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Examining the existing reality of using social media as e-learning tools at an Emerging University in Saudi Arabia from the viewpoint of tutors and students

By

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Submitted in fulfilment of the requirements for the degree of Doctor of Philosophy (PhD)

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March 2021

Abstract

Social media has become an integral part of today's societies across the globe. As a consequence, the use of social media in higher education is rapidly expanding, both amongst students and faculties. Saudi Arabia's higher education is no exception. This study examines dimensions of the reality of social media use in an EU in Saudi Arabia in order to provide new understanding that supports the effective integration of these tools in higher education.

The theoretical basis for this study was developed from Bandura's Social Learning Theory and Davis' Technology Acceptance Model and explored social media use from the viewpoints of tutors and students. The study employed a concurrent mixed-methods design. Firstly, 407 students and 290 tutors completed questionnaires, and then, to increase validity and reliability, 10 of the tutors were then interviewed. The data were analysed separately, then compared and integrated to identify key results.

The findings reveal that the students and tutors who participated in this study had positive perceptions of the use of social media in education. Moreover, a great number of students were highly dependent on social media and viewed these tools as supportive and useful for facilitating learning, communicating, enhancing collaboration, exchanging experiences, generating and improving content, and constructing knowledge. Many tutors expressed the view that they could see the benefit of students interacting with and learning from others through social media. Nevertheless, a large portion of the faculty did not use social media for instructional purposes.

The results also indicate that the major barriers to implementing social media tools in higher educational institutions are their potential for distraction, the need for training, privacy issues, and cyber-bullying. These findings highlight the fact that, as social media tools continue to attract student attention, more research needs to be done on the impact of social media on:

- student collaboration and social interaction within the learning environment;
- student collaboration with tutors;

- the ways in which the different types of SM affect student learning and performance;
- the negative impact of SMTs on learning environments and how this may also affect student learning and academic performance; and
- the different barriers that students and tutors face when they utilise SM for learning, especially regarding their perceptions of privacy and security issues when using web-based applications.

Dedication

I dedicate this work to those who have paid the price for their involvement in my postgraduate studies.

To my late father, Abdullah bin Omar Alshehri, whose prayers, support and love have been instrumental in me achieving my goals throughout my life. I express my gratitude to you, my beloved father, with heartfelt sadness, as you did not have the opportunity to see your dreams, and mine, come true. May Allah forgive you and grant you the highest paradise. May your soul rest in eternal peace.

To my sweet and loving mother, Fatimah Zafer Alshehri, whose continuous affection, love, encouragement and prayers, day and night, has enabled me to achieve such levels of success and honour. I could not have achieved this without you, thank you mum.

To my wife, Reham Feaz Alshehri, you are the source of my endless inspiration and strength. Thank you for your limitless assistance, patience, sacrifices and encouragement, which have inspired me to continue on my endeavours. Your love and support have given me the confidence and reassurance to know that, with you by my side, anything is possible.

To my son, Faisal, for your lovely interrupting!

To all my brothers and sisters, you have been a constant source of motivation and inspiration to me throughout my studies.

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

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Acknowledgements

In the name of Allah, the Most Gracious, the Most Merciful.

All praise is due to Allah alone, I thank Allah Almighty for giving me the inspiration, patience, time and strength to finish this work. With Allah's will and mercy, I have been able to achieve all of this.

I express my sincere appreciation and gratitude to a number of important and valued people who, directly and indirectly, have assisted and supported me during this study. First, I wish to express my sincere gratitude to my first supervisor, Professor Vic Lally, for his patience, motivation, immense knowledge, reviews, suggestions, expertise and assistance throughout the entire process. It has been an honour to be a Ph.D. student under his supervision. Besides my advisor, I would like to thank my second and third supervisors, Dr David Morrison-Love and Dr Kristinn Hermannsson, for their encouragement, very helpful critical comments and suggestions regarding my work, which encouraged me to widen my research from various perspectives.

In addition, I owe a debt of gratitude to my father, may his soul rest in peace; his words have supported me throughout and have given me the encouragement I needed to continue my study. Special appreciation and thanks go to my mother for her prayers and encouragement. Also, I would like to extend my appreciation to all of my brothers and sisters for their love and support throughout these years of study, which contributed to making this work possible. My sincere thanks and love go to my wife, whose support and encouragement during the different stages of this Ph.D. journey are so appreciated, as are her contributions of talent, time, faith and endurance. My love and deepest gratitude go to my son, Faisal, who suffered greatly as he shared the ups and downs of this journey.

Last but not least, I would like to express my thanks and appreciation to the EU, which sponsored my scholarship in the United Kingdom and provided me with this valuable opportunity to live and study in one of the greatest countries in the world. My profound thanks and appreciation to my colleagues and staff at the EU who facilitated and offered helpful suggestions during my thesis period. I am

also indebted to the study participants, the tutors and their students at the EU, who so generously gave their valuable time and energy. Furthermore, the Saudi Arabian Cultural Bureau (SACB) in London, which facilitated certain matters related to my stay in the UK, deserves great thanks and appreciation.

Author's declaration and publications

I declare that, except where explicit reference is made to the contribution of others, this dissertation is the result of my own work and has not been submitted for any other degree at the University of Glasgow or any other institution.

The researcher used some of the content from the following publications in this thesis.

Journal articles

(1) Alshehri, O. A. (2020). THE VIEWS OF PH. D. SAUDI STUDENTS AT THE UNIVERSITY OF GLASGOW TO UTILISE SOCIAL MEDIA TOOLS TO SUPPORT LEARNING. International Journal of Research-GRANTHAALAYAH, 8(4), 1-6.

(2) Alshehri, O. & Lally, V. (2019). "Perceptions of Saudi students to use social media tools for learning". *European Journal of Open Education and E-learning Studies*. Available at: https://oapub.org/edu/index.php/ejoe/article/view/2681

(3) Alshehri, O. (2019). "Usage and Perceptions of Social Media Tools among Higher Education Instructors". *International Journal of Information and Education Technology* vol. 9, no. 7, pp. 493-497. Available at: http://www.ijiet.org/vol9/1252-JR347.pdf

(4) Alshehri, O. (2018). "Using Social Media in Higher Education as Tools for Learning: What do tutors think?" *Global Advanced Research Journals*, 7(1), pp. 1–5. Available at: http://garj.org/garjerr/8/2018/7/1

Conference articles

Alshehri, O. & Lally, V. (2019). "Students' perceptions of the use of social media in higher education in Saudi Arabia". World Academy of Science, Engineering and Technology, International Science Index 145. *International Journal of Social, Behavioral, and Educational,* 13(1), pp. 28 - 31.

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List of Abbreviations

EU	Emerging University
HE	Higher Education
IT	Information Technology
KAU	King Abdul-Aziz University
KFU	King Faisal University
KKU	King Khalid University
KSA	Kingdom of Saudi Arabia
KSU	King Saud University
LMS	Learning Management System
MoE	Ministry of Education
MoHE	Ministry of Higher Education
NCeL	The National Center for e-Learning and Distance Learning
PEU	Perceived Ease of Use
PTQ	The Project of Training and Qualification
PU	Perceived Usefulness
SDL	Saudi Digital Library
SEU	Saudi Electronic University
SLT	Social Learning Theory
SM	Social Media
SMTs	Social Media Tools
SoMeLT	Social Media as e-Learning Tools
TA	Thematic Analysis
TAM	Technology Acceptance Model

Chapter 1: Introduction

1.1 Background

During my several years of teaching educational technology at an emerging university (EU) in the Kingdom of Saudi Arabia (KSA), I have noticed that most of the present generation of undergraduate students rely heavily on the emerging technology of social media (SM). This reliance appears to be growing rapidly and these tools are entering into many aspects of the students' social lives. Students are also using SM 'apps' (Facebook, Twitter, YouTube, WhatsApp, Wikipedia and Skype) as tools of e-learning more often than their tutors. As many have argued, incorporating this technology into the learning process changes the way people learn, exchange knowledge, participate, collaborate with peers and teachers and create innovative ideas (Eady & Lockyer, 2013; Dickie & Meier, 2015; Saqr et al., 2018).

In 2013, there were more than 6 million active Facebook users in the KSA, and over 90 million videos were watched daily on YouTube (more than any other country worldwide) (Al-Khalifa & Garcia, 2013). A more recent report found that roughly 18.96 million Saudi Arabians were active Twitter users - almost half (56%) of all tweets in the Arab world were produced by Saudi Arabians (Arab SM Report, 2019). What does that mean for education? Are teachers ready for this shift? Are educators using this opportunity in a useful way? Or are they just annoyed at the constant phone activity going on underneath tables? These, and other related questions, have gone through my mind during my time as a tutor and now as a doctoral student. In this age of technology, I have watched the classroom transform as technology has transformed society. However, social media tools (SMTs) are technological resources that seem to be mostly untouched by tutors.

SM is one of the most prominent inventions of the twenty-first century. Many SM applications, such as YouTube, WhatsApp, Facebook, Twitter and Wikipedia, have become an integral part of daily life. Internet and mobile devices have fostered the prevalence of SM use at all times and in all spaces. Of course, educators understand there is a value in technology, and many have begun to harness these inventions for educational purposes. Studies conducted in various

parts of the globe have proven the benefits of integrating SM for facilitating teaching and learning in higher education (HE) (Lo, 2013). Moreover, SM can provide an opportunity for students to acquire the skills of communication, collaboration (Zgheib, 2014), critical thinking, creativity and life-long learning (Collins & Halverson, 2018).

SMTs promise to bridge the gap between home and schools, raise academic performance and level the playing field for all students, regardless of ethnicity or income level (The New London Group, 1996). Nevertheless, there is still a hesitancy to incorporate different modes of SM. As Stufft notes: "While educators may recognize the value of incorporating technology into the classroom, many may struggle to identify ways to use technology toward extending students' thinking, rather than as an add-on to a lesson" (2013, p. 24).

There are diverse resources available to educators and students that can be integrated into the classroom curriculum. As an example, YouTube has become a popular video-sharing website which allows many teachers the opportunity to incorporate short videos related to course content into their lessons. This has helped to expand communication beyond the classroom to experts in the real world (Mourlam, 2013). Consequently, the incorporation of online SM has become a most promising tool for reinventing public education.

Another major motivation for using SMTs in education is the familiarity that students already have with them, as they are already being used outside the classroom for a variety of social networking and communication purposes (Seo, 2012).

The present generation of students "...use digital technology transparently, without even thinking about it" (Jukes et al., 2010, p. 15). SM is their main source of communication and they build relationships through it. As Marc Presnky argued in 2001, "our students today are all 'native speakers' of the digital language of computers, video games, and the Internet" (p. 1). While we should be cautious in assuming this is true of all students in higher education, the fact remains that policies and practices in higher education pedagogy needs to take the new technology rich environment into account.

Coming back to the context of the KSA, the current generation of youth is greatly influenced by technology and SMTs. Consequently, higher education in KSA has to adapt to these modern technologies in order to apply them as effective tools in education. In view of the different views on how to do so, this research investigates practices and perceptions regarding the application of SMTs as effective educational tools.

It is crucial to examine tutors' and students' viewpoints concerning using SoMeLT. With students, it is important to understand how they perceive the educational value of such tools and the barriers they face when using SM for learning. In addition, as Lohnes & Kinzer (2007) state, "Faculty needs to have better perspectives of the Net Generation technology expertise and how student learning is connected with technology; this is a vital component for HE" (p.7). Therefore, the present research aims to help tutors understand how their students' learning practices and experiences are connected to the emerging technology of SM. In addition, this research aims to understand the perceptions of Saudi tutors regarding using SoMeLT to support student learning and to explore factors and barriers affecting the adoption of such tools at the EU in the KSA.

1.2 **Need for the Research**

In 2017, the Saudi MoE reported that there were 30 government universities and 33 private universities that provided male and female students with programmes for achieving their educational goals. In the KSA, education is free for all students who enrol in government institutions. Additionally, students receive a monthly salary and equal education opportunities for both males and females (MoE in KSA, 2017).

In concordance with the current revolution in educational technology, education in the KSA is undergoing a profound change. Consequently, the Saudi Ministry of Education (MoE) has worked to encourage students and teachers to use appropriate modern tools, such as SMTs, in the educational process, in order to develop self-education, cooperative knowledge-building and knowledge-exchange. The Ministry encourages Saudi universities to integrate modern technologies to cope with the technological revolution of this digital era and

help students enhance their learning, develop their knowledge and communicate with each other (Al-Shehri, 2010).

The MoE in KSA has established the Jusur System, which is a Learning Management System (LMS) designed by the National Center of Electronic Learning (NCeL). The NCeL was created to manage distance learning in Saudi universities (Al-Najdi, 2011). The Jusur System helps university tutors upload their courses so that students can access them. Also, administrators and managers can access this system to observe students' progress, strengths and weaknesses.

SMTs can offer channels for flexible learning by providing opportunities to meet with and learn from professionals, teachers, peers and others from different cultures. Using these technologies, learners can exchange ideas, experiences, information and academic resources anytime and anywhere. Ito et al. (2009, p. 28) note that "... basic access to technology, the ability to navigate online information and the ability to communicate with others online are becoming increasingly central to our everyday participation in public life".

Students are using SMTs almost every day to communicate, learn and build relationships with others. However, few studies have investigated the impact of SMTs specifically on Saudi students' academic achievements and learning skills. Seven years ago, Elsayed & Westrup (2011) were still able to say: "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). Has this situation changed? If so, are Saudi universities using this new educational opportunity?

There are many studies that show how SM can enhance education (Odom et al., 2013; Dabbagh & Kitsantas, 2013; Casey & Wells, 2015). However, there is a shortage of studies that have been conducted in Saudi universities regarding Saudi students' and tutors' attitudes towards adopting SM as an e-learning tool to support learning. Thus, this research intends to uncover the existing reality of SoMeLT use in the EU. Furthermore, it aims to provide tutors with a better understanding of their students' perceptions, expectations, practices and barriers that they might encounter when utilising this technology. Finally, this

research aims to understand the gap between the digital learners' needs, interests and expectations, and the tutors' expectations, perceptions and use of SMTs in teaching and learning environments in KSA.

1.3 **Statement of the Problem**

The local problem that prompted the need for this study emerged from the pilot study I conducted at the EU (Alshehri, 2017), which found that students used SM applications as tools of e-learning more often than their tutors. This pilot study noted that staff and faculty members did not frequently use SMTs in their instruction, despite the revolutionary nature of SM in promoting professional development, broadening the reach of the institution, increasing student success and collaboration, and contributing to the growth of students' education.

Accordingly, this research examines the existing reality of SoMeLT use at the EU from the viewpoint of tutors and students to support learning. It is designed to understand the salient issues around improving the use of SMTs to advance Saudi students' learning at the EU. It also investigates factors that influence Saudi tutors' and students' perceptions regarding the use of SM for learning purposes.

Additionally, the research explores the SMTs most commonly used by Saudi students and the purposes of using such tools. Caruso & Salaway (2008) report students holding ambiguous positions regarding the acceptance of emerging technology and its adoption in the learning process. Therefore, this present research investigates Saudi students' perceptions of the educational values and benefits that SM has brought to Saudi students' learning culture and ecologies. As Oblinger et al., (2005) observe, "Given the technology experience of most of the 'Net Generation', it is not surprising they may have significant expectations regarding the use of technology to support learning" (p. 6).

Another aim of this research is to examine the barriers that Saudi tutors and students face in using SoMeLT. This may help tutors and students at the EU to understand what might prevent them from obtaining the advantages that come from using these modern tools to support their learning. This research investigates the perceived value of using SMTs in the classroom and the concerns that educators and learners report about these modern technologies. Lastly, this

research seeks to examine the current state of SM use by tutors at the EU for e-learning.

1.4 **Aim of the Research**

The aim of this research is to examine the existing reality of using SoMeLT at the EU. This new phenomenon gives institutions a platform that allows them to be connected to their students to disseminate information and news (Liu 2010). This research examines how the EU engages with their existing and potential future students through SMTs and the use of these various communication tools in the educational field. Specifically, this research seeks to:

1) examine the usage, purposes, experiences and categories of SoMeLT among students and tutors at the EU;
2) examine the perceptions of students and tutors at the EU regarding the advantages of using SoMeLT; and
3) examine the disadvantages of using SMTs to support learning at the EU, as perceived by students and tutors.

1.5 **Significance of the Research**

The significance of this research lies in its contribution to understanding the reasons for the limited use of SMTs for education at the EU. This research has implications for both the faculty and students of the EU. The instructional use of SMTs is a relatively new field of research, yet it has been the focus of many studies. Extensive work is still needed on the role of SMTs at the EU to identify the appropriate use, potential advantages and consequences of its use in higher education.

Change may be needed in instruction and the educational system at large. In addition, new teaching strategies may be required to engage students in relevant learning that can better prepare them for the future. Interactive online networks provide another kind of education that is claimed to enhance the time students spend learning face-to-face in a physical classroom. Nagar (2015) even goes so far as to suggest:

> "Students have high levels of exposure to electronic media; hence, they have greater access and time to shape young people's attitudes and actions than do parents or teachers, replacing them as educators, role models, and the primary sources of information about the world and how one behaves in it" (p. 41).

In our increasingly connected world, the potential importance of SM in educational environments cannot be ignored. Therefore, this research is significant because the findings may help the tutors at the EU change their perceptions towards the adoption of online tools, such as SM, in their students' learning. Moreover, it may make it possible for the staff and faculty at the EU to address their concerns about the use of SMTs, help the tutors consider how to deal with the 'Net Generation', enable them to facilitate their students' utilisation of these tools to improve their learning, and enable them to equip their students with the technological skills they need to communicate at university level and in the workplace.

This is supported by Prensky (2006) who states: "Teachers can learn what technological equipment they need in their classrooms simply by asking the students; they can also lobby to get these items installed in school computer labs and libraries" (p.10). Thus, understanding the students' perceptions regarding the use of SMTs for learning may help the tutors to develop their personal learning, 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" (Prensky 2006, p. 10).

Prensky (2006) also states: "Recognising and analysing 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). Prensky continues: "Tutors 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).

According to Hatkevich (2008), understanding which technologies students need to utilise in order to support their learning is a fundamental challenge in the educational field. Thus, the results of this research should provide revealing

information concerning the SMTs used by the Saudi students and identify how they perceive the value of such tools in their learning. This investigation should also help Saudi tutors gain the necessary knowledge regarding the SMTs their students interact with so that they can consider how to develop their pedagogy to effectively integrate such tools into their teaching environments.

It is important to examine any barriers which prevent Saudi students from utilising SM for learning purposes. This examination would help Saudi tutors and administrators at the EU to consider steps to overcome these challenges in order to improve their students' academic performance and knowledge. Kennedy et al. (2006) argue that knowing and understanding the many advanced technologies the 'Net Generation' utilises may overcome barriers when educating them.

This research is the first to examine the existing reality of SoMeLT use at the EU from the viewpoint of both tutors and students. The results of the pilot study conducted with tutors whom I interviewed at the EU in 2017 revealed that Saudi students use SM outside school in their everyday activities and in school in their learning environments. Therefore, studying this generation's perceptions and expectations regarding the utilisation of SM for learning purposes is a crucial investigation that should benefit both students and tutors at the EU.

1.6 **Research Questions**

Upon choosing the topic of SM use in learning as the focus of my PhD research I read, in depth, the previous studies on this subject in English and Arabic. SM use in learning has yet to be investigated in great depth in the KSA. While many researchers (e.g. Dabbagh & Kitsantas, 2011; Dickie & Meier, 2015; Al-Saggaf & Simmons, 2015; Lanier, 2016; Alsolamy, 2017) have addressed this issue, they have done so only in a general way. Therefore, I was particularly interested in conducting a deeper examination of the use of SoMeLT. I focused on the relevant literature to identify in-depth research questions related to the main subject of the study through balanced resources such as books, journals, articles, government documents and theses.

I have developed a number of quantitative and qualitative questions for this research to guide my investigation using the relevant data sources to provide a

complete and precise answer to the research questions. I sought to make the research questions clear, simple, meaningful and at the same time enjoyable to explore. After focusing on the above, I finally obtained a clear picture of the questions that may be suitable for my research. I tried to ensure the questions were comprehensive and covered all the dimensions that I wanted to examine.

Next, I conducted a pilot quantitative study of these questions on a sample of tutors and students at the EU (see Chapter 4, Section 4.5 for more details). Based on the results of this pilot study, I was able to ascertain the need to further develop some of these research questions that would shape my research design and choice of methods. I was keen that each question should focus on a specific dimension in the research. I also carefully considered which research methodology to use to answer the research questions, opting eventually for a mixed methods approach. Consequently, this research is guided by one main question with three sub-questions.

1.6.1 Main Research Question

What is the existing reality of using SoMeLT at the EU from the viewpoint of tutors and students?

1.6.2 The sub-questions

1. To what extent are SMTs used by students and tutors for e-learning at the EU?
    a. What are the reported purposes of using SM?
    b. What are the reported experiences of using SM?
2. What are the perceptions of Saudi students and tutors regarding the advantages of using SoMeLT at the EU?
3. What are the perceptions of students and tutors at the EU regarding the disadvantages of and barriers to using SoMeLT?

1.7 **Organisation of the Thesis**

This thesis is composed of eight chapters and associated appendices and is structured as follows:

Chapter One presents the background to the research, the need for the research, statement of the problem, the purpose of the research, the significance of the research, and the research questions.

Chapter Two provides a review of the context of the research including the location, geographical area, population, basic resources, development of the KSA and its education system, and the increased use of the internet, social media and e-learning.

Chapter Three provides a literature review on the following concepts:

- the technologies used to deliver information;
- e-learning technology in education
- SMTs usage in education;
- the challenges of using SoMeLT in HE; and
- SM theories.

Chapter Four clarifies the methodology of this thesis by developing a holistic picture of the research questions and research methods utilised.

Chapter Five presents the analysis of the quantitative data (questionnaire results).

Chapter Six presents the analysis of the qualitative data (interview analysis).

Chapter Seven presents a discussion of the results and the findings of the research.

Chapter Eight presents the conclusion of this research and details the research implications. This chapter also provides the researcher's contributions, recommendations and suggestions for further research.

1.8 **Chapter Summary**

Chapter one is the introduction to this research. I have presented the background to this study, the need for this research and a statement of the problem. Also, in this chapter, I have explained the purpose of this research and

its significance, as well as describing the research questions in detail. Finally, I have presented the organisation of this thesis.

In the next chapter, I will present a review of the history of the KSA in terms of its location, geographical area, population, basic resources, development, KSA Vision 2030, and education policies along with an overview of the country's current education system.

Chapter 2: The Saudi Arabian Context

2.1 Introduction

This chapter presents the history of Saudi Arabian education policies along with an overview of the country's current education system. The KSA has a rich and unique context and history. The swift development of the KSA during the last 40 years has been remarkable, despite the problems facing the country. In order to understand this journey and its implications for this study, a detailed account will follow the KSA in terms of its location, geographical area, population, basic resources, development and education system.

The chapter also discusses the growth of the use of the Internet, and e-learning in the Saudi education system. This is followed by a discussion of the King Abdullah bin Abdul-Aziz Education Development Project (*Tatweer*) and the National Center for e-Learning and Distance Learning (NCeL), as well as an overview of several projects implemented by the Center, such as JUSUR, MAKNAZ, the SDL, SANEED and the PTQ. The chapter concludes with background information relating to the EU and the KSA Vision 2030.

2.2 Profile of Saudi Arabia

The Kingdom of Saudi Arabia (KSA) was founded in 1932 by King Abdul Aziz bin Abdul Rahman Al-Saud. It is the original birthplace of Islam and is the location of Islam's two holiest cities; namely: Makkah and Madinah. The KSA hosts one of the pillars of Islam, and all Muslims are obliged to make the Hajj, or pilgrimage to Makkah, at least once during their lifetime, if they are able to do so.

The KSA is a monarchy whose constitution is based on the Holy Book 'The Quran' (Koran) and Shariah Law. The King heads the government and the Council of Ministers, which comprise the executive and administrative bodies, respectively. The king of the KSA is the custodian of the two holy mosques, King Salman bin Abdul Aziz. The official religion is Islam, although large numbers of non-Muslims work or visit the KSA. In fact, Islamic law protects the rights of Muslims and non-Muslims to the same extent. The official language of the KSA is Arabic, which is also the language of the Holy Koran (Al-Munajjed, 1997).

The cultural environment in KSA is highly conservative. All aspects of social and cultural life centre on the Muslim religion and its identity. As a result, the Saudi population believes in honouring an authentic Arab culture and thus, has close family ties, adheres to tribal customs and the principles of the Islamic religion, and has respect for other international customs and cultures (Al-Seghayer, 2011).

Although Arabic is the first language in the KSA, this does not mean that other languages are ignored. In fact, it is quite the contrary, with the English language being widely used in the business sector. Furthermore, English is included in the education curriculum as a core subject (MoE, 2018). Pupils are taught English from the fourth year of primary school, at 9 years of age, or equivalent to the English and Welsh Year 5 in Key Stage 2, Year 6 in Northern Ireland and Primary 6 in Scotland. Consequently, the KSA's ethnic diversity has impacted the country's education system. In order to provide education that meets each ethnic group's needs, the education policies allow these groups to open private schools and operate with greater flexibility.

2.3 Geographic Information

2.3.1 Location

As can be seen in Figure 2.1, the KSA is located between Africa and mainland Asia. It boasts long frontiers on the Red Sea and the Arabian Gulf, and the Suez Canal runs near to the north-west border. The KSA is one of the largest countries on the Arabian Peninsula, covering approximately 830,000 square miles (2,150,000 square kilometres). It is bordered by Jordan and Iraq to the north, the Red Sea to the west, Yemen and Oman to the south, and the United Arab Emirates, Bahrain, Qatar and Kuwait to the east (Ministry of Economy and Planning, 2014).

Figure 2-1 Map of KSA (Source: http://www.riyadh.gov.sa)

2.3.2 Population

The KSA has experienced a population explosion in the last 40 years and continues to grow at a rate of 1.63% per year. According to the General Authority for Statistics (2017), the KSA is the second largest state in the Arab world. During the first half of 2017, the population was reported to be 32.6 million, with 67% of the population (approximately 20.8 million) being Saudi citizens. A significant percentage of the nation's inhabitants (37% of the total Saudi population), are immigrants seeking economic opportunities. The 2018 census estimated that males accounted for 57.48% of the population and females represented 42.52%. Approximately 27.3% of the Saudi population was younger than 15 years old at the time.

The KSA's population growth continues to be 0.295% higher than the population growth rates in the Middle East and North Africa. As can be seen in Figure 2.2, the population is forecast to rise to almost 34 million by 2019 (British Council, 2015). It is estimated that almost half the Saudi population is under the age of 20, while the portion of the population aged 20-35 is growing. Additionally, the nation has also seen a rise in its older population, as life expectancy has risen throughout the last 40 years (General Authority for Statistics, 2017).

Figure 2-2 Saudi Arabian Population (2008-2018)

2.4 **The Economy**

Before the discovery of oil in 1937 the KSA was a subsistence economy which relied on farming, trading, pearl fishing and pilgrimage dues. Oil production commenced after World War 2 and the revenue was used initially to develop the oilfields and socio-economic infrastructure (Esmail, 2015). Today, the KSA is making great efforts to develop a diversified economic base and improve the investment environment. Thus, the government has taken serious steps towards economic reform (Alhowaish, 2014).

The KSA has great advantages in a number of strategic sectors in the region and in the world. It is the largest petroleum exporter in the world. Its production capacity is approximately 9.5 million barrels a day and, unsurprisingly, oil is the major source of income in the KSA. The country holds a distinctive position in the world due to its massive oil reserves of 260.2 billion barrels (Saudi Aramco, 2014), as well as its rapid development in all aspects. The KSA is the largest free economic market in the Middle East, accounting for 25% of total Arab countries' gross national product. Therefore, the Saudi government is focused on job creation and raising per capita income as part of its rapid growth (Al Khalifa, 2010).

2.5 **The Education System in Saudi Arabia**

The KSA's education system was formally established in 1953 by three government institutions. The first was the MoE, with functions which ranged from policymaking, planning and budgetary staffing, to provide physical teaching materials and administration for all elementary, intermediate and secondary schools (Al-Ghmadi & Al Saadat, 2002).

The second institution, the Ministry of Higher Education (MoHE), was established in 1975 to administer, develop and coordinate the country's HE needs. Its purpose was to develop a national cadre of specialists in the administrative and scientific fields to facilitate national development (Ministry of HE 2018). The third institution was the Technical & Vocational Training Corporation (UNEVOC), whose function was to train and develop Saudi workers in technical and vocational fields according to the demands of the labour market, both in terms of quality and quantity. According to the national policy, in general, the main aim of education is to satisfy the needs of the country's communities and reflect their cultural norms and ways of living. All educational policies are subject to government control and the curriculum, syllabus and textbooks are uniform throughout the country (MoE, 2018).

The MoE is the umbrella organisation which supervises the free education offered in elementary, intermediate and secondary schools, as well as at university level. In 2018, approximately 7 million students (46.5% female and 53.5% male students, aged between 4 and 18 years old) studied in 35,397 general education schools in all four stages (kindergarten, elementary, intermediate and secondary) throughout the KSA. More than 500,000 teachers and educational staff in these schools teach several subjects, such as religion, Arabic language, maths, science and information communication technology (ICT) (MoE, 2018). Saudi Arabian officials pay particular attention to the Arabic language, mathematics, ICT and science courses. The Saudi government allocates substantial resources to education; between 2010 and 2015, this figure amounted to $57.9 billion, or 25% of the Saudi annual national budget (MoE, 2018).

The purpose of the MoE in the KSA is to provide education for all in an appropriate educational environment and within the framework of the KSA's education policy, as well as to promote the quality of educational outcomes, encourage creativity and innovation, develop community partnership, improve the abilities of students, and increase the effectiveness of scientific research. Accordingly, the Saudi government has paid great attention to education, which it perceives to be the key to improving society. Thus, it has made tremendous efforts to create a well-educated and productive society.

2.6 **HE in Saudi Arabia**

The Ministry of HE became a separate entity in 1975, with the purpose of dealing exclusively with HE and supervising the development of university education in all sectors. It coordinates universities, specifically their science departments and degree programmes, encouraging research and formulating rules and regulations for compliance by all higher learning institutions. The Ministry of HE also supervises scholarships, international academic relations and educational offices abroad (Ministry of HE, 2018). HE in the KSA has undergone significant improvements over the last five decades. One of the first objectives of the Ministry of HE's early plan was to establish new HE institutions throughout the country, expand those already in existence and ensure that the programmes offered meet the requirements of both the national and international job markets.

As Table 2.1 shows, HE in the KSA has experienced tremendous growth over the past decade. This rapid development is clearly evident by the continually increasing number of universities located all over the country. There were only seven public universities in 2005; ten years later, this had increased to 30 public and more than 33 private universities and colleges. The increase in the number of institutions has enabled more than 1.5 million students in the country to enter higher education. Currently, female students represent 55% of this total (Ministry of HE, 2018). According to the Ministry of HE (2018), there are approximately 73,817 tutors, 40% of whom are female (Ministry of HE, 2018).

The Saudi government has allocated around $3.28 billion for the purposes of establishing new universities, as well as maintaining and refurbishing of college

campuses in many universities. The government allocation of a substantial budget for education is partly due to the increasing demand for enrolment over the past 10 years. The KSA's high birth rate and young population has put pressure on the country's universities to accommodate a growing number of students.

Type	Number
Government universities	30
Primary teachers' colleges for men	18
Primary teachers' colleges for women	80
Colleges and institutes of health	37
Technical colleges	12
Private universities and colleges	29

Table 2-1 Institutions of HE in KSA

The MoE is responsible for HE in the KSA and regulates, supervise and manages the country's universities and colleges. The Saudi universities offer bachelor's, master's and Ph.D. degrees. All subjects are taught in Arabic, except in the technology and science fields, where English is used as the medium of instruction. Thirty government universities in addition to 29 private universities and colleges are distributed across all regions of the KSA. The Saudi government provides significant financial support for public universities and exercises strong control over their governance (Al-Eisa & Smith, 2013).

Many Saudi universities are now generating much of their own research funding through cooperation with the private business sector. This sector provides money and resources to support the growth of research development in universities, including full funding for major endowment projects and research chairs in a variety of disciplines. As a result, public universities are increasingly lobbying the MoE for the right to make their own decisions about the allocation of such funding.

2.6.1 The Government Scholarship Programme for Study Abroad

In 2006, the Ministry of HE established the 'Study Abroad Programme'. The Programme aims to provide gifted students with the opportunity to continue HE

in all fields of academic specialisation in the United States of America, the United Kingdom, Australia and Canada. These experiences are aimed to meet the country's vision for the future and its market needs, while enabling its students to learn about modern science and prepare them to serve their country and help their nation progress. This programme can also help address the shortage of Saudi tutors, as there are fewer students in classrooms.

According to the statistical department of the KSA's Ministry of HE (2014), this Programme started in 2007 with more than 25,000 Saudi students. By 2018 it had exceeded 130,000 sponsored students in 46 countries. By launching this programme, the Ministry of HE in the KSA seeks to meet the growing demand for HE, sustain the country's rapid growth in various technologies and produce a skilled and qualified workforce capable of delivering technological and educational growth.

2.6.2 Excellence Programme for Public University Education

At the beginning of 2010 the MoE launched the Excellence Programme for Public University Education Project with the aim of raising the quality of Saudi universities. The Project set up a series of programmes and training courses to improve the skills of academic staff through a co-operation between Saudi Universities and expert institutions. These programmes and training courses focus on effective teaching skills, communication, using the Internet in education and integrating modern educational technologies (Ministry of HE, 2010b).

The Ministry seeks to raise the performance levels of its employees, encourage positive competition among them and promote the culture of successful practices to then disseminate them among the administrative circles in the Ministry. These objectives are an essential part of the Ministry's priorities and plans aimed at improving education by emulating the best quality educational models in the world. The Project consists of annual competitions between Saudi universities to choose the best educational plans and e-learning programmes (Ministry of HE, 2010a).

2.6.3 Future of University Education in Saudi Arabia (Aafaq Horizons Plan)

In 2006, the Ministry of HE launched a modern and ambitious long-term plan for university education in the KSA (AAFAQ) intended to last for 25 years until 2030. The Plan considers all social, educational, technical and health aspects in order to respond effectively and adequately to the variables of future life and keep pace with developments in all areas of life. The main aim of this programme is to provide all the support required by the educational system in order to integrate modern teaching techniques and benefit from these modern tools in the development of the educational process. Additionally, this project helps in reforming HE in the KSA to support Saudi Universities to be recognised at the global university's ranking, mainly through "...embodying a Saudi model for knowledge-based socio-economic growth" (Smith & Abouammoh, 2013, p. 415).

In respect of developing e-learning in the KSA, the AAFAQ Project gives great consideration to evaluating all aspects relating to the current use of educational technology in most HE institutions in the KSA. It also highlights the factors, methods, tools and infrastructure required for the utilisation of educational technology in HE institutions. As part of the AAFAQ Project's broader vision, similar to this research, a study has been undertaken which focuses on the current use of e-learning in one of the HE institutions in the KSA. The study investigates and identifies ways to improve higher education, taking into consideration the perceptions of the university's teachers and students. It would, therefore, seem appropriate to link the results of this thesis to the wider vision of the AAFAQ.

2.7 The Internet in Saudi Arabia

The Internet was first introduced to the KSA in 1994 and was officially made available in 1997. In December 2000 there were 200,000 Internet users in the KSA. By 2005, the number of Internet users had a growth rate of 1,170% (Internet Al Saudia, 2007). In 2011, the number of Internet users had grown to 11.4 million. Internet penetration in the country has now reached 91% (Internet World Stats, 2014), and has one of the highest growth rates in the entire Arab world.

This is indicative of the development of Saudi Arabian technology and further growth is predicted over the next few years (See Figure 2.3).

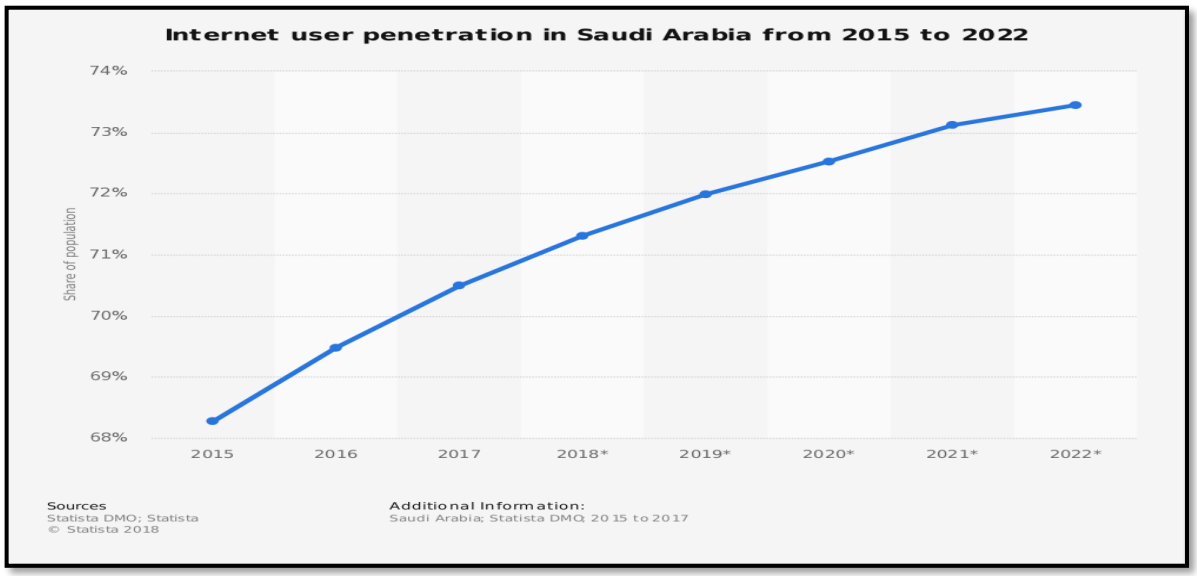

Figure 2-3 Internet World Stats (2018)

The rapid increase in the number of users may derive from the fact that 75% of the Saudi population is young, and therefore tend to be quick to adopt new technologies (General Directorate for Planning and Statistics, 2010). Alqarni (2015) reported that 60% of the Internet users in the KSA are of the younger generation, aged between 16 and 25, while the majority of students use the Internet for entertainment (Sait et al., 2007). Many users reside in urban areas where there is significantly more wealth and Internet access, both in the home and in public spaces, such as cafes and offices.

The KSA is home to 14.7 million mobile users, a number that makes their rate of mobile phone penetration the highest in the world. Mobile devices account for 48% of the country's Internet usage and constitute the most popular place for search inquiries, a rate that is growing annually at 200%. It is estimated that on average, Saudi residents spend roughly five hours per day using the Internet, making it one of the largest Internet markets in the Middle East (The Arab SM Report, 2015; the Statistics Portal, 2015). Search trends in the KSA are not drastically different than other nations, with most people looking for information relating to news, sports, politics, learning, business, entertainment, shopping, and redirection to specific websites. Saudis' usage of search engines is the highest in the Middle East and North African (MENA) region.

2.8 **E-Learning in the Saudi educational system**

E-Learning in the KSA has become integrated into a national plan and does not merely represent an educational goal with a promising outlook. It requires raising awareness and encouraging application in all aspects of daily life. As a result, the KSA government approved Decision no.160 on 27 May 2007 on The National Communication and Information Technology Plan (NCITP). This included a long-term perspective for communication and information technology in the KSA for the next twenty years (NCITP 2005) to ensure the optimum utilisation of new technology at all levels of education and training. This plan presented the importance of providing scientific and technological information and implementing programmes to make it accessible to all users based on the laws and objectives of education (MoCT, 2005). The realisation of this objective is presented as:

> "The establishment of a National Center for E-learning to offer the service and its encouragement by preparing the regulations and policies governing the e-learning process, formulate a unified model for e-learning using standard specifications, develop quality assurance standards for e-learning, issue quality assurance certificates for e-learning systems and measure the efficiency of various technologies as aids for the e-learning process" (NCITP 2005, p.75).

Although the KSA has been slower than many nations to move into distance education, e-learning has increased significantly in many of the country's private and government universities (Al-Asmar & Khan, 2014). HE institutions in the KSA have become aware of the significant contribution that e-learning can make (Alamri, 2016). Therefore, they have invested heavily in the field of pedagogy and training using technology as an aid to make education more accessible, thereby, raising standards and improving quality (Alwalidi & Lefrere, 2010).

Additionally, the Ministry of HE in the KSA has started to develop new strategies to adopt virtual and distance learning in the HE system. As a result, the majority of universities and colleges in the KSA have now adopted e-learning as a part of their curricula to respond to the rapid population growth, the lack of tutors in terms of both quality and quantity (Alshathri & Male, 2016), and the frequent use of the Internet by students and researchers in many aspects of education, such as teaching, research and training (Al-Asmar & Khan, 2014).

There has been a commitment made by the MoE to develop the infrastructure of new technology and its employment in education and learning by integrating computers into the teaching and learning of many subjects in the curriculum (Alamri, 2016). Over the last few years, the MoE has begun to integrate online services and develop web services using e-learning strategies that can make a positive contribution towards improving the educational systems. Many projects have been developed by the Ministry to fulfil this commitment, such as a scheme to develop school libraries into Learning Resources Centers (LRCs) containing information sources in both print and non-print forms and including new technology.

LRCs are now integrated with the teaching and learning process to create richer learning environments (Alamri, 2016). Digital Technical Centers (DTCs) are part of another new project. They have been established in various educational regions of KSA with the aim of meeting educational needs in the areas of digital content and the educational application of modern technologies. Each of these Centers is equipped with a unit for the production of digital interactive educational aids to support school curricula (Mirzajani et al., 2015).

In order to keep abreast of the technological development taking place in KSAHE, most of the country's universities have started to provide courses online and have established a special center or deanship that specialises in providing distance and e-learning courses online. KAU was one of the first Saudi universities to establish a deanship of e-learning and distance education in 2006, followed by KFU in 2010. Additionally, the EU established the Electronic Learning and Distance Learning Deanship in 2016 (Al-Asmar & Khan, 2014).

The remit of the EU was to assist both tutors and students and improve the quality of the learning process through e-learning, allowing the learner to choose the place and time to learn, and to help tutors to provide scientific content through information technology and modern communication (The EU Website, 2018). Moreover, the Deanship of Electronic Learning and Distance Learning established more than a hundred smart classrooms distributed across various colleges in campus buildings and university branches at Al Namas, Tathlath, and Balqarn. The Deanship also organised a training programme on the effective use

of smart classrooms in cooperation with the university's Deanship of Skills Development.

2.8.1 King Abdullah bin Abdul-Aziz Education Development Project (Tatweer)

The government has recently launched a National Project (Tatweer) focused on raising the quality of education, teacher requalification, curriculum development, school systems, learner needs, ensuring that students acquire twenty-first-century skills, and enhancing the school environment to promote learning, while preserving the values and principles of Saudi society (Hakami, 2010). '*Tatweer'* is an Arabic term meaning 'reform', and the aim of the Project is to:

> "Make students proficient in computer skills and further promote the use of computers as an educational technology. This program will encourage young Saudi students to acquire better communication skills and learn to be more flexible and innovative, as well as teaching environmental literacy" (Chicago forum: Private sector to help reform Saudi education system, 2012, p. 8)

Tatweer decentralises the Saudi education system by giving more authority to education directorates and schools. The Project is independent of the MoE and is directly supervised by and reports to the King, which gives it a strong authority. Furthermore, this Project has six objectives:

1. To develop students' skills using modern educational technology by preparing them in an effective manner for the future.
2. To improve teachers' potential and training them to employ modern technology in all educational activities.
3. To enhance the school environment to promote learning.
4. To take care of students who are distinguished in the use of information technology, training them and sending them to international universities to improve the outcome of the educational process.
5. To encourage students and tutors to develop information technology and provide them with all the means of success by localising the advanced IT industry in KSA.

6. To extend school services in partnership with the wider community (Hakami, 2010, p. 12).

The *Tatweer* Project is aimed at integrating ICT use in education and providing training courses for lecturers and students in the use of ICT technology in education. Moreover, it aims to develop skills and encourage creativity and analytical thinking (Tatweer, 2012). Sait et al. (2007) highlighted that this project extends education beyond the traditional school boundaries and increases students' use of technology.

2.8.2 The National Center for E-Learning and Distance Learning (NCeL)

The NCeL was established in 2006 to provide technical support for the development of e-learning content as well as the necessary tools and means. The NCeL is one of the recent MoHE projects designed to facilitate the collaborative efforts of universities toward utilising current distance education and electronic learning applications. It has helped HE institutions to become optimum users of new technology. It also supports the development of courseware administration (MoHE, 1996). The Center supports the HE processes at both the administrative and pedagogical level. As a result, most universities have started applying e-learning in their systems, including King Saud, King Abdul Aziz, King Faisal, King Khalid, Baha, Taiba and Qassim Universities (NCeL, 2012).

More attention is being paid to e-learning by the MoE as a creative step towards the fulfilment of the country's mission to spread knowledge and information. Therefore, the Center has implemented a number of projects, such as MAKNAZ, the SDL and the PTQ (MoE, 2010; NCeL, 2012). MAKNAZ is a national repository for teaching materials. It was created to develop, archive, retrieve, reuse and share teaching materials and resources. Thus, high-quality digital curricula are ensured at universities with reduced cost (MoE, 2010; NCeL, 2012).

The SDL is another project created by the NCeL to enhance Saudi education generally, with the focus on e-learning and distance learning. It meets the needs and requirements of scientific research and enables competency and the

building of a knowledge society. It is currently the largest digital library in the Arab world (SDL, 2016). The main purpose of creating this library was to support e-learning in the tertiary education sector, thereby meeting the needs of both students and academic staff in the KSA. It has more than 310,000 digital books and receives the support of more than 300 global publishers (Saudi Digital Library, 2016).

PTQ is another project being carried out by the NCeL which aims to provide e-learning training to the academic and technical staff in Saudi universities. Its training courses range from simple awareness raising and basic skills development to more advanced and professional programmes (NCeL, 2012). In 2010, PTQ offered 22 face-to-face training programmes for 410 academic staff from Saudi universities. It focused on subjects including e-learning tools, Course Lab, PowerPoint, online exams, Articulate and mobile learning. PTQ also offered some online training programmes, such as Web 2.0 (NCeL, 2012).

Another recent achievement in the domain of online learning is the launching of the SEU in 2011. This was viewed as a step forward in the country's vision of online learning and distance education (King Abdul Aziz City for Science and Technology Report, 2014). The SEU is the only Saudi university specialised in distance education that awards bachelor's degrees to its graduates. The outputs of the SEU are characterised by the requirements of the labour market in a form suitable to Saudi society in general (Al-Asmari & Khan, 2014). It appears that the use of technology and online learning applications by Saudi teachers is still in its early stages.

The NCeL has launched a competition for e-learning which is open to all Saudi universities and their staff called the Excellence Award for e-learning in University. This initiative aims to raise awareness of excellence in e-learning in the KSA. Moreover, it sets the standards for excellence and innovation in e-learning applications and promotes initiatives that contribute to the enrichment of e-learning in universities. It is also going to publish what it considers to be the best practices in the areas of e-learning (Alahmari, 2017).

Furthermore, most universities in KSA, such as KSU, KAU, KKU, Taiba, Qassim, Al-Baha, and Madinah Islamic Universities, have significantly increased their

focus on e-learning, replacing much of the current curriculum with e-learning content (Al-Asmari & Khan, 2014). These universities have formal agreements with the NCeDL to introduce e-learning schemes into their curricula. By applying e-learning systems in Saudi education, universities aim to provide their students with 21st-century education by helping them align, collaborate, engage and innovate through e-learning initiatives, while augmenting their educational experiences (Al-Asmari & Khan, 2014).

2.9 **The Background of the EU**

The EU is in the southern region of the KSA. Its name derives from Bisha city, one of the oldest cities in the Arabian Peninsula and Asir Region. In April 2014, the Custodian of the Two Holy Mosques, King Abdullah bin Abdul-Aziz Al-Saud, ordered the conversion of the KKU branch in Bisha and neighbouring provinces into an independent university. Based on the HE Council's Resolution 72, this new university was named the 'EU'. The EU is a public university that obtains its funds from the government, represented by the MoE.

Located in the southern region and spanning an estimated area of 10 million square meters, the EU is one of the newest universities in the country. The University has almost 1,338 employees, 1,200 of whom are tutors, who, according to a recent report published by the EU Statistics Center database 2016, come from the KSA, Africa (Egypt, Sudan and Mauritania), the Middle East (Jordan, Syria and Yemen) and Asia. Subjects are taught in both Arabic and English, the latter being the medium of communication in departments like English and medical sciences. This diversity enriches the educational environment and integrates resources. Educating in excess of 16,000 students, the EU consists of 20 colleges, 12 of which are on campus and 8 are off campus.

HE began in the EU when the MoE created a Medium College for Teachers, which subsequently evolved into the Teachers' College in 1991. The Medium College prepares many teachers in several disciplines and academic departments, including Qur'anic studies, Arabic language, mathematics, Islamic studies, sciences, physical education, computer science, art education and English. The aim of the College was to train people to teach in elementary schools. The MoE decided in 2003 to establish a community college in the EU under the supervision

of KKU, the closest university in the region at that time, to offer diplomas and meet the society's needs in terms of academic disciplines.

Four years later, in 2007, KKU established the College of Arts and Sciences at the EU, which includes a range of departments, such as English, mathematics, physics, biology, chemistry, medical sciences and computer science. In order to organise and improve the system of HE in the country, a decision was taken by The HE Council to annex the Teachers' College to KKU in 2008. Consequently, KKU began managing all of the colleges for boys and girls in the EU and its provinces (Balgarn and Tathleeth). Two years later, in 2010, a resolution to establish the faculties of medicine and engineering was issued by KKU.

2.10 **Saudi Arabia's Vision 2030**

Saudi Arabia's Vision 2030 project has recently been created as a roadmap for developmental and economic activity to establish the KSA in a leading position in all fields. As part of the vision, in its first year (2016), the National Transformation Programme 2020 was launched across government organisations functioning in the development and economic sectors (KSA Vision 2030, 2016). The project aims to attract foreign talent and retain Saudi minds and provide for their needs, all of which, it is hoped, will contribute to economic development and attract more foreign investment to the country.

The KSA has entered a new era of progress and prosperity since the launch of Vision 2030 in 2016 and the National Transformation Programme (NTP) 2020. The plan is to diversify the country's economy by reducing dependency on oil, boosting foreign investment, and restructuring the health, education, and tourism sectors.

To this end, through the MoE, Vision 2030 aims to improve and reform the educational regulations and prepare modern curricula focused on rigorous standards of literacy, numeracy, and character development. The project will be undertaken in close partnership with the private sector to ensure HE outcomes are in line with the requirements of the job market (Patalong, 2016). Therefore, the MoE established eight strategic objectives in line with 'KSA's Vision 2030', as follows:

1. Improve curricula and teaching methods.
2. Improve the learning environment to stimulate creativity and innovation.
3. Improve recruitment, training, and development of teachers.
4. Provide education services for all student levels.
5. Improve students' values and core skills.
6. Help address national development requirements and labour market demands by enhancing the educational system.
7. Improve the educational system's financial efficiency and develop creative financing methods.
8. Increase private sector participation in the education sector (KSA Vision 2030, 2016, p. 60).

2.11 **Conclusion**

The current chapter has presented the history of Saudi Arabian education policies along with an overview of the country's current education system. A detailed account was provided of KSA's location, geographical area, population, basic resources, development and education system. The growth in the use of Internet and e-learning in the Saudi education system were also discussed. This was followed by a discussion of the King Abdullah bin Abdul-Aziz Education Development Project (*Tatweer*), the NCeL and an overview of a number of projects implemented by the Center, such as JUSUR, MAKNAZ, the SDL, SANEED and the PTQ.

Due to the context of HE in the KSA, described above, and the utilisation of e-learning, the KSA government is placing increased importance on e-learning in education in general, and in HE in particular. The government is seeking to improve and develop the current educational system to promote the skills needed in modern society and for employment. Most of the KSA population (60%) consists of young people who rapidly adopt modern technology. Therefore, Saudis are becoming the most 'online' individuals in the world when it comes to SM use. In light of this fact, the present research could potentially support the policy aims in relation to HE. Furthermore, it could also encourage students and tutors to use the innovative technology to overcome the problems associated with population growth and extend the informal use of these technologies among the youth. Adopting new technologies as e-learning tools in HE is probably

inevitable; it is hoped that introducing these tools into HE pedagogy will improve the quality of teaching and learning in a cost-effective manner, however there are various concerns which must be addressed.

In the next chapter, I will present a detailed review of the literature related to the use of SoMeLT, covering studies in both English and Arabic.

Chapter 3: Literature Review

3.1 Introduction

This research was designed to examine the present reality of SoMeLT use at the EU in Saudi Arabia through the lens of the experiences and viewpoints of university tutors and students. It also aims to uncover the factors that reportedly affect the use of SM to support learning. This chapter provides an overview of the most relevant studies on SMTs in higher education, in both the KSA and other countries.

In line with the research objectives of this study, there will be a focus on the reported use of SoMeLT in particular, and the perceptions of tutors and students (Section 3.4). However, since SoMeLT can only be understood in the context of the development of e-learning in universities, the literature review will begin there (Section 3.3). Finally, the chapter presents the theoretical framework that will guide the analysis of the research results (Section 3.5).

3.2 Literature Search Strategy

In reviewing the literature, I began by familiarising myself with books and academic articles on both e-learning and the use of SMTs for teaching and learning in general. I then focussed on resources, mainly web-based, specifically related to the role of e-learning and SMTs in higher education. In sifting through the literature, I prioritised academic texts and articles that addressed the main concerns of the present study, i.e. studies containing concrete experiences of the use of e-learning and SMTs in institutions of higher education, as well as the attitudes of tutors and students.

I attempted to be as comprehensive as possible in locating research studies relevant to the specific context of the KSA. While I found a number of articles, it was more challenging to find resources that described the use of social media tools in this EU, as there is no evidence of any studies having been carried out here previously. I also searched for sources that discussed the state of the integration of e-technology in Saudi higher education (Section 3.3.2), e-learning at the EU (Section 3.3.3) and social media use in Saudi higher education (Section 3.4.5).

In addition to being aware of studies carried out in the local Saudi setting, it was also essential to examine the international research literature on using social networking sites in higher educational teaching and learning. Therefore, I searched for and consulted studies conducted in other countries. These studies gave me a clear picture of the current use of SoMeLT by students and tutors in different institutions and national contexts across the whole world, especially those that have come a long way in this regard. This allowed me to have an idea of how the situation in Saudi Arabia in general, and at this EU specifically, compares in the global context. In addition, these studies were a source of good practices that could be transferred to an emerging university in the KSA.

As my main research questions required a combination of quantitative and qualitative data, I was especially interested in studies that used mixed methods to investigate SoMeLT. However, I did not rule out other studies that provided rich findings to support my research, even if they had used only quantitative or qualitative data. This general reading helped me to evaluate the quality and relevance of the studies I found.

I used Google Scholar and the library at the University of Glasgow to carry out searches, using keywords such as e-learning in higher education, social media use, social media in higher education, the role of social media in higher education, Web 2.0 technologies, and the use of technology in education. I also consulted databases such as JSTOR, Wiley Online Library, ERIC, SAGE, and Education Research Complete.

As a result, the literature I found and review in this chapter includes books, journal articles, government documents and academic theses. I also consulted the list of references of some of the resources I found which led me to other valuable texts and was instrumental in helping me to expand my literature review.

In examining the resources I found, I paid close attention to the summaries, abstracts and keywords, as these often gave an indication of their relevance to my research. After organising the sources that I decided to use, I started to read them carefully. I took copious notes, also writing down questions, my own opinions of the texts, and comments on the methodological approaches. This strategy helped me judge which sources I wanted to focus on in my review.

3.3 **E-learning Technology in Education**

One of the major developments in the learning environment since the late twentieth century has been the introduction of e-learning. This was made possible by the widespread accessibility of the World Wide Web and the ease of browsing its resources. E-learning technology facilitates the provision of training and education to students of diverse cultural backgrounds and at different educational levels. Educators in developed countries also see the potential of technology to provide opportunities to facilitate learning in HE institutions, through making course materials available and communicating with students outside of the classroom, for example.

Since the use of social media tools in teaching and learning falls within the larger trend of the integration of e-learning, the literature review begins with a discussion of e-learning, more specifically, its definition (Section 3.3.1), its integration into higher education in the KSA and at the EU specifically (Sections 3.3.2 and 3.3.3), and an overview of studies conducted both inside and outside the KSA (Section 3.3.4) related to student and tutor attitudes, perceptions and reported experiences with e-learning, in line with the overall topic of this research.

3.3.1 The Concept of E-learning

E-learning is the use of computer or mobile technology hardware and software, including the Internet and learning management systems, by academic staff or learners in order to achieve desired learning objectives (Morrison, 2003). More specifically, it is "... a set of synchronous and asynchronous instruction delivered to learners over technology" (Colvin & Mayer, 2008, p.10), and sets forth the integral role of software and online connectivity in the learning process today.

The term 'e-learning' first appeared in the early 1990s with the emergence of new technology, such as Blackboard and distance education (Morrison, 2003). Thereafter, it spread very quickly in parallel with the development of information technology. After its emergence, educational institutions across the world began to integrate e-learning in their classroom environments (Colvin & Mayer, 2008). It has since become one of the most widely used and embraced

learning tools and methods in the current age. Consequently, the educational landscape has been transformed for good.

E-learning takes into account both the individual needs of learners and the delivered content (Colvin & Mayer, 2008) and has the potential to offer a number of educational advantages. In general, it accommodates a wide diversity of needs; it allows the quick delivery of lessons (Morrison, 2003); it leads to better retention; it offers quick access to updated content; it has the potential to save time and money; and it supports a flexible teaching and learning environment (Palloff & Pratt, 2007). For students, it offers new and appealing possibilities to express oneself, participate in dialogic exchanges, obtain diverse forms of knowledge and experience different cultures. It also enables them to learn in a self-directed way and select their own venue, time and content, as well as the stages of their study (Garrison, 2011).

The adoption of e-learning has implications for the skills required in this new educational environment. According to Venkataraman and Sivakumar (2015), e-learning creates a strong impetus for teaching and learning new educational methods by students and tutors (p.14). In this regard, Clark & Mayer (2016) argue that e-learning supports professional development and the adoption of best practices that use technology and internet tools to enrich classroom activities (Clark & Mayer, 2016).

The acquisition of these new skills and the learning of new techniques allow teachers and educational institutions to cope with specific requirements without incurring any significant additional costs. For this reason, training for both tutors and students on the use of different software and e-learning tools and their application in the classroom is of extreme importance.

3.3.2 E-learning in Saudi Arabia

In parallel with the ever increasing integration of e-learning in higher education globally, policy makers and individual higher education institutions in Saudi Arabia have demonstrated an awareness of the rising significance of e-learning. Furthermore, they have made a commitment to the greater use of technology as an aid to making education in the country more accessible. To this end, the Ministry of Education in Saudi has placed online education at the heart of its

plan to improve the quality of education in the KSA. There have also been heavy investments in the fields of technological infrastructure, pedagogy and training (Alshathri and Male, 2015).

One important development was the creation of the National Centre for E-Learning and Distance Learning in 2008. The Centre was established by the Ministry of Education with the objective of aiding all higher education institutions in the country in their adoption of high-quality e-learning. Its remit includes conducting ongoing research in the area, evaluating e-learning projects, establishing e-learning principles, organising workshops and conferences, and creating strong connections with other international pioneers in the field (NCeLDL, 2012).

In his work, Aljaber (2018) provides a historical overview of the development and evolution of e-learning at universities such as King Saud University, King Faisal University, King Abdulaziz University, and the Saudi Electronic University in the KSA. He also explores the challenges encountered and the strategies adopted by these institutions to support and develop e-learning. Aljaber argues that e-learning offers tutors and learners new ways to acquire knowledge and allows large numbers of students to access education.

Online education can also help overcome some of the challenges currently facing the country's educational system, such as the over-enrolment of students, the shortage of teaching staff, the growing demand for an educated workforce, as well as the challenges of providing quality education equitably to both male and female students (Albalawi, 2013; NCeLDL, 2008).

The KSA is a young country, with 60 percent of the population aged under 25 (Alrashidi, 2013). As a result, the number of students enrolled in HE institutions in the KSA has grown rapidly over the last few years. This has led to a shortage of colleges to accommodate the ever-increasing number of students, especially in emerging universities. In addition, there are not enough tutors to teach these students face-to-face. In response, many HE institutions have introduced and offered e-learning systems to deliver course content and enhance access to courses and subjects for both students and teachers (Binyamin et al., 2017).

The adoption of e-learning can also play a role in ensuring that both male and female university students can be equally served. At present, the Saudi

education system is segregated between male and female students. Female students cannot be seen by male faculty members, so separate colleges must be maintained for men and women. Thus, educational institutions have to provide curricula, tutors and staff for their male and female students separately.

The increasing demand created by the growing number of female students has led to a distinct lack of preparation of the tutors in women's sections and colleges. Moreover, according to Kutbi & Zhang (2016), the number of female tutors is significantly lower than the number of male tutors at all academic levels in the KSA. Clearly, a long-term solution would be to train and employ more female tutors. In the short term, one solution has been to use e-learning facilities in all universities and encourage tutors to introduce e-courses for their students in different faculties. This and the relatively reasonable expenses of closed-circuit TV (used to allow women to virtually access lectures given by male tutors) combines to make e-learning a cost-efficient and culturally acceptable way to have male tutors teach female students (Al-Sarrani, 2010).

The introduction of e-learning has been transforming educational processes in the KSA causing it to shift from paper-based learning to interactive e-learning (Aljaber, 2018). However, the tutors in the KSA must equally transition from conventional methods of teaching toward embracing more constructive pedagogies that enable students to exploit the full benefits of e-learning (Almohaisen, 2007).

3.3.3 Current State of E-learning at the EU

The current study was conducted in a relatively young EU established in 2016. Nevertheless, it has been making a tremendous effort to provide its tutors and students with the latest educational technologies available globally. To begin with, a Deanship for E-learning and Distance Learning was established in 2015 with the aim of ensuring that all courses are online by 2021. The University is also planning to equip its lecture rooms with interactive whiteboards, data shows, e-podiums, Polycom video conferencing solutions and multimedia centres. These would ensure a comprehensive learning management system, virtual classrooms, digital collaboration, content authoring and capturing tools, as well as digital repository systems.

Moreover, each of the EU's colleges has established e-learning centres in which online tools are used to enhance the educational experiences of the students (Al-Masaud & Gawad, 2014). In addition, many colleges aim to provide video and audio recordings of physical lectures that allow interaction between tutors and students and digital capture of tutor PCs in addition to the use of whiteboards. Like other Saudi universities, the EU is also suffering from a shortage of university tutors as a result of the increasing number of students which had reached a total of 19,000 students in 2019.

As a researcher and lecturer at this University, I believe that the EU should also learn from the experiences of other Saudi and international universities to enable the optimal integration of e-learning in the education process. Exchange visits for faculty members and students could be arranged to acquaint them with successful e-learning programmes and courses offered at other institutions. The EU could also benefit from offering the training programmes which are provided for students and faculty members at these universities.

3.3.4 Using E-Learning Tools in Education: Perceptions of Tutors and Students

Some scholars, such as Alshehri (2010), would argue that e-learning is not merely a case of integrating technology or web applications; rather, it is also or even principally based on the attitudes, knowledge, and skills of all those involved. For this reason, a number of studies have focussed on these aspects. Liaw et al. (2007) conducted a survey to explore the attitudes of 30 Taiwanese instructors and 168 college students towards e-learning. They found that the more positive the attitude of instructors, the greater the behavioural intention to take part in e-learning. Regarding learners' attitudes, self-paced, teacher-led, and multimedia instruction were major factors contributing to their perception of e-learning as an effective learning tool.

Martin and Nunes (2016) carried out semi-structured interviews with 62 academics in Portuguese public HEIs to identify what they perceived as being the risks and enabling factors related to the adoption of e-learning. Their main recommendation was for HEIs to have a strategic approach to organisational learning that enhances trust; in this way, they were underlining the importance of perceptions and attitudes for successful e-learning.

The integration of e-learning involves the acquisition of technological knowledge by both tutors and students. In a discussion of technology education, Morrison-Love (2017) writes that "... it offers an authentic and invaluable range of skills, knowledge, capabilities, contexts and ways of thinking for learners in the 21st century" (p.23). However, the acquisition of these skills is also related to attitude.

Krishnakumar and Rajesh (2011) studied the attitudes of HE teachers in India towards e-learning. The study concluded that the teachers who had some knowledge of computers, blogs and Internet access had more positive attitudes towards e-learning than those who did not. Furthermore, a study conducted by Panda & Mishra (2007) among faculty members at the Indira Gandhi National Open University in India found that computer proficiency could not be transferred to learners until tutors adopted a positive attitude towards e-learning.

A number of studies have identified that educators and academics from different countries have a positive disposition towards using new technologies with students enrolled at university level. More specifically, many teachers reported that their students performed better with the employment of new technologies (Arkin, 2003; Bailenson et al., 2008; Barzegar et al., 2010). For example, teachers at the Iran Azad University of Qazvin felt that using new technologies stimulated students' curiosity, as they became motivated to uncover the secrets of these new tools. It also helped students discover skill-enhancing applications, motivated them to seek solutions to complicated tasks and improved their academic achievement (Barzegar et al., 2010).

Moreover, a study conducted in the USA by Bailenson et al. (2008) found that many teachers at Stanford University felt that lessons were enhanced by the integration of web-based materials, such as images, videos and sound recordings that can be saved on the desktop and accessed by the students when needed. They also felt that the adoption of e-learning and distance learning improved the learning process. For example, teachers were able to provide individualised responses in this modified environment, while disciplinary issues, such as students sleeping or eating during lessons, were also obviated through distance-learning (Bailenson et al., 2008).

Despite the significant role that computer technology and digital resources may play in facilitating the educational process, Cox (2013) argues that there are many teachers who oppose these technologies for a number of reasons. To begin with, they are concerned that this technology may only be accessible to wealthy students due to high adoption costs. In addition, making use of these technological innovations requires that teachers are trained well to fully understand their functionality. Finally, they feared that technology could distract students from attending classroom lectures and managing their time wisely.

Additionally, Islam et al. (2015) argue that there are a number of challenges, including logistical issues, which prevent e-learning from spreading rapidly. These challenges relate to learning styles, cultural beliefs, the lack of infrastructural support, time constraints, poor technical and administrative support, technical training, and time management. For example, in the study conducted by Panda & Mishra (2007) mentioned above, the most significant barriers perceived by the faculty included poor internet access by students and the lack of training on e-learning, followed by institutional policy on and instructional design for e-learning.

I have, so far, focussed on studies conducted outside the KSA; however, a number of studies have been carried out in the KSA that have explored the experiences and attitudes of tutors and students towards the integration of e-learning in HEIs. In this section, I will start by discussing the studies on attitudes, followed by a presentation of research in which tutors and students have reported on their experiences with e-learning and its effects on teaching and learning. I will end with studies that present some of the factors that may be affecting attitudes, including the main perceived obstacles.

In numerous studies conducted at HEIs in Saudi Arabia, both tutors and students alike have predominantly expressed positive attitudes towards e-learning. In a survey carried out by Alshathri and Male (2015) with academic staff in Saudi Arabian universities, the participants had highly positive attitudes towards e-learning. They believed that using technology in teaching is enjoyable and stimulating which, in turn, drives their motivation to continue to use it.

In a recent study at King Saud bin Abdulaziz University for Health Sciences, carried out by Algahtani et al. (2020) utilised a closed-ended questionnaire to assess the perception of students about e-learning as a teaching modality. 61.8% of the students had heard of e-learning. In terms of attitudes, 60% of the students believed that e-learning has the potential to expand educational opportunities; 73% agreed that cell phones can be used as a teaching modality, whereas 52.2% (n = 202) opined that cell phones can play a role in stimulating critical thinking among medical students.

Saudi students studying abroad had a similar positive orientation towards e-learning. In a 2011 study, Alanazy used an online survey to explore the attitudes, beliefs and preferences of Saudi students in the United States toward coeducational online cooperative learning. He found that both male and female students believed that the introduction of co-educational online tools in the KSA would be beneficial to facilitate and enhance education and make it accessible to the digital generation.

In universities where e-learning is being implemented in one form or another, students and tutors have been reporting educational benefits. Alkhalaf, Drew and Alhussain (2012) have found that e-learning systems increase students' abilities to interpret information accurately and understand relevant activities in their departments. They also allow students access to basic information through lectures, communication tools, virtual classes, search websites and chat sites. This, in turn, helps students make important decisions from an informed position, thus increasing the overall productivity of the process of teaching and learning.

Some studies have tried to determine the factors that play in a role in shaping attitudes and perceptions of e-learning. For example, Ziyadah (2012) conducted a mixed methods study on attitudes among female faculty, administrators, and graduate assistants in five government universities across Saudi Arabia. The main factors which affected the attitudes of female Saudi students' towards participating in online learning included the personal motivation to use technology, the graduate training received, reduced teaching load, release time, the opportunity to improve teaching, greater course flexibility for students, the ability to reach new audiences that are unable to attend classes on campus, and opportunities for scholarly pursuits.

The aforementioned study by Islam et al. (2015) cited concerns about time management. However, in several other studies, staff and students have reported that e-learning saves them time (Alshehri, 2005; Al-Sarrani, 2010; Al-Nuaim, 2012; Almulhem, 2014; Albalawi, 2013; Alshathri and Male, 2015; Aljaber, 2018). Almalki's (2011) conducted a study with nine instructors and 504 students from Umm Al-Qura University in the KSA to examine the use of blended learning in higher education. The findings indicate that instructors saved the amount of lecture time devoted to information dissemination while increasing the time given to interacting with students, thus allowing them to use their lecture time more effectively.

Despite research results that have found positive attitudes towards and positive experiences of e-learning, studies have also documented some of the challenges perceived by tutors and students towards fuller integration of e-learning. Primarily, there remains a big gap between the current generation's needs and practices, tutors' attitudes and the traditional equipment of some institutions in the KSA (Alshehri, 2005; Al-Kahtani, 2007; Al-Sarrani, 2010; Al-Nuaim, 2012; Almulhem, 2014; Albalawi, 2013; Alhazzani, 2013; Alshathri and Male, 2015; Aljaber, 2018).

Some of these challenges and obstacles may be technical. For instance, Colbran and Al-Ghreimil (2013) used open-ended questions to explore academics' views on the positive and negative aspects of the use of e-learning tools in seven Saudi Arabian universities. Any negative responses related mainly to technical and pedagogical problems, such as the risk of viruses affecting data, fear of data loss due to technical issues, systems failures on past occasions and poor maintenance of equipment. In his study, Alshehri (2010) found that the biggest challenge in implementing successful e-learning is the need to develop the required knowledge and skills in learners and tutors. In other cases, however, the obstacles may be attitudinal.

In one study, Alshehri (2010) explored the views of 30 senior academicians involved in e-learning during their attendance at a two-week course as he to examine the current state, possible future developments and challenges of e-learning in the KSA. The findings led him to conclude that e-learning can be only be effectively implemented if tutors and students adopt a positive attitude towards it. In addition, in a survey of perceptions about e-learning among

students at a Saudi Arabian university, Chanchary & Islam (2011) found that only 54% of students expressed an interest in attending courses over the Internet with learners of other universities, despite being equipped with personal computers and a steady Internet connection. The students expressed their apprehension of communicating with students from different countries around the world due to their weakness in the English language and cultural prohibitions.

Some of the studies discussed above have shown that there is a growing positive perception of e-learning in the KSA, which is a good omen. However, the level of acceptance remains relatively low, although constant efforts are being made to expand e-learning facilities. Therefore, there is a need to increase the level of acceptance of e-learning, both among students and teachers. This can be achieved by establishing well-developed e-learning facilities in Saudi educational institutions that address some of the issues mentioned in the study by Colbran and Al-Ghreimil (2013).

As a researcher, I would also argue that with proper training and guidance, it is possible to motivate students to overcome a lack of technological skills, language barriers and cultural embargo and get more involved in online based learning methods. This is supported by Alshehri (2005) who found that a lack of knowledge to use modern technologies and computers' skills are the main obstacle limiting the implementation of online courses at the Institute of Public Administration in Saudi Arabia.

3.4 **SMTs Usage in Education**

SMTs have become a critical part of young people's lives and are utilised in a diversity of ways by different users. For some, SM might just be a way to stay connected with family, friends, and relatives; for others, it might be a means of entertainment, a platform for the promotion of a business or a learning space (Carr & Hayes, 2015). This research, however, is interested in the potential of SoMeLT to support learning among young people and seeks to explore the factors and barriers affecting the adoption of such tools at the EU in the KSA, with a special focus on the perceptions of Saudi higher education tutors and students.

SMTs are currently a prominent mode of communication and learning where people can build communities to share ideas, exchange knowledge and collaborate with each other (Dickie & Meier, 2015). SMTs allow people to connect with others who have similar interests and backgrounds, share different types of media such as images and video, and search for information. HEIs can benefit from the use of SMTs to enhance the level of services they provide in general as well as educational services in particular. However, there are many obstacles that need to be overcome in order to maximise the educational benefit of using these networks. These include the lack of technological skills or support, the existence of online abuse, SM's potential to distract, and concerns over privacy issues (Al-Khalifa & Garcia, 2013).

The use of modern technologies in education is still in its early stages in some countries. With continuous and rapid technological development, many HE institutions find that they need to catch up in terms of using SM applications (Selwyn, 2012). Moreover, although there may be some disadvantages and obstacles associated with their integration, there are also a number of potential roles which SMTs could play to support and enhance HE. These include providing a means for scholars and students to collaborate and share ideas and opinions; providing learners with access to different knowledge sources and cultures; enhancing the learning abilities of tutors and students; and increasing civic awareness and youth engagement in public affairs (Al-Khalifa and Garcia, 2013, pp.66-67).

In this section I will begin by presenting the definition of SM that I have adopted for this study, as well as a brief history of the emergence of SM (Section 3.4.1). The sections that follow provide an overview of studies that have examined the use of SM in higher education (Section 3.4.2), as well as the attitudes of tutors (Section 3.4.3) and students (Section 3.4.4) to social media use in higher education. The final two sections will focus on the Saudi context, examining first SM use in Saudi Arabia (Section 3.4.5) and then its specific use in higher education (Section 3.4.6).

3.4.1 The History and Definition of Social Media (SM)

SM is a twenty-first century term used to broadly define a variety of technologies that emphasise the social aspects of the Internet as a site of

communication and collaboration among users (Dabbagh & Reo, 2011, p.12). These sites allow users to create content, collaborate, exchange knowledge, communicate with peers, share images and other media, express themselves, including through providing comments on existing content, acquire information, and build capacities. SM has contributed to some of the major changes in modern day living. People now have many different ways to interact, communicate, and even think (Weisgerber & Butler, 2010).

SMTs began to appear in the late 1990's and their use has been growing at an exponential rate since then. By the year 2000, around 100 million people had access to the Internet, and it became quite common for people to be socially engaged online, utilising chat rooms to make friends, date, and discuss topics of mutual interest. With the availability of high-speed internet, SM began to explode in popularity. Tools such as Myspace and LinkedIn gained prominence in the early 2000s, and Photobucket facilitated online photo sharing.

In 2005, YouTube was founded, thus creating an entirely new way for people to communicate and participate with each other through video-creation and sharing. By 2006, both Facebook and Twitter became available to users throughout the world. To this day, Facebook and Twitter remain as two of the most popular social networking sites available on the Internet.

There are many existing definitions of social media (Boyd & Ellison, 2007; Kietzmann, 2012; Casey & Wells, 2015; Chawinga, 2017). Kietzmann (2012) define SM as a set of Internet-based applications built on the technological foundations of Web 2.0 that involves several online tools through which learners can create, participate, present their perspectives and experiences and modify user-generated content (p.12). Likewise, Boyd and Ellison (2007) define SM as a set of applications that strengthen relationships within a group. These networks increase the level of social cooperation, the exchange of information, and the integration of information in a web environment.

The different definitions all agree upon a certain set of characteristics which make SM suitable for educational purposes. The researcher's definition of this group of characteristics is summarised as:

> SM may act in an electronic educational environment which allows students to create and be exposed to educational content

in total freedom. The activities of students on the network are non-specific to time or place. SM communication can help users in self-learning through writing and interacting with others.

3.4.2 SM Tools in HE

This section discusses the use of SoMeLT through an overview of recent studies conducted internationally, as well as in an Arab and Saudi Arabian context. At first, I will present studies that focus on social media use as an e-learning tool in general before moving on to studies that focus on specific tools, more specifically, Facebook, YouTube, Twitter, WhatsApp and Wikipedia.

SM has become increasingly popular as a learning and teaching resource in HE worldwide, providing students with increased opportunities for educational engagement. The wide range of SMTs on offer is generally easy to access and simple to utilise (Ng'ambi & Lombe, 2012; Dickie & Meier, 2015; Ali et al., 2017). As a result, SM is used in HE for many purposes, including advising students and internal use among tutors and teaching. HE institutions are also creating opportunities for students to utilise SMTs and integrate them into their education such as YouTube, Wikipedia, Twitter, and Facebook (Saha & Karpinski, 2018). This development has the potential to enhance students' sense of community and promote classroom communities of practice (Sarapin & Morris, 2015).

Some studies have examined the extent of SoMeLT use in universities. One study by Moran et al. (2011) investigated the use of SM by university and college tutors in the US and found that almost 80 percent of tutors in the study reported that they used SM for some aspects of the courses they teach. Moreover, nearly one-half used other forms of SM in addition to online video. Most tutors reported that they believed that SMTs, especially videos, podcasts and wikis, were valuable tools for teaching. They also felt that these tools are beneficial, as they enable rich and flexible collaborations with positive psychological consequences for their participants, and powerful competitive ones for their institutions. Furthermore, a majority reported that SM sites could be valuable tools for collaborative learning.

However, another study by Dickie and Meier (2015) found that most HE institutions in the UK and their educators at the time of the study seemed

hesitant to communicate via SM or use them as educational tools. This is also the case in other countries. According to Al-Rahmi et al. (2015), many HE institutions in Malaysia still depend on traditional learning systems which do not use the full capacity of SM while a study conducted at a Turkish university, found that SM is also not fully employed there (Kivunja (2015). This is due, among other reasons, to the fact that the use of SM as a teaching and communication tool requires additional effort and an adequate level of computer literacy (Kivunja, 2015).

This reluctance on behalf of tutors is unfortunate, as SM offers several alternative communication channels which students seem to rely on a great deal. While many of today's students are highly proficient in the use of digital media (Bodle, 2011), the competency of tutors is not at the same level. What is then required is the improvement of these skills and a more systematic approach to teacher training. This appears to be equally the case in regions as different as the Scandinavian countries and the Arab world (Krumsvik, 2014; Kivunja, 2015; Alshehri, 2020).

Other studies have examined the results of the integration of SMTs at HEI where they are being used as educational tools. Most of these studies have found several benefits associated with SMT use in HE (e.g. Alufi & Fulton, 2014; Dabbagh and Kitsantas, 2013; Hamid et al., 2015, Alshehri & Lally, 2019). Many of these benefits relate to the 'social' nature of social media, such as its improvement of interaction among students themselves, as well as with tutors and its promotion of collaboration and learning communities. In turn, these benefits affect the learning experience, increasing student engagement and improving the mentoring they receive (Davis et al., 2012; Sobaih & Moustafa, 2016).

A number of studies have examined the reported effect of SM on student-tutor interaction. One study, conducted by Roopchund et al. (2019) at the Université des Mascareignes in Mauritius, found that SMTs facilitate both direct and indirect interaction between and among educators and students. This has resulted in an increase in learner engagement levels and the development of cognitive learning skills, including reflection and critical thinking.

In other research, Dunn (2013) studied the impact of using social media networks on students' experiences at Glasgow University. One of the findings was that the students believed that their interactions with teachers had improved as a result of social media use. Almost all of the students also stated that using SMTs led to improved learning experiences.

In a similar vein, Sugimoto et al. (2017) found that relationships formed via SMTs between university tutors and students open up new avenues of communication and result in an enhanced learning environment. Sobaih and Moustafa (2016) add that using SMTs such as Facebook builds strong relationships among tutors and students and helps develop self-confidence. It also enhances direct communication, thereby increasing the speed of feedback whilst supporting students and facilitating learning among peers.

This latter point, how social media facilitates learning among peers, has been the focus of studies on collaborative learning. Sarwar et al. (2019) conducted a quantitative study with 360 full-time students enrolled in undergraduate and postgraduate courses at the University and Technology Center of China to study the use of SMTs for cooperative learning. The findings suggest that YouTube, Twitter, Facebook, WhatsApp, Wikipedia, and Skype can serve as dynamic tools to accelerate the development of learning environments by encouraging collaboration and communication among students in which they discuss topics, share thoughts, support suggestions, and implement recommendations for topics related to their curriculum. Thereby, they enhanced their behaviour, knowledge, critical thinking, and learning performance.

In a qualitative study among faculties in the discipline of public administration in the United States, Chen and Bryer (2012) emphasised the value of using SM to build communities and collaborate. This result was consistent with the findings of another study by Mondahl & Razmerita (2014). The two researchers conducted a mixed methods study to discuss the experiences and challenges of using a SM-enhanced collaborative learning environment in the teaching of foreign languages. The case-study findings indicate that collaborative learning processes embedded in the SM enhanced learning platform are supportive and conducive to successful problem-solving.

Al-Rahmi et al. (2015) also found that "... social media affects positively and significantly collaborative learning with interaction with peers, interaction with supervisor, engagement, perceived ease of use, and perceived usefulness" (p. 210). From my academic experience as a technology lecturer and from my practical experience of studying abroad English as a second language, I totally agree that these SMTs could be a beneficial way to maintain communication with native speakers of other languages, regardless of where one is located.

All these effects of SMTs have implications for student engagement and independence. Researchers such as Lederer (2012), Saqr et al. (2018) and Alshehri (2020) have argued that students can use these media on mobile devices to manage their own learning more effectively, and thus become more independent, lifelong learners. Furthermore, Del Valle et al. (2017) emphasise the value of using SoMeLT to promote active participation in the learning process and information dissemination. Tutors and students could also use some of these tools to engage in discussions with experts in different fields.

For shy learners who may be hesitant to speak inside classrooms, Misman et al. (2019) believe that SMTs may provide them an opportunity and a platform to contribute and express their ideas freely. However, Alshehri (2019) found that other tutors have concerns about SMTs usage among these students as SM may increase student isolation, loneliness, and distraction, which in turn create major obstacles to learning.

Finally, these tools appear to have benefits at both the cognitive and emotional level. They aid in developing critical thinking skills, the acquisition of new knowledge and the provision of students with personal and emotional support, ultimately leading to increased self-confidence (Mondahl & Razmerita, 2014; Dickie and Meier, 2015; Saqr et al., 2018). In addition, the integration of SMTs in HE is valuable for improving academic performance through collaborative learning (Al-Rahmi et al., 2015), where learners and tutors use the SMTs that are appealing to them (Roopchund et al., 2019).

The label of social media includes a wide variety of tools. New SMTs are constantly emerging and can be categorised into different groups. Some of the most popular ones to emerge over the last decade, according to Dickie and Meier (2015), are Facebook, Twitter, YouTube, Skype, Wikipedia and WhatsApp, all of

which have all helped users create online identities and enabled them to interact with their existing contacts as well as create new social relationships with others. After discussing the literature pertinent to the use of SoMeLT in general, in the remainder of this chapter I will discuss the use of Facebook, WhatsApp, YouTube, Twitter, and Wikipedia respectively, as e-learning tools, through presenting relevant studies carried out at the international and Saudi Arabian level.

Facebook

Facebook is a popular and free SMT that is available in 37 different languages. It allows registered users to create profiles, upload photos and video, send messages and keep in touch with friends, family and colleagues. Individuals with common interests may create Facebook pages or groups, and these might include university students, educators and scholars. These spaces allow their members to come together around a common cause, issue or activity in order to organise, design objectives, discuss issues and share relevant content. Not all studies, however, have indicated the successful integration of Facebook into the classroom.

Dickie and Meier (2015) demonstrate the important role that Facebook can play in classrooms. If SMTs are utilised to the best advantage, they may meet the needs of students through simplifying and facilitating access to correct and relevant information, including that discussed during the lectures. SM can expand students' knowledge and improve their educational experience without losing the traditional student/teacher relationship. Their study concludes that "... the evidence presented reinforces the view that such networks have untapped potential which is capable of making a significant contribution to the learning and teaching process" (Dickie & Meier, 2015, p.1).

Another study conducted by Foogooa et al. (2017) supported this view. An intervention was carried out in which Facebook was used in conjunction with a Learning Management System (LMS) to improve engagement among students in an engineering course. A closed Facebook group was created by the lecturer and used to interact with the class. In the online survey carried out with the students at the end of the class, they reported that the use of Facebook helped them

develop judgment and time-management skills, and enhanced collaboration, professional development, and supportive learning communities.

However, another study found resistance to the use of Facebook from some tutors. Fewkes and McCabe's (2012) mixed method study of 63 students in Canada found that the majority of their teachers did not support the use of Facebook for academic purposes. Only 27 percent indicated that at least one instructor in different classes, such as mathematics, the arts, English and technological education, had found a way to include Facebook in their lessons. This could be explained by the findings of two studies that showed that teachers in Canada and the USA felt they had not received adequate support on how to use Facebook as an e-learning tool (Fewskes & McCabe, 2013; Mourlam, 2013).

WhatsApp

The introduction of this app not only made mobile SM popular but has resulted in mobile learning becoming more prevalent among students. WhatsApp Messenger is the name of a mobile messaging application that allows android, iPhone, Windows Phone, Mac or Windows PC users to exchange text, images, video and audio messages for free. WhatsApp allows individuals, including university students and tutors, to share up-to-date information with other members of WhatsApp groups of which they are members.

WhatsApp can be used to provide access to educational resources, deliver teaching as well as promote communication and collaboration among students and tutors. Chipunza (2013) conducted a study to investigate the potential of WhatsApp to support fourth year human resource management students in gaining access to collectively generated educational resources at a South African University. The results found that WhatsApp enhanced accessibility, encouraged cooperation and intensified students' motivation to take an active part in academic assignments, thus promoting meaningful context-free learning.

Likewise, a study conducted among students in Spain examined the use of WhatsApp in English language studies to implement the reading comprehension reinforcement method. The students reported a rise in motivation and a greater enthusiasm for reading in a foreign language (Plana et al., 2013). In both these cases, WhatsApp use had clear educational benefits.

Studies that have delved into students' educational experiences with WhatsApp have found the app to be popular among them. Church & Oliveira (2013) investigated the perceptions and motives of WhatsApp use via an interview study and a large-scale survey. They interviewed 9 active WhatsApp learners, 5 men and 4 women, all living in Spain. The students felt that WhatsApp made the learning process easier, favoured problem-solving, and helped in resolving learning difficulties through the presentation of suitable content to the students.

Another study carried out by Mahdi (2019) on students of the College of Education at KFU concluded that students found learning through WhatsApp interesting, educationally useful and enjoyable. Moreover, they learned collaboratively through sharing audio lessons as well as sending documents and video content. In addition, the students felt that WhatsApp made it easier to communicate with their teachers and peers.

YouTube

YouTube is a Web 2.0 platform of distributed video sharing service widely used by students, universities and scholars to watch videos posted by other users or upload videos of their own. YouTube appears to be among the most widely used SMT. An investigation conducted by Zakharov et al. (2017) into tutor use of YouTube at Purdue University found that tutors considered YouTube to be a vital instrument for educating and learning. It is also the most frequently used SMT in the classroom at Jacksonville University in the USA (Jill et al. 2019). Showing videos on YouTube served to engage students in the subject matter and allowed different perspectives to be presented, including those that may not have been otherwise considered.

Many researchers have argued for the educational benefits to students of using YouTube in the university classroom. Burgess & Green (2018) claim that students' participation in YouTube improved their productivity and increased their creativity. According to Jones and Cuthrell (2011), YouTube "... is an innovative technology tool" (p.83) that all educators can commit to integrating into their classrooms in order to engage their digital learners. However, Jones and Cuthrell (2011) also warn users that the use of YouTube videos in the classroom needs to be undertaken with caution. Teachers need to be careful and critical about the

type and content of videos they choose to share in class to avoid exposing students to inaccurate or irrelevant content.

Twitter

Another social networking platform that has been used successfully in the university classroom is Twitter. Twitter is a 'microblogging' system that allows you to send and receive short posts called tweets and follow other users. Tweets can include links to relevant websites and resources. Learners can choose to follow people and organisations with similar academic and personal interests to them (Gao et al., 2012). Twitter is a space that allows individuals to connect with others, create or share content, collaborate, and cultivate or sustain personal and professional relationships (Veletsianos, 2013).

Twitter has become increasingly popular with academics, students, policymakers and the general public. It is the social media platform of choice for many to follow the work of other experts in the same academic field (Kruskal & Carpenter, 2016), contribute to discussions, stay updated on the latest news and developments and share them with others instantly (Bista, 2015). Twitter also allows members to participate, to some extent, in events, for example, conferences that learners are unable to attend in person (Evans, 2014). Finally, students may seek feedback about lessons or topics while tutors and students may provide feedback to others (Veletsianos, 2013).

In relation to the latter, Imlawi et al. (2015) have advocated strongly for the employment of Twitter in the learning environment to communicate and get feedback from students and tutors as well as to tweet questions or comments they have about any topics related to their majors. They argue that it provides students with control and promotes reflection, self-set learning, and adaptability.

Since 2010, there has been a rise in empirical research that has tackled the use of Twitter as a tool in higher education (Carpenter & Kruskal, 2014; Kruskal & Carpenter, 2016; Alshehri, 2018; Alshehri & Lally, 2019; Dommett, 2019; Nochumson, 2020) although these studies remain relatively few in number. These studies, both quantitative and qualitative, have examined the use of Twitter as a tool for knowledge exchange through connecting with others, a way to locate educational resources, a tool to tweet homework and assignments, and

a space to share and engage in discussing interesting topics in a way that supports critical thinking, reading and writing skills.

Evans (2014) conducted a study to examine the use of Twitter for teaching. He encouraged 52 undergraduate students in Business and Management at a British university to use Twitter to communicate with their tutor and each other during a twelve-week course. The findings indicated a positive correlation between the amount of Twitter usage and student engagement in university-associated activities, including organising their social lives and sharing information. Finally, Twitter usage did not impact class attendance.

Although these findings are interesting, one limitation is that the participants were clearly already using Twitter as they were recruited via a tweeted survey. Therefore, examining other users who do not use Twitter may provide further rich information about the effectiveness of Twitter as a learning tool.

Wikipedia

Another SMT that has been used successfully in classrooms is Wikipedia. It is a free, open content online encyclopaedia created through the collaborative effort of a community of users. Knight and Pryke (2012) found that three-quarters of university tutors and students in the UK use Wikipedia as a source of background information for both teaching and learning purposes. In the United States, almost 90 percent of educators used Wikipedia in some fashion (Purcell et al. 2013).

In the same vein, Meseguer et al. (2015) conducted a study to examine the factors that influence the teaching use of Wikipedia in HE, through surveying 800 faculty members in various disciplines teaching at the Open University of Catalonia, Spain. They found a strong positive perception of the quality of the information provided by Wikipedia and the potential of using it as a knowledge source.

A number of studies have examined the educational effectiveness of using Wikipedia as a gigantic open repository of knowledge and a platform that facilitates collaboration in knowledge creation and dissemination (Knight and Pryke, 2012; Freire & Li, 2016; Zou, 2020). Most of these studies reported positive results which are driven by the public nature of Wikipedia, which allows

students to work collaboratively to create new content, improve writing skills, and observe the work of their peers (Huang et al., 2013 and Meseguer et al., 2015). According to Huang et al. (2013), Wikipedia supports reading and writing activities in a reciprocal and collaborative manner.

In another study, Brailas et al. (2015) found that participants use SMTs such as Wikipedia to complete their tasks, access information or edit articles. This allowed learners to take advantage of existing and constantly updated content or information that they can play a part in creating, which then leads to opportunities for growth, learning, and development.

However, there are also issues with Wikipedia use. Some studies have found that there is a general lack of understanding of how Wikipedia works, concerns over the accuracy and credibility of information posted on Wikipedia and a lack of institutional support to encourage staff and learners to use this rich information site as an e-learning tool. Moreover, there are prevailing negative attitudes towards collaborative knowledge produced outside academia, as well as a perceived widespread suspicion as to whether contributing to Wikipedia would be well received by one's peers (Brunet, 2013; Bayliss, 2013; Brailas et al., 2015).

To sum up, an increase in students' active engagement, better interaction with peers and tutors, collaboration and participation in a sense of community have been considered key benefits of SMT use in higher education. SMTs have the potential to be useful pedagogical tools and contribute towards effective and positive teaching and learning environments, although some of the above studies have identified concerns and issues.

From the perspective of both tutors and students, the following question needs to be asked: ‘What are the advantages of using these tools for learning, and do they have any concerns about utilising them in education?’ These queries and others will be the subject of the two questionnaires and interview questions intended to achieve the aims of this investigation. Before doing so, I will examine what some of the existing literature has found regarding the attitudes of both groups.

3.4.3 Tutors' Perceptions of Using SoMeLT

Ajzen (1991) defines perceptions as, "...the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question" (p.188). An overview of the literature on tutors' perceptions confirms that teachers have predominantly positive perceptions regarding the use of social media such as Facebook, Twitter, YouTube, and Wikipedia in their classrooms (Carpenter and Kruskal, 2014; Pew Research Centre, 2014; Asterhan & Rosenberg, 2015; Dickie and Meier, 2015; Ali et al., 2017; Saha & Karpinski, 2018; Roopchund et al., 2019; Mahdi, 2019; Jill et al. 2019).

In this section, I will be delving into the results of some of these studies. What will also emerge is that many tutors also report that they do not use modern technologies often to communicate and engage with their students (Alturise & Alojaiman, 2013; Habib et al., 2014; Kutbi& Zhang, 2016; Alshehri, 2019).

To begin with, some research is suggesting that modern technologies have become a part of the life of not just students but also their tutors. In 2013, the Pew Research Centre conducted a mixed methods study of 2,462 tutors in the U.S.A to determine how they used technology (Purcell et al., 2013). Almost all of the teachers reported that they had high speed Internet (97%) or owned a smart phone (94%). Furthermore, 97% watched videos on YouTube while 78% used social media sites like Facebook, LinkedIn, or Google+. Six out of ten teachers stated they used social media for personal use daily. Unfortunately, this study did not elaborate specifically on how these tutors used SMTs in their classrooms.

However, a study conducted by Valtonen et al. (2019) in Finland did address this specific issue. The researchers surveyed 437 technology teachers to determine what SMTs they used for personal and instructional purposes. This mixed methods study revealed that the participants preferred to use SMTs, such as YouTube, Twitter, and WhatsApp for instructional purposes, to support topics they explained.

They felt more comfortable with using these tools alongside face to face teaching to facilitate the acquisition of knowledge, support collaboration, and encourage thinking skills. However, these results suggest that the actual number of SMTs actively used for teaching is relatively small. Furthermore, while this study provided valuable information on preferences related to SMT in teaching, a

more in-depth qualitative inquiry focussing on personal, professional, and instructional use is also required.

Another study on teachers' attitudes toward using SoMeLT in Utrecht University, Netherlands also found positive results (Piotrowski, 2015; Akbari et al., 2016). This is line with many other studies that have found similar positive attitudes among tutors, some of which are discussed below. As Sarapin and Morris (2015) argue, changing attitudes towards new technology-based pedagogies are due to the evidence that these pedagogies are providing students with the main skills they need in their lives, whether for their university studies or the workplace as well as enhancing interaction among peers and between tutors and students.

Capo and Orellana (2011) found that 60 percent of their 137-participant sample from a specific school region of Miami-Dade County Public Schools felt that SM would improve student-teacher interactions. Overall, the teachers showed positive attitudes toward using SM as an educational tool to establish a collaborative classroom culture that incorporates elements of 21st-century teaching and learning.

In the same vein, from their study, Sarapin and Morris (2015) indicated that tutors perceived that their interaction with students via Facebook affected their relationships with students positively, in terms of professionalism, credibility, approachability and mutual connectedness. Positive feedback from tutors indicates that Facebook may be useful in promoting collaborative learning and discussions alongside the face-to-face delivery of content (Irwin et al., 2012).

In a qualitative study, Lee et al. (2015) found that teachers felt SM made their classrooms more interactive for students. Positive effects were observed, such as the expansion of face-to-face communication opportunities for teachers and students, an increase in the frequency of interactions, and a widening of the spectrum of educational opportunities and variety when properly applied. Nevertheless, tutors also reported negative effects, such as the students' exposure to unhealthy information and cyber-bullying. As such, further efforts are needed to identify appropriate methods of using SMTs for educational purposes.

The attitudes of tutors towards e-learning or SoMeLT has clear implications for how effectively new teaching technology is implemented. When these attitudes

are more positive, there is a greater incentive to use this technology (Liaw et al., 2007). Owen et al. (2016) conducted a study to examine the perceptions of 174 tutors in the UK concerning SM use, both personally and professionally with students. They found links between the tutors' positive attitudes and positive perceptions of the potential value of SMTs.

Despite the availability of computer technology resources in many universities and the significant role that they play in facilitating the educational process, some tutors do not perceive there to be significant potential or benefit from using SM in their classrooms. Moran et al. (2011) conducted a study in the USA to examine the attitudes of tutors towards using SMT as a learning tool. They found that the majority of tutors reported that using SM takes more time than it is worth and brings with it issues of privacy and integrity. They also complained about the lack of training and institutional support. Moreover, they did not view SM sites as equally valuable for teaching with tools such as Facebook and Twitter seen as of less educational use.

Furthermore, to determine how likely higher education faculty are to use Facebook for either personal or educational purposes at the University of Tennessee in the USA, Roblyer et al. (2010) indicated that a large proportion of university tutors felt that Facebook (53 percent) and Twitter (46 percent) have a 'negative' value for use in class. They mentioned that the faculty has a track record of prohibiting the use of technologies that are frequently used by students in classrooms, due to issues of distraction, privacy, and improper use. It was particular interesting to note the perceived role of this tool being social, rather than educational.

As indicated in the research of Moran et al. (2011), the issue of training is an important one to consider when examining tutor attitudes. A study by Prescott (2014) found that most university tutors (85 percent) at one UK university had not received any training on the use of SMTs within an educational environment, whereas 33 percent would like to receive more support in this regard. As a result, the existing literature illustrates that many tutors require additional support from their institutions in the form of training courses, and assistance in achieving a purposeful integration of these tools in academia. Saini & Abraham (2015) found that academic institutions in New Delhi do provide training on the use of SoMeLT. However, the actual difficulty was the teachers' time constraints

which made them unable to attend and participate in these training sessions due to the academic workload.

To summarise this section, many tutors have positive perceptions concerning the academic benefit of SMTs and their role in supporting the acquisition of different forms of knowledge, enhancing learning, supporting collaboration, and developing different skills. Moreover, tutors indicated that SMTs improved communication between student and tutor and among students.

Conversely, however, other tutors are more sceptical, believing that SMTs are of less use academically, or having concerns about issues such as privacy, cyber bullying and distraction. Furthermore, many report constraints that stand in the way of implementing SoMeLT effectively, such as the lack of training, the inadequacy of internet and technological infrastructure, and time management challenges.

3.4.4 Students' Perceptions of Using SoMeLT

Technology provides students with diverse learning tools, as well as providing space to promote interaction amongst themselves and with their teachers. Saha & Karpinski (2018) argue that technology use in education also contributes to the development of critical thinking, and improved speech and academic writing skills. In addition, technology can build or promote the students' respect and tolerance for different responses, promote greater social/emotional support among peers, and allow the increased accessibility to different kinds of information. Furthermore, challenging material can be disseminated in a more effective manner to students in order to promote lifelong learning. As we saw in the previous section, there is a prevailing positive perception among tutors, of SoMeLT being a tool to facilitate learning, encourage collaboration, enhance critical thinking, and support brainstorms (Wingo et al., 2017; Albalaw, 2017; Del Valle et al., 2017; Gruzd et al., 2018; Alshehri & Lally, 2019).

At an international level, predominantly, most studies have found similar positive attitudes among students towards the use of SoMeLT in education. Bista (2015) conducted a quantitative study to explore undergraduates' perceptions of using Twitter as a pedagogical tool at one public university in southern United States. Participants reported a positive experience of using Twitter even though

it was their first experience with the platform. Twitter provided them a space and opportunities to engage in academic activities, such as receiving immediate and frequent course information, posing questions to mentors, updating course assignments and sharing helpful information from outside the textbook with their fellow classmates and mentor.

Another study conducted at a Midwestern US University by Imlawi et al. (2015) focussed on students' attitudes towards Facebook. In a pre-semester and post-semester questionnaire, 78 percent of students believed that a Facebook page would increase student interaction and 51 percent felt that it would augment instructor interaction.

In a similar vein, a survey of 1658 undergraduate students of two universities in Australia conducted by Henderson et al. (2017) found that the students had a positive attitude towards the use of digital technologies to organise their work and 'manage academic demands', as well as support creative collaborative and hyper-connected practices (P.7). However, the authors caution that digital technologies may not necessarily be 'transforming' the nature of university teaching and learning. Therefore, university tutors and researchers need to modify their expectations for what might be achieved through technology-enabled learning and develop a better understanding of the realities of students' encounters with digital technology.

However, not all students reported positive experiences with SoMeLT. In a 2015 study, Yee found that Malaysian students at an Australian university perceived online discussion as "difficult and boring" because of a lack of experience with this type of learning environment (p. 591). However, Welzer et al. (2011) thought that language barriers in understanding others can be bridged by using translation tools or a common language such as English. Nevertheless, they agreed that communication in a common language among people from different cultural backgrounds via a SMT can often be difficult.

This indicates that despite positive perceptions by students, there are also many inhibiting factors that stand in the way of effective SoMeLT use. As mentioned above, one of them is language, and the challenge becomes to support the users of SMTs in overcoming language differences (Li & Kirkup, 2009; Liu et al., 2010; Alturise & Alojaiman, 2013; Alshehri, 2020).

Like in Yee (2015)'s study, Habib et al. (2014) found in a Scandinavian study that language skills are a key factor in how international students participate in SM communication related to educational activities. Students in this study expressed insecurities regarding their ability to use the host country's academic language, which in turn affected their participation in learning activities requiring writing on SM.

In addition to language difficulties, there are other concerns. These include the state of internet infrastructure, the existence of support and training, and the state of the participants' knowledge, and skills. As Russell et al. (2014) noted, many students may not have access to or the ability to afford these technologies, which is frustrating and may put them at a disadvantage. However, the main issue that has been discussed throughout the literature on social media use in education is privacy. Privacy concerns have been used by many as a major argument against utilising the internet and SM in learning. As we shall see in Section 3.4.6, this is an even greater concern in the KSA.

In this regard, training can play an important role in relation to privacy and managing online identity. When adopting new technology, educational institutions have a significant role to play in empowering students to acquire the basic skills needed to use digital tools. More specifically, "... it is essential to train teachers in digital citizenship so that they can educate students about preserving their online integrity. One misstep can have ramifications for years to come" (Bolkan, 2015, p.13). I would argue that universities and tutors need to play a similar role with Saudi Arabian students.

In conclusion, most studies have found that students and tutors have a predominantly positive attitude towards the integration of SoMeLT in higher education. This is due to their reported benefits to students, such as expanding their learning, allowing them to discover new educational resources, and keeping them up to date with the latest information. Having said that, some studies have also identified certain challenges surrounding the adoption of SMTs in learning methods, such as challenges with language, lack of head-on communication, unsuitable content, unequal access to technology, and privacy (Del Valle et al., 2017; Wingo et al., 2017; Saha& Karpinski, 2018; Roopchund et al., 2019). So far, I have presented the results of studies conducted beyond the KSA. However, in the coming two sections, the focus shifts to the KSA.

3.4.5 SM in the KSA

The Kingdom of Saudi Arabia has a unique status as the guardian of the Islamic holy sites, and it is a conservative country in comparison with other Middle Eastern nations. Nevertheless, this has not made it immune to the effects of SMTs (Samin, 2012). SM plays an important role in the lives of Saudi Arabians and its usage has expanded rapidly. Saudi Arabia currently (2020) has a total population of 33.85 million. Of that population, 23 million or 68% are active SM users, and the country ranks 7th globally in terms of individual SM accounts.

In 2019, the KSA had the highest per capita rate of YouTube use of any country in the world with 24.71 million active users, while Facebook came in second, with 20.99 million users. Moreover, in the same survey, it was found that the KSA had the largest share of Instagram users in the Arab region, with 20.31 million users, and it had an estimated 18.96 million Twitter users, with more than 60% of all Twitter users in the Arab world living in the country (Saudi Arabia Social Media Statistics, 2019). WhatsApp was the most used chat platform in 2019, with 24.37 million users, or 73% of users, with Facebook Messenger, Snapchat and Skype at a distant second, third and fourth respectively, in chat applications (Saudi Arabia Social Media Statistics, 2019).

This strong digital engagement is an output of high internet and mobile telephone penetration in the country. By the beginning of 2019, the number of internet users in the KSA was 30 million people (Arab SM Report, 2019). As mentioned on the Arab SM Report (2019), the country also has one of the highest levels of mobile telephone penetration in the globe, estimated at roughly 180 subscriptions per 100 residents. Out of the nearly 23 million total active users on WhatsApp, YouTube, Twitter and Facebook, 16 million access these tools through their mobile devices. This number accounts for nearly 72% of all SM users in the country (Salem, 2017).

From their beginnings as mere networking tools, SM has morphed into a potent force for social change in Saudi Arabian society, whether in education, policy, sport, and economy. Therefore, the KSA has emphasised the role these technologies can play in bringing about a significant and tangible leap forward in the country, especially in the field of education (Al-Khalifa & Garcia, 2013).

The Kingdom of Saudi Arabia's Vision for 2030 is highly dependent on modern technology and information. The National Transformation Programme, which aims to automate and digitise information in all sectors, has been launched to increase the productivity of government institutions and make them more efficient and competitive through using modern technologies. The development and improvement of education is one of the most important goals of that vision, which involves the adoption of the newest educational technologies to keep Saudi Arabian students, tutors and administrators up to date with 21st-century methodologies.

Fatany (2012) argues that the increased number of young people on WhatsApp, YouTube, Twitter, Facebook, Wikipedia and Skype is an indication that the they are likely to play a more active role their own learning. Consequently, Saudi Arabians have adopted SMTs to enhance their learning experience through interacting and establishing collaborations with others, exchanging knowledge, acquiring new skills, contacting experts and getting immediate feedback to their questions. Therefore, the traditional method of learning may soon not be suitable for digital natives who use these tools extensively in their lives (Alsuraihi et al., 2016; Naguib et al., 2018; Alshehri & Lally, 2019; Hashim et al., 2019).

In the field of education, Alsurehi and Al-Youbi (2014) studied the usage of the most popular SMTs, such as Facebook, Twitter, Instagram, and WhatsApp, in Saudi HE. The authors conducted surveys with students in a number of major universities in the KSA. They concluded that:

> "... The use of social networking applications is quite prevalent among major universities in KSA, although the usage and awareness seem to be limited to major and popular applications like Facebook. The potential for using social networking applications as powerful collaboration and educational tools seems to remain under-utilised by Saudi students" (Alsurehi & Al-Youbi, 2014, p. 11).

The fast and continuously emerging new technologies have shifted patterns of learning behaviour, which has gradually led to the integration of social media tools in a wide range of learning and teaching activities. The future of technology use in the KSA is promising, as raising ICT promotion and awareness,

especially in education, has become a national strategy (Al-Asmari & Khan, 2014).

3.4.6 SMTs Use in Saudi Arabia HE

The use of SMTs for education in the KSA is still in its early stages, although some Saudi Arabian universities such KSU, KAU, KKU and UB have started providing such services for their tutors and students. For example, short clips from YouTube have been shown during lectures, while Twitter and WhatsApp serve as open channels to pose questions and receive answers, whether from students, tutors or experts.

Some studies have attempted to discover the extent of SM use at universities and identify the most popular apps. They have found different levels of SM use at different universities, with the most popular and most frequently used apps being Facebook, YouTube and Twitter. In a quantitative research study conducted by Alsurehi& Al Youbi (2014), the results indicated that the use of social networking applications, especially Facebook, Twitter, YouTube and WhatsApp, is quite prevalent among students in major universities, such as KSU, KAU, KKF, and KKU in the KSA. However, Saudi Arabian students seem to under-utilise social media as an effective collaboration and educational tool.

In their study of SM use in medical education in the KSA, Alsuraihi et al. (2016) had different results concerning student use of SM for learning. They carried out a quantitative study involving 381 students and found that most participants use YouTube, Twitter, and Wikis to assist in their learning. They use SMTs to search for information, build knowledge, share experiences and points of view on different topics, as well as communicate and collaborate with others. The results of an online survey carried out by Alhashem (2015) on SM use and acceptance among 320 health educators in the KSA had similar results. The participants used SMTs, especially YouTube, WhatsApp, Twitter, Wikipedia and Facebook, for health-related purposes in health care and in health education facilities.

More recently, Naguib et al. (2018) conducted a quantitative study on the pattern of Facebook and other SMTs use among the dental students at KAU, to assess how they affected the behaviours, social interactions, academic

performance and study, as well as the health status of students. The findings revealed that WhatsApp and Facebook were the most common types of SM used by the students, although 50% used Facebook for only 30 minutes per day. A considerable number of students were using Facebook to create a sense of community, promote collaboration, enhance communication between instructors and students and make global connections (66%). The students also reported that they felt that SM enhanced their social lives.

In the same vein, Guraya et al. (2018) conducted a quantitative study to determine the educational use of SMTs among the medical students in one Kuwaiti and two Saudi Arabian medical schools. The results reveal that most of the students used SMTs for educational purposes to share education-related information and lectures, and therefore, found these tools to be useful. Based on these results, it appears that many Saudi students share with their international peers their positive perceptions of using SoMeLT.

Zabadi & Al-Alawi (2016) conducted a study at the University of Business & Technology (UBT) in Jeddah with 371 students from four colleges and the English Language Centre. They found the participants had a mainly positive attitude towards using new and modern technology in the educational process. Another study was conducted by Alshehri & Lally (2019) on attitudes towards SMT use to support learning at the EU in the KSA. The majority (76.2%) of the students surveyed believed that SMTs would increase student interaction and enable learners to connect and collaborate with their peers and teachers.

A study conducted in the Education College at King Faisal University in Saudi Arabia by Alamri (2019) not only investigated the perceptions of 132 undergraduate students towards social media usage but sought to discover the most popular applications. The results indicated a generally positive perception of using social media for academic purposes. WhatsApp and Twitter were the most preferred social media options while Wiki, Facebook and LinkedIn were less popular. As is clear from some of these research results, positive attitudes towards SMT relate to their reported benefits for learning. In another study by Hashim et al. (2019), the researchers found that Saudi students believed that using SoMeLT gave them more flexibility to access online resources which allow them to work and learn more independently compared to the traditional method of learning.

The literature has also revealed the concerns that have acted as barriers to using SMTs and that exist in certain Saudi universities (Alsurehi & Al Youbi, 2014; Alshehri, 2019). A study conducted by Alsurehi & Al Youbi (2014) indicated that privacy and security concerns continue to be the biggest challenges inhibiting the usage of SM applications, particularly among female students. In this respect, the results are very similar to those of studies conducted outside the KSA. However, privacy is an especially delicate issue in Saudi society, especially for women. Furthermore, privacy is not only a personal matter for the user, but rather a social concern.

In a broad sense, any action, be it positive or negative, conducted by individuals will reflect not only on the individual concerned, but also on their family. The whole family will be proud or ashamed of what their members have achieved. This makes it increasingly difficult to keep an individual's personal information safe, which is why it is important that learners are aware of how to manage their privacy.

From my point of view, the issue of privacy requires the serious attention of higher education institutions, administrators, teaching staff, and researchers. More needs to be done to maintain the privacy of participants and more education is needed on the risks of posting personal information (Prescott, 2014; Saini & Abraham, 2015; Misman et al., 2019; Alshehri, 2020). Furthermore, researchers need to be aware that privacy does not have the same meaning for all people or communities around the world.

Critical privacy issues in Western countries, for example, are not necessarily shared by those in other countries due cultural differences. Saudi Arabia is a conservative country where societal considerations are strongly taken into account and cultural values need to be respected. Thus, protecting privacy is a very critical issue, particularly on SMTs. That is why I would argue that the way in which online privacy has been discussed in most of the literature, from a mostly Western perspective, is not sufficiently sensitive to the Saudi case.

Aside from the privacy issue, some Saudi research participants, especially tutors, believed that SMTs were not useful and caused distractions among learners in the classroom. Indeed, Hashim et al. (2019) emphasised in their study that one factor that discourages tutors from using SM in their teaching environments is

the distractions that they caused among students. They felt that SMTs were detrimental and prevented students' from focussing on the course content. Doubts about the usefulness of SMT in education seem to be supported in the research carried out by Alwagait et al. (2015) on the impact of using SMTs such as Twitter, Facebook, YouTube, Wikis, and others on Saudi students' academic performance. The findings reveal that there is no relationship between using these tools and student performance during the four years studied.

Additionally, teachers had concerns about how technology might affect the study habits and social lives of their students. They feared that technology would distract students from attending classroom lectures or prevent them from managing their time wisely. They also worried that these innovations may decrease the number of interpersonal interactions among students. If students only attend online courses, they may not have or maintain contact with their peers and lose opportunities to build relationships. This, in turn, may also negatively affect their academic achievement (Hashim et al., 2019).

Students' perceptions of SM technologies as educational tools can also be a major problem which, in turn, affects the tutors' attitudes. Hashim et al. (2019) report that one factor that discouraged tutors from using SM in their teaching environments at KAU in the KSA, is that students were not taking the integration of such tools into the learning environments seriously. Thus, developing the students' awareness and knowledge of how to utilise SMTs effectively for educational purposes becomes a major requirement.

As the literature review has shown, there have been a number of research studies on SoMeLT use in Saudi universities as well as tutor and student attitudes. However, this research is the first undertaken to examine the existing reality of using SoMeLT at the EU specifically, from the viewpoint of both tutors and students and that uses mixed methods research. A broad understanding of students' and tutors' perceptions on this issue may contribute to a better comprehension of the relationship between the use of these tools and important educational outcomes such as collaboration, interaction, and engagement. More generally, the findings of this research would also highlight students' and tutors' voices on important pedagogical issues. Finally, this research seeks to provide practical insights for students and tutors who intend to use SoMeLT in the Saudi context and at the EU specifically.

After presenting an overview of some of the existing literature on e-learning and SM use in higher education, I now move to the discussion of the theoretical approaches that will provide a lens to understand the results of this research. In particular, I will present in the coming section the theoretical perspectives chosen, the rationale behind their selection and how they have been synthesised in order to allow a comprehensive framing of the research findings.

3.5 **Theoretical Framework**

Higher education institutions are beginning to integrate the use of SMTs into their teaching and learning methods. However, SoMeLT has, for the most part, not yet been used effectively, whether in traditional courses or outside the classrooms. This may be due to the failure of teachers to fully consider and understand the role SMTs play in delivering information and knowledge to learners within a specific educational system in an institution. Consequently, before adopting SMTs to support learning, it is critical to frame it in the context of teaching and learning theories while considering the goals and objectives of the courses or educational systems in question.

Learning is associated with how people acquire knowledge and meaning, as well as how they understand the world (Marton and Booth 1997). Furthermore, there exist different ways in which people can learn with different students having divergent learning experiences, backgrounds and expectations. This means that there is no simple answer to the following three questions:

1) How do we teach as teachers?
2) What are the best materials and resources to deliver information and knowledge?
3) How do we learn as students?

In this section, the aim is to provide a comprehensive understanding of how different learning theories respond to these questions and how they apply to the use of SoMeLT.

Often, the selection of relevant theoretical perspectives and conceptual models lays a sound foundation for a research study. However, at other times, the choice of the theoretical framework only becomes clear once the data collection and analysis have been completed, especially as the principal aim of such a

framework is to frame and interpret the perceptions that emerge from the findings.

To expand the researcher's knowledge of the theories of educational technology, as well as understanding the more contemporary ways of thinking and their relevance to the current research, the researcher decided to examine six major theories in the field of research to find out which of these theories are suitable for achieving the objectives of the research.

Some of these theories directly address how users engage with SMTs and the nature of this interaction, while other theories are more concerned with teaching and learning practices in general. In the end, the researcher settled on six theories and models that were most relevant; namely:

1) The Connectivism Theory;
2) Social Cognitive Learning;
3) The Social Learning Theory;
4) The Theory of Digital Nativity;
5) Innovation Diffusion Theory; and
6) The Technology Acceptance Model.

Due to the nature of the research, the researcher planned and completed the data collection process before deciding on the most appropriate theoretical approach to implement in this study. After conducting the fieldwork, examining the respondents' attitudes and analysing the patterns that emerged, I could then more confidently identify the theoretical approaches among the many existing theories of teaching and learning that were of relevance to my study.

Section 3.5.7 will explain in detail the justifications for choosing certain theories while dismissing others for this research. In the final analysis, I chose the SLT and TAM due to their suitability to the research subject and, most importantly, because of the strong relationship between their assumptions and the findings that emerged in the investigation. Having said that, other scholars conducting research on similar topics may find the approaches I dismissed useful for the framing of their own findings. In what follows, I will discuss the six educational theories and models to provide a comprehensive understanding of how different learning theories and their applicability to the use of SoMeLT.

3.5.1 The Social Learning Theory (SLT)

One of the central ideas of Albert Bandura's SLT is that individuals learn and gather information through imitation, observation, and modelling (1977). While the acquisition of new knowledge involves effort, social learning reduces the work required. Bandura (1977) summarises his main ideas in the following passage:

> 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 behaviour is learned observationally through modelling: from observing others one forms an idea of how new behaviours are performed, and on later occasions this coded information serves as a guide for action (Bandura, 1977a, p. 191).

Individuals learn by watching the behaviours of others and observing the outcomes of such behaviour (Bandura, 1977). Bandura's theory also elaborates on how the psychology and behaviour of individuals changes with time through social learning. There are four key stages in social learning, as cited in David (2015) (see Figure 3.1):

1. Attention: It is crucial that learners focus so that they can learn.
2. Retention: New behaviours must be retained.
3. Reproduction: Learners then carry out the learned behaviour. Continued practice is of great significance at this stage.
4. Motivation: It is crucial that learners have the motivation to continue the behaviour if learning is to be effective.

When learners fulfil all the stages, a new behaviour will be effectively learned. Bandura argues that, technology, through connecting people, provides learners the opportunity to acquire new behaviours via social learning. These contemporary technologies play a vital role in disseminating newly learned behaviours because they enable individuals to socialise, provide learners with instant feedback, and offer motivation to repeat new behaviours. In the case of Facebook, for example, Hilscher (2013) argues that it "is capable of distributing

and spreading a behaviour and giving the vital feedback and rewards needed to promote the reproduction of behaviours" (p. 15).

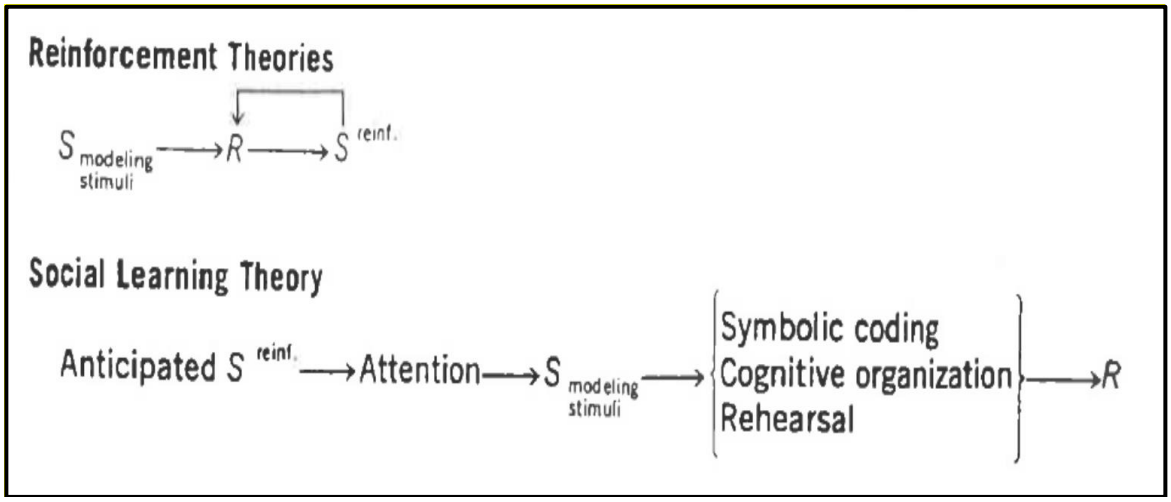

Figure 3-1 Social Learning Theory adopted from Bandura (1977)

With the advent of online learning and virtual classrooms, learning is now accessible via the Internet, and web-based learning has become supplemental to as well as a replacement for traditional classroom learning. In this respect, it is possible to employ SM applications as a means of minimising the work required to gain knowledge. Students interacting via SMTs are able to exchange information and gain new knowledge; in this way, SMTs enables social learning to occur.

Furthermore, Hilscher (2013) notes that Facebook is an open platform that enables all members to be found by other Facebook users. This openness is in line with the open social dimension of Bandura's SLT (p. 14). University students use SM continuously, both inside and outside of the classroom. SLT provides a framework to examine how the affordances of these tools can enhance learning. By working together online and sharing knowledge, learners can develop communities that foster social learning.

Self-efficacy, or the individual's belief in his or her ability to produce desirable results through his or her actions, is another central concept in Bandura's model of social learning. SM serves as a platform for students to interact in a number of roles in numerous groups within a low risk setting. Users thus frequently show high levels of self-efficacy which can manifest itself in higher engagement. This ultimately can improve student learning (Freudenberg et al., 2010). On the other hand, as Mourlam (2013) asserts, students in a conventional classroom

setting are sometimes isolated from other students, specialists, parents, and the community. This lack of interaction hinders self-efficacy and social learning.

3.5.2 The Social Cognitive Theory

Social Cognitive Theory is an extension of the SLT as established by Albert Bandura (Boeree, 1998 & Wulfert, 1993). Bandura argued that education consists of the interconnection of three key areas, that is, cognition, behaviour, and the environment. He believes that individuals have the potential to design control measures over their actions via the self-regulatory process. More specifically, people influence their own behaviour through the establishment of individual goals, the evaluation and assessment of goals, the mediation of the consequences of their actions, and the creation of cognitive strategies (Wulfert, 1993). Self-efficacy is the individual's belief that he or she can produce definite results through his or her actions. Wulfert argues that self-efficacy is the fundamental self-regulation aspect in Bandura's theory.

Boeree (1998) argues that an individual with high self-efficacy can work out problems in a more efficient way; and emphasises the four sources considered by Bandura as key to strengthening self-efficacy. The first and most fundamental is being successful. In other words, the successful completion of a demanding task will enhance the self-efficacy of an individual. Second, self-efficacy could originate from indirect experiences. Observing a person similar to you and witnessing his or her success in a specific task can make an individual believe he or she can also succeed at the same task. Third, self-efficacy can be enhanced through encouraging words. Lastly, teaching different coping strategies can help people gain or develop the ability to succeed and increase their self-efficacy.

The concept of self-efficacy is important because it can help explain people's experiences in adopting new learning practices centred on technology. Training is fundamental in the development of self-efficacy. It is essential for people who have previously and/or continually used computers and software as part of their learning process, individuals with limited or no computer skills, and those who have not succeeded in using digital technology or have never used a computer in the past.

Higher education institutions should ensure that every student and tutor undergo training related to the use of SMTs before incorporating these tools into their teaching and learning. In so doing, ultimately, this will increase their productivity and instil confidence (Espejo et al., 2003; Newland et al., 2006). Learning through observation, engagement, motivation and modelling is strongly emphasised in the social cognitive theory. This is equally the case in e-learning.

Salmon (2004) and Wulfert (1993) highlight the importance of teachers' actively participating in online discussions and communication, the use of emails to respond to student enquiries, the development of online activities to help students challenge themselves, and encouraging students who are unlikely to participate. Providing necessary support to students on the online platform will allow them to be more successful in their respective courses. Consequently, this will also increase their confidence and self-efficacy.

3.5.3 The Technology Acceptance Model (TAM)

The TAM developed by Fred Davis in 1989 is a highly popular research model that addresses the process that users go through to accept and use new technology. TAM holds that an individual's acceptance or decision to adopt a particular type of technology depends on his/her attitude towards technology. More specifically, this is determined by two key factors, namely the Perceived Usefulness (PU) and Perceived Ease-of-Use (PEOU) of the technology (See Figure 3.2). Davis (1989) defines perceived usefulness as the degree to which an individual believes that technology will improve their work performance (p.320). PU is determined based on the advantageous results derived from attributes of the technology being used. According to Dhar & Wertenbroch (2000), the utilitarian value drawn from the usage of technology is cognitively driven, instrumental, goal-oriented, and accomplishes a functional or practical task for the users. Perceived ease of use, on the other hand, is the extent to which someone thinks that a specific technology or system will require limited physical and mental efforts (Dhar & Wertenbroch, 2000, p.323).

TAM can be applied to develop expectations about the use and acceptance of modern computer technology and SMTs. The user would assess a site based on how easy it is to use and how effective it is in helping him/her accomplish his/her SM -related needs. In this way, PEOU and PU work collaboratively to

determine a user's attitude towards technology. Subsequently, this attitude determines the user's behavioural intention. If the attitude is favourable, the process culminates in the real use of the system or technology acceptance by the user.

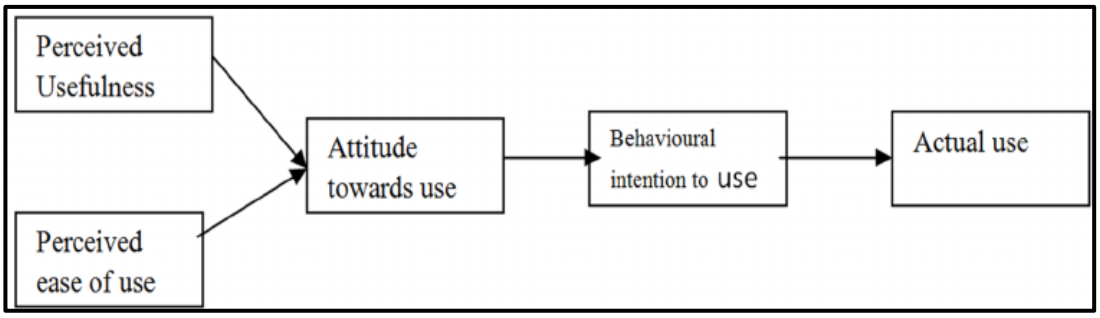

Figure 3-2 The Technology Acceptance Model (TAM)

The existing research has provided evidence for this model, with PU and PEOU found to affect attitude and intentions along with the existence of a strong correlation between these two variables. Sen (2005) carried out research exploring the impact that technology acceptance has on the mathematics achievement levels of post-secondary African American students. He employed the dimensions of the TAM including perceived ease of use, perceived usefulness, computer self-efficacy and subjective norms. The study found that perceived usefulness was the key factor in predicting perceived ease of use and computer usage played a crucial role in the final achievement score in mathematics.

Likewise, Mathur (2004) employed the TAM in order to investigate the intent of students from the University of West Florida to engage with Mobile Learning Course Management Systems. The results suggested that both students' perceptions of usefulness and their understanding of ease of use had a significant positive correlation with their intent to engage with the Mobile Course Management System.

Further research was carried out by Masrom & Hussein (2008) to explore the factors encouraging individuals to adopt electronic collaboration technology. In the findings, the perceived ease of use of electronic technology had a significant positive relationship with perceived usefulness. In addition, perceived usefulness strongly influenced the employment of electronic collaboration technology. A further study by Rogers' (2003) into the factors influencing users' attitudes

toward technology concluded that a higher level of perceived usefulness, ease of use, and technology compatibility lead to the user having a more positive the attitude regarding the technology.

The model of TAM provides a framework to understand the process that users go through in order to accept and use modern technologies. It may also serve to predict the future use and acceptance of the technology, including SMT, through the concepts of PU and PEO.

3.5.4 The Theory of Digital Nativity

Digital nativity, a term coined by Marc Prensky, refers to a psychological construct associated with individuals who possess or use digital devices, the Internet, and SM (Prensky, 2001). It is a 21st-century phenomenon that coincided with the emergence and growth of a generation of Internet and SM consumers (often defined as those born after 1980); unlike anything the world has ever seen (Prensky, 2001). As the world shifted to highly connected communities with globalisation and the emergence of the Internet and smartphones (Friedman, 2005), young digital consumers born into the digital world were quickly grasping and taking command of technology (Prensky, 2001).

Based on the above, Prensky (2009) argued that there is a gap between older and younger users of digital media. Prensky described this digital division by labelling people according to their early or late exposure to digital media, as either ‘digital natives’ or ‘digital immigrants’. Prensky identifies Millennials and twenty first century students as digital natives due to their early and constant exposure to digital media (Prensky 2001, p. 2).While digital natives are "...native speakers of technology, fluent in the digital language of computers, video games and the Internet" (Prensky, 2006, p. 9), digital immigrants have had to integrate technology and computers into their already established lives while struggling at times.

Prensky (2001) has used the concept of digital nativity to promote understanding of the 21st-century generation of digital learners. According to Franco (2013) and Prensky (2001, 2006), digital natives have experienced digital nativity in both their social and academic lives (Franco, 2013; Prensky, 2001, 2006). Franco

(2013) and Prensky (2001, 2006) believe that digital natives prefer technology as tools and motivators towards their learning experiences.

However, Prensky observes that few educators adopt SoMeLT and networking to their instructional planning to support students' learning skills and achievements. As digital immigrants, they would have very limited acceptance for the skills that digital natives have acquired and perfected through years of interaction and practice (Prensky 2001, p. 3). Thus, Prensky advocates for the need for more radical solutions to help these digital natives utilize such digital tools effectively for their learning. Prensky (2006) argued that colleges should be teaching students how to program, filter knowledge, and maximize the feature and connectivity of online and digital tools.

Palfrey and Gasser (2008) have expanded Prensky's original definition to recognise that digital natives possess a competency and usage of technology that is not solely related to year of birth or age. Moreover, it is simplistic to conceive of all young university students as digital natives. In fact, the theory of digital natives has received criticism for its association of age with digital literacy from a number of empirical studies.

Bullen et al. (2011) did not find a generational divide in the student population they studied at one postsecondary institution in Canada. When compared on the most commonly cited net generation characteristics, such as living in an environment infused with digital and networked technologies and having a high level of network connectivity and access to resources, students born before and after 1982 were not significantly different. Both groups of students were equally comfortable using computers, the Internet, and other technologies for a variety of purposes. Thus, they argue that students' communication preferences were not simply age or generation related.

Lankshear & Knobel (2008) note that the Internet began to be put to widespread use in educational establishments in the mid 1990's and became the source of information chosen first by seekers, regardless of age. Currently, the Internet is now the sole up-to-date source of information with most people of all ages having enough skills to use modern technologies.

Another similar criticism of the Digital Nativity Theory relates to its assumption of digital skills among all young people. As Facer and Furlong argue, young people are not "...a homogeneous generation of digital children" (Facer and Furlong, 2001: 467). In fact, there may be as much variation within the supposedly digital native generation as there is between the generations. This conclusion is supported by research that has demonstrated that there are significant differences within cohorts of young people in terms of their preferences, skills and use of new technologies.

For instance, Kvavik, Caruso & Morgan (2004) conducted a survey of 4374 students across 13 institutions in the United States into how young people in education access and use technology. They found that a minority of the students (around 21%) were engaged in creating their own content and multimedia for the Web, and that a significant proportion of students had lower level skills than might be expected of digital natives.

In the same vein, two studies of Australian university students by (Kennedy et al., 2006; Oliver & Goerke, 2007) found that emerging technologies that dispositions commonly ascribed to the digital native generation were not commonly used, with only 21% of respondents maintaining a blog, 24% using social networking technologies (Kennedy et al., 2006), and 21.5% downloading podcasts (Oliver & Goerke, 2007).

In a study at the University of Wollongong in Australia, Bennett, et al. (2008) note that there is a significant proportion of young people who do not have the levels of access or technology skills predicted by proponents of digital nativity. This point has also been raised Chen et al. (2016) who argue that "...not all those born within the digital native generation may have the expected access to, or experience with digital technologies, and a considerable gap among individuals may exist" (p. 51). Alongside the matter of digital skills, both these studies underline the issues related to access.

In the Saudi context, a sizeable amount of literature exists that identifies overlapping barriers, such as the lack of adopting digital technologies or digital software reliably. From this literature, Almadhour (2010); Hakami et al. (2013); Al Mulhim (2014); Al-harbi (2014); conducted a study to investigate the barriers

to the use of ICT in learning in KSA. One such common barrier was the lack of access to technology either in the home setting or in the classroom.

Educators therefore cannot presume that all young students are digital natives who understand how to use technology to support and enhance their learning (Margaryan & Littlejohn, 2011). This relates to a common criticism of the Digital Nativity Theory that it focuses attention on technically adept students while those less interested and less able are neglected. Palfrey and Gasser (2008) have developed the concept of digital nativity by suggesting that while there might be general characteristics of digital natives, each student carries a variation within this group depending on experiences with the Internet, computers, and digital devices.

Researchers continue to credit Prensky (2001) for this early contribution to the understanding of digital natives while this concept has been expanded by other researchers mentioned above. To this day, Prensky's original definition remains the starting point for discussions on what to expect when examining digital nativity. Furthermore, digital natives have continued to grow collectively as digital consumers (Palfrey & Gasser, 2008; Prensky, 2001).

Prensky himself has revisited his own theory. He observes that as we move further into the 21st century, the distinction between digital natives and digital immigrants has become less relevant as an increasing proportion of society would have grown up in a digital age or have been exposed to digital and networked technology. Consequently, he (2009) proposed a new term ‘digital wisdom’. He defines wisdom as "the ability to find practical, creative, contextually appropriate, and emotionally satisfying solutions to complicated human problems" (Prensky, 2012 p2).

The Digital Wisdom Theory reflects the diversity and dynamicity of learners. While the digital native remains the end-point of the trajectory towards complete digital fluency, digital wisdom reflects an idea of a continuous attribute (wisdom) rather than a nominal attribute (nativity). There is an ongoing process of nativisation whereby the more wisdom one acquires, the more ‘native’ the individual becomes (Prensky, 2012. P.3).

Prensky (2012) reduces the divide he had previously identified between digital natives and digital immigrants, and he now views them both as being able to

move towards digital enhancement. Arguing that technology could make us ‘not just smarter but truly wiser’ Prensky retains the idea that the "brains of those who interact with technology frequently will be restructured by that interaction" (p.1).

Prensky also addresses the changes that the Internet and digital technologies have undergone since his earlier work and rethinks the educational methods he had previously advocated for as they are no longer appropriate (Prensky, 2016, p. 2). The new generation of learners (people born after 1993) have grown up with Web 2.0 technology, where content is generated by users (YouTube, social networking sites, blogs). As a result, they prefer audiovisual processing over the traditional textual one and have higher levels of interactivity (Prensky, 2016).

In addition to Prensky's model, other models have emerged, including the Visitors and Residents Model by David White (2011). This Model focuses on the user's desired level of engagement (Hockly, 2011). It assumes that people use modern technology differently depending on their motivation and context. It categorizes users on this basis instead of their age or background. ‘Visitors’ use the Internet, in functional terms, as a tool. In contrast, ‘Residents’ see the Internet as a social space.

The Visitors and Residents approach provides a valuable framework for those considering the use of social tools in educational contexts. The Web users with a range of competencies can simply learn from each other by mingling in shared spaces on the Web. Therefore, the technical aptitude is directly linked to being ‘successful’ in the online environment. White (2011) said that "...in order to know how to effectively teach using SM one needs to understand the student's motivation to use it. Such paradigms, if proven correct, help educators to approach this problem, increasing student engagement with tasks (p. 4).

3.5.5 The Innovation Diffusion Theory (IDT)

The Innovation Diffusion Theory, as advanced by Rogers (1995), regards innovations as the communication that occurs through specific channels over time, between different social system members. In addition, the Theory presents the existence of four critical elements that affect the adoption of

innovations in technology and the spread of a new idea. They include innovation, communication channels, time, and social systems.

According to Rogers, an **innovation** is "...an idea, practice, or project that is perceived as new by an individual or other unit of adoption" (Rogers, 2003, p. 12). It does not matter when an innovation emerges as long as it is new for the individual. The diffusion occurs when an individual who has knowledge about the innovation communicates with another individual who does not have the knowledge, through **communication channels or means**. Mass media channels have the potential to reach large numbers of audience members, while interpersonal channels could be more effective in convincing individuals to adopt the innovation. This is especially true when the individuals involved are similar in their educational backgrounds and achievements, socioeconomic status, or other important areas.

Time is the duration required for an individual to go through the innovation-decision process. Some individuals require more time than others to adopt innovations (Rogers, 2003). A s**ocial system** is "... a set of interrelated units engaged in joint problem solving to accomplish a common goal" (Rogers, 2003, p. 23). The structure of the social system can affect the diffusion and adoption of innovation and individual innovativeness (Rogers, 2003).

According to Rogers, there are five divisions of innovation or technology adapters, depending on their uptake speed. They include early adopters, innovators, late majority, laggards and the early majority. The individuals or adopters are identified as possessing divergent degrees of willingness to embrace 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). In addition, the social system constitutes a boundary within which the diffusion of innovation takes place. Rogers (1995) also proposes that social system structures influence the individual's attitude towards innovation, and it is the fundamental standard for characterising the different classification of adopters. Rogers (2003) suggests that innovations which offer a better relative advantage, simplicity, compatibility, observability, and trialability are more likely to be quickly adopted than others. He acknowledges that "... getting a new idea adopted, even when it has obvious advantages, is difficult" (p. 1).

Rogers defined trialability as "... the degree to which an innovation may be experimented with on a limited basis" (Rogers, 2003, p.258), while observability is "... the degree to which the results of an innovation are visible to others" (Rogers, 2003, p.258). Therefore, the accessibility of innovation variants hastens the process of diffusion. Nevertheless, Bradford and Florin (2003) have deduced that relative advantages (perceived usefulness) and complexity (perceived ease of use) have the greatest influence on users' adoption of innovations, as cited by Masrom and Hussein, (2008).

3.5.5.1 The innovation-decision process

According to Rogers (2003), the decision to adopt an innovation is "... not an instantaneous act … [but] a process that occurs over time that consists of a series of different actions" (p. 169). The process can be divided up into five phases which are: persuasion, decision, knowledge, confirmation and implementation (see Figure 1). In these stages the individual reduces his or her uncertainty about innovation by seeking and processing information about the pros and cons of innovation (Rogers, 2003).

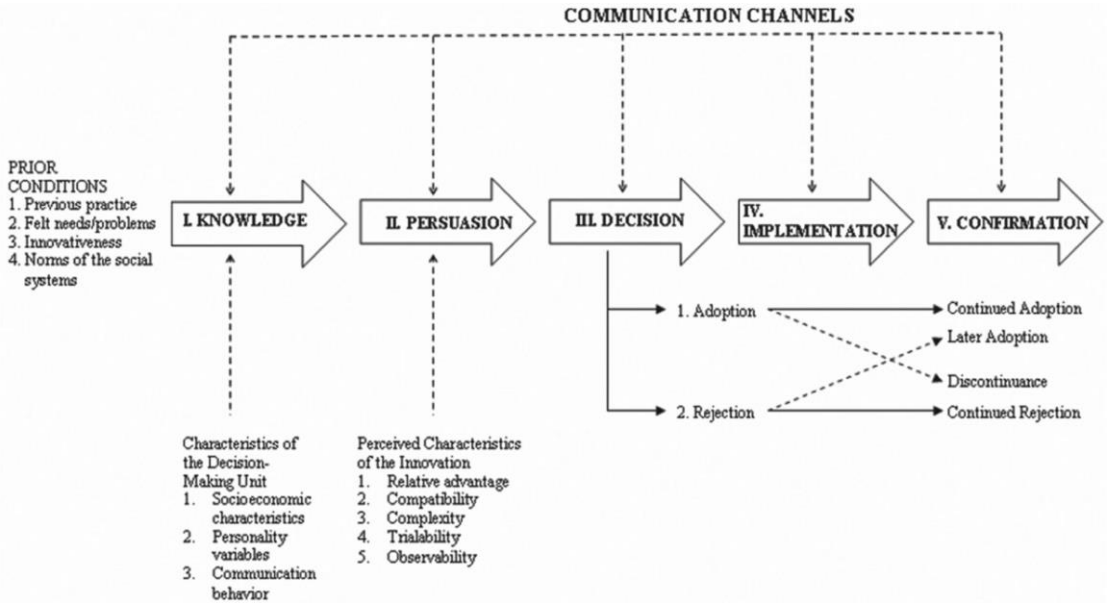

Figure 3-3 The Innovation-Decision Process (Rogers, 2003, P.170)

A decision-making unit or an individual gets a better understanding of innovation functions when exposed to an existing innovation. This initiates the first step in the process of making a decision, that is, the knowledge. Consequently, the second step occurs when a person develops a favourable or unfavourable viewpoint towards the innovation. The third step involves the decision-making

process that occurs when an individual takes part in activities initiating the choice to reject or accept the innovation. The application or implementation of a new idea occurs in the fourth step. The last step is the confirmation that occurs when an individual or other decision-making unit seeks reinforcement of an innovation-decision that has been already made. However, exposing an individual to conflicting messages about the innovation may lead him or her reverse this previous decision (p.169).

The IDT model is useful in understanding the factors affecting tutors' and students' perceptions, including in the KSA and the EU, towards using SoMeLT as a tool to enhance their teaching and learning, while relating it to their experiences with, or attitudes towards adopting technological innovations in general.

3.5.6 Connectivism

In a 2004 paper entitled "Connectivism: A Learning Theory for the Digital Age", George Siemens critiqued the existing learning theories, such as constructivism, cognitivism and behaviourism, for failing to yield a theoretical framework that takes into account new learning approaches. However, he saw within social constructivism the possibility to conceptualise e-learning practices and consequently introduced the Connectivism Theory. This Theory has played a key role in filling a gap in the literature of knowledge (Siemens, 2014; Pettenati and Cigognini, 2007).

Pettenati and Cigognini (2007) developed the Connectivism Theory due to the lack of approaches that address learning practices in the digital age. They believed these practices do not follow the same patterns identified in traditional learning theories. To address this, Siemens (2004) asked: “How does learning change when knowledge growth is overwhelming, and technology replaces many basic tasks we have previously performed?” (p. 4). He goes on to argue that “Knowing and learning are today defined by connections ... Connectivism is the assertion that learning is primarily a network forming process” (Siemens, cited in Pettenati and Cigognini, 2007, p. 4).

Therefore, the integration of contemporary communication and information technologies in the educational system requires clear educational plans or

strategies based on a conceptualisation of how the process of learning occurs through the network that connects students with their teachers, peers and the content they are learning.

The Connectivism Theory is based on eight foundational principles (Siemens, 2014). However, the following aspects are the most relevant to the present research:

1) Learning is a process of connecting multiple information sources for students. For instance, in addition to relying on the content of the books, tutors or students can use SMTs such as YouTube or WhatsApp to share information and exchange opinions or different links related to the lessons under study.

2) Learning and knowledge are facilitated through using modern technologies, including SMTs, as non-human tools to support the interactive acquisition and exchange of knowledge.

3) SMTs work to enhance and increase knowledge. Through these connecting networks, learners increase their capacities, performances, and levels of knowledge while creating and reforming the information.

4) The nurturance and maintenance of connections (e.g., strong network, new computers, and other devices like Smartphones) is necessary to facilitate continual learning.

5) The ability to see connections between educational fields, ideas and concepts is a core skill for individuals.

6) The main purpose of connectivity's learning activities is to get accurate and updated knowledge.

From these principles, it is clear that the Connectivism Theory prioritises both the individual, as well as his or her unique knowledge. As Siemens (2014) reported, personal knowledge is made up of a network like YouTube, as an example which feeds into institutions and organisations like universities or schools. This, in turn, feeds back into the network like YouTube, and then continues to provide knowledge to the individual or learners. Therefore, it is a successive cycle of knowledge development, starting with the person, to the network, to the institutions, and then back to the person. In addition, it is an

ongoing process that permits the learners to remain updated in their field of knowledge via the established connections. Moreover, Siemens suggests the following as cited by Pettenati and Cigognini (2007):

> "Learning is no longer a process that is entirely under the control of the individual, an internal, individualistic activity. It can reside outside of ourselves, within other people, an organization, or a database, and these external connections that enable us to learn more are more important than our current state of knowing" (p. 5).

Based on this description, Male and Aldhafeeri (2015) assert that current digital age learning is a continuous process, and the main responsibility is not upon the educators but the students themselves. The instructor's role has been remodelled from presenting educational resources and giving lectures, to helping learners in the creation of knowledge, collaboration, and the sharing knowledge through emerging technologies.

The Theory of Connectivism considers the media as the most essential and powerful tool of learning (Kop and Hill, 2008). SM in the 21st century houses the social facets of the Internet, like communication, collaboration, and creative expression. Generally, Internet technology has moved learning from internal individualistic activities, to group, community, and even crowd activities.

Thus, the Connectivism Theory is considered a theoretical viewpoint that focusses on how technology influences the process of learning in the current digital age. In addition, it is highly conscious of the significance of developing continuous connections associated with information resources and knowledgeable learners, which can enrich learners' perceptions and their communities. Therefore, it is valuable for educators and students, in underlining the importance of maintaining an intact knowledge connection in knowledge acquisition.

3.5.7 Justifications for choosing the Social Learning Theory and technology acceptance models

In different ways, these theoretical frameworks and models have the potential to contribute to our understanding of the nature of SM and the reasons why people contribute to and from relationships on SM, as well as value SM content (Boyd and Ellison, 2007). As Durham and Kellner (2009) point out, adopting

multiple theoretical approaches can assist in understanding various dimensions of the issue examined and provide a comprehensive perception of the subject under investigation.

The theories examined above each have their strong and weak points. Theories are either complicated, with high explanatory power (e.g. Connectivism, the Theory of Digital Nativity, and the Innovation Diffusion Theory (IDT)), or simple, with reasonable explanatory power (e.g. the SLT and the TAM) (Hilscher, 2013; Aifan, 2016; Wingo et al., 2017). In the end, I have opted for the last two theories only. In this section, I will start by explaining why I dismissed four of these six theories and end by justifying my choice of SLT and TAM to frame the results of this study.

To begin with, the SLT and Connectivism are two perspectives that take into consideration social aspects in the process of learning. Connectivism, which emphasizes the importance of learning networks, is also "... a network theory of learning" (Pettenati and Cigognini, 2007, p.103) as many of its underlying principles can be drawn from other theories (e.g., Bandura's Social Learning (1977) and Social Cognitive Theories (1986)).

Connectivism has the potential to contribute to the development of new pedagogies where motivation, observation, collaboration, connection, and interaction interact to enable learners to share, acquire different viewpoints, be exposed to a diversity of opinions and learn to make critical decisions (Kop and Hill 2008). However, Verhagen (2006) argued that connectivism is not a new educational theory for learning but no more than a "pedagogical view". Other researchers have condemned it for not focussing on fundamental concepts in learning, including reflection, inquiry, detection, and correcting errors (Chatti, 2010).

The Social Cognitive Theory is an expansion of Albert Bandura's SLT in which he emphasized the role of cognitive factors in the process of social learning. The SLT and SCLT theories have often been called a bridge between behaviourist learning theories and cognitive learning theories because they encompass attention, memory and motivation. However, researchers believe that SCLT, not

a fully systematized, unified theory, and that it focusses on self-efficacy while ignoring the other constructs (Espejo et al., 2003; Newland et al., 2006).

In view of the great similarity between the objectives of social cognitive, connectivism, and social learning theories especially in content, I decided to use the SLT because it is a comprehensive theory that focuses on a variety of essential educational components, such as observation, collaboration, encouragement, modelling and motivation. Adding to that, it is the most developed theory and is compatible with the objectives of my research.

The SLT is suitable for this study; it addresses how individuals learn from each other by observing, imitating and modelling the behaviours of others. Similarly, the use of SMTs in education emerges from the belief that the knowledge of learners is shaped by their interactions and collaborations with others in social settings, including virtual ones. I argue that using SoMeLT promotes the development of communication and social skills and encourages dialogue and collaboration between members, as postulated in the Social Learning Theory. It also allows students and tutors a space to collaborate, engage in dialogue, and construct knowledge.

The SLT has many implications for the e-learning environment. Section 3.5.1 highlighted that SLT pays great attention to the importance of collaboration, observation, interaction and modelling. Moreover, social learning helps to ensure that students understand the content and activities through collaboration, interaction and observation. Hence, it takes the learning process from the simpler to the more complex stages.

SMTs help students and tutors know how to access information. In addition, via these tools, it becomes easier to exchange knowledge and experiences with other learners, work as a team and get answers or feedback. This type of online collaboration and interaction provides social learning and immediate feedback, which is very important in the Social Learning Theory.

Bandura's SLT is therefore appropriate as the theoretical framework for this study. Indeed, this theory provides more information on the role of acquisition through what Bandura refers to as modelling. Modelling is described by Bandura

(1977) as observational learning. The use of SoMeLT is therefore expected to play the role of the model in the relationship environment, and the students and tutors learn by observing each other.

The role of the SMTs is crucial in the role of learning as a form of social learning. Therefore, this confirms the use of SoMeLT to be a form of social learning since it is based on community. What makes social learning important is the fact that it makes the opportunities for both the students and tutors to learn from each other possible.

Moving to the theories that directly address the perceptions of and attitudes towards technology use, IDT presents an understanding of individuals' perceptions of an innovation. IDT also confirms that the diffusion occurs when an individual that has the knowledge about the innovation communicates with another individual that does not have this knowledge, either through communication channels or between different social system members (Rogers, 2003). However, since its introduction, IDT has attracted criticism (Rogers, 2003).

Critics (e.g., Rogers, 2003; Masrom & Hussein, 2008; Giesler & Markus, 2012) argue that the original concepts are now outdated and that ‘adopters’ need to be redefined for modern markets and to be more applicable to high-tech industries. Another criticism of this Theory is that it blames the individual and holds them responsible for their problems, rather than the system in which the individual is part of (Rogers, 2003; Greenhalgh et al., 2005). Another weak point of this Theory is its failure to take into account the digital gap that exists between individuals advantaged by the Internet and those individuals relatively disadvantaged by the Internet (Rogers, 2003; Greenhalgh et al., 2005; Giesler & Markus, 2012).

There is a close link between the SLT and IDT, especially as both models are conceived of individuals who learn from each other and gather information through communication channels or through the social system. In this regard, the choice of the SLT is not a rejection of the IDT; rather, the theory of social learning was more relevant because of the way it places motivation, collaboration, and the exchange of information and experiences between

learners at its centre. In the same vein, TAM is highly appropriate for the examination of students' and tutors' perceptions related to using SoMeLT, which would then affect their actual use of technology.

Digital nativity theories and other models that emerged out of it alert us to the fact that different users use digital devices, the Internet, and SM with differing levels of mastery for diverse objectives and to varying extents in their lives. The Social Learning Theory, on the other hand, is based on the assumption that students and tutors learn better in social environments; thus, one can argue that this has certainly become part of the digital natives' lifestyles (Prensky, 2001). Moreover, education cannot take place without a social presence. Hence, by working together online and sharing knowledge, learners can develop communities that foster social learning. Since this is the aspect of SoMeLT that this research is most concerned with, the SLT, by itself, is adequate for the current study.

This research aims to examine the perceptions of using SoMeLT at an EU in KSA from the viewpoint of tutors and students. Consequently, the SLT and TAM are fully in line with achieving this aim. Therefore, these two theoretical perspectives can contribute to underpinning the educational findings that have emerged from this research, and also expand our understanding regarding participants' viewpoints.

Although the SLT and TAM also possess several weaknesses and may arguably be considered outdated, they are, nevertheless, the most appropriate framework to use in this research. The main reason for this is that they can prove useful in understanding the existing reality of using SoMeLT from both the students' and tutors' perspectives.

The main assumption of the SLT is that the group members, who have a common interest in a particular subject of knowledge or experience, regularly interact, discuss and learn from each other via observation, imitation and modelling, to share ideas, strategies, concerns, and solutions. Therefore, this particular perspective places great emphasis on the learning process as a social involvement which presents individuals as participants who contribute actively to the construct of their identity through these social communities (Yang, 2003).

This has definitely been a feature of people's engagement with SMTs. Having these technologies in the hands of young learners is a golden opportunity to develop their own capabilities by supporting cooperative work and the exchange of knowledge and experiences. Therefore, the use of the SLT was appropriate for this research to support cooperation, motivation, observation, and interaction between students and tutors in the presence of modern technologies.

In the Saudi context, because of the separation between girls and boys in schools and universities, SMTs contribute to collaboration, interaction and communication with each other, particularly for female tutors and students. Face-to-face settings do not enable female tutors or students to effectively take part in the majority of social participation. For that reason, the SLT has been chosen as one of the main theoretical frameworks in this research to support and allow an interpretation of the findings.

In addition, compared to other theories (Connectivism, the Theory of Digital Nativity, and the Theory of Diffusion of Innovations (TDI), the TAM has been widely used to examine users' acceptance of using SMTs for learning (Aifan, 2016; Wingo et al., 2017; Binyamin, 2019). This body of research has contributed to the TAM's validity for this research. Thus, this model may be regarded as having succeeded in providing an understanding of technology acceptance amongst users, based on perceived ease of use and perceived usefulness. The TAM, therefore, has a proven ability to interpret human behaviour in an effective manner (Davis, 1989).

Furthermore, the TAM (Davis, 1989) has been adopted more than 44,000 times, according to Google Scholar. This popularity may indicate its reliability validity of the TAM. In addition, previous literature indicates that there is a dearth of studies in relation to the integration of usability attributes into the TAM within the context of Saudi higher education, especially as the KSA differs in its culture and learning strategies from other countries. Moreover, SMTs are considered as a rather new learning aid, and so they need to be studied carefully from different angles and points of view, whether that of students, tutors, universities and tools.

The SLT and TAM are also argued as being flexible in that they can be redesigned and modified to the topic of this thesis (Dhar & Wertenbroch, 2000; Mathur, 2004; Masrom & Hussein, 2008; Mourlam, 2013). Moreover, these theories proved helpful in generating the information needed to answer each research question. The implementation of the SLT and the TAM in the present research enabled the researcher to address the research questions relevant to the EU's students. In addition, the Theory helps the researcher understand the process that users go through when accepting and using modern technologies. It would not have been possible to interpret the data to the same extent if other approaches had been applied.

These two theories also helped the researcher to understand the current situation of using SoMeLT and predict the use and acceptance of the technology that might emerge in the future. The fast and continuous development of new technologies could easily overwhelm both students and tutors. Hence, understanding their implications by developing different views could help tutors and students deal with these developments.

Students use SM continually, both inside and outside of the classroom and, as such, they require guidance to support their effective use of such tools. Such guidance can be provided based on theories that consider perceived usefulness (PU) and perceived ease-of-use (PEOU) of the technology.

Theories become stronger as more supporting evidence is gathered; they provide a context for making predictions and therefore inform our understanding of issues. This in turn assists us in making research decisions. Most importantly, these theories provide basic concepts and direct us to important questions, while also increasing a researcher's awareness of interconnections and of the broader significance of data. Additionally, by using this framework, the researcher can understand the relationships between the variables that affect students' and tutors' intent to use SoMeLT.

This framework has developed a new way of understanding the differences in using SoMeLT between students and tutors. This framework is arguably useful and suited for the EU to examine the current use of SoMeLT. This is due to the type of students and tutors involved, who are strongly passionate about new

technologies, especially since they are considered the digital generation. This is especially important, so the students, tutors, and university administrators can re-adjust their pedagogical strategy in order to use these tools properly and usefully.

Theories may aid both researchers and learners in preparing more efficiently for future challenges and view matters in a new light. The SLT and TAM may help the researcher to better understand the behaviours and issues in the research context. They also provide the language needed to describe the research field and can even aid in explaining the practices given the strong relationship between these theories and the findings that emerged in the current examination.

Finally, these theories can guide the selection of relevant data, the interpretation of this data, propose explanations of the underlying causes or influences of observed phenomena, give research a direction and set boundaries for the research, and inspire future research.

Chapter 4: Research Methodology and Methods

4.1 Introduction

Wherever possible, before commencing a study it is important for researchers to clarify their paradigmatic position (in terms of their claims to knowledge), the methodology that links methods to results (strategies), data collection methods and analysis procedures (Creswell, 2009, p.5). Consequently, this chapter outlines the various research paradigms available and the reasons for selecting a particular one for this research. It then presents the study design, the importance of the literature review, the selection of samples, and the piloting of the instruments employed, as well as the statistical procedures used to analyse the collected data. In addition, it provides a summary of the pilot study, which was conducted in the first stage of this research. The following aspects are discussed successively: data analysis, quality of the research, validity, reliability, role of the researcher, and ethical considerations.

4.2 Research Paradigms

Crotty (1998) describes the choice of theoretical paradigm as an essential stage in research that provides guidance for the whole investigative procedure. According to Filstead (1979), a research paradigm is "... a set of interrelated assumptions about the social world which provides a philosophical and conceptual framework for the organised study of that world" (p. 34). Creswell (2009) asserts that paradigms assist researchers in selecting an approach to their intended work.

Three fundamental areas of contemplation were identified by Denzin & Lincoln (1998) as the focus of paradigms:

- **ontology:** the nature of reality;
- **epistemology**: the nature and attainment of knowledge or the relationship between perceived fact and investigator; and
- **methodology**: the systematic approach to acquiring information.

Epistemology should be considered as an essential pillar in research work; a study cannot be separated from the epistemological framework it inhabits. Therefore, researchers ask about how particular knowledge can be identified, how they can recognise it when they have found it, and how 'truth' can be distinguished. As a result, researchers seek to establish and describe the truth, bringing a wide range of theoretical perspectives to their studies. The theories of epistemology and ontology affect the methodologies of researchers within their studies, while methodology "... is based upon critical thinking about the nature of reality and how we can understand it" (Morrison, 2012, p. 15).

According to Ponterotto (2005), the researcher's selection of a paradigm is influenced by the philosophical assumptions on which the research is based and guides the selection of research tools and participants. To answer the research questions, it is important to choose the appropriate research design and use the appropriate methods for data collection and analysis (Muijs, 2010).

There is some confusion in the literature regarding paradigms, where many terms are used to refer to similar things. While some researchers point out that there are many paradigms, such as realism, constructivism and methodological pragmatism (Bryman, 2003; Saunders et al., 2009), others argue that there are only two main paradigms (positivism and interpretivism) and that they develop along a continuum (Collis & Hussy, 2013). Lincoln & Guba (1985) identify positivism, post-positivism, interpretivism, and methodological pragmatism as the more frequently used research paradigms.

Paradigms differ on the basis of their methods, logic, epistemology, axiology, causal linkages and views on the nature of knowledge. While there is not strictly a necessary link between paradigm and data analysis, a positivist paradigm is often adopted in quantitative research, whereas an interpretivist paradigm is more usual in qualitative research. The decision to combine both types of research (so-called 'mixed methods') may be seen as a pragmatic one. This is the paradigm that guides this study, and it is presented in the coming section (4.2.1) along with the justification for its use (4.2.2). This will be followed by a discussion and justification of the use of a mixed methods approach for the current research, which makes use of surveys and semi-structured interviews.

4.2.1 Positivism

According to Guba & Lincoln (1994), positivism aims to explain and empirically verify existing theories through formulating hypotheses that can be explained, usually in quantitative measures, and through direct observation and generalising the findings to wider populations. The philosophical underpinning of this paradigm is an ontology that assumes that a universal knowledge, driven by universal, natural laws, exists independently of human influence, whereas its epistemology assumes that this universal knowledge can be discovered by separating its elements and uncovering its order (Hatch, 2002).

Therefore, Gratton & Jones (2010) argue that, as scientists can observe the causes and effects of natural and scientific phenomena, precisely measure them and develop laws and hypotheses, so indeed can social researchers follow similar procedures, observe human behaviours and actions, measure the facts, laws or hypotheses of cause and effect, develop laws and hypothesis, and introduce them to other contexts to explain or predict future behaviours (p. 24). Moreover, the feelings, emotions, beliefs and views of the people involved are not relevant to this paradigm because it considers that these cannot be measured or observed and are not reliable or constant (Gratton & Jones, 2010).

In brief, positivism espouses the view that, like natural sciences, social science is subject to fixed laws, that human behaviours can be predicted and controlled, and that choices and different interpretations do not exist (Wisker, 2008).

Although it marked the beginning of a new era in research and is still popular in many fields, positivism was criticised for its assumptions that natural and social phenomena can be studied and understood by applying the same set of rules and laws and hence, methods applied by natural scientists. Moreover, it assumes that social researchers are like scientists, and therefore, should not be influenced by these phenomena or other related elements (Bryman 2003). Williams & May (1996) consider positivism to be "... one of the heroic failures of modern philosophy" (p. 27). Hughes & Sharrock (1997) add that another failure of positivism is its assumption that theoretical explanations might be deduced from observing phenomena as they occur.

Along similar lines, Anderson& Arsenault (2005) argue that "... some of the most important things in human behaviour are things that cannot be directly

observed, such as intentions and feelings" (p. 4). For Crotty (1998), the results of the positivist research paradigm are presented and taken for granted as objective and factual truths, but no theory can be verified by simply relying on observations, as theories or laws might be deductively falsified.

4.2.2 Post-positivism

Post-positivism is considered an extension to positivism. It emphasises meanings and seeks to explicate social concerns. Ryan (2006) describes the characteristics of post-positivism as broad, bringing together theory and practice, allowing acknowledgment and encouragement for the researchers' motivations and commitment to the topic, and recognising that many correct techniques can be applied to collecting and analysing data. This approach is quite explicitly anchored in methodological pragmatism.

Ontologically, post-positivists believe in the existence of a single reality, but due to the restrictions stemming from the bias of human beings, they acknowledge that reality can never be fully known (Guba, 1990). Post-positivists strive to be objective and neutral and to ensure that the findings fit with the existing knowledge base. According to Ryan (2006), post-positivism recognises that dualistic thinking is usually inadequate, and that multiplicity and complexity are the reality of all human experiences. Thus, post-positivists agree that reality exists from the observer's point of view and worldview but disagree about the degree to which it can be known. For example, two people may observe the same event and understand it differently, based upon their own experiences and beliefs.

Epistemologically, post-positivism legitimises the potential for using mixed methods. Denscombe (2008) explains that the purpose of mixed methods is to improve accuracy and thereby obtain a more complete picture of phenomena; it is a way to avoid biases and a means to build analyses. One reason why post-positivism often works in social studies is that researchers are frequently interested in uncovering meaning from people's multiple interpretations of reality. Further, this paradigm allows for the use of natural settings and situational data and allows possible solutions to be identified for important

problems. Qualitative data and mixed methods are often essential in this context.

According to Ryan (2006), post-positivism believes in generalisation and presents a narrative that balances personal and professional experiences and theoretical interpretations with a compelling story. Post-positivism enables researchers to be reflexive about their position in relation to a topic that they find compelling (Dupuis, 1999). The quality standards of this paradigm are validity and reliability, which can be modified with the use of triangulation of data and methods.

4.2.3 Interpretivism

Interpretivism refers to a fundamental research approach widely adopted for studying social phenomena. Interpretivists look at the social world differently from positivists and post-positivists. According to Schwandt (1994), interpretivists attempt to investigate social phenomena in order to obtain meaning and a better understanding. In addition, interpretivists aim to provide explanations by relying on the researchers' experience, the participants' views and the context of the study.

Babbie & Rubin (2011) explain that by providing objective measurements and seeking generalisations, rather than by studying isolated issues, interpretivists attempt to explore and subjectively understand the feelings, experiences, attitudes and behaviours of people from their own viewpoints. Roth & Mehta (2002) summarise an interpretivists' approach firstly, as interpretive, in that it explores how individuals perceive an issue. Secondly, as subjective, in that it views facts as constructions to be interpreted. Thirdly, as specific, in that it investigates the perceptions of specific individuals within a specific context; and lastly, as self-validating, in that validity is obtained through consistency and coherence of investigation and analysis (p. 136).

Wisker (2008) added that within an interpretivist framework, individuals are viewed as social entities with consciousness or mind, whose behaviours and actions are influenced by their knowledge of the world, and who interpret experiences and events and make meaning from them. According to Guba &

Lincoln (1994) interpretivism reflects the ontology that the world consists of multiple realities that are experienced, constructed through social interactions and are meaningful. Hence, it follows that the interpretivists' role is to explore how people construct and perceive their experience within a given social context.

According to Hay (2011), the epistemological assumptions of interpretivism imply that knowledge is perspectival, provisional, socially constructed and subjective. It also assumes that understanding is fundamental to explain social phenomena and involves identifying the beliefs and meanings that guide human behaviours and actions.

According to Schwandt (1994), although it has contributed to a fundamental development in the field of social sciences, interpretivism has been criticised for its claim that subjective human experiences, views and values can be objectively investigated and understood. Schwandt (2014) offers a further criticism of interpretivism in that "... it retains a subject-object dichotomy and an objectivist conception of method" (p. 160). Interpretivism has also been criticised for its assumption that knowledge is cognitively processed and individually constructed making it impossible to have knowledge of anything else outside our minds (Hansen, 2004).

4.2.4 Methodological pragmatism

Creswell (2009) describes methodological pragmatism as an 'umbrella' which serves as a guide or philosophy where mixed-method research is appropriate. Pragmatists believe that reality is constantly changing and that we learn better by applying our experiences and ideas to problems when they arise. Saunders et al. (2009) argue that within methodological pragmatism, both observed phenomena and subjective meanings can provide acceptable knowledge based on the research question. Methodological pragmatism requires a mixed approach depending on the nature of the research which could be adapted to achieve better results for addressing the problem under study (Biesta, 2010).

From an ontological perspective, pragmatists believe that there are different views of social reality; everyone sees reality or fact based on their criteria and

beliefs. In terms of cognitive vision, this model is either subjective or objective, based on the particular research and stage of research (Teddlie & Tashakkori, 2009). Qualitative methods are often used for in-depth research and verification of quantitative data accuracy (Creswell & Clark, 2011). More than one research method may be required to address research questions and enable the collection of reliable, well-founded and relevant data to advance the research (Yin, 1994). Therefore, methodological pragmatism is often viewed as the best methodology to justify the use of mixed research methods (Tashakkori & Teddlie, 1998).

According to Powell (2001), for pragmatists, research begins with a problem and aims to contribute to practical solutions guided by future practices. Teddlie and Tashakkori (2009) point out that methodological pragmatism is a methodology of common sense and that it uses targeted humanitarian inquiry as a focal point. One of the positives of methodological pragmatism is that actions are assessed in the light of practical consequences.

Although methodological pragmatism is fairly recent in comparison with other philosophical positions, it has developed into a competing paradigm. Tachakuri & Tedley (2003) define methodological pragmatism as follows:

> "… a deconstructive paradigm that debunks concepts such as 'truth' and 'reality' and focuses instead on 'what works' as the truth regarding the research questions under investigation. Methodological pragmatism rejects the either/or choices associated with the paradigm wars, advocates for the use of mixed methods in research, and acknowledges that the values of the researcher play a large role in the interpretation of results" (p.713).

However, methodological pragmatism has been widely criticised, especially by European philosophers, who see it as lacking in serious concern for the truth. They consider it overly invested in the practical, rather than the universal. The benefits it offers in terms of time are, therefore, an inaccurate measure of the truth, and beliefs can be clearly both useful and false (Rescher, 2001). While recognising concerns about philosophical incompatibility issues, I concur with Kroti's (1998) belief that these concerns do not prevent the practical use of any particular set of methods.

This position reflected is in line with Creswell and Clark (2005) who advocate that students should have the opportunity to develop into 'pragmatic researchers' by learning to use and value both qualitative and quantitative approaches. Consequently, I have adopted a pragmatic approach as I view it as the appropriate paradigm for the mixed approach that I used in this research and to address the problem under study and answer the research questions by applying triangulation.

Interestingly, methodological pragmatism does not reject the importance of the concepts of knowledge philosophy, but, as Morgan (2007) argues, it rejects what it sees in other models as an advantage of ontology over knowledge theory and the theory of knowledge. Morgan (2007) calls for a pragmatic approach that focuses on methodology and its relevance to methodology and methods, while giving equal attention to each connection. Thus, although Modell (2009, p. 219) argues that "...critical realism provides more clearly articulated ontological and epistemological premises that are found in many pragmatist approaches to mixed methods research", this would be considered largely impractical by pragmatists: models are realistic and are common beliefs among members of the field of specialisation.

At this stage, methodological pragmatism offers an alternative that embraces both positivist/post-positivist and constructivist paradigms, along with research questions that determine the use of quantitative and/or qualitative methods (Teddlie & Tashakkori, 2009). This means that it provides an intermediate position methodologically and philosophically by providing a mix of qualitative and quantitative methods to answer research questions (Johnson & Onwuegbuzie, 2004). Thus, in my view, methodological pragmatism is the appropriate model for my research. The next section will explain my stance regarding the choice of methodological pragmatism as a paradigm for my research.

4.2.5 Selection of Research Paradigm

The nature of research is the main basis for selecting a particular paradigm. This research aims to reveal a greater understanding of the current reality of SoMeLT in the EU from the point of view of tutors and students. It focuses on the

participants' perceptions of the use of SoMeLT at the EU, the purposes behind the use of these tools, and the experiences of participants in using SoMeLT. This research also explores the views of the students and tutors in terms of the perceived advantages and disadvantages of using SoMeLT.

Having reviewed the different paradigms, I believe that the nature of methodological pragmatism seems more consistent with the objectives of this research than other paradigms. Methodological pragmatism is the most appropriate paradigm for exploring and explaining events in real life, within a practical framework, taking into account social structures.

Since this thesis deals with the use of SoMeLT, the philosophical perspective adopted by this research is a pragmatic approach. This is because, in order to fully analyse this phenomenon, it is necessary to support the inductive approach with deductive reasoning to enable it to address the real-world problem that is at the heart of this research. In this sense, methodological pragmatism allows me as a researcher to be free of the practical constraints imposed by the "... forced choice dichotomy between post-positivism and constructivism" (Creswell & Clark, 2007, p. 27). Moreover, methodological pragmatism attaches fundamental importance to research questions, focuses on the problem, and tries to find practical solutions using mixed methods (Tashakkori & Teddlie, 2009).

Accordingly, a methodological pragmatism approach has been used because it helps to provide healthier results and remove errors through constant triangulation. Biesta (2010) suggest that methodological pragmatism allows triangulation to produce well-validated and consistent results through different tools. Furthermore, the approach helps explain quantitative results with subsequent qualitative data. Finally, the multi-layered approach promotes study using a complementary data set, either quantitative or qualitative. Morgan (2007) states that methodological pragmatism emphasises "... creating shared meanings and joint action" (p. 67). Therefore, the philosophy of pragmatic research calls for the adoption of mixed methods as a means of collecting data and which opens the possibility to be objective and subjective in analysing the views of participants (Saunders et al., 2009).

The current research methodology is based on understanding and exploring new phenomena through human perceptions and by investigating factors that can affect the implementation of using SMTs to support learning from the perspective of teachers and learners. These factors are influenced by various issues, such as culture, concepts of technology and psychology. According to methodological pragmatism, it is important for the researcher, as a social actor, to appreciate the differences between people. In addition, the learning environment must be designed in such a way as to have a close relationship between the researcher and what is being studied, so that learners can describe their individual experiences in the learning process.

A methodological pragmatism approach supports the observation, investigation and understanding of the learning process, as well as the collating and documenting of accurate details regarding the perceptions of teachers and learners through various tools, such as online surveys and face-to-face interviews, in the social and cultural context in which learning occurs (Collis & Hussey, 2013). The application of the mixed methods helped me draw comprehensive images of the research, confirm the results obtained from the research, and enhance the weaker results from another tool with satisfactory results.

In conclusion, the use of mixed methods allowed me to mix and match elements that I expected to provide the best opportunity to answer the research questions. In addition, the classical pragmatists, C.S. Peirce, William James, and John Dewey all advise studying the practical results and experimental results to help determine the action to be taken to better understand real-world phenomena (Johnson & Ongosozi, 2004). In the current context, the real-world phenomenon under study is how students and tutors at an EU in the KSA use SoMeLT and, in particular, in a classroom environment.

4.3 **Study Design**

The research design should be a basic plan for any research. Creswell (2009) defined research design as a plan or proposal for research and includes a cross-philosophy of research strategies and specific methods. There are three critical factors that a researcher must highlight in any type of research design, which

are key parts of all research methodologies; namely: philosophical position, strategies, and data collection methods (Creswell, 2009).

Through using the systematic review, the researcher found that the utilisation of SMTs in education has been investigated around the world. However, despite the positive impact that these tools bring to the classroom and to learning (Odom et al., 2013; Vooren & Bess, 2013; Greenfield, 2014; Donelan, 2016; Alshehri 2018; Alshehri & Lally, 2019), this area of study has received very little attention, particularly with regard to KSA (Al-Khalifa and Garcia, 2013; Al-Rahmi et al., 2015; Ali et al., 2017; Alshehri & Lally, 2019).

It appeared to the researcher that there is a paucity of studies that have been conducted in Saudi universities regarding the factors and barriers affecting Saudi students' and tutors' perceptions towards adopting SM to support learning especially at the emerging universities. Thus, this research aims to enrich Saudi scholarship related to using SoMeLT to facilitate the acquisition of knowledge, and to help the tutors get a better understanding of the students' perceptions, expectations, practices, and barriers that they might encounter when utilising the tools of SM for learning purposes.

Furthermore, KSA is a conservative society and has an Islamic culture that puts Islamic legislation and laws first. Consequently, it is essential to take the most relevant cultural and societal factors in the Saudi Arabian context into consideration. Additionally, the literature review reveals that different challenges can prevent or minimise the usage of SMTs in educational settings. These difficulties relate to various aspects, including educational, communicational, technical, legal, and ethical.

Therefore, this study will contribute to filling the gap in the literature by considering how to draw clear plans and policies to use SoMeLT, by examining the existing reality of using SoMeLT at an EU in KSA from the viewpoint of tutors and students.

It is evident that few studies are concerned with cultural or societal considerations in SA (Ellison and Boyd, 2007; Almalki, 2011; Aifan, 2016; Alsolamy, 2017). The studies covered in the literature review have tended to

indicate that there is a need for more research on how to use social networking sites as special educational tools in the context of conservative societies such as Saudi society. Therefore, this study will contribute to the discussion in the literature regarding the richness of information that can be provided using cell phones and computer communication in online settings.

Analysing and discussing the findings emerging from this research, as well as addressing cultural and social issues in the context of conservative societies, will contribute to building knowledge. Furthermore, this understanding will fill in the gap between the students' and tutors' needs, interests, expectations, perceptions, and adoption of SMTs in teaching and learning environments, particularly in non-Western, conservative societies, taking Saudi society as an example. Moreover, this research adds to the general body of knowledge by exploring how the university administration, students, and tutors can make the best use of SoMeLT.

To achieve the aim of this thesis in examining the existing reality of using SoMeLT at the EU in the KSA from the viewpoint of tutors and students, I adopted a mixed methods where quantitative and qualitative data analysis were combined to take advantage of the complementary strengths of each approach. This will be discussed in the coming sections. The use of mixed methods is line with my choice of methodological pragmatism, based on a fundamental belief in integration, as paradigm as discussed in 4.2.

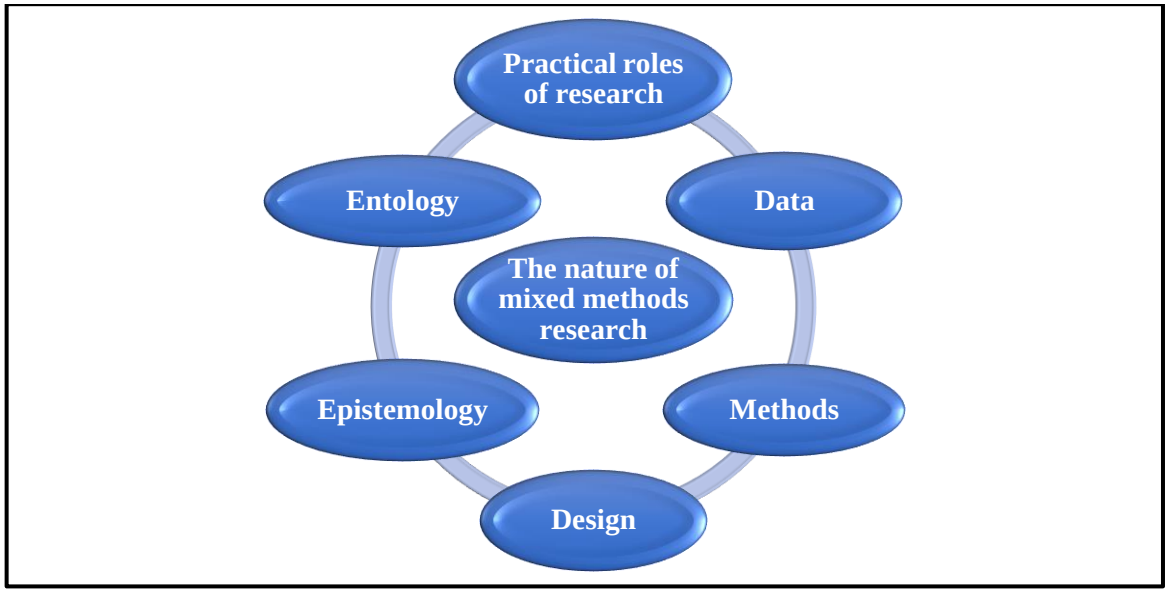

Figure 4-1 The nature of mixed methods research, adopted from Biesta (2010)

Biesta (2010) points out that it is easy to combine mixed methods approaches, but it is difficult to explain exactly what this means, what it entails or what one tries to mix or merge. Thus, it is suggested that researchers are aware of the different levels that one may seek to mix or integrate. For this reason, Biesta (2010) proposes a distinction between seven levels or dimensions in which the methods of mixing the search could be made. As can be seen in Figure 4.1 above, I have used some of these levels or dimensions to build my research. I have made a general review of the existing literature on the existing reality of using SMTs for learning in Western and Arabic studies. After drawing a clear picture of this topic, I narrowed the literature review to include literature on technologies used to deliver information, the concept of e-learning and SMTs used in education, as well as works focusing on the advantages and disadvantages of using SoMeLT in HE, considering in each case the country on which the study is focused.

To integrate the interpretation and reporting levels, I have focused on interpreting the quantitative and qualitative data collected and analysed in this research by taking into consideration the previous literature. This discussion underlines the heuristic (discovery) value of Saudi students and tutors using SoMeLT in the KSA. It also contributes to the identification of the most appropriate mechanisms for maximising the benefit of using SoMeLT in the KSA. In addition, the research sought to assist the EU in transitioning towards using

SoMeLT in all of its departments to support students and tutors in their adoption of SoMeLT.

Figure 4.2 illustrates how the research design was set up using the framework proposed by Biesta (2010) to build the pilot study of my research.

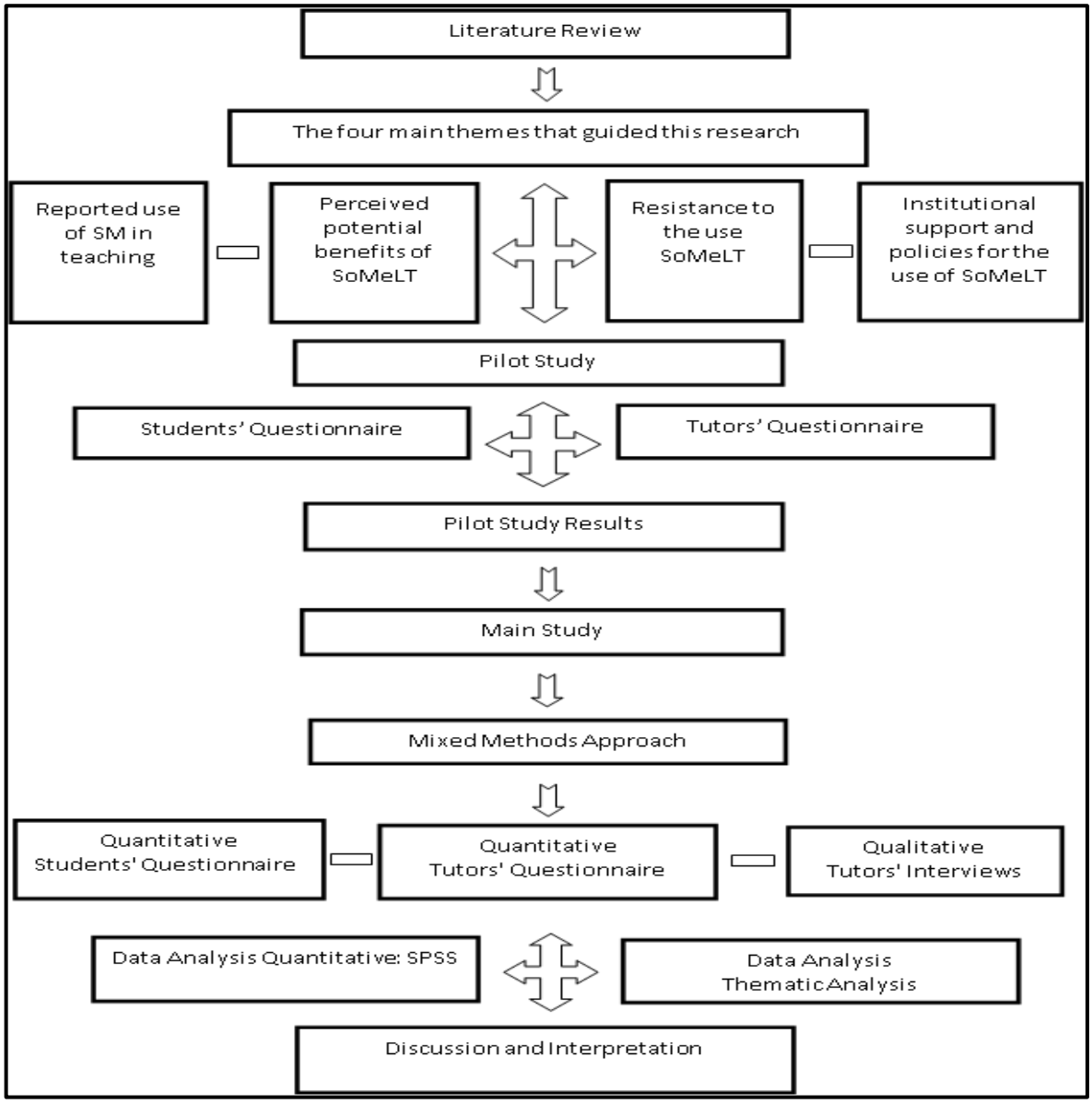

Figure 4-2 The analytical framework of this study

4.4 **Pilot Study**

Polit et al. (2001) describe a pilot study as a procedure leading to key research through experimental tests with a miniature version of the study, with the purpose of trying to reveal the aspects of faults or weaknesses in the research plan. A pilot study is a small initial study aimed at finding out if there is a

problem that requires research and investigation. It can play a very important role before conducting a large-scale research project. It is important to ensure that the pilot study answers a simple question: “Can the comprehensive study be conducted in a planned manner or should some components be changed?”

A pilot study is particularly important in the design of social science research in general, and especially in this project to provide greater conceptual clarity. The current pilot study helped me in my role of researcher, to examine important and sensitive issues in the context of the research, to assess the challenges that may be encountered during the research, and to refine the research questions and study design. Yin (2014) asserts that using different resources from the relevant literature review and the experimental data provides insights into the key issues under study stating: “The dual sources of information helped to ensure that the actual study reflected significant theoretical or policy issues as well as questions relevant to real-world cases" (p. 150).

The literature review helped to identify the relevant research methods and instruments and to create ideas about how best to use a survey questionnaire with high reliability and validity for both the pilot study and the main research. After collecting sufficient ideas regarding ways to adapt the questionnaires in the pilot study, I conducted a quantitative pilot study to examine the perceptions of students and tutors regarding the use of SoMeLT at the EU in the KSA. I built two questionnaires to examine the existing reality of using SoMeLT in the EU from the viewpoint of tutors and students. The questionnaire approach allowed responses to be more easily compared; it also reduced the effect of the researcher on responses.

It took approximately 15 minutes to complete each questionnaire which included 30 items across six domains. I tried to cover the important dimensions of using SoMeLT in the classroom. From the results, I found that all students agreed that SMTs are useful tools for education, as they can help learners to develop their knowledge, communicate with other learners and share related information. Moreover, they expressed the views that these tools encouraged collaborative learning and support self-learning.

However, it was also found from the pilot study that most of the tutors rejected the use of these tools in education for different reasons (see Chapter Six for more details). Consequently, I decided to use semi-structured interviews to examine the perceptions of the Saudi tutors in greater depth. More specifically, I wanted to establish exactly the extent to which they used SMTs, their application of SMTs, and their experience of using them. Additionally, it was essential for me to examine the tutors' perceptions at the EU regarding their perceived advantages and disadvantages of using SoMeLT.

The purpose of using the two questionnaires in this pilot study was to test whether it was a suitable instrument for gathering data to answer the study's questions, or whether I needed to adopt other tools, such as interviews, case study and/or observation. Additionally, the pilot study provided the basis for changing some of the items and also helped me to develop new items for inclusion in the questionnaire. Moreover, it provided immediate and critical feedback at the early stages of the questionnaire design.

I had the benefit of continuous support, guidance and input from my supervisors throughout the process of developing items for the questionnaires. Arising from their feedback, some of the questionnaire items were subsequently revised and articulated differently so they would be better understood by the participants. After collecting the data, the SPSS (Statistical Package for Social Science) V21.0 statistical processing tool was used to help clarify the descriptive data using tables and descriptive statistical tests were applied to analyse the answers. This type of analysis provides information in the form of percentages, frequencies and rank.

After obtaining the results of the pilot study, I decided to investigate this topic in greater depth and apply the study to a larger sample of students and tutors. This was to explore all the possibilities of using SoMeLT from the perception of the students and tutors at the EU in the KSA. As most of the tutors in the pilot study rejected the use of SoMeLT, for the main study, in addition to the two questionnaires, I decided to use semi-structured interviews with ten tutors to examine their perceptions of using SoMeLT.

Finally, the pilot study helped me, as a researcher, to examine important and sensitive issues in the research context and assess the challenges that I might encounter during the research process. It also helped to refine the research questions and design of the study. (For more details about the semi-structured interviews, see Chapter 4, Section 4.10.2)

4.5 **The Main Study**

The main purpose of this study is to examine the existing reality of using SoMeLT at the emerging Saudi university from the viewpoint of tutors and students, by investigating their perceptions of the educational values and benefits that SM has brought to their learning culture and ecologies. In addition, it aims to assist the EU in understanding relevant issues and ultimately, to improve the use of SMTs within the University in so as to advance the Saudi students' learning. It also investigates factors that influence Saudi tutors' and students' perceptions about utilising SM for learning purposes.

Additionally, the study explores the applications of the SMTs most frequently used by Saudi students. Moreover, this research seeks to examine the barriers that Saudi tutors and students face when using SoMeLT. This should help tutors and students at the EU to understand what might prevent them from obtaining the advantages that come from using these modern tools to support their learning.

4.6 **Importance of the Literature Review**

Among other things, the literature review is important to avoid repeating topics and to see what's left to be done in a certain area, on a certain subject. I have used the literature review to gather information related to the existing reality of using SoMeLT. Reading different books, primary sources, government documents, statistics, scholarly articles, Ph.D. theses and opinion pieces that discuss the use of these tools for e-learning has helped me, as a researcher, to gain a deeper understanding of the current contribution of these tools in education. I have used these resources to track intellectual progression and all major debates in the field of study.

After reading most of these resources, I was able to develop a clear image of my topic and its aims, purposes and questions. Further, the literature review enabled me to identify the theoretical frameworks used in previous studies which can be ameliorated to form a new conceptual framework for my research. The literature review helped me to ascertain the relevant research methods and instruments and create ideas for developing a survey questionnaire with high reliability and validity, for adoption and adaptation. It also helped me to decide the types of interviews to adopt in my research. In the words of Oppenheim (2001):

> "Many weeks of planning, reading, design and exploratory pilot work will be needed before any sort of specification for a questionnaire can be determined, for the specification must follow directly from the operational state of the issues to be investigated and from the research design that has been adopted" (p.100).

From a research perspective, the literature review has also helped me to know how well I have succeeded in linking my research to the larger fabric of pre-existing knowledge, illustrate how the subject has been studied previously, highlight flaws in previous research, and determine the gaps in previous studies. Most importantly, the literature review has helped me to demonstrate that my work is adding to the understanding and knowledge of the field and it assisted me in refining and refocusing the topic where needed.

With respect to the primary research dimension of the study, the literature review and pilot study have helped inform the selection of the appropriate research paradigms and to select the research methodology and appropriate data collection instruments, as well as to analyse and discuss the research findings.

4.7 **Mixed Methods Methodology**

According to Neuman (2000, p. 521), "Looking at something from several different points gives a more accurate view of it". A mixed method design in research is an approach that combines both qualitative and quantitative methods. Creswell (2009) states:

> "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).

This is consistent with methodological pragmatism, which advocates combining research components that work with both the research question and its circumstances (Hibberts & Johnson, 2012, p. 124). The mixed methodology was selected for use in this research because it provides a systematic consolidation of qualitative and quantitative data analysis. It also provides better results through triangulation compared to research based on individual methods (Karsenti, 2009). This methodology is believed to have the potential to provide more depth and breadth to a research problem than one particular method (Creswell & Clark, 2007). One of the reasons for selecting a mixed methods approach for this research was to enhance the validity of the results. This was done by confirming and contrasting data sources for comparing the qualitative and quantitative results of the same phenomenon (Hammond & Wellington, 2012).

There are clear differences between quantitative and qualitative methods. In quantitative research, a deductive process is followed. Herein numerical data is gathered and analysed using statistical tools and methods to produce more formal results. In qualitative research, as Johnson & Christensen (2004) put it, qualitative data forms a basis on which the inductive approach can be used. Research can be conducted within a small group of participants for in-depth information, and data is analysed by evaluating and synthesising words and topics. Dawson (2007) argues that, despite the small number of people involved, qualitative research methods help to explore more fully the perceptions, experiences, behaviour and opinions of individuals. While quantitative methods can be deployed among a large number of people, communication with participants is much more restricted than it is with qualitative data collection (p. 16).

Green et al. (1989) present five purposes for the adoption of mixed methods research, which are: triangulation, integration, development, initiation and expansion. This thesis seeks to triangulate the results derived from data

collected through student and tutor questionnaires with data collected from tutors' interviews. As highlighted by Biesta (2010), the use of triangulation techniques provides a deeper understanding of phenomena. In fact, "... triangulation ultimately fortifies and enriches a study's conclusions, making them more acceptable advocates of both qualitative and quantitative methods" (Oliver-Hoyo & Allen, 2006. p. 43). In particular, I used both a questionnaire and semi-structured interviews. When I carried out a survey in the pilot study, I noted certain trends and perceptions regard SoMeLT by both tutors and students.

It was, therefore, necessary for me to understand the reasons for these perceptions. This necessitated the use of another tool; namely, semi-structured interviews. Hence, I interviewed ten tutors to investigate their perceptions in-depth and establish their views on the use of SoMeLT. This helped me to identify the truth behind the refusal of most tutors involved in this research to use SoMeLT.

This would ensure that the results provide a reliable resource to guide researchers and practitioners in their use of SoMeLT and achieve an equitable and effective use of SoMeLT.

Despite its benefits, the use of mixed methods also has certain disadvantages, such as, for example, the need for large-scale data collection and the length of time needed to analyse both text and digital data. Moreover, it requires that the researcher be well-versed in both quantitative and qualitative forms of research (Criswell, 2009).

4.8 **Mixed Methods Concurrent Triangulation Strategy**

Paraho (2006) describes a research strategy as "... a plan that describes how, when and where data are to be collected and analysed" (p. 183). After reviewing the literature, the most appropriate research design for this research was deemed to be mixed methods (including the collection of qualitative and quantitative data). As can be seen in Table 4.1, Creswell (2009) identifies six strategies that can be followed in a mixed methods study as:

a) concurrent triangulation strategy;
b) concurrent nested strategy;
c) concurrent transformative strategy;
d) sequential transformative strategy;
e) sequential exploratory strategy; and
f) sequential explanatory strategy.

He (2009) identifies four criteria that influence the choice of a suitable strategy for a mixed approach. The first criterion concerns whether data will be collected sequentially or concurrently, while the second criterion relates to any quantitative or qualitative approach given priority, or whether the priority is equally distributed. The third criterion relates to the method of analysis of data to be selected integrated or separately. Finally, I must decide at any stage of the research that two types of data formats can be mixed (during data collection, analysis or interpretation) (pp. 539-540).

According to Creswell's typology, this research employs a concurrent triangulation strategy with quantitative and qualitative methods used to explain and analyse results at the same time. The concurrent triangulation is used to offset the weaknesses inherent within one method with the strengths of the other and offers greater confidence in the conclusions drawn (Tashakkori & Teddlie, 2010). As mentioned above, Creswell's first criterion relates to whether the data is collected sequentially or concurrently. In this case, the mixed methods are implemented at the same time to compare and strengthen the results. I distributed a link to access the two questionnaires among tutors and students at the EU so that they could complete them. During the same period, I conducted semi-structured interviews with ten tutors. The quantitative data provide a general picture of the research problem, while qualitative data allow the exploration of the views of the participants in greater depth and is useful in expanding data as the qualitative analysis is open-ended.

Creswell's second criteria concerns the priority given to the quantitative and qualitative methods relative to each other in the mixed methods approach. The quantitative and qualitative data had the same importance in this research. Therefore, an equal priority was given to both of them.

After gathering the data, I analysed the quantitative and qualitative data separately (see Creswell's third criterion-stage of integration). The quantitative data analysis is presented in Chapter 5 while the qualitative data analysis is presented in Chapter 6. The two kinds of data were then compared to determine whether there was convergence, divergence or some combination of the two. This process is outlined in a discussion section (Chapter 7).

The Creswell's fourth criterion relates to the use of theory. Due to the nature of the research, I planned and carried out the data collection before deciding upon the theoretical approach to use. After examining the respondents' attitudes and analyzing the patterns that emerged, I chose the SLT and TAM due to their appropriateness to the research subject and, most importantly, because of the strong relationship between their assumptions and the findings that emerged.

The purpose of adopting a mixed methods triangulation strategy is to validate the results generated by each method through the evidence produced by the other. The quantitative data was first examined to understand the current reality of using SoMeLT at an EU from the point of view of tutors and students through two separate online surveys. The qualitative data was used at the same time to provide in-depth data from tutors on the current reality of the use of SM as tools of e-learning in terms of their perceived advantages and challenges. This was achieved through semi-structured interviews with 5 male and 5 females at the EU.

By adopting methodological pragmatism and a concurrent mixed methods triangulation strategy, triangulation can be obtained. Researchers argue that by collecting data from different sources, triangulation can capture a more comprehensive and contextual picture of the units under study (Oliver-Hoyo, 2006; Yin, 2014).

Triangulation can be utilised in four ways: data triangulation, methodological triangulation, theory triangulation, and researcher triangulation (Boswell & Cannon, 2018). Data triangulation is the use of a variety of information or data sources in order to increase the validity of the results while methodological triangulation uses different qualitative and quantitative methods to check for consistency of the findings that are generated. If the different methods yield the

same results, then validity can be established. While this method is popular, it is time consuming to analyse the information yielded from the different methods.

Additionally, theory triangulation uses different theoretical perspectives to make inferences about a distinct set of data. This method is the most difficult and time consuming. Lastly, researchers' triangulation is used in the analysis process when the findings of each are compared to develop a better understanding of how every investigator views the issue. If the findings are similar it heightens the confidence in the study.

In this research, I used both methodological and data triangulation, since both quantitative and qualitative methods were used for data collection and the data were compared at the same time. I used this method because it allows us to understand all of the dimensions of any phenomena and to categorise the related factors that could be used to explain phenomena (Oliver-Hoyo, 2006). Subsequently, the review of the literature, together with the data gathered from the quantitative questionnaires and the qualitative interviews, serves as the foundation for triangulation to determine if the available data yield similar or dissimilar results

The Major Mixed Method Strategies Types				
Design type	**Implementation**	**Priority**	**Stage of integration**	**Theoretical perspective**
Sequential explanatory	Quantitative followed by qualitative	Usually quantitative but can be qualitative or equal	Interpretation phase	May be present
Sequential exploratory	Qualitative followed by quantitative	Usually qualitative but can be quantitative or equal	Interpretation phase	May be present
Sequential transformative	Either qualitative followed by quantitative or quantitative followed by qualitative	Qualitative, quantitative or equal	Interpretation phase	Definitely present (i.e. conceptual framework, advocacy, empowerment)
Concurrent triangulation	Concurrent collection of quantitative and qualitative	Preferably equal, but can be quantitative or qualitative	Interpretation or analysis phase	May be present

Concurrent Embedded	Concurrent collection of quantitative and qualitative	Quantitative or qualitative	Analysis phase	May be present
Concurrent transformative	Concurrent collection of quantitative and qualitative	Qualitative, quantitative or equal	Usually analysis phase but can be during the interpretation phase	Definitely present (i.e. conceptual framework, advocacy, empowerment)

Table 4-1 Mixed Methods Strategies (adapted from Creswell (2009)

4.9 Data Collection Instruments

4.9.1 Questionnaires

A questionnaire is a primary data collection tool which usually contains a predetermined set of questions that participants are asked to answer (Gray, 2004). The body of a questionnaire can comprise open-ended questions or closed questions. In this study, closed and open-ended questions were used in the questionnaire.

In closed questions, respondents select a response from a set of pre-designed options (Williams, 2003). The pre-designed replies include (yes/no), multiple-choice responses or the selection of a number that represents the strength of feeling or attitude (Gray, 2004). Five-point Likert scale responses were used in most items to scale the extent to which participants agreed or disagreed with each statement. Compared with open-ended questions, closed questions are easy and quick, do not require extensive writing or high resource costs and comparisons can easily be made between the responses (Oppenheim, 1992).

According to Gray (2004), questionnaires are economical; they can be sent to a huge number of participants at a low cost. Moreover, the data are easier to gather, analyse and interpret than the data collected from oral responses (Marton-Williams, 1986). In order to eliminate bias, all participants respond to exactly the same questions and honesty is encouraged by the anonymity of the process. However, closed questions also present certain pitfalls. They do not enable participants to express what they think, nor can respondents add any notes or explanations (Oppenheim, 2001, p. 114). In addition, they are inflexible when it comes to the exploration of an idea or comment (Gray, 2004).

On the other hand, open-ended questions provide an opportunity for respondents to write and explain their answers using their own words (Dawson, 2007). They enable respondents to explain and qualify their responses freely without restrictions; therefore, new issues may be raised (Cohen et al., 2007). However, open-ended questions could lead to a higher proportion of irrelevant or redundant data. This type of information may extend the collection phase and make analysis more difficult (Cohen et al., 2007, p. 321).

4.9.1.1 Questionnaire Design

Robson (2016) observes that questionnaire questions are "... designed to help achieve the goals of the research and, in particular, to answer the research questions" (p. 241). Therefore, I must have clear research questions before starting to develop a questionnaire. The first step is to have an obvious conceptual map of the questionnaire. After that, items and specific questions can be developed (Punch, 2009). Cohen et al. (2007) have stated that the researcher should use precise wording in the questionnaire as well as simple words and language to enable participants to fully comprehend the questions and ensure researchers can obtain the required information. Meanwhile, ambiguous questions and questions that include double negatives should be avoided to prevent possible confusion.

Two questionnaires were designed to examine the existing reality of using SoMeLT at the EU from the viewpoint of tutors and students. These two questionnaires each include five parts which correspond to the research questions or sub-questions for this research. This research has one main question and three sub-questions. The first sub-question has two elements: a and b. Item a answers the question related to the purposes of using SMTs reported by participants, while Item b answers the question that relates to the experiences of using SM as reported by the participants.

The second sub-question is related to the perceptions of Saudi students and tutors regarding the advantages of using SoMeLT. The third sub-question answers question related to the perceptions of Saudi students and tutors regarding the disadvantages of using SoMeLT. I displayed each item separately with a table and

a set of related elements. I will explain these parts in greater detail in the following five sections.

Part One: Demographic information

The first part of the questionnaire was designed to collect demographic information about the Saudi tutors and students at the EU. It consists of five questions. The first question asks all respondents to identify their gender. The second asks them their age. The third asks them about their specialty; 1 = science, 2 = humanities. The fourth asks the student respondents whether they have any smart devices (e.g. laptop, Smartphone, tablet); 1 = yes, 2 = no. In the tutors' questionnaire, respondents are asked in this question about their experience of teaching. The last question asks both tutors and students whether or not they use SM; 1 = yes, 2 = no. (See Appendices 8 and 9)

Part Two: SMTs usage and purposes

This part consisted of three questions involving 38 items: 19 items in the tutors' questionnaire and 19 in the students' questionnaire. The first question (A) was created to collect information about the purposes for which tutors and students use SM. Possible answers include social communication, news, learning, entertainment, or other purposes. This part of the questionnaire was created from the tutors' and students' pilot study, as well as from the latest literature review related to the usage of SM as educational tools.

The second question (B) explored examples of SMTs that they each use and their frequency of use. It consisted of 14 items in the two questionnaires answered on a five-point Likert-type scale: never use, rarely, sometimes, often, and frequently. A five-point Likert-type scale was used in this research to increase responsiveness and response quality while reducing the "frustration level" of respondents (Cohen et al., 2007). Previous research has found that the five-point scale is easy for respondents to understand and can express their views accurately (Marton-Williams, 1986).

The examples of SM referred to in this question were chosen according to the most popular SM that tutors and students reported in the pilot study or were

mentioned in previous studies. These tools include social networking sites (e.g. Facebook), blogs and micro blogs (e.g. Twitter), media sharing platforms (e.g. YouTube), text chat apps (e.g. WhatsApp), Wikis (e.g. Wikipedia) and video teleconferencing apps (e.g. Skype).

The second question (C) explored tutors' and students' experiences of using six types of SMTs (Facebook, Twitter, YouTube, WhatsApp, Wikipedia and Skype) and the frequencies of their use. It consisted of 14 items across the two surveys answered on a five-point Likert-type scale, offering the options: never use, rarely, sometimes, often and frequently. This question was developed according to the tutors' and students' responses to the pilot study, as well as based on the latest literature review related to the use of SM as educational tools (See Appendices 8 and 9).

Part Three: Perceptions of Saudi students and tutors regarding the advantages of using SoMeLT

The third part of the questionnaire was created to examine how tutors and students view the educational values and advantages of SM in their learning. It addressed research sub-question number two. It consisted of 16 items: eight items in the tutors' questionnaire and eight items in the students' questionnaire, each 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 were developed according to the tutors' and students' responses to the pilot study questions and also from the literature review related to the advantages of SM in learning (See Appendices 8 and 9).

Part Four: Perceptions of Saudi students and tutors regarding the disadvantages of using SoMeLT

This part of the questionnaire was created to investigate the difficulties that tutors, and students face when utilising SM for learning purposes. It addressed research sub-question number three. This question consisted of twenty items: 11 items in the tutors' questionnaire and 9 items in the students' questionnaire, with five-point Likert-type scales: 5=SA (Strongly Agree), 4=A (Agree), 3=N (Neutral), 2=D (Disagree), 1= SD (Strongly Disagree). Items were developed from

the literature review related to the barriers to adopting SM technologies for education and learning and also according to the tutors' and students' pilot study (See Appendices 8 and 9).

Part Five: Open-ended question

The fifth part of the questionnaire consisted of an open-ended question. This question asked tutors and students to express additional comments or ideas related to using SoMeLT. Although open-ended questions may lead to a higher proportion of irrelevant or redundant data that, may in turn, cause difficulties in analysis, open-ended questions provide an opportunity for respondents to write and explain their responses without restrictions or predefined categories of response (Cohen et al., 2007, p. 321).

In this instance, I sought to adopt these open questions to achieve triangulation, ensure access to data from different sources and give participants more space to present their perceptions of using SoMeLT. In addition, I applied these open questions as part of the questionnaires to combine quantitative and qualitative data. This could provide rich information that is difficult to obtain from the questionnaires alone. For details about the open question for tutors and students, see Chapter 6.

4.9.1.2 Drawing Upon the Literature Review in the Questionnaire Design

The design of the questionnaire was informed very directly by the existing literature on SoMeLT. Many research studies such as those by Al-Khalifa and Garcia, 2013; Ali et al., 2017; Zakharov et al., 2017; Saha &Karpinski, 2018; Roopchundet al., 2019) have found a positive relationship between the use of SMTs and its potential to support and enhance, among other things, collaboration, idea and opinion sharing and the learning abilities of tutors and students (Roopchundet al., 2019, pp.66-67).

As a result, there were several questions in the questionnaire that addressed these aspects. For instance, the second part of the questionnaire was created to collect information about the educational purposes for which tutors and students use SM. Possible answers including collaborating, interaction, social communication, facilitating learning, and enhancing learning abilities. Moreover,

the third part of the questionnaire was created to examine how tutors and students view the educational value and advantages of SM in their learning. Examples included finding and sharing educational resources, enhancing students' learning experiences, engagement, and decreasing effort and cost.

On the other hand, several research studies such as Odom et al., 2013; Vooren & Bess, 2013; Greenfield, 2014; Donelan, 2016; Alshehri 2018; Alshehri & Lally, 2019 had also noted negative aspects of the use of SMTs. These included cyber-bullying; distraction; inappropriate use of technology; language and culture barriers; quality of the training, internet, and technology. As a result, there were several questions in the questionnaire that addressed these disadvantages and barriers. For instance, the fourth part of the questionnaire was created to investigate the difficulties that tutors, and students face when utilising SM for learning purposes and included items and questions related to the negatives aspects such as cyber-bullying; privacy; distraction; security; the lack of training; the time-consuming nature of SMT use; and conflict with Islamic religious teachings.

4.9.1.3 Piloting the Questionnaires

There were different objectives behind piloting the questionnaires. One of the main objectives of piloting the questionnaires was to ensure the clarity of the data and its consistency with the research objectives and questions, as well as to check that the participants had no trouble understanding the questionnaire questions. Another objective was to examine whether these questionnaires were consistent with the dimensions of each of the five parts of the questionnaires. Furthermore, the pilot study was also intended to check that the survey data was meaningful, and the same answers were not repeated in other parts of the questionnaires.

Another important objective of the piloting of the questionnaires was to detect and address any practical problems, such as the length of time required to complete these questionnaires. Also, it was necessary to ensure that these questionnaires were accessible to all participants. Finally, the piloting of the questionnaires attempts to identify possible practical problems in following the research procedure. For example, it can highlight whether the research tools are

sufficient for the study or whether an additional research tool is required to achieve triangulation and validation. It is far better to experiment with a pilot survey and correct any inefficiencies at this point than to collect thousands of responses from the official questionnaires that cannot be analysed in a meaningful way.

Teijlingen & Hundley (2001) note some other advantages of applying a pilot survey. For example, the study can familiarise the researcher with the research procedures and ensure that the procedures are suitable and applicable. The pilot survey can also help the researcher to be more confident and improve the quality of the research by assessing its questions and plan, thus allowing the researcher to draw a clear picture of the effort required in the major investigation. It can also provide general feedback on the instrument and make sure that the instrument measures what it has been designed and intended to measure.

The questionnaires in this study were prepared in English. However, since the majority of the research population is Arabic, the questionnaires were translated into Arabic and sent to an Arabic language proof-reader in order to eliminate any colloquial language and ensure that the questionnaire items were clear and meaningful. Subsequently, the questionnaires were reviewed and revised to ensure that the meaning of the items was not changed or lost during the translation and the proofreading process. For instance, the English language frequently contains abbreviations that Arabic does not have.

After that, the questionnaires were sent to a panel of experts consisting of six professors of educational technology at the Faculty of Education at KKU, SEU and at the EU to review the items to evaluate their relevance, clarity, and conciseness. The panel suggested removing some questions that were found to duplicate other questions and amending other items slightly to make the meaning clearer. Moreover, they suggested that the items should be short and inclusive to prevent misunderstanding by participants. Moreover, the panel experts recommended revising item number 9 in part three (B) in the tutors' questionnaire.

The statement, prior to being edited, focused on the idea that students cannot learn from different sources without the help of their teachers. Thus, the experts suggested revising this statement to be clearer, using the following statement instead: “Using SoMeLT decreases the dependency of students on the tutors and promotes students' self-direction”. This feedback contributed to enhancing the wording of the questionnaires to reflect and adapt to cultural aspects. After reviewing the recommendations of the expert panel, I distributed the questionnaire in English and Arabic to a Ph.D. volunteer student at Glasgow University, as well as some faculties in Saudi universities other than the EU. They were asked to review the questionnaires, share their opinions regarding the instructions, clarity and length, to complete the questionnaire and comment on any aspects that needed further clarification. There were no changes required after this stage, as all the volunteers agreed that the questionnaire was clear, and they could measure what was intended to be measured.

4.9.1.4 Participants of the Questionnaire

The population and sample of this research focused on one university in south-western KSA. For ethical considerations, I refer to this university as the ‘EU’ so as not to give any direct evidence of the real name of the university, as there are more than four universities emerging in KSA. The study was conducted between 1 December 2017 and 1 March 2018. The EU was chosen as a research site for this study because it is one of 29 universities in KSA involved in the implementation of e-learning techniques and has introduced a number of e-learning courses. I also chose this university because I am a full-time lecturer there and I received a scholarship from the same university to gain my Ph.D. and conduct a project on the use of SoMeLT to improve the current use of these tools at the EU.

As mentioned in Chapter Two, Section 2.9, the EU has two separate campuses, one for men and one for women, in accordance with Islamic regulations. Therefore, I sought to gain a representative sample of all colleges and disciplines, whether male or female. As a researcher, I believe that the quality of the research depends on the sampling strategy adopted. Therefore, close attention was paid to four main aspects in determining the sample population:

(1) sample size, (2) range of representation, (3) sample access, and (4) sampling strategy (Cohen et al., 2007, p. 100).

According to the statistics provided by the EU (2019), there are 1,200 faculty and 17,250 male and female students. The EU has 20 colleges, 12 of them on campus and 5 off campus. It has three branches: in the Al Namas, Tathlath, and Balqarn provinces. There are over 1,200 tutors and 17,000 students with an active university email account, according to data from the same department.

The population for this research encompassed all of the tutors and students at the EU from all colleges and disciplines. The participants were those who responded to an invitation sent by the researcher by e-mail with an attached research consent form (See Appendix 3, 4, and 5) and link to the questionnaires. The email was sent first to the Graduate School at the EU, from where it was forwarded to the Department of Information Technology, which has all of the tutors' and students' e-mail addresses. That Department then distributed the email among all of the tutors and students with an active university e-mail account, regardless of major, gender or position. In quantitative studies, representativeness is the most important quality of a sample. Therefore, I was keen that participation in these questionnaires was representative of all colleges and disciplines in order to give all students and tutors the opportunity to participate in this study.

The quantitative data collection was based on the strategy of 'simple random sampling', where every student and tutor at the university had an equal chance to participate (Cohen et al., 2007, p. 110). According to Krejcie and Morgan (1970), the minimum sample for such a population should be 245 participants for scientific research to guarantee accurate results that can be generalised to the research population. The number of participants in this research totalled 697 tutors and students, all of whom responded to the electronic questionnaire. Due to the nature of the questions included in the questionnaire, all of which were compulsory to complete (participants could not move to subsequent sections before completing the current one), none of the responses received, or, more importantly, the participants, were deemed unsuitable or unusable for this study.

As can be seen in Table 4.2, 290 of the participants were tutors and 407 were students. All participants came from the science and humanities disciplines. According to Krejcie and Morgan (1970), the minimum sample for such a population should be 245 participants for scientific research to guarantee accurate results that can be generalised to the research population.

Tutors Sample		**Students Sample**	
Gender		**Gender**	
Male	**Female**	**Male**	**Female**
164 (56.6%)	126 (43.4%)	209 (51.4%)	198 (48.6%)
Specialisation		**Specialisation**	
Sciences	**Humanities**	**Sciences**	**Humanities**
137 (47.2%)	153 (52.8%)	204 (50.1%)	203 (50.1%)
Total		**Total**	
290		407	
Total participants			
697			

Table 4-2 Research population based on gender

All participants were advised that their involvement in the research was completely voluntary and they could withdraw at any time, without penalty or explanation. Moreover, in order to protect the rights and well-being of the sample participants, they were required to sign a consent form which guaranteed their confidentiality, anonymity and security (see Appendix 3, 4, and 5). They were advised that there were no known risks associated with taking part in this research. The consent form explained the nature, demands and benefits of participating.

By having the participants read and sign the form before moving on to the questionnaire and interview, the students were knowingly agreeing to assume any risks involved. Moreover, they were informed that they did not thereby waive any legal claims, rights or remedies and were provided a copy of the consent form upon request. The approval was granted by the EU for the data collection process, ensuring protection both for the university and for the sample participants.

4.9.1.5 Quantitative Data Analysis

After collecting the data, the research questions were analysed using the Statistical Package for Social Science (SPSS) programme. The first step of the data analysis phase was to evaluate the results of the questionnaire using descriptive statistics to draw conclusions from the sample tested. The SPSS V.21 package was used to help clarify the descriptive data using tables. Descriptive statistical tests were applied to analyse these questions. This type of analysis provides information about percentages, frequencies and rank.

Additionally, a non-parametric variance test was applied to the questionnaires to find out whether there were any significant statistically differences between the sample groups in each category in terms of using SoMeLT and, if so, to highlight those differences. The test applied was the Mann-Whitney, which is equivalent to the t-TEST. It was employed to explore whether three groups of the categories (gender, specialisation and using SMTs) had statistically significant differences. Furthermore, the non-parametric Kruskal-Wallis test was applied to the questionnaires in this research.

The Kruskal-Wallis test is a rank-based nonparametric test that can be used to determine if there are statistically significant differences between two or more groups of an independent variable on a continuous or ordinal dependent variable. It is considered the nonparametric alternative to the one-way ANOVA, and an extension of the Mann-Whitney U test, to allow the comparison of more than two independent groups. For the open-ended questions, most of the responses were in Arabic, hence, they required translating into English, then analysing in the same way as the qualitative data.

4.9.2 Semi-Structured Interviews

Interviews are a common data collection instrument when qualitative research is used (Gray, 2004). Kvale (1996) define the interview as the "... interchange of views between two persons conversing about a theme of mutual interest" (p.14). Bush (2007) also noted that "... unstructured or semi-structured interviews are often used by interpretive researchers and assume greater diversity in both the

design and use of the research instrument and responses from participants" (p. 78).

In this study, semi-structured interviews were used in conjunction with the students' and tutors' questionnaires to collect data and to provide the opportunity for some flexibility (Punch & Oancea, 2014, p. 327). Interviews are suitable for gaining data about a person's knowledge, values, preferences, and attitudes (Cohen et al., 2007). Indeed, according to Kothari, the interview is one of the best qualitative methods to discover underlying human desires and motivations (2006, p. 3).

In the semi-structured interviews, I set up a list of key questions that define the main issues that I sought to explore in the study. I was able to use multiple types of questions to ask for clarification or expansion, such as "... prompts, probes and follow up" (Drever, 1995, p. 1). The same questions were asked of all the participants to ensure parity among them. The semi-structured interviews were considered the best option to answer the main question of the research and its sub-questions. Babbie and Rubin (2011) note the inherent flexibility of this approach as one of its main advantages. It is expected that the views of the interviewee will be expressed more freely when the interview format is more flexible and open in terms of interview style and is limited to a standard set of questions (Kvale, 1996).

The objective of each interview was to obtain information regarding the current use of SoMeLT from a range of different perceptions of the tutors. This would provide an overview of the purposes and current use of SMTs and the tutors' experiences using these tools for learning. It would also provide details of their perceived advantages and disadvantages of using SoMeLT and their suggestions for overcoming potential problems. Although semi-structured interviews may take a long time, they were the best option for obtaining rich information from the participants and enable the researcher to seek further clarification and details about the questions or topics under study.

Semi-structured interviews allow participants more space to talk about the issue in greater depth and detail. The researcher can create new questions from the responses of the interviewers, explore further follow-up inquiries and discuss

them in depth. The researcher can also request clarification and elicit rich details about questions or topics. Another advantage associated with the use of a semi-structured interview is that it provides individual interaction and sufficient flexibility to deal with information generated during interviews (Dawson, 2007, p. 29). However, there are some disadvantages of semi-structured interviews. For example, the interviewee may spend a lot of time talking about marginal issues and the researcher may lose control of the participant; this may all lead to less reliable data being generated (Breuerton & Millward, 2001, p. 70).

4.9.2.1 Design of Semi-Structured Interview

After observing the opposition to using SMTs in education expressed by most of the participants involved in the pilot study, the purpose of conducting semi-structured interviews with ten tutors at the EU was to examine in depth the perceptions of tutors regarding the current use of SoMeLT, in terms of the perceived purposes, experiences, advantages and disadvantages. Consequently, I sought, through these interviews, to develop comprehensive, real and satisfactory results. The interview consisted of ten main questions which focused on the main question of this research and its sub-questions.

As with the questionnaire, the focus of the interviews was to examine the existing reality of using SoMeLT at the EU. The first question related to the types of SMTs that are used by tutors in their daily lives. The second question concerned the use of SMTs for teaching and learning. The third question regarded the importance of using SMTs in today's society. The interview also focused on the usage of SMTs in general in the educational process. This question was designed to uncover the details of SoMeLT use in terms of its types, the reasons, its applications and the interviewees' experiences of using them.

The interview sought more in-depth data about the SMTs that are not available at the EU, what the tutors know about SMTs and whether they wish to use them with their students. Moreover, it sought to investigate the advantages and disadvantages of using SoMeLT as perceived by the faculty. The interview also focused on the possibility of using SMTs in KSA HE and the tutors' intentions regarding their future use of SoMeLT. They were asked whether or not they were

willing to develop or expand their use and to provide a justification for their answers.

The interviewees were asked whether they used SM in their teaching. If the interviewees stated that they used these tools for learning, they were asked to measure the success of applying SMTs for learning and give examples of this success. If the interviewees were not using these tools, they were asked about the factors that might prevent them from using SMTs in their classes. Most importantly, the interviewees were asked to suggest how they could overcome the challenges that hindered the employment of these tools in their classes.

Having ascertained from the literature review and the pilot study that many of the tutors preferred not to use SMTs for learning, I designed the semi-structured interview questions to be consistent with the interviewees' answer to whether or not they used these tools. Accordingly, I designed the semi-structured interviews to follow the interviewees step by step to provide them with enough room to justify their answers and express their views in their own words.

Identifying the current level of competence in using SMTs possessed by the academic staff was essential in the interview. Thus, the questions focused on the kind of support the university offers its tutors for using SoMeLT. The interviewees' experiences of training were highlighted, as well as how the tutors rated them. Finally, ideas about the preferred characteristics of a future training package were sought, along with the expected impact of attending (see Appendix 11 and 12 for more information about the semi-structured interviews questions).

4.9.2.2 Piloting the Semi-Structured Interviews

The purpose of semi-structured interviews in this research was to obtain first-hand an in-depth understanding of the perceptions of Saudi tutors regarding the use of SoMeLT at the EU and their advantages and disadvantages. Another purpose of these semi-structured interviews was to examine the extent to which SoMeLT is used by tutors at the EU. Briggs et al. (2012) points out that interview questions usually arise from the central questions of a study, which have been identified and agreed upon in advance (p. 260). Accordingly, Briggs et al. (2012)

emphasises the importance of limiting the number of interview questions to be consistent with the duration of the interviews with the participants (p. 260).

In order to create effective questions that could draw a clear picture of the topic under study, I read different scientific articles related to the use of SMTs for learning (e.g. Dunn, 2013; Zgheib, 2014; Alasfor, 2016; Alsolamy, 2017; Zakharov et al., 2017), and examined the results of my pilot study to design the interview schedule outlined below. The interview schedule included ten main questions, with sub-questions that were carefully designed to contribute to the research aims. Table 4.3 is a summary of how the interview questions linked to the research questions.

Operational Research Questions	Interviews Questions
1. To what extent are SMTs used by students and tutors for e-learning at the EU?	1. Can you explain briefly what SoMeLT means to you? 2. Can you describe any types of SoMeLT that you are aware of and have used in this university? 3. How do you use SMTs in general in the educational process and why?
2. What are the perceptions of Saudi students and tutors regarding the advantages of using SoMeLT at the EU?	4. What do you think about using SMTs for teaching and learning and why? 5. How important do you think using SMTs is today and why? 6. 6. How do you measure the success of SMTs for learning?
3. What are the perceptions of students and tutors at the EU regarding the disadvantages of using SoMeLT?	7. What possibilities are there for using SMTs in classes in KSA? Please explain. 8. What kind of university support is available for using SM? 9. What are the factors that might prevent you from using SMTs in the classroom? 10. Do you have suggestions for how these issues can be overcome?

Table 4-3 Linkage between research questions and the interview questions

Briggs et al. (2012) stress the importance of piloting the interview questions with a small number of people to verify that the questions are understandable and relevant to the focus of the study (p. 260). Therefore, interviews were conducted with three of the academic staff at the Faculty of Education in the EU. Two of the interviewees were studying in the UK so were interviewed face-to-face. Some of the feedback provided recommended that some educational terms needed to be redefined, for greater clarity and to avoid any confusion.

The other interviewee was located in the KSA and so the other interview was conducted by Skype. This participant was concerned with the length of the interview and suggested shortening the questions as much as possible.

I also sought opinions from the three participants regarding the accuracy, clarity and general comprehensibility of the list of questions. The participants noted a few problematic questions, such as those with ambiguities, which required further modification to ensure that they were clear. This feedback contributed to enhancing the wording of the interview questions. This part of the piloting was very important as it allowed me to determine how clear and direct the questions were.

4.9.2.3 Participants in the Semi-Structured Interviews

As mentioned previously, the EU has two separate campuses, one for men and one for women, in accordance with Islamic regulations. Therefore, I sought to ensure a sample that was representative of all of the colleges and disciplines, regardless of gender. To this end, I contacted the director of information technology at the EU to obtain a list of email addresses for the tutors of the various departments at the EU.

Although only 10 participants were required, during the recruitment and selection process I initially emailed invitations to 20 prospective participants; twice as many than were needed for this study. A total of 13 participants indicated their interest in participating and, due to the limited scope of the study; I selected the 10 successful participants from various departments at the EU. Table 4.4 shows the details relating to the participants who took part in the study. There were five male and five female participants. The participants were from various departments: three from humanities and arts; one from engineering; one from chemistry; one from physics; two from computer science; one from health sciences; and one from mathematics.

Pseudonym	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
Department	H	C	E	P	M	HS	Ch	H	C	H
Position	Prof	Asst. Prof	Assoc. Prof	Assoc. Prof	Asst. Prof	Asst. Prof	Asst. Prof	Prof	Asst. Prof	Assoc. Prof
Gender	M	F	M	F	M	F	M	F	M	F

Table 4-4 Details of Participants

Key: Department: P = physics, H = humanities, E = engineering, M = maths, C = computer science, Ch = chemistry, HS = health sciences

A phone call was made to the 10 potential participants to confirm interview dates and times. I did not leave any telephone messages with personal information or data related to the study to ensure the confidentiality of the participants. As can be seen in Table 4.5, the interviews were conducted at convenient times indicated by each participant, between December 1st, 2017 and March 1st, 2018. The interviews were held in the conference room at the EU or in the participant's office.

The participants were advised that they would not be reimbursed for their involvement in the study, which was on a purely voluntary basis. Furthermore, they were assured that during and after interviews, their rights would be upheld, their identity would be protected, and their names would be replaced with a unique participant code. This ensured the confidentiality and privacy of the data collected (see Appendix 13 for more information about the semi-structured interviews participation consent form- Arabic version).

As education in the KSA is strictly segregated according to gender, as a male I was not permitted to enter any female colleges to interview the five female participants. Therefore, a female member of the academic staff from the ICT Department at the Faculty of Education kindly volunteered to act as an interviewer on my behalf. I was with her step by step on the cell phone and listened to all the discussions during the interviews. Because the five members of the interviews are females, the gender of the person who interviews the participants play a role in this situation, subsequently, the presence of the female volunteer helped them to discuss the questions extensively, give deep answers, ask more questions and suggestions related to the research questions that help in creating an appropriate environment for the use of SoMeLT in the

educational environment. In the Islamic environment, it is important to mention that when females are in one place, there is a general feeling of relief and confidence, and therefore I made this decision after my supervisors agreed to allow the female volunteer to do these interviews on my behalf. Interestingly, I did an interview with one of the participants but there was a great lack of data that I was seeking to get because the female participant was shy and embarrassed to speak directly to me as a man.

Month	Duration	Details
December 2017	1st week	Conducting a pilot study in the campus of the EU
	2nd week	Conducting a pilot study in the Tathlath branch of the EU
	3rd week	Conducting a pilot study in the Balqarn branch of the EU
	4th week	Conducting a pilot study in the Al Namas branch of the EU
January 2018	1st week	Transcribing the pilot study interviews and sending them to the supervisors
	2nd week	Revising and amending the interview questions (if required)
	3rd week	Contacting participants (respondents) at the EU and its branches to arrange participation
	4th week	Conducting the actual interviews with the participants
February 2018	1st week	Conducting the actual interviews with the participants in the Tathlath branch of the EU
	2nd week	Conducting the actual interviews with the participants in the Balqarn branch of the EU
	3rd week	Conducting the actual interviews with the participants in the Al Namas branch of the EU
	4th week	Reviewing my fieldwork at the EU

Table 4-5 Plan of Pilot Study and Fieldwork

4.9.2.4 Qualitative Data Analysis

The second step of the data analysis phase involved examining the results of the interviews. This study focused on inductive analysis, which principally has a descriptive and exploratory orientation. Thus, I read the data carefully several times, searching for keywords, patterns, ideas and themes that outlined the analysis (Guest et al., 2011, p. 7). Thomas (2006) defines inductive analysis as "... approaches that primarily use detailed readings of raw data to derive concepts, themes, or a model through interpretations made from the raw data by an evaluator or researcher" (p.238).

The qualitative data in this research was obtained from two sources: open-ended questions in the two questionnaires, and semi-structured interviews. A thematic analysis was used to analyse the research data. This is considered one of the most common methods associated with an exploratory approach (Guest et al., 2011, p. 36). The reason for choosing this particular method of analysis is its flexibility. Thematic analysis is known as a method which provides "... a flexible and useful research tool, which can potentially provide a rich and detailed, yet

complex account of data" (Braun & Clark, 2006, p.5). Boyatzis (1998) stated that "... thematic analysis enables scholars, observers, or practitioners to use a wide variety of types of information in a systematic manner that increases their accuracy or sensitivity in understanding and interpreting observations about people, events, situations and organisations" (p. 5).

In the present study, the semi-structured interview data were analysed in three phases. As can be seen in Figure 4-3, the interview data were coded and analysed by adapting the framework of Braun and Clarke (2006, p.87), who state that "... in different texts the approaches to analysing qualitative data vary slightly, but we believe they can be described in six stages, as follows:

1) organising and familiarising;
2) generate the initial codes;
3) search for themes;
4) reviewing themes;
5) defining and naming themes; and
6) interpretation of the data" (p.481).

The interviews were conducted in Arabic, because it is the official language of the participants. As a result, I added translation to the previous steps so that the analysis process was clear and consistent (see Figure 4.3).

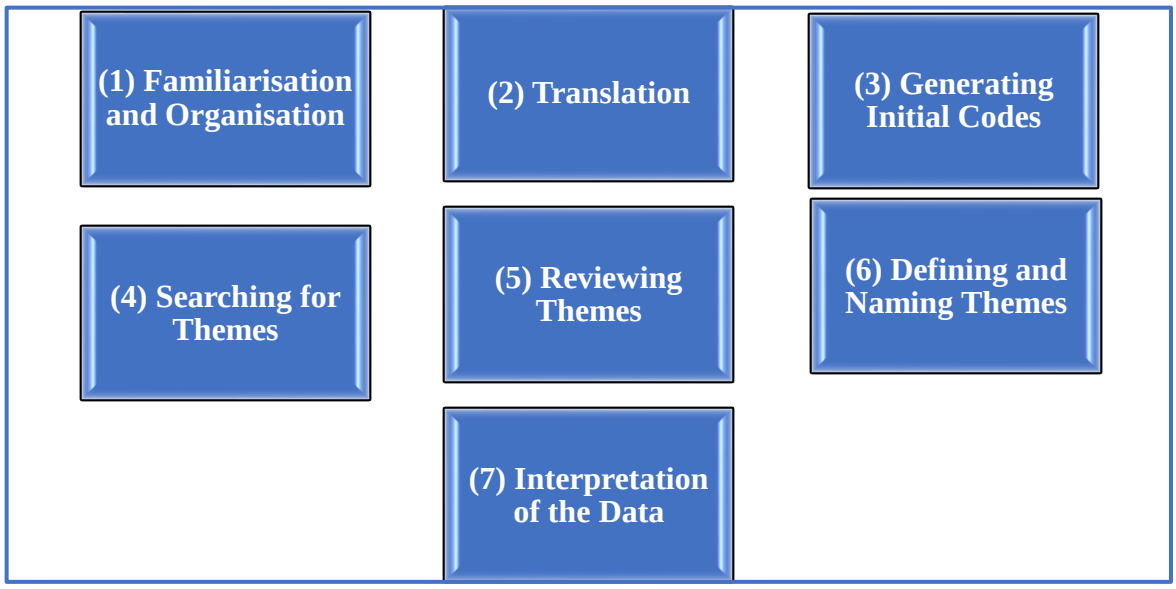

Figure 4-3 Analysing qualitative data: process adapted from Braun and Clarke (2006, p. 87) and modified by the researcher

It was important for me to actively engage with the data during the collection and analysis process. Therefore, I collected the data myself and constantly read the data gathered from the respondents, to identify themes, patterns and sense. I organised the data into Microsoft Word documents, to simplify their collection and prepare them for analysis by uncovering significant themes and sub-themes. Additionally, I read the documents and data closely, on multiple occasions, so that they became very familiar. Moreover, I familiarised myself with the data by listening to the audio recordings of the interviews and by reading the notes taken during the interviews for coding and, at this stage, I highlighted the initial codes to be further developed.

In the second phase, I copied the data in Arabic, which was then translated into English and revised by a professional translator. This translation was carried out to convey the meaning rather than word by word, as there may be variations in the syntax of the two languages (Filep, 2009). As Filep notes, "... transfer of meaning" is the key. It was important for me to familiarise myself with the data, thus, I read and reread the data and documented my initial ideas. It was very important for me to listen carefully to ensure that nothing reflected in the choice of language used, or culturally, related was lost in the participants' accounts.

According to Ritchie and Spencer (1994), after the familiarisation stage, researchers examine the data and their notes and "... attempt to identify the key issues, concepts and themes according to which the data can be explored and referenced, setting up a thematic framework within which the data can be sifted and analysed" (pp. 179-180). After completing the transcription and translation I tracked the interesting features systematically, across the entire data, collecting relevant data for each code. I was continuously coding and recoding each data item that was potentially relevant to the research question. I continued to use a systematic analysis of coding until all the interview data were fully coded and each code was combined with its relevant data. The coding was carried out manually by making notes on the texts and highlighting potential themes.

Braun and Clarke (2006) note that code is a short phrase that symbolically assigns a summative or salient meaning to data, whereas a theme is a pattern

that describes a phenomenon in relation to the research question. First, the emerging codes were catalogued and then the patterns that emerged from the codes became the themes. The themes were examined to make sure that the encrypted snippets generated an objective 'map' for analysis. After that, the continuous analysis improved the details of each attribute, resulting in clear definitions and names for each attribute.

Due to the large sets of data, I was working on and to avoid losing coherence, I focused on analysing and reporting the data that told specific stories that answered the research study questions. The codes identified were placed under four main overarching themes to answer the research questions. To achieve reliability in the coding and analysis of themes, I decided to share the emergent themes with an independent reviewer to ensure that the themes were consistent with the whole of the text. My supervisors took on the role of the external reviewers; they participated in this particular process from an early stage of analysis and subsequently provided feedback.

The fifth phase was to define and name the themes. In this stage I defined and refined the themes and analysed the data within them; I then determined what aspect of the data each theme included. It was essential that each theme presented an obvious scope and purpose that showed why it is important in relation to the research question, what story it tells and why it is interesting in relation to the overall bigger picture painted by the entire data.

In relation to the present research, four main themes with their own separate sub-themes emerged; namely:

1) perceived potential benefits of SoMeLT;
2) resistance to the use SoMeLT;
3) the reported use of SM in teaching; and
4) institutional support and policies for the use of SoMeLT.

I paid close attention to make strong links between the final themes and the research questions.

According to Ritchie & Spencer (1994), after the data has been coded, sifted and categorised, the researcher then starts the process of interpreting the data by defining key concepts and identifying phenomena so that it could be easily understood and interpreted. My role in this phase is to put the complex story that lies behind the themes into concise and convincing words. Therefore, the final phase resulted in the production of a report which included a summary of all issues related to each subject, with a selection of representative quotations as evidence to support the claims. These quotations embody the essence of the phenomenon I am exploring.

In order not to disclose the name of the participants, to maintain their anonymity and for the purpose of statistical numerical coding, it was necessary that descriptor codes be ascribed to each participant. As 10 tutors were involved, each tutor was assigned a number between 1 and 10 for this purpose. Additional sections of codes were then added to identify department, Q. No: 1; Male). This also served to avoid confusing words, phrases, ideas, events or issues that were repeated throughout the responses. All efforts were made to confirm meanings and ensure that the conclusions reached answered the questions of the study. This process of reporting is evident in Chapter 6.

4.10 **Back-Translation Technique**

Back-translation is the process of translating a document or survey items that have already been translated into the target 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 Brislin (1970), back-translation is the most common and highly recommended procedure for translating, especially in the cross-cultural use of measurements. As the back-translation technique involves translating from the target language (e.g., Arabic) back to the source language (e.g., English), 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.

Bracken and Barona (1991) argue that back-translation procedures should be applied to the test instruments as well as to 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. Chen &Boore (2010) add that it is important that the translators are knowledgeable about both cultures.

Once the research proposal was approved, given that the Saudi tutors and students at the EU speak Arabic, I started to have the questionnaire items translated from English to Arabic and then back to English. I worked with a group of independent translators who are fluent in both languages; two of whom were majoring in educational technology and translated the English version of the surveys into the Arabic language. After that, the Arabic versions were given to an independent translator who is fluent in both Arabic and English in order to translate the Arabic versions into English. Finally, these two English versions were given to a native English-speaking graduate student at the University of Glasgow to examine for any significant differences between the two versions of English.

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. The final drafts of the questionnaires in Arabic were given to four native Arabic speakers who were asked to read the items carefully and to examine their clarity. I evaluated their suggestions for ways to improve the items and changed them accordingly. The final draft of the Arabic questionnaires was reviewed by a well-reputed English teacher specialising in teaching English as a second language in order to confirm the translation. He concluded that the questionnaire items were clear and understandable.

4.11 **Validity and Reliability**

Cohen defines validity as "... a demonstration that a particular instrument, in fact, measures what it purports to measure" (2000, p. 133). Validity is a requirement for both quantitative and qualitative research (Cohen et al., 2007) and takes different forms. For qualitative data, validity might be addressed through the honesty, depth, richness, the extent of triangulation and the objectivity of the researcher (Cohen et al., 2007). Similarly, the validity of

quantitative data can be measured through appropriate instrumentation and statistical treatment of the data, as well as careful sampling (Cohen et al., 2007).

In the present research, when the validity of data collection instruments was assessed they were, in fact, found to measure what they were intended to measure. The form of the interview questions was reviewed by five of my research colleagues and checked by my supervisors. As an extra measure and to ensure that the data collection strategy was appropriate for addressing the research questions, prior to implementation, I carried out a pilot study with three lecturers at the EU, two of whom were studying abroad.

The tools were judged as valid by the specialists and other interested parties concerned with the research subject. This allowed me to identify any potential obstacles and make any changes required to be sure that the instrument measured what it was designed and intended to measure. This also allowed me to familiarise myself with the research procedures.

An instrument's reliability refers to whether or not scores for items are internally consistent and stable over time. This includes consistency in test administration and scoring, according to Creswell (2009, p. 233). The reliability of the study was achieved by using two different data collection instruments: questionnaires and semi-structured interviews. The questionnaires included closed and open-ended questions to ensure more accurate, in-depth answers, and to minimise possible error or bias. The use of these two methods of data collection achieved the generation of triangulation.

Reliability was also ensured by including respondents from both genders and a variety of disciplines, academic positions and roles. Moreover, the internal consistency reliability was calculated by using Cronbach's Alpha, as it is frequently used to gauge how closely related a set of items are as a group. The questionnaire is internally consistent, as it achieved a Cronbach's Alpha score of .950, which indicates a high-reliability coefficient.

4.12 **Role of the Researcher**

In this context, my role was to interview the tutors at the EU in the KSA, in order to examine the existing reality of using SoMeLT. As the president and vice-president of the EU were newly appointed by the MoE, as were many members of the teaching staff, I did not have the honour of meeting them prior to beginning this research due to my study abroad. I am currently studying PhD. in educational technologies at the University of Glasgow in the United Kingdom. Likewise, all of the participants whom I interviewed in person were also studying abroad; they had obtained scholarships from the EU to study English and pursue master's and Ph.D. degrees in various countries, such as the United States of America, the United Kingdom, Canada and Australia. Once they receive their required degrees, they would return to the EU to continue their work.

The professors involved in this study from the EU were not known personally to the researcher; therefore, this contact did not create bias or coercion. I have never held a supervisory role at the University at which this research was conducted; nor have I worked for any of the departments related to the participant's professional evaluations, or which influence over their promotion prospects. Therefore, interviewees were not fearful of participating in the interview process. Triangulation also avoided (or minimised) bias in the research design.

My focus was to treat all participants equally and make sure that my relationship with the participants had as little impact as possible at every stage of the data collection procedures, data analysis or interpretation, or upon the participants themselves. Before conducting the interview sessions, I introduced myself to the participants and told them about my teaching background. It was important for me to establish a good relationship, rapport and credibility with them, as well as to encourage openness by putting them at their ease. As previously mentioned, during the data and analysis phases, I minimised personal bias by playing the role of an outside person who was not familiar with the topic and by using the same interview questions with all participants.

4.13 **Ethical Considerations**

Hays and Singh (2012) define ethics as "... a set of guidelines established within a professional discipline to guide thinking and behaviour" (p. 68). According to Gray (2004), these guidelines determine and indicate appropriate and inappropriate conducts of researchers in relation to the subjects involved in their inquiry. Therefore, researchers should be aware of and consider these ethical issues in the process of their research and data collection. Brinkmann and Kvale (2005) point out that "... it is indeed important to obtain the subjects' consent to participate in the research, to secure their confidentiality, to inform them about the character of the research and of their right to withdraw at any time, to avoid harmful consequences for the subjects, and to consider the researcher's role" (p. 167).

According to Hays and Singh (2012), obtaining the subjects' consent to participate in a study is called informed consent "... whereby the researcher seeks permission from the participants to collect data from them" (p. 80). Wellington (2000) emphasised that "...ethical concerns should be at the forefront of any research project and should continue through to the write-up and dissemination stages" (p. 3). Also, the ethical issue is particularly important in scientific research "... where people are studying people" (ibid, p.54).

In order to address the ethical issues, protect participants' rights and follow the regulations of official organisations rules, this study applied several procedures at both the official and personal level. First of all, I sent a request to the College of Social Sciences Research Ethics Committee at the University of Glasgow to obtain their approval to start conducting the research and collecting the research data. According to McNamee et al. (2007), before starting any research proposal, researchers should have their study assessed and approved by the ethics committee at their organisations and accept their decisions.

After reviewing the study applications, the College Research Ethics Committee granted their approval for me to begin collecting the study data (see Appendices 1 and 2). Furthermore, permission was also granted by both the Saudi Arabian Cultural Bureau (SACB) in London and the EU administration in the KSA to conduct the study and collect the data. A copy of the research survey, interview

questions, a letter of support from the academic advisor and other related documents were sent to the SACB in order to begin the process involved in the researcher's field trip. I was subsequently granted approval by the EU in the KSA to collect data from its tutors and students and given assurances that they would facilitate the data collection process (see Appendix 6).

Since the research was to be carried out in a work setting there were certain important ethical issues that needed to be considered, most importantly, the anonymity and confidentiality of participants and the voice recordings of the interviews. It was crucial to ensure there would be no repercussions as a result of their participation in the research. To overcome these issues, an information sheet with a description of the nature of the research and its intended objectives was distributed, along with the questionnaire, which confirmed that the raw data gathered from the participants could not be accessed by the EU representatives.

In addition, it was reiterated that the data would be treated confidentially for the purposes of the research and stored securely under password in the School of Education at the University of Glasgow. According to McNamee et al. (2007), confidentiality is concerned with what will happen to the collected data; in this case, guaranteeing confidentiality involves keeping the information obtained from the participants secure.

The information sheet also informed the participants that their involvement was entirely voluntary. Furthermore, they had the right to withdraw from the study at any time without having to give reasons and with no ill consequences. The following statement was expressed within in the information sheet:

> **'It is not obligatory to take part in this study if you do not want to, but your participation will be appreciated, and your views will be very important'.**

In order to ensure the anonymity of the participants, their names were not collected in the questionnaire or during the interviews. Additionally, to make the participants feel more comfortable about responding to the survey items, they were assured that their responses would remain anonymous and the data collected would be used only for research purposes. There was also a consent

form attached to the questionnaire that summarised the key ethical points to be agreed (see Appendix 3, 4, and 5). Prior to interview, each participant was asked to carefully read and sign the consent form to indicate their willingness to participate in this study. They were also informed that the discussions would be audio-recorded using a Voice Plus Recorder.

4.14 **Conclusion**

This chapter has outlined the methodological approach and the research method used in this study. To obtain data-rich responses, quantitative and qualitative research methods were employed, involving two questionnaires (one for the tutors and another for the students), and semi-structured interviews with tutors. This helped me as a researcher, to obtain a comprehensive understanding of the existing reality of using SoMeLT at the EU from the viewpoint of tutors, as well as their actual use. I worked to prepare appropriate environments in which to interview the participants, as this would be more likely to provide data that would be accurate and relevant to the research goals. This chapter also described and justified the design and content of the data collection instruments used. Details were provided regarding the samples of the study and the participants responding to each instrument.

This chapter included several sections related to research methodology: research paradigm, research design, piloting, mixed methods methodology, mixed methods strategy, research validity and reliability, and data analysis. In addition, I highlighted the essential ethical matters that were considered in this research, including the role of the researcher. The qualitative and quantitative research data analyses will be presented separately in Chapters 5 and 6.

Chapter 5: Quantitative Results

5.1 Introduction

The main aim of this research is to examine the use of SM in education at the EU, from the viewpoint of tutors and students. This chapter describes the results of the quantitative analysis performed on the data derived from two online questionnaires; one student questionnaire and another questionnaire for tutors. This section presents the tools used to statistically analyse the data, provides demographic information about the participants, and summarises the results of the data analysis. The data analysis cross-validates the questionnaire datasets with those obtained from the interviews conducted with the tutors (detailed in the next chapter).

5.2 The Questionnaires

Two separate questionnaires were used to examine the current use of SoMeLT at an EU, from the viewpoint of tutors and students (see Appendices 8 and 9). As can be seen in Figure 5.1, the first format was for the students, while the second one was created for the tutors. Subsequently, the tutors' responses then provided a systematic background for the interviews, presented in the next chapter.

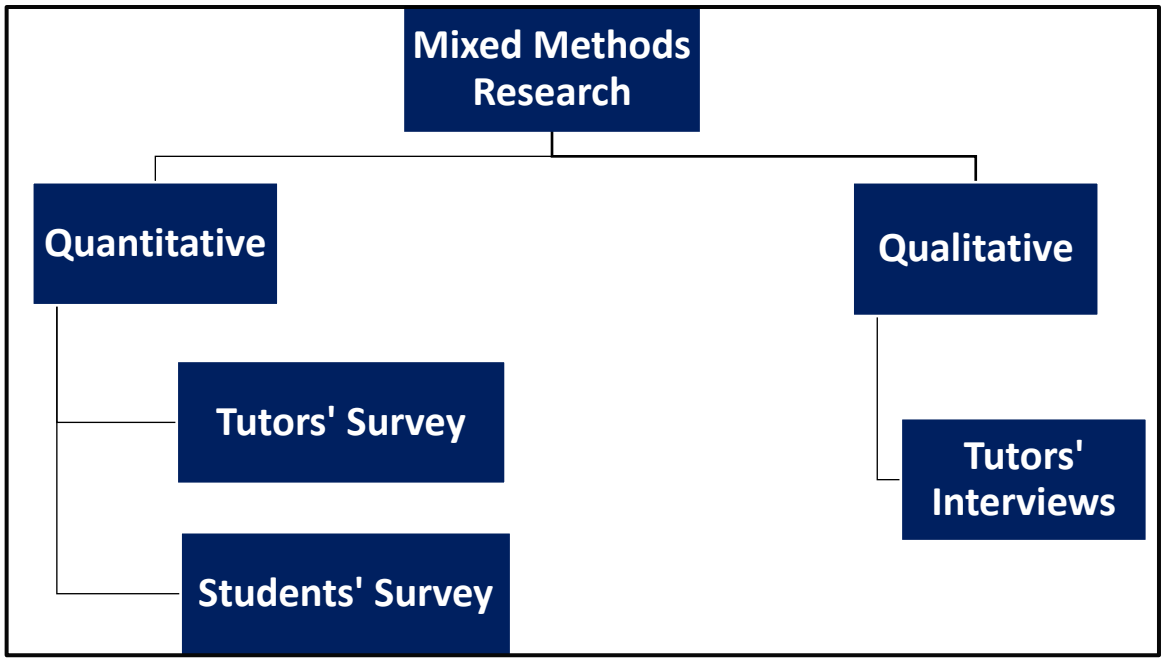

Figure 5-1 Design of the research results

The questionnaire was designed to collect data from tutors and students to answer the following research questions:

1. To what extent are SMTs used by students and tutors for e-learning at the EU?
    a. What are the reported purposes of using SM?
    b. What are the reported experiences of using SM?

2. What are the perceptions of Saudi students and tutors regarding the advantages of using SoMeLT at the EU?
3. What are the perceptions of students and tutors at the EU regarding the disadvantages of and barriers to using SoMeLT?

The questionnaire contained five sections, specifically designed to answer these questions.

Section one of the questionnaire obtains the demographic information of the Saudi tutors and students at the EU. The second section of the questionnaires is divided into two parts, detailed below:

- ***Part A*** *focused on the purposes for which the Saudi tutors and students used these tools (five statements)*
- ***Part B*** *focused on the experiences of using SM reported by the participants (six statements).*

The third section of the questionnaire covered the tutors' and students' perceptions of using SoMeLT to support learning. It consisted of two questions (A and B) and contained 36 items; 17 in the students' questionnaire and 19 in the tutors' questionnaire. The purpose of the fourth section was to examine how Saudi tutors and students view the potential value of using SoMeLT. It consisted of 16 items (eight items in the tutors' questionnaire and eight items in the students' questionnaire).

The fifth section of the questionnaire covered the difficulties that Saudi tutors and students face when utilising SM for learning purposes. It consisted of 20 items (11 items in the tutors' questionnaire and nine items in the students'

questionnaire). The last section of the questionnaire contained the open-ended questions, as discussed in Chapter 4. This section provided the participants with the opportunity to record any challenges they confront in the use of SoMeLT, provide any recommendations for overcoming these challenges and finally, to comment on any aspect of this research. The data obtained in this section is analysed in Chapter 6, based on thematic analyses, and was treated like the other qualitative research dataset.

The SPSS Version 21 (Statistical Package for Social Sciences) software was used to analyse the dataset collected from the questionnaires. I adopted the descriptive statistics method using frequencies and percentages to analyse demographic data, give an overview of their distribution and obtain the broad trends of as all the responses. The basic statistic concepts used in this thesis showed which scores were the most and least frequent. This offered an insight into the dynamic of the situations and people (Cohen et al., 2007). The frequency reflects the number of times an item/sub-factor has been observed to occur, whereas the mean represents the average performance of a group or the centre of the group (Lodico et al., 2010: 61).

In order to identify whether there were statistical differences between the participants in terms of using SoMeLT and using SMTs, according to gender, specialisation, age, number of years teaching (for tutors only), and the types of electronic devices owned by the tutors and students, non-parametric tests were also applied. The Likert scale is described as an ordinal scale of measurement to order categories (McCrum-Gardner, 2008). According to Pallant (2010), "... non-parametric techniques are ideal for use when you have data that are measured on nominal (categorical) and ordinal (ranked) scales" (p. 213).

In this dataset, the assumptions of normality were not met, thus, parametric procedure analyses would not appropriate. Therefore, non-parametric tests were applied because they do not make assumptions about the underlying population characteristics and distribution (Pallant, 2010). It is important to highlight that I applied a non-parametric variance test to the questionnaires to compare the different ranks the participants gave to all of the statements in the questionnaires. The non-parametric variance tests enabled me to identify whether there were any significant statistical differences between the sample

groups in each category relating to the use of SoMeLT and to highlight those differences.

First, the Mann-Whitney test, which is equivalent to the t-TEST, was used to explore whether three groups of the categories (gender, specialisation and electronic devices owned by the students and tutors) and the use of SM by the students and tutors had any significant statistical differences. For non-parametric statistics, the Mann-Whitney test is the most suitable method to test the differences between independent samples.

Second, the non-parametric Kruskal-Wallis test was applied to the questionnaires. The Kruskal-Wallis test is a rank-based, nonparametric test that can be used to determine if there are statistically significant differences between two or more groups of the categories (age, electronic devices owned by the students and tutors, and teaching experience (for tutors only)). It is considered the nonparametric alternative to the one-way ANOVA and an extension of the Mann-Whitney U test that allows the comparison of more than two independent groups. Finally, in order to save space, I summarised the findings related to these tests under the relative research questions. A full account of the results of the statistical tests is provided in the relevant tables in the appendices.

5.3 **Participant Data**

As mentioned in the methodology chapter (Chapter 4, Section 4. 10. 1.3), the participants in this study were Saudi male and female tutors and students at the EU. The total number of participants in this study was 290 tutors and 407 undergraduate students. All of the students, 51.4% of which were male and 48.6% of which were female, were studying at the University at the time the research took place. They came from different specialisations in the campus of the University and the branches of the University in the neighbouring governorates.

The tutors who took part in this study comprised 56.6% males and 43.4% females. All the participants were current faculty members of the University at the time of the research and had different areas of expertise and academic levels. The

participants came from the campus of the University and the branches of the University in the neighbouring governorates. They had different academic ranks, such as teaching assistant, lecturer, assistant professor, associate professor and professor. (For more details about the sample's representativeness, please see Chapter 4, Section 4.10.1.3).

5.4 Student online survey

5.4.1 Descriptive statistics

Demographic description: As described in Chapter 4, the research participants were Saudi male and female students at the EU. The participants' demographic characteristics are described in detail in this section. This information includes gender, age, major, whether they have any smart devices (e.g., laptop, iPhone, iPad or Samsung) and their usage of SMTs.

Age and gender: As shown in Table 5.1, the number of student participants in the survey was 407 - 209 were male (51.4%), while 198 were female (48.6%). The participants in the online survey were also asked to list their age. Of those who responded, 27.3% (n=111) listed their age as 20 or under, 52.3%% (n=213) listed their age as 20 to 25 years old, 13.3% (n=54) listed their age as 26 to 30 years old, and 7.1% (n=29) listed their age as 31 or older. (For more details about the sample's representativeness, please see Chapter 4, Section 4.10.1.3).

Specialisation of the student sample: As shown in Table 5.1, the sample was evenly divided between those specialising in science subjects; such as physics, medicine, mathematics and chemistry (204 out of 407 or 50.1%); and those specialising in humanities, such as Arabic language and literature, English language and literature, history and geography etc. (203 out 407 or 49.9%). (For more information about the sample's representativeness, please see Chapter 4, Section 4. 10.1.3).

Electronic devices (students): Table 5.1 showed that the most commonly possessed 'smart' device was a laptop, with 159 out of the 407 participants having one (39.1%). The next most popular smart device was the iPhone; with 147 out of 407 (36.1%) stating that they had one. 59 out of the 407 participants

owned a tablet (14.5%), while 42 out of 407 stated that they had an iPad (10.3%).

Use of SM: All the students reported that they use SM, as shown in Table 5.1.

Variables	Frequency	Percent
Sex groups		
Male	209	51.4
Female	198	48.6
Total	**407**	**100%**
Age groups		
Less than 20	111	27.3
From 20 to 25	213	52.3
From 26 to 30	54	13.3
From 31 and more	29	7.1
Total	**407**	**100%**
Specialisation groups		
Sciences	204	50.1
Humanities	203	49.9
Total	**407**	**100%**
Electronic devices groups		
Tablet	59	14.5
Smart Phones	147	36.1
Laptop/PC	159	39.1
iPad	42	10.3
Total	**407**	**100%**
Use of SM groups		
Yes	407	100
No	0	0
Total	**407**	**100%**

Table 5-1 The participants' demographic information

From the table 5-1, it is notable that the number of student participants in the gender categories and specialisation groups is roughly the same. This may give some kind of assurance that each group in each main category of the study population received an equal opportunity to participate in this study. The fact that SoMeLT is used by all the students who participated in this research can be interpreted as being a positive sign for the potential to effectively apply these technologies in education. The respondents are the generation of this digital age

who, considering that SoMeLT is still a new trend in learning, use these tools repeatedly, so much so that they have now become an integral part of their daily lives.

5.4.2 Findings of the Research Questions

The following sections will explain the three main questions guided by this study in detail. The first question was designed to examine the students' current use of SoMeLT. The second question was designed to examine the perception of the students regarding the advantages of using SoMeLT. Finally, the last question intended to identify the disadvantages of using SoMeLT, as perceived by the students.

5.4.3 First Research Question: To what extent is SM used by students as a tool for e-learning?

This question was divided into two sub-questions. The following sections look in detail at each sub-question according to the variables analysed.

5.4.3.1 Sub-Question One: What are the purposes for which Saudi students use SM?

The first sub-question explored the purposes and frequency of using SM by Saudi students. The identified purposes are social communication, following the news, learning, entertainment and 'other'. The participants were asked to report the frequency that they used those SM for the purposes mentioned above, as follows: 1 = Never use, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Frequently. The following table displays the data obtained in this part of the questionnaire as distributive statistics, including percentages, frequencies of the full sample responses for the 5 statements, and the rank based on the frequencies of agreement (4 + 5).

Purpose	Frequencies & Percentages						Rank
	Stat.	1	2	3	4	5	
Social communication	*F*	0	2	21	57	327	1
	%	0	0.5	5.2	14.0	80.3	
News	*F*	2	6	88	127	184	4
	%	0.5	1.5	21.6	31.2	45.2	
Learning	*F*	3	14	61	104	225	3
	%	0.7	3.4	15.0	25.6	55.3	
Entertainment	*F*	6	11	54	92	244	2
	%	1.5	2.7	13.3	22.6	60.0	
Other ----------	*F*	11	24	78	110	184	5
	%	2.7	5.9	19.2	27.0	45.2	

Table 5-2 Descriptive statistics for the purposes of using SoMeLT among Saudi students (n=407).

As shown in Table 5.2, the results reveal that the participants used SM most frequently for social communication, with frequencies and percentages of (n=384, 94.3%). The second most frequently mentioned reason for using SM was for entertainment, with frequencies and percentages of (n=336, 82.6%). The third was for learning, with frequencies and percentages of (n=329, 80.9%). The fourth was for news, with frequencies and percentages of (n=311, 76.4%). 'Other purposes' represented the least frequently mentioned use of SM, with frequencies and percentages of (n=294, 72.2%). The 'other purposes' category included shopping, job hunting, religious content and programmes, business, marketing and commerce.

A high proportion of the participants used SMTs for learning. This indicates the important role that these tools can play in modern education and for allowing knowledge to be obtained from different sources. This suggests there is an opportunity for educational policymakers and principals to encourage students and tutors to use SoMeLT to benefit from these tools through a simplified learning process and gain a greater access to knowledge.

5.4.3.2 Sub-Question 2: What experiences of using SM do the student participants report?

This section reported the results of the second sub-question of the main first question from the questionnaire, which explored the students' experiences of six different SMTs (Facebook, Twitter, YouTube, WhatsApp, Wikipedia, and Skype) and the frequency of use. The participants were asked to rate their experiences with using these tools. Their responses were recorded according to a five-point Likert-type scale: 1= Never use, 2 = Rarely use, 3 = Sometimes use, 4 = Often use, 5 = Frequently use. The following table (5.3) shows the data obtained in this part of the questionnaire, displayed as distributive statistics, including percentages, frequencies of the full sample responses for the 5 statements, and the rank based on the frequencies of agreement (4 + 5).

SM Categories	Frequencies & Percentages						Rank
	Stat.	1	2	3	4	5	
Facebook	*F*	79	57	72	63	136	6
	%	19.4	14.0	17.7	15.5	33.4	
Twitter	*F*	12	20	54	91	230	3
	%	2.9	4.9	13.3	22.4	54.5	
YouTube	*F*	40	38	106	113	110	4
	%	9.8	9.3	26.0	27.8	27.0	
WhatsApp	*F*	3	4	17	54	329	1
	%	0.7	1.0	4.2	13.3	80.8	
Wikis or Wikipedia	*F*	3	6	42	97	259	2
	%	0.7	1.5	10.3	23.8	63.6	
Skype	*F*	96	66	113	53	79	7
	%	23.6	16.2	27.8	13.0	19.4	
Other_____	*F*	21	33	82	94	177	5
	%	5.2	8.1	20.1	23.1	43.5	

Table 5-3 Frequencies and percentages of experience using SoMeLT (n=407)

The most frequently used platform was WhatsApp, with frequencies and percentages of (n=383, 94.1%). The second was Wikipedia (n=356, 87.4%), followed by Twitter (n=321, 76.9%), YouTube (n=223, 54.8%) and Facebook

(n=199, 48.9%). The SM platform used less frequently was Skype (n=132, 32.4%). The participants reported that they had extensive experience using other SMTs such as Blackboard, Snapchat and Instagram. Considering the SM categories, we can see that the participants revealed a high awareness of the importance of using SoMeLT. Furthermore, the culture of using SoMeLT to construct professional networks of relationships, engage in discussions and exchange experiences with other users from different cultures who have the same interests was widespread among both students and tutors.

5.4.4 Second research question: What are the perceptions of Saudi students regarding the advantages of using SoMeLT?

This question was divided into two sub-questions, each of which is analysed in detail below.

5.4.4.1 Sub-Question One: To what extent did tutors use any of the following SM in their teaching?

The first sub-question was designed to ascertain the frequency of tutors' use of SM in their teaching. Students were asked to describe the extent to which their tutors used any of the following seven SMTs in any of their classes: Facebook, Twitter, YouTube, WhatsApp, Wikipedia and Skype. Their responses were recorded according to a five-point Likert-type scale: 1= Never use, 2 = Rarely use, 3 = Sometimes use, 4 = Often use, 5 = Frequently use. The following table presents the data obtained in this part of the questionnaire displayed as distributive statistics, including percentages, frequencies of the full sample responses for the 5 statements and the rank based on the frequencies of agreement (4 + 5).

SM Categories	Frequencies & Percentages						Rank
	Stat.	1	2	3	4	5	
Facebook	*F*	266	68	35	16	22	6
	%	65.4	16.7	8.6	3.9	5.4	
Twitter	*F*	212	68	63	25	39	4
	%	52.1	16.7	15.5	6.1	9.6	
YouTube	*F*	91	86	87	93	50	1
	%	22.4	21.1	21.4	22.9	12.3	
WhatsApp	*F*	88	73	111	61	74	2
	%	21.6	17.9	27.3	15.0	18.2	
Wikis or Wikipedia	*F*	199	100	42	33	33	5
	%	48.9	24.6	10.3	8.1	8.1	
Skype	*F*	271	82	30	12	12	7
	%	66.6	20.1	7.4	2.9	2.9	
Other	*F*	127	81	129	29	41	3
	%	31.2	19.9	31.7	7.1	10.1	

Table 5-4 Frequencies and percentages of the extent SoMeLT is used in classes by tutors (n=407)

As shown in Table 5.4, the most frequently used SMTs by the tutors for teaching was YouTube (n=143, 35.2%), followed by WhatsApp (n=135, 33.2%), Wikis (n=66, 16.2%) and Twitter (n=64, 15.7%). The participants reported that they sometimes used Facebook. The least frequently used SMT for teaching was Skype (n=24, 5.8%). Some participants also reported that they often use other SMTs, such as Tango and Snapchat. The findings clearly show that SMTs are used significantly less frequently by the Saudi tutors than students.

If one considers the numerous opportunities for exploiting SM in education, this result is somewhat frustrating, as Saudi youths are among the most prolific users of these sites globally. Therefore, it is essential that the high use of these tools by Saudi youths is matched by a proficiency in the use of SM among tutors, which is unlikely given their infrequent use. Therefore, it is important for tutors to develop their SM skills in order for them to keep pace with the prevalent use of SoMeLT by their students.

5.4.4.2 Sub-Question Two: What are the Saudi students' perceptions regarding the advantages of using SoMeLT?

The second sub-question was designed to explore the Saudi students' perceptions of using SM to support their learning at the EU. The participants were asked to rate their degree of agreement by responding to eight items and their responses were measured using a five-point Likert-type scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree. As shown in Table 5.5, descriptive statistics were generated to allow the data in this question to be analysed. This included calculating the percentages and frequencies of the full sample responses for the eight statements and the rank, based on the frequencies of agreement (A+SA), to identify which items had the highest and lowest incidence of agreement.

Statements	Frequencies & Percentages						Rank
	Stat.	SD	D	N	A	SA	
1. Using SM allows me to discuss topics of interest with other students.	*F*	7	13	26	123	238	3
	%	1.7	3.2	6.4	30.2	58.5	
2. SM allows me to find and share educational resources.	*F*	7	10	21	125	244	1
	%	1.7	2.5	5.2	30.7	60.0	
3. SM develops and promotes knowledge.	*F*	8	8	29	116	246	2
	%	2.0	2.0	7.1	28.5	60.4	
4. SM enhances students' learning experiences.	*F*	7	11	39	122	228	6
	%	1.7	2.7	9.6	30.0	56.0	
5. Students are more engaged with the educational process when using SM for learning.	*F*	11	19	36	116	225	8
	%	2.7	4.7	8.8	28.5	55.3	
6. SM enhances tutors' expertise by diversifying their knowledge.	*F*	9	9	38	128	223	7
	%	2.2	2.2	9.3	31.4	54.8	
7. SM helps connect and support people with similar hobbies.	*F*	9	12	28	118	240	4
	%	2.2	2.9	6.9	29.0	59.0	
8. SM decreases the effort and cost required to communicate with teachers and friends.	*F*	10	11	27	118	241	5
	%	2.5	2.7	6.6	29.0	59.2	

Table 5-5 Frequencies and percentages of the advantages of using SoMeLT (n=407)

Table 5.5 presents the analysis of frequencies and percentage and indicates that items 2 and 3 were the most frequently mentioned advantages (n=369, 90.7% and n=362, 88.9%). For item 3, the participants agreed that SM allows learners to find and share educational resources and develop and promote knowledge. Interestingly, with frequencies and percentages of (n=358, 88%), the data also highlighted that the participants agreed that SM contributes to gathering the practitioners of various hobbies and encourages them (item 7). Also, the decrease in effort and cost to communicate with teachers and friends was one of the important advantages of using SoMeLT reported by most of the participants (item 8), with frequencies and percentages of (n=359, 88.2%).

The least mentioned advantages were items 4, 5 and 6, with frequencies and percentages of (n=350, 86%; n=351, 86.2% and n=341, 83.8% respectively). The participants agreed that using SoMeLT enhances learning experiences (item 4). They also reported that SM works to refine the tutors' personality through the diversity of their knowledge (item 6). The lowest advantage mentioned by the participants was that students are engaged with the educational process by using SoMeLT (item 5).

These results indicate that the participants have a great belief in the urgent need to take advantage of SMTs. In addition, it is clear that they have strong positive perceptions of the role that SMTs could play in facilitating the acquiring, developing and promoting of knowledge, whilst also supporting work continuity and efficiency, enhancing cooperative education, accomplishing tasks and encouraging self-learning.

Section 5.4.4 provides details of the statistical descriptions used, based on frequency, proportion and rank. Consequently, it was necessary to conduct an in-depth examination of the extent students use SoMeLT to find out whether there were statistically significant differences between their perceptions of the advantages of using SoMeLT, based on the research variables. Accordingly, I used the Mann-Whitney test to test the differences regarding the advantages of using SoMeLT based on gender and specialisation variables.

I used the non-parametric Kruskal-Wallis test to compare the different ranks to find out whether there were statistically significant differences between the

students' perceptions regarding the use of SoMeLT in terms of advantages, based on the variables of age and the type of electronic devices the students own. The following sections report these differences based on the variables of this research.

5.4.4.3 Student perceptions regarding the advantages of using SoMeLT based on gender

I used the Mann-Whitney test to test for gender-based differences in the perceptions of the students regarding the advantages of using SoMeLT. The following table (5-6) shows the results.

Statements	Gender	N	Mean Rank	Sum of Ranks	Z value and Sig.
1. Using SM allows me to discuss topics of interest with other students.	Male	198	190.51	37721.00	-2.563**
	Female	209	216.78	45307.00	*P*< 0.01
2. SM allows me to find and share educational resources.	Male	198	188.43	37308.50	-2.991**
	Female	209	218.75	45719.50	*P*< 0.01
3. SM develops and promotes knowledge.	Male	198	186.19	36865.00	-3.421**
	Female	209	220.88	46163.00	*P*< 0.01
4. SM enhances students' learning experiences.	Male	198	187.79	17183.00	-3.032**
	Female	209	219.35	45845.00	*P*< 0.01
5. Students are more engaged with the educational process when using SM for learning.	Male	198	188.84	37391.00	-2.316**
	Female	209	218.36	45637.00	*P*< 0.01
6. SM enhances tutors' expertise by diversifying their knowledge.	Male	198	191.04	37826.50	-2.413*
	Female	209	216.28	45201.50	*P*< 0.05
7. SM helps connect and support people with similar hobbies.	Male	198	192.04	38024.00	-2.275*
	Female	209	215.33	45004.00	*P*< 0.05
8. SM decreases the effort and cost required to communicate with teachers and friends.	Male	198	186.85	36996.50	-3.267**
	Female	209	220.25	46031.50	*P*< 0.01

**** P < 0.01. * P < 0.05.**

Table 5-6 Advantages of using SoMeLT based on gender

From the results of the Mann-Whitney test it can be concluded that there was a statistically significant difference in the students' perceptions of using SM

regarding the advantages for e-learning. Statistically, the perceptions were significantly higher for females (MR = 220.28) than for males (MR = 186.92).

5.4.4.4 Student perceptions regarding the advantages of using SoMeLT based on specialisation

I used the non-parametric Mann-Whitney test to test for specialisation-dependent differences in the students' perceptions regarding the advantages of using SoMeLT. The results indicate that there were no significant differences in the students' perceptions regarding the advantages of using SoMeLT based on their specialisations, except for item 3, where it was found that there was a statistically significant difference among students specialising science subjects (see Appendix 14).

5.4.4.5 Student perceptions regarding the advantages of using SoMeLT based on age

The results of the Kruskal-Wallis test (see Appendix 15) reveal that there were statistically significant age-based differences in the perceptions of the students regarding the advantages of using SoMeLT. Statistically, the perceptions were significantly more positive among students aged below 20 (MR = 220.31), followed by students aged between 20 and 25(MR = 207.93), students aged 26 to 30 (MR = 187.64) and lastly, those aged 31 or above (MR = 143.17).

5.4.4.6 Student perceptions regarding the advantages of using SoMeLT based on electronic device owned

As can be seen in Appendix 16, the results of the Kruskal-Wallis test indicate that there were statistically significant differences in the perceptions of the students regarding the use of SoMeLT based on the electronic devices that they own. Statistically, the perceptions were significantly more positive among students with laptops (MR = 221.157), followed by those with an iPhone (MR = 201.98), students with an iPad (MR = 191.08) and lastly, those with a Samsung (MR = 170.86).

5.4.5 Third research question: What are the students' perceptions regarding the disadvantages of using SoMeLT?

The third question was designed to examine the disadvantages of using SoMeLT by Saudi students at an EU. The participants were asked to rate how far they agreed with eleven statements. Their responses were measured using a five-point Likert-type scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly Agree. Descriptive statistics were generated, as shown in the following table, to allow the data in this question to be analysed, calculating percentages and frequencies of the full sample responses for the 11 statements, and the rank based on the frequencies of agreement (A + SA) to identify which items had the highest or lowest incidence of agreement within the study.

Statements	Frequencies & Percentages						Rank
	Stat.	SD	D	N	A	SA	
1. SM use in the educational process could distract students' focus away from academic learning	*F*	37	71	82	71	146	**7**
	%	9.1	17.4	20.1	17.4	35.9	
2. I feel concerned about privacy when using SM in the classroom	*F*	20	42	60	116	169	**5**
	%	4.9	10.3	14.7	28.5	41.5	
3. I feel concerned about the threat of spam and phishing attacks when using SM in the classroom	*F*	24	38	63	104	178	**4**
	%	5.9	9.3	15.5	25.6	43.7	
4. Using SM to supplement face-to-face courses can become too time intensive	*F*	47	91	125	60	84	**10**
	%	11.5	22.4	30.7	14.7	20.6	
5. I have concerns about the vague copyright and intellectual property issues involved in SM	*F*	27	37	63	109	171	**6**
	%	6.6	9.1	15.5	26.8	42.0	
6. I can understand the SM websites that are in English	*F*	99	97	85	69	57	**11**
	%	24.3	23.8	20.9	17.0	14.0	
7. Some contents of SM oppose Islamic religious teachings	*F*	46	52	110	74	125	**8**
	%	11.3	12.8	27.0	18.2	30.7	
8. I am concerned about who is monitoring SM for inappropriate or offensive use and thus how we deal with it	*F*	20	40	55	107	185	**3**
	%	4.9	9.8	13.5	26.3	45.5	
9. SM inhibits my ability to express my thoughts and opinions	*F*	59	69	131	53	95	**9**
	%	14.5	17.0	32.2	13.0	23.3	
10. I feel concerned about the dangers of improper use of technology by students	*F*	18	35	60	111	183	2
	%	4.4	8.6	14.7	27.3	45.0	
11. I feel concerned about the dangers of cyber bullying that can cause profound psychosocial outcomes	*F*	17	31	63	95	201	1
	%	4.2	7.6	15.5	23.3	49.4	

Table 5-7 Frequencies and percentages regarding the disadvantages of using SoMeLT (n=407,) as reported by the Saudi students

As shown in Table 5.7, items 11, 10 and 8, relating to cyber-bullying, the dangers of students' improper use of technology and monitoring SM use, were considered to be the greatest disadvantages associated with the use of SoMeLT, with frequencies and percentages of (n=296, 72.7%; n=294, 72.3%; n=292, 71.8% respectively). The barriers which were considered least significant were items 5, 1, 7, 9, 4 and 6 relating to distraction, vague copyright and intellectual, opposing Islamic religious teachings, inhibiting ability to express thoughts and opinions and understanding the English language, with frequencies and percentages of (n=280, 68.8%; n=217, 53.3%; n=199, 48.9%; n=148, 36.3%; n=144, 35.3%, n=126, 31%, respectively).

Although most of the students have positive perceptions regarding the use of SoMeLT, they face some barriers that limit their use of these tools in education. Providing training on how to use these tools for clear aims may remove concerns about the use of these tools in the educational process and, at the same time, help learners to use them effectively as e-learning tools.

Since I used statistical descriptions based on frequency, proportion and rank in Section 5.4.5, it was necessary to conduct an in-depth examination of the extent of using SoMeLT among students and establish whether there were statistically significant differences between their perceptions regarding the disadvantages of using SoMeLT based on the research variables. Accordingly, I used the Mann-Whitney test to test these differences based on gender and specialisation variables.

Additionally, I used the non-parametric Kruskal-Wallis test to compare the different ranks to find out whether there were statistically significant differences between the students' perceived disadvantages regarding the use of SoMeLT based on the variables of age and the types of electronic devices that the students own. The following sections report these differences based on the variables of this research.

5.4.5.1 Student perceptions regarding the disadvantages of using SoMeLT based on gender

I used the non-parametric Mann-Whitney test to test the different perceptions regarding the concerns associated with using SoMeLT based on the students'

gender. The results indicate that there was no significant gender-based differences in the students' perceptions in this regard (see Appendix 17).

5.4.5.2 Student perceptions regarding the disadvantages of using SoMeLT based on specialisation

As shown in Appendix 18, the non-parametric Mann-Whitney test was used to test for specialisation-related differences in the students' perceptions regarding their concerns about using SoMeLT. The results indicate that there were no significant specialisation-based differences in their perceptions regarding their concerns.

5.4.5.3 Student perceptions regarding the disadvantages of using SoMeLT based on age

As can be seen in Appendix 19, the Kruskal-Wallis test indicates that there were no significant age-based differences in the students' perceptions regarding the concerns with using SoMeLT, except for items 6 and 11. The perceptions were statistically significantly more positive for those aged 31 and above (MR = 266.03) for item 4 than for those aged under 20 (MR = 221.33) for item 11.

5.4.5.4 Student perceptions regarding the disadvantages of using SoMeLT based on electronic device owned

Statements	Electronic devices that they own	Mean Rank	Sum of Ranks	Z value and Sig.
1. SM usage in the educational process could distract students' focus away from academic learning	Samsung	59	238.27	7.824* *P*< 0.05
	iPhone	147	204.76	
	Laptop	159	189.92	
	iPad	42	206.50	
2. I feel concerned about privacy when using SM in the classroom	Samsung	59	218.5	13.771** *P*< 0.01
	iPhone	147	177.04	
	Laptop	159	216.95	
	iPad	42	228.48	
3. I feel concerned about the threat of spam and phishing attacks when using SM in the classroom	Samsung	59	228.5	15.334** *P*< 0.01
	iPhone	147	175.76	
	Laptop	159	216.76	
	iPad	42	219.11	
4. Using SM to supplement face-to-face courses can become too time intensive	Samsung	59	221.01	8.474* *P*< 0.05
	iPhone	147	216.94	
	Laptop	159	183.56	
	iPad	42	212.21	

Statements	Electronic devices that they own	Mean Rank	Sum of Ranks	Z value and Sig.
5. I have concerns about vague copyright and intellectual property issues involved in SM	Samsung	59	227.53	25.761** *P*< 0.01
	iPhone	147	166.93	
	Laptop	159	221.72	
	iPad	42	233.62	
6. I can understand the SM websites that are in English	Samsung	59	201.86	65.898** *P*< 0.01
	iPhone	147	261.67	
	Laptop	159	155.66	
	iPad	42	188.17	
7. Some contents of SM oppose Islamic religious teachings	Samsung	59	243.83	9.781* *P*< 0.05
	iPhone	147	205.37	
	Laptop	159	192.55	
	iPad	42	186.57	
8. I am concerned about who is monitoring SM for inappropriate or offensive use and thus how we deal with it	Samsung	59	219.54	30.817** *P*< 0.01
	iPhone	147	163.85	
	Laptop	159	227.09	
	iPad	42	235.27	
9. SM inhibits my ability to express my thoughts and opinions	Samsung	59	220.95	4.045 *P*> 0.05
	iPhone	147	202.75	
	Laptop	159	193.42	
	iPad	42	224.62	
10. I feel concerned about the dangers of improper use of technology by students	Samsung	59	217.57	13.236** *P*< 0.01
	iPhone	147	177.65	
	Laptop	159	220.99	
	iPad	42	212.85	
11. I feel concerned about the dangers of cyber bullying that can cause profound psychosocial outcomes	Samsung	59	209.53	19.584** *P*< 0.01
	iPhone	147	172.97	
	Laptop	159	226.34	
	iPad	42	220.26	

**** P < 0.01. * P < 0.05.**

Table 5-8 Differences in the disadvantages of SoMeLT based on electronic device owned

From the Kruskal-Wallis test results presented in Table 5.8, it can be concluded that there were significant statistical differences in the students' perceptions regarding the disadvantages of using SoMeLT based on the electronic devices they own. Statistically, the perceptions were significantly different at (P < 0.01) for those owning iPads, as shown in items 2, 5 and 8 (MR = 235.27, MR = 233.62 and MR = 228.48 respectively).

Statistically, the students' perceptions were significantly different at (P < 0.01) for those owning a Samsung, shown in items 3, 4, 5 and 7 (MR = 186.92, MR = 221.01, MR = 228.5, and MR =243.83 respectively). Moreover, their perceptions

were significantly different statistically at (P < 0.01) for those owning a laptop, as shown in items 10 and 11 (MR = 226.34 and MR = 220.99 respectively). However, for item 9, there were no significant differences in the students' perceptions based on the electronic devices they own.

5.5 Tutors' online survey

5.5.1 Descriptive statistics

Demographic Description

As described in Chapter 4, a selection of Saudi male and female tutors currently teaching at the EU participated in this study. This section describes the participants' demographic characteristics in detail. It includes their gender, age, major, experience of teaching, the smart devices they own (e.g., laptop, iPhone, iPad, or Samsung) and their usage of SMTs.

Participants' age and gender: As shown in Table 5.9, the number of participants in the survey was 290: 164 were male (56.6%), while 126 were female (43.4%). Also, the participants in the online survey were asked to list their age. Of those who responded, 23.4% (n=68) listed their age as 20 to 30, 47.6% (n=138) listed their age as 31 to 40 years old, 17.9% (n=52) listed their age as 41 to 50 years old, and 11.0 % (n=32) listed their age as 51 or older. (For more information about the sample's representativeness, please see Chapter 4, Section 4.10.1.3).

Specialisations of the tutor's sample: As can be seen in Table (5.9), the sample was evenly divided between those specialising in the sciences, such as physics, medicine, mathematics, chemistry, etc. (137 out of 290 or 47.2%) and those specialising in the humanities, such as Arabic language and literature, English language and literature, history, geography, etc. (153 out 290 or 52.8%). (For more information about the sample's representativeness, please see Chapter 4, Section 4.10.1.3).

Tutors' experience of teaching: As can be seen in Table 5.9, the participants in the online survey were asked to list their experience of teaching. 25.5% (n= 74) stated that they had less than five years' experience of teaching, 33.1% (n= 96)

had between 5- and 10-years' experience of teaching and 41.4% (n= 96) reported that they had more than 10 years' experience of teaching.

Tutors' electronic devices: Table 5.9 revealed the most commonly owned smart device was a laptop (39.7%), 25.9% owned an iPhone and 23.1% stated that they owned all the above electronic devices. The next most popular device was the tablet, with 9.3 %, while 2.1% only owned an iPad.

Use of SM: As illustrated in Table 5.9, 89.7 % (n= 260) of the participants reported that they used SM, while 30 (10.3%) of the participants stated that they did not use SM at all.

Variables	Frequency	Percent
Sex groups		
Male	164	56.6
Female	126	43.4
Total	290	**100%**
Age groups		
From 20 to 30	68	23.4
From 31 to 40	138	47.6
From 41 to 50	52	17.9
From 51 or older	32	11.0
Total	**290**	**100%**
Specialisation		
Science Studies	137	47.2
Humanities Studies	153	52.8
Total	290	100%
No. of years teaching experience		
Less than 5 years	74	25.5
5 – 10 years	96	33.1
More than 10 years	120	41.4
Total	**290**	**100%**
Electronic devices owned		
Tablet	27	9.3
iPhone	75	25.9
Laptop	115	39.7

iPad	6	2.1
All the above	67	23.1
Total	**290**	**100%**
Use of SM groups		
Yes	260	89.7
No	30	10.3
Total	**290**	**100%**

Table 5-9 Demographic information on participants

From the table 5-9, it is notable that the number of tutor participants in the gender categories, specialisations groups and experience of teaching groups is roughly the same convergent. This may give some kind of assurance that each group in each main category of the study population received an equal opportunity to participate in this study, enhancing the generalisability of the results.

The tutor participants expressed positive perceptions regarding the use of SoMeLT, despite it still constituting a new trend in education in KSA and especially at the EU. However, 10.3% of the tutor participants were totally opposed to using these tools for any kind of learning, for different reasons that will be discuss later in this chapter.

5.5.2 Findings of Research Questions

The following sections will explain the three main questions guided by this study in details. The first question was addressed to examine the current use of SoMeLT by tutors. The second question was designed to examine the perception of tutors regarding the advantages of using SoMeLT. The last question was intended to examine the perception of tutors regarding using SoMeLT in terms of disadvantages.

5.5.3 First Research Question: To what extent is SM used by tutors as a tool for e-learning?

This question was divided into two sub-questions. The following presents in detail the responses to each question based on the variables being analysed.

5.5.3.1 Sub-Question One: What are the purposes for which Saudi tutors use SM?

The first sub-question explored the purposes and frequency of using SM by Saudi tutors. The identified purposes are social communication, following the news, learning, entertainment, other. The participants were asked to report the frequency with which they used those tools for the purposes mentioned above as follows: 1= Never use, 2 = Rarely use, 3 = Sometimes use, 4 = Often use, 5 = Frequently use. The following table displays the data obtained in this part of the questionnaire as distributive statistics, including percentages, frequencies of the full sample responses for the 5 statements, and the rank based on the frequencies of agreement (4 + 5).

Purpose	Frequencies & Percentages						Rank
	Stat.	1	2	3	4	5	
Social communication	*F*	22	3	40	37	188	1
	%	7.6	1.0	13.8	12.8	64.8	
News	*F*	24	30	68	47	121	2
	%	8.3	10.3	23.4	16.2	41.7	
Learning	*F*	37	52	76	54	71	3
	%	12.9	17.9	26.2	18.6	24.5	
Entertainment	*F*	37	62	69	44	78	4
	%	12.8	21.4	23.8	15.2	26.9	
Other	*F*	63	71	86	33	37	5
	%	21.7	24.5	29.7	11.4	12.8	

Table 5-10 Descriptive statistics for purposes of using SoMeLT by tutors (n=209).

As can be seen in Table 5.10, the results reveal that the participants used SM most frequently for social communication with frequencies and percentages of (n=225, 77.6%). The second most frequently mentioned purpose of utilising SM was for following the news, with frequencies and percentages of (n=168, 57.9%). The third most frequently mentioned purpose was for learning with frequencies and percentages of (n=125, 43.1%), which was followed by entertainment with frequencies and percentages of (n=122, 42.1%). The least frequently mentioned purpose was for other pursuits. The other category included shopping, finding jobs, religious content and programmes, business, marketing and commerce.

5.5.3.2 Sub-Question Two: What experiences of using SM do tutors report?

This section reported the results of the second sub-question of the main first question from the questionnaire, which explored the tutors' experiences of seven different SMTs (Facebook, Twitter, YouTube, WhatsApp, Wikipedia, Skype and others) and the frequency of use. The participants were asked to rate their experiences with using these tools. Their responses were recorded according to a five-point Likert-type scale: 1= Never use, 2 = Rarely use, 3 = Sometimes use, 4 = Often use, 5 = Frequently use.

The following table shows the data obtained in this part of the questionnaire, displayed as distributive statistics, percentages, frequencies of the full sample responses for the 5 statements, and the rank based on the frequencies of agreement (4 + 5).

SM Categories	Frequencies & Percentages						Rank
	Stat.	1	2	3	4	5	
Facebook	*F*	86	67	64	34	39	4
	%	29.7	23.1	22.1	11.7	13.4	
Twitter	*F*	46	33	60	59	92	3
	%	15.9	11.4	20.7	20.3	31.7	
YouTube	*F*	30	6	52	90	112	2
	%	10.3	2.1	17.9	31.0	38.6	
WhatsApp	*F*	24	2	15	48	201	1
	%	8.3	0.7	5.2	16.6	69.3	
Wikipedia	*F*	62	46	96	54	32	5
	%	21.4	15.9	33.1	18.6	11.0	
Skype	*F*	112	89	64	18	7	7
	%	38.6	30.7	22.1	6.2	2.4	
Other	*F*	89	55	84	33	29	6
	%	30.7	19.0	29.0	11.4	10.0	

Table 5-11 Frequencies of use and adoption of using SoMeLT (n=209)

As shown in Table 5.11, the results indicated that the most commonly used SMTs by the participants was WhatsApp, with frequencies and percentages of (n=201, 69.3%). The second was YouTube, with frequencies and percentages of (n=112, 38.6%), followed by Twitter, with frequencies and percentages of (n=92, 31.7%), Facebook, with frequencies and percentages of (n=39, 13.4%), and Wikipedia,

with frequencies and percentages of (n=32, 11.0%). The least commonly used SM platform was Skype, with frequencies and percentages of (n=7, 2.4%).

The participants reported that they also had fairly extensive experience using other SMTs such as Blackboard, Snapchat, Instagram, and Tango. This result suggests that tutors have limited experience using SMTs, which could be a challenge for implementing these tools effectively for learning. This supports the need to raise the awareness of the importance of SMTs and the multiple possibilities for simplifying knowledge, catering for diverse needs, supporting collaborative learning, and sharing information and ideas among learners.

5.5.4 Second research question: What are the perceptions of Saudi tutors regarding the advantages of using SoMeLT?

This question was divided into two sub-questions, as explained in detail below.

5.5.4.1 Sub-Question One: To what extent did tutors use SM in their classes?

The first sub-question was designed to ascertain the frequency of tutors ' use of SM in their teaching. Tutors were asked to describe the extent to which they used any of the following seven tools in any of their classes: Facebook, Twitter, YouTube, WhatsApp, Wikipedia and Skype. The participants' responses were recorded according to a five-point Likert-type scale: 1= Never use, 2 = Rarely use, 3 = Sometimes use, 4 = Often use, 5 = Frequently use. The following table shows the data obtained in this part of the questionnaire, displayed as distributive statistics, including percentages, frequencies of the full sample responses for the 7 statements, and the rank based on the frequencies of agreement (4 + 5).

SM Categories	Frequencies & Percentages						Rank
	Stat.	1	2	3	4	5	
Facebook	*F*	162	57	44	16	11	6
	%	55.9	19.7	15.2	5.5	3.8	
Twitter	*F*	132	48	62	28	20	4
	%	45.5	16.6	21.4	9.7	6.9	
YouTube	*F*	67	36	59	55	73	1
	%	23.1	12.4	20.3	19.0	25.2	

WhatsApp	*F*	86	42	64	45	53	2
	%	29.7	14.5	22.1	15.5	18.3	
Wikipedia	*F*	114	61	51	34	30	3
	%	39.3	21.0	17.6	11.7	10.3	
Skype	*F*	183	56	31	12	8	7
	%	63.1	19.3	10.7	4.1	2.8	
Other	*F*	151	49	49	22	19	5
	%	52.1	16.9	16.9	7.6	6.6	

Table 5-12 Frequencies and percentages of using SoMeLT in classes by tutors (n=209)

As shown in Table 5.12, the most frequently used SM platform by the tutors was YouTube, with frequencies and percentages of (n=128, 44.2%). The second most frequently used were WhatsApp with frequencies and percentages of (n=98, 33.8%), and Wikipedia with frequencies and percentages of (n=64, 22%). The participants reported that they sometimes used Twitter, with frequencies and percentages of (n=48, 16.6%), and Facebook with frequencies and percentages of (n=27, 9.3%). However, the least frequently used was Skype, with frequencies and percentages of (n=20, 14.2%).

The participants also reported using other SMTs. Some examples of these include Blackboard and Instagram. Although tutors use these tools less than students, their use by some faculty is still a good thing and calls for optimism and for steps to be taken to ensure they are used more comprehensively in the near future. It can be seen that some of the tutors at the EU from various academic departments have integrated WhatsApp, YouTube, Twitter and Wikipedia into their teaching and their communications with their students.

This might reflect the extent to which these tutors at the EU realise the importance of integrating these tools into learning and actively participating with students. It is an invitation for tutors to use these effective and highly praised tools; especially as they are so popular with students who would rather, they were used in all activities. Encouraging tutors and supporting them to use these tools is essential, as is the need to remind them of the fact that even a little access to them is better than none.

5.5.4.2 Sub-Question Two: What are the Saudi tutors' perceptions regarding the advantages of using SoMeLT?

The second sub-question was designed to explore Saudi tutors' perceptions of using SM to support their learning at an EU. The participants were asked to rate their degree of agreement by responding to eight items determining their perceptions. The participants' responses were measured using a five-point Likert-type scale: 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree.

Descriptive statistics were generated, as shown in the next table, to allow the data in this question to be analysed, calculating percentages and frequencies of the full sample responses for the 8 statements, and the rank, based on the frequencies of agreement (A + SA), to identify which items had the highest or lowest incidence of agreement.

Statements	Frequencies & Percentages						Rank
	Stat.	SD	D	N	A	SA	
1. SMTs allow discussing topics of interest with other teachers	*F*	27	12	56	119	76	8
	%	9.3	4.1	19.3	41.0	26.2	
2. SMTs allow finding and sharing educational resources	*F*	19	2	24	131	114	2
	%	6.6	0.7	8.3	45.2	39.3	
3. SMTs promote knowledge development	*F*	20	3	27	130	110	3
	%	6.9	1.0	9.3	44.8	37.9	
4. SM enhances students' learning experiences	*F*	26	10	36	127	91	6
	%	9.0	3.4	12.4	43.8	31.4	
5. Students are more engaged with the educational process by using SMTs	*F*	29	14	48	116	63	7
	%	10.0	4.8	16.6	40.0	28.6	
6. SMTs connect people with similar hobbies	*F*	21	8	54	114	93	5
	%	7.2	2.8	18.6	39.3	32.1	
7. SMTs help diversify tutors ' knowledge	*F*	20	4	33	124	109	4
	%	5.9	1.4	11.4	42.8	37.6	
8. SMTs decrease the effort and cost required to communicate with teachers and friends	*F*	19	3	32	106	130	1
	%	6.6	1.0	11.0	36.6	44.8	

Table 5-13 Frequencies and percentages of the advantages of using SoMeLT (n=209)

As shown in Table 5.13, the most frequently mentioned advantages were items 8 and 2 with frequencies and percentages of (n=236, 81.4%, n=245, 84.5%). The

participants agreed that SM decreases the effort and cost to communicate with teachers and friends (item 8) and share educational resources (item 2). One of the important advantages of using SoMeLT mentioned by the participants was that SM helps diversify tutors' knowledge (item 7) with frequencies and percentages of (n=233, 80.4%.

Interestingly, the participants agreed that SM connects people with similar hobbies (item 6), with frequencies and percentages of (n=207, 71.4%). However, it is interesting to note that less than a third of the participants (n=99, 32.9%) believe that using SM to discuss topics of interest with other teachers and enhancing learning experiences, making these the least frequently mentioned advantages by the tutors (n=195, 67.2%, n=218, 74.2%, n=209, 68.6%, respectively).

This finding indicates that some tutors strongly believe that using SoMeLT provides students with information that could help them to develop their academic level. The participants believe that using these tools provides a high-quality learning atmosphere and an appropriate learning environment for learners to exchange information, ideas, and experiences.

For the statistical descriptions based on frequency, proportion and rank, in Section 5.5.4, it was necessary to carry out an in-depth examination of the extent of SoMeLT use among tutors. Specifically, I aimed to find out whether there were any statistically significant differences between the perceptions of tutors regarding the use of SoMeLT in term of advantages, based on the research variables. Accordingly, I used the Mann-Whitney test to identify differences regarding the use of SoMeLT in term of advantages, based on gender and specialisation variables. Additionally, I used the non-parametric Kruskal-Wallis test to compare the different rankings and uncover whether there were statistically significant differences between the perceptions of tutors regarding the use of SoMeLT in term of advantages, based on the variables of age and the type of electronic devices that they own. The following sections report the statistically significant differences based on the variables of this research.

5.5.4.3 Tutors' perceptions regarding the advantages of using SoMeLT, based on gender

As indicated in Appendix 20, the Mann-Whitney test was used to test for gender-based differences in the perceptions of the tutors regarding the advantages of using SoMeLT. The results indicated that there were no statistically significant differences in their perceptions, except for item 3, where statistically, they were significantly more positive at ($P < 0.05$) for females.

5.5.4.4 Tutors' perceptions regarding the advantages of using SoMeLT, based on specialisation

As can be seen in Appendix 21, the Mann-Whitney test indicated that there were no significant differences in the tutors' perceptions regarding the advantages of using SoMeLT, based on specialisation.

5.5.4.5 Tutors' perceptions regarding the advantages of using SoMeLT, based on age

The results of the Kruskal-Wallis test (see Appendix 22) revealed that there were no statistically significant age-based differences in the perceptions of the tutors regarding the advantages of using SoMeLT, except for items 4, 5, 6, and 7, where the perceptions were statistically significantly more positive among tutors aged 20 to 30 years old.

5.5.4.6 Tutors' perceptions regarding the advantages of using SoMeLT, based on electronic device owned

As can be seen in Appendix 23, the results of Kruskal-Wallis test displayed that there were no statistically significant differences in the perceptions of the tutors regarding the use of SoMeLT, based on the electronic devices that they own.

5.5.4.7 Tutors' perceptions regarding use of SoMeLT, based on experience of teaching

The results of Kruskal-Wallis test (see Appendix 24) demonstrated that there were no statistically significant differences in the perceptions of the tutors regarding the use of SoMeLT, based on teaching experience, except for items 4, 5, and 7, where the perceptions were statistically significantly more positive for tutors with less than five years' teaching experience.

5.5.5 Third research question: What are the tutors' perceptions regarding the disadvantages of using SoMeLT?

The third question was designed to examine the disadvantages of using SoMeLT by Saudi tutors at an EU. The participants were asked to rate how far they agreed with 9 statements. Their responses were measured using a five-point Likert-type scale: 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree. Descriptive statistics were generated in the following table to allow the data in this question to be analysed, including calculating percentages and frequencies of the full sample responses for the 9 statements, and the rank based on the frequencies of agreement (A + SA) to identify which items had the highest or lowest incidence of agreement.

Statements	Frequencies & Percentages						Rank
	Stat.	SD	D	N	A	SA	
1. I am concerned about privacy, security, and problems related to the use of SM in the educational process	*F*	9	47	69	74	91	5
	%	3.1	16.2	23.8	25.5	31.4	
2. Using SM to supplement face-to-face courses can become too time intensive	*F*	11	31	68	86	94	3
	%	3.8	10.9	23.4	29.7	32.4	
3. I have concerns about vague copyright and intellectual property issues involved in SM	*F*	21	68	61	63	77	7
	%	7.2	23.4	21.0	21.7	26.6	
4. I can understand SM websites that are in English	*F*	12	29	52	100	97	1
	%	4.1	10.0	17.9	34.5	33.4	
5. Some contents of SM oppose Islamic religious teachings	*F*	66	31	41	58	94	8
	%	22.8	10.7	14.1	20.0	32.4	
6. I am concerned about who is monitoring SM for inappropriate or offensive use and thus how we deal with it	*F*	29	29	69	82	81	6
	%	10.0	10.0	23.8	28.3	27.9	
7. SMTs inhibit my ability to express my thoughts and opinions	*F*	9	41	64	84	92	4
	%	3.1	14.1	22.1	29.0	31.7	
8. I'm concerned about the lack of training courses for teachers to use SMTs to support learning	*F*	27	73	45	56	59	9
	%	9.3	25.2	25.9	19.3	20.3	
9. I feel concerned about the dangers of cyber bullying that can cause profound psychosocial outcomes	*F*	13	33	54	86	104	2
	%	4.5	11.4	18.6	29.7	35.9	

Table 5-14 Frequencies and percentages of the disadvantages of using SoMeLT (n=209)

As shown in Table 5.14, the barriers that were considered the greatest were items 4, 9, and 2 relating to understanding the English language; cyber-bullying and time-consuming, with frequencies and percentages of (n=197, 67.9%; n=190, 65.6%; n=180, 62.1% respectively). The barriers which were considered least significant were items 8 and 9 relating to the lack of training and opposing Islamic religious teachings, with frequencies and percentages of (n=115, 39.6%; n=190, 65.6%). It is obvious from this finding that approximately half of the full sample was against using SoMeLT. Indeed, they identified far more disadvantages with using these tools than advantages. However, there are a number of underlying reasons which may drive this result. These tools may be judged somewhat superficially by the majority of the tutors involved in this questionnaire and therefore, they may not be sure of their utility. Alternatively, they may have experience in using them but are not convinced of their usefulness; or, they may feel that there is lack of clarity as to how best to use them in the learning process, particularly as regulations have not yet been put in place at the EU.

For the statistical descriptions based on frequency, proportion and rank, in Section 5.5.5, it was necessary to carry out an in-depth examination of the extent of SoMeLT use among tutors. I specifically aimed to find out whether there were statistically significant differences between the perceptions of tutors regarding the use of SoMeLT in term of disadvantages, based on the research variables. Accordingly, I used the Mann-Whitney test to identify differences regarding the use of SoMeLT in terms of disadvantages, based on gender and specialisation variables.

In addition, I used the non-parametric Kruskal-Wallis test to compare the different rankings and uncover whether there were statistically significant differences between the perceptions of tutors regarding the use of SoMeLT in term of disadvantages, based on the variables of age and the type of electronic devices that they own. The following sections report the statistically significant differences based on the variables of this research.

5.5.5.1 Perception of tutors regarding the disadvantages of using SoMeLT, based on gender

Statements	Gender	N	Mean Rank	Sum of Ranks	Z value and Sig.
1. I am concerned about privacy, security, and problems related to the use of SM in the educational process	Female	126	173.36	21843.00	-5.129** *P*< 0.01
	Male	164	124.10	20352.00	
2. Using SM to supplement face-to-face courses can become too time intensive	Female	126	169.48	21354.00	-4.436** *P*< 0.01
	Male	164	127.08	20841.00	
3. I have concerns about vague copyright and intellectual property issues involved in SM	Female	126	168.40	21219.00	-4.186** *P*< 0.01
	Male	164	127.90	20976.00	
4. I can understand SM websites that are in English	Female	126	164.27	20697.50	-3.492** *P*< 0.01
	Male	164	131.08	21497.50	
5. Some contents of SM oppose Islamic religious teachings	Female	126	119.92	15110.00	-4.691** *P*< 0.01
	Male	164	165.15	27085.00	
6. I am concerned about who is monitoring SM for inappropriate or offensive use and thus how we deal with it	Female	126	139.82	17617.50	-1.042 *P* > 0.05
	Male	164	149.86	24577.50	
7. SMTs inhibit my ability to express my thoughts and opinions	Female	126	160.17	20182.00	-2.708** *P*< 0.01
	Male	164	134.3	22013.00	
8. I'm concerned about the lack of training courses for teachers to use SMTs to support learning	Female	126	150.52	18965.00	-0.916 *P*> 0.05
	Male	164	141.65	23230.00	
9. I feel concerned about the dangers of cyber bullying that can cause profound psychosocial outcomes	Female	126	161.05	20292.50	-2.886** *P*< 0.01
	Male	164	133.55	21902.50	

**** P < 0.01. * P < 0.05.**

Table 5-15 Disadvantages of using SoMeLT, based on gender

From the Mann-Whitney test results in Table 5.15, it can be concluded that there was statistically significant gender-based differences at (P < 0.01) in the students' perceptions of the disadvantages of using SoMeLT. The perceptions were statistically significantly more positive for males.

5.5.5.2 Tutors' perceptions regarding the disadvantages of using SoMeLT, based on specialisation

Statements	Specialisation	N	Mean Rank	Sum of Ranks	Z value and Sig.
1. I am concerned about privacy, security, and problems related to the use of SM in the educational process	Science Studies	137	164.39	22521.50	-3.755** *P*< 0.01
	Human Studies	153	128.58	19673.50	
2. Using SM to supplement face-to-face courses can become too time intensive.	Science Studies	137	160.49	21987.00	-2.994** *P*< 0.01
	Human Studies	153	132.08	20208.00	
3. I have concerns about vague copyright and intellectual property issues involved in SM	Science Studies	137	161.50	22125.00	-3.156** *P*< 0.01
	Human Studies	153	131.18	20070.00	
4. I can understand SM websites that are in English	Science Studies	137	159.69	21878.00	-2.352** *P*< 0.01
	Human Studies	153	132.79	20317.00	
5. Some contents of SM oppose Islamic religious teachings	Science Studies	137	136.55	18707.00	-1.772* *P*< 0.05
	Human Studies	153	153.52	23488.00	
6. I am concerned about who is monitoring SM for inappropriate or offensive use and thus how we deal with it	Science Studies	137	138.77	19012.00	-1.333 *P* > 0.05
	Human Studies	153	151.52	23183.00	
7. SMTs inhibit my ability to express my thoughts and opinions	Science Studies	137	160.81	22031.50	-3.051** *P*< 0.01
	Human Studies	153	131.79	20163.50	
8. I'm concerned about the lack of training courses for teachers to use SMTs to support learning	Science Studies	137	151.28	20725.50	-1.140 *P*> 0.05
	Human Studies	153	140.32	21469.50	
9. I feel concerned about the dangers of cyber bullying that can cause profound psychosocial outcomes	Science Studies	137	154.89	21220.00	-1.881 *P*> 0.05
	Human Studies	153	137.09	20975.00	

**** P < 0.01. * P < 0.05.**

Table 5-16 Disadvantages of using SoMeLT based on specialisation

From the Mann-Whitney test results in Table 5.16, it can be concluded that there were statistically significant specialisation-based differences in the tutors' perceptions of using SM to support their learning. Statistically, the perceptions were significantly more positive among tutors teaching scientific subjects. However, the results of the above test indicated that there were no specialisation-based differences in the tutors' perceptions in items 6, 8 and 9.

5.5.5.3 Tutors' perception regarding the disadvantages of using SoMeLT, based on age

The results of the Kruskal-Wallis test (in Appendix 25) revealed that there were statistically significant age-based differences in the perceptions of the tutors regarding the disadvantages of using SoMeLT. Statistically, the perceptions were

significantly most positive for those aged 31 to 40 (MR = 141.48), followed by tutors aged 20 to 30 (MR = 135.49), then tutors aged 41 to 50 (MR = 142.95), and lastly, the tutors aged 51 to 60 (MR = 188.25).

5.5.5.4 Tutors' perceptions regarding the disadvantages of using SoMeLT, based on electronic device owned

The Kruskal-Wallis test indicates that there were no significant differences in the tutors' perceptions regarding the disadvantages of using SoMeLT based on the electronic devices they own (see Appendix 26).

5.5.5.5 Tutors' perceptions regarding the disadvantages of using SoMeLT, based on teaching experience

The results of the Kruskal-Wallis test revealed that there were statistically significant differences at ($P < 0.01$) in the perceptions of the tutors regarding the use of SoMeLT, based on their number of years teaching experience. The results indicate that the tutors with teaching experience of more than 10 years, while a significant difference was found in items 2 and 8 at ($P < 0.05$) for tutors who have teaching experiences of less than 5 years. Meanwhile, the same table (5.16) shows that for some other items, there were no teaching experience-based differences in the tutors' perceptions of using SoMeLT: these statements are items 2, 4, 6 and 8 (see Appendix 27).

5.6 Differences in Saudi tutors' and students' perceptions of SM use in teaching

In order to obtain an in-depth examination of the extent SM used by students and tutors as a tools for e-learning, the researcher used a non-parametric Mann-Whitney test for the differences in the ranking of the Saudi tutors' and students' perceptions toward: (1) purposes for which Saudi students and tutors use SM; (2) experiences of using SM; and (3) to what extent students and tutors use SM in teaching and learning. The next table shows the results.

5.6.1 Purposes of SM use

Purpose	Sample	N	Mean Rank	Sum of Ranks	Z value and Sig.
Social communication	Students	407	375.61	152871.50	5.365** *P*< 0.01
	Tutors	290	311.66	90381.50	
Learning	Students	407	407.45	165831.00	9.467** *P*< 0.01
	Tutors	290	266.97	77422.00	
News	Students	407	382.67	155747.50	5.637** *P*< 0.01
	Tutors	290	301.74	87505.50	
Entertainment	Students	407	417.25	169820.00	11.256** *P*< 0.01
	Tutors	290	253.22	73433.00	
Other	Students	407	431.24	175515.50	13.157** *P*< 0.01
	Tutors	290	233.58	67737.50	

**** P < 0.01.**

Table 5-17 Results of Mann-Whitney test for differences in Saudi tutors' and students' perceptions of the purposes for using SoMeLT

As shown in Table 5.17, there is a significant difference at (P < 0.01) level in the ranking of all purposes for which Saudi students and tutors use SM. This meant that students perceptions of using SoMeLT for (social communication, education, news, entertainment and 'other') purposes are at a higher level than those of the tutors. Thus, students use these tools most of the time for different purposes and therefore have positive perceptions of using them in education. However, it is interesting to note that some tutors hold positive perceptions of SM in general and their capacity to make life easier; however, they do not believe that these tools should be used for learning. Changing negative perceptions toward SMTs are the first key obstacle to overcome in commencing their use as educational tools. Therefore, these results support the idea that tutors need to broaden their experience with using SMTs and start harnessing their benefits in the classrooms in order to catch up with developed nations.

5.6.2 Experiences of SM use

SM Categories	Sample	N	Mean Rank	Sum of Ranks	Z value and Sig.
Facebook	Students	407	388.42	158086.50	6.265** *P*< 0.01
	Tutors	290	293.68	85166.50	
Twitter	Students	407	397.77	161893.50	8.048** *P*< 0.01
	Tutors	290	280.55	81359.50	
YouTube	Students	407	391.60	159382.00	7.275** *P*< 0.01
	Tutors	290	289.21	83871.00	
WhatsApp	Students	407	367.54	149589.00	3.859** *P*< 0.01
	Tutors	290	322.98	93664.00	
Wikipedia	Students	407	393.80	160277.00	7.145** *P*< 0.01
	Tutors	290	286.12	82976.00	
Skype	Students	407	398.57	162217.50	7.928** *P*< 0.01
	Tutors	290	279.43	81035.00	
Other	Students	407	429.50	174805.50	12.838** *P*< 0.01
	Tutors	290	236.03	68447.50	

**** P < 0.01.**

Table 5-18 Results of Mann-Whitney test for differences in Saudi tutors' and students' perceptions of experiences of using SoMeLT

Table 5-18 indicates that there is a significant difference at level (P < 0.01) in the ranking of all the participants' experiences of using SM reported between the responses of tutors and students. This means that students' experiences of using SM are higher than tutors. As a result, tutors need to improve their experiences of using SM. This is not meant to underestimate the experience of tutors at all. They are sufficiently knowledgeable and have extensive experience in using these tools at a personal level. However, they lack the experience of using these tools in education. Providing the requirements for effectively using these tools while tackling the challenges that hinder their use may increase the enthusiasm of tutors to expand their use in classrooms so that eventually, they will develop the same level of experience and expertise as their students.

5.6.3 Extent of SM use in the educational process

SM Categories	Sample	N	Mean Rank	Sum of Ranks	Z value and Sig.
Facebook	Students	407	335.52	136558.00	2.400*
	Tutors	290	367.91	106695.00	*P*< 0.05
Twitter	Students	407	339.66	138241.00	1.557
	Tutors	290	362.11	105012.00	*P*> 0.05
YouTube	Students	407	332.22	135212.50	2.662**
	Tutors	290	372.55	108040.50	*P*< 0.01
WhatsApp	Students	407	356.18	144966.50	1.142
	Tutors	290	338.92	98286.50	*P*> 0.05
Wikipedia	Students	407	330.06	134336.00	3.112**
	Tutors	290	375.58	108917.00	*P*< 0.01
Skype	Students	407	342.77	139505.50	1.145
	Tutors	290	357.75	103747.50	*P*> 0.05
Other	Students	407	380.43	154833.00	5.110**
	Tutors	290	304.90	88420.00	*P*< 0.01

**** P < 0.01. * P < 0.05.**

Table 5-19 Results of Mann-Whitney test for differences in Saudi tutors' and students' perceptions of the extent to which they use SoMeLT

As can be seen in Table 5.19, there is a significant difference between the responses of tutors and students in their ranking of three tools regarding the extent the students and tutors use them in their teaching and learning (Facebook, YouTube and Wikipedia). The results indicate that some tutors use these tools more than students, therefore, students need to rethink their use of Facebook, YouTube and Wikipedia tools in their learning and develop an effective strategy to ensure they are used effectively to help them improve their learning and cognitive skills. Students should know that these tools were created to facilitate learning and make knowledge accessible to them in the easiest ways.

However, there is no significant difference in the ranking of the three tools (Twitter, WhatsApp and Skype) in terms of the extent to which students and tutors used them in their teaching and learning. This result means that both tutors and students need to develop their skills in using Twitter, WhatsApp and Skype in their teaching and learning. The entire sample agreed on the great

importance of using WhatsApp and Twitter to provide an appropriate learning environment for learners outside the classrooms.

It is believed that the majority of learners in the KSA tend to use Twitter and WhatsApp more than other SMTs. Therefore, making a greater effort to use these tools effectively will be appreciated and admired by all students and tutors. There is a significant difference between students and tutors in terms of their ranking of other tools and how much they use them in their teaching and learning. The results showed that the students used them more frequently, which means that tutors' need to concentrate on incorporating the tools that are used by students into their teaching, in order to improve their learning.

5.7 Differences in Saudi tutors' and students' perceptions regarding use of SoMeLT

5.7.1 Perceptions regarding the advantages of using SoMeLT

Statements	Sample	N	Mean Rank	Sum of Ranks	Z value and Sig.
1. SMTs allow to discussing topics of interest with other teachers.	Students	407	403.62	164273.00	9.123**
	Tutors	290	272.34	78980.00	*P*< 0.01
2. SMTs allow finding and sharing educational resources	Students	407	379.98	154652.00	5.332**
	Tutors	290	305.52	88601.00	*P*< 0.01
3. SMTs develop and promote knowledge	Students	407	382.04	155488.50	5.659**
	Tutors	290	302.64	87764.50	*P*< 0.01
4. SMTs enhance students' learning experiences	Students	407	387.82	157843.00	6.513**
	Tutors	290	294.52	85410.00	*P*< 0.01
5. Students are more engaged with the educational process when using SMTs	Students	407	391.84	159480.00	7.115**
	Tutors	290	288.87	83773.00	*P*< 0.01
6. SMTs help people with similar hobbies	Students	407	387.46	157696.00	6.432**
	Tutors	290	295.02	85557.00	*P*< 0.01
7. SMTs enhance tutors ' expertise by diversifying their knowledge	Students	407	381.03	155078.00	5.454**
	Tutors	290	304.05	88175.00	*P*< 0.01
8. SMTs decrease the effort and cost required to communicate with teachers and friends	Students	407	371.56	151225.50	3.881**
	Tutors	290	317.34	92027.50	*P*< 0.01

**** P < 0.01**

Table 5-20 Results of Mann-Whitney test for differences in Saudi tutors' and students' perceptions of each of the 8 advantages of using SoMeLT

Table 5-20 demonstrated that there is a significant difference at ($P < 0.01$) level in the ranking of each of the (8) advantages of SM between the responses of tutors and students. The results tended to the students and these results meant that students' perceptions toward advantages of SM are higher than tutors' perceptions. Generally, most of the student respondents saw SMTs as having significant benefits when used effectively in the learning process. They believed that using these tools could motivate students to learn, enhance their learning through the development of higher order thinking skills, including creativity and evaluation abilities, and provide students with effective counselling.

Meanwhile, though some tutors appeared to have the same attitude as the students, the majority believed that despite these tools having advantages for life in general, their harm outweighed their benefits in the classroom. Therefore, raising awareness and providing multiple training courses that explain the advantages of using SoMeLT will contribute to changing the negative perceptions that discourage teachers from adopting them in the learning process.

5.7.2 Perceptions regarding the disadvantages of using SoMeLT

Statements	Sample	N	Mean Rank	Sum of Ranks	Z value and Sig.
1. I feel concerned about privacy when using SM in the classroom	Students	407	368.61	150025.50	3.177** *P*< 0.01
	Tutors	290	321.47	93227.50	
2. Using SM to supplement face-to-face courses can become too time intensive	Students	407	306.61	124790.00	6.766** *P*< 0.01)
	Tutors	290	408.49	118463.00	
3. I have concerns about vague copyright and intellectual property issues involved in SM	Students	407	382.47	155665.00	5.389** *P*< 0.01
	Tutors	290	302.03	87588.00	
4. I can understand the SM websites that are in English.	Students	407	283.83	115520.00	10.345** *P*< 0.01
	Tutors	290	440.46	127733.00	
5. Some contents of SM oppose Islamic religious teachings.	Students	407	354.89	144442.00	0.941 *P*> 0.05
	Tutors	290	340.73	98811.00	
6. I am concerned about who is monitoring SM for inappropriate or offensive use and thus how we deal with it	Students	407	379.06	154279.00	4.875** *P*< 0.01
	Tutors	290	306.81	88974.00	
7. SMTs inhibit my ability to express my thoughts and opinions	Students	407	313.31	127519.00	5.698** *P*< 0.01
	Tutors	290	399.08	115734.00	
8. I feel concerned about the dangers of cyber bullying that can cause profound psychosocial outcomes.	Students	407	368.73	150075.00	3.244** *P*< 0.01
	Tutors	290	321.30	93178.00	

**** P < 0.01**

Table 5-21 Results of Mann-Whitney test for differences in Saudi tutors' and students' perceptions of each of the 8 disadvantages of using SoMeLT

As shown in Table 5.21, below, there is a significant difference at (P < 0.01) level in the ranking of some disadvantages of SM between the responses of tutors and students. The results for the students tended to be in items 1, 3, 6 and 8. Additionally, the result showed that there is a significant difference at (P < 0.01) level in the ranking of some disadvantages of SM between the responses of tutors and students. The results tended to the tutors in items 2, 4, and 7. Otherwise, there was no significant difference in the ranking of only one disadvantage item 5 (opposing Islamic religious teachings). The results highlighted some important issues of concern to either by students or tutors.

Firstly, tutors and students have feelings of concern about privacy when using SM in the classroom. Secondly, they feel challenged when facing some intellectual issues posed by using SM. Thirdly, they lack confidence in their abilities and are concerned about people monitoring SM for inappropriate behaviour. Finally, they

are concerned about the dangers of cyber-bullying, even if there are risks associated with this.

5.8 **Chapter Summary**

The data analysed in this chapter was gathered by two separate questionnaires given to faculty and students at the EU. The analysis of the results was divided into two formats. The first format focused on the students' online survey responses, while the second dealt with the tutors' online survey responses. The first section of the two questionnaires asked all the research population to provide personal information in relation to their gender, age, specialisation, the use of SM, tutors' years of teaching experience and the electronic devices that the participants own, in order to properly understand the research population characteristics and to figure out whether there is a statistically significant difference between participants perceptions of using SoMeLT.

The second, third, and fourth sections of the two questionnaires asked all participants to agree or disagree on a 1-5 Likert scale, with 98 closed items related to the purposes of using SM, experiences with six examples of SM, and the perceptions of Saudi tutors and students regarding the advantages and disadvantages of using SoMeLT. The data were analysed using descriptive statistics and non-parametric tests, and the results presented in tables.

Overall, the results showed that there was a significant difference in perceptions between students and tutors in the use of SMTs in education. The vast majority of students used SMTs in academic settings. The SMTs that attracted significant usage among student respondents were WhatsApp (94.1%), Wikipedia (87.4%), Twitter (76.9%), YouTube (54.8%), Facebook (48.9%) and Skype (32.4%). To be precise, the students indicated the need to integrate and use these tools in the educational process for its many contributions in facilitating learning, sharing educational resources, decreasing the effort and cost required to communicate with teachers and peers, developing and promoting knowledge, simplifying access to information, and pointed to the fact that they are the tools of the digital age.

The majority of the tutors opposed the use of SM in education and pointed to the various disadvantages of using SoMeLT. They drew attention to the distraction that these tools might cause when using them in class and in informal settings. Their main concerns regarded the lack of discipline these tools can provoke. The teachers also stated that SMTs can cause cyber-bullying, which has profound effects on the individual and on society.

Moreover, they added that these tools open the door to inappropriate or offensive use, especially as some learners do not have enough understanding of how to use these tools properly. The tutors stressed that using SoMeLT requires more training. Finally, they highlighted their concern about the disregard on SM platforms for authors' individual property rights and the dangers of copying and pasting information without mentioning the original owners.

The results of the variance tests revealed that there are statistically significant differences between the participants' responses, depending on gender, specialisation, experiences, the use of SM, the purposes of using those tools, and differences between Saudi tutors' and students' perceptions regarding the use of SoMeLT in terms of advantages and disadvantages. The data indicated that most participants who agreed to use SoMeLT were male student's participants aged 20 and 25 who had experience with the use of these modern tools and always called to adopt them in education. Overall, there was a significant difference at ($P < 0.01$) between the Saudi tutors' and students' perceptions of the advantages of using SoMeLT. However, there was no significant difference between the two groups' concerns with using SoMeLT.

To conclude, it is obvious that the results indicated a noticeable gap between students and tutors regarding the use of SoMeLT. Almost all the students felt that these tools should be used for learning and highlighted the need to integrate and use these tools in the educational process to facilitate and achieve various opportunities for learning, teaching, communication, building professional networks with other peers or tutors, and participating in activities within these specialist groups. Conversely, the majority of the tutors opposed the use of SoMeLT for different reasons (presented in Chapter 3, Section 3.6 and Chapter 5, Section 5.5.5).

Chapter 6 focuses on a detailed analysis of the one-to-one interviews conducted with ten deans of an EU. The purpose of analysing these interviews is to cross-validate the analysis of the quantitative data obtained from tutors involved in this research as well as to examine in depth to find out the current state of SM use in education among tutors at an EU.

Chapter 6: Qualitative Results

6.1 Introduction

The main aim of this chapter is to present the analysis of the qualitative data generated from the interviews and the open-ended questions of tutor and student surveys. The purpose of the interviews was to clarify and expand the participants' answers to the questions in the questionnaire, as well as to find out if the EU tutors are using SoMeLT to support the educational process. I wanted to examine the current reality of using these tools for learning, as well as discover their objections or hesitations to implementing them. As Lodico et al, (2010) said: "… interview questions often help the researcher to probe more deeply into the phenomena being studied" (p.39).

A total of 10 tutors were interviewed individually at the EU. Five tutors were male and five females. This gender balance could be positive, as it enriches and deepens the study data. All of the participants invited agreed to take part in the study. Prior to their involvement they all signed an informed consent form. All interviews were conducted face to face in an appropriate place and notes of their responses and exchanges were taken, mostly recorded for transcription and analysis later. Each interview took between 20 to 25 minutes and each respondent was allocated an individual title as their reference, such as:

(Respondent: P1; Q. No: 1; [Job title]; Male, etc.)

in order to map out the spread of responses and accurately represent the views of the different participants. For detailed information and in-depth discussion of the process involved in the interpretive interviews and analysis, see chapter four (Methodology).

This chapter also aims to analyse the results of the open-ended question included at the end of the questionnaires about whether the participants (tutors' and students') would like to add any comments about this study. The purpose of this question was to provide ample opportunity for tutors and students to express what they consider to be the advantages and/or concerns regarding the

use of SoMeLT at the EU. The open-ended question also allowed the participants to discuss any topics that were not covered by the questionnaires.

6.2 **Participant Data**

As mentioned in the methodology chapter (Chapter 4, Section 4. 4. 2), ten tutors took part in the final interviews. The participants were currently working in these colleges as tutors and had different areas of expertise and academic levels. In the sample, seven participants were from the campus of the University and three participants were from the branches of the University in the neighbouring governorates. The participants had different academic ranks. Five of them were assistant tutors, three were associate tutors and two were tutors (see Chapter 4, Section 4.8.2.3 for more details).

6.3 **The Interview Analysis**

This section presented the analysis of data gathered through semi-structured interviews conducted with 10 tutors: 5 males and 5 females. The focus of the interviews was an examination of the perceptions relating to the research issues. It was hoped that the participants would provide their perceptions regarding the current reality of using SoMeLT at the EU. After the final reading and writing up of the data obtained from all the participants in this study, the tutors' responses to eight questions were analysed. As detailed in Chapter 4, Section 4. 4, I have incorporated the mixed methods research approach as the basis for the framework of this research, as formulated by Biesta (2010). A total of four broad themes emerged during the process of analysing the responses to the interview questions and data collected from the interviews. Interviewees gave responses regarding the existing reality of using SoMeLT at the EU from the viewpoint of tutors and students. Table 6.1 shows the themes that emerged from this data collection process, along with the subthemes of the emerged themes.

Emergent themes	Subthemes
• Perceived potential benefits of SoMeLT	• Overview of tutor attitudes toward the use of SoMeLT • Developing social communication skills • Supporting students' learning • Accessible online educational resources and tools
• Resistance to the use SoMeLT	• Factors compromising the learning process • Risks to Students • Practical considerations concerning the use of SMTs in teaching
• Reported use of SM in Teaching	• Professional use in the classrooms • Professional use beyond the classrooms • Successful and unsuccessful experiences of incorporating types of SMTs into teaching
• Institutional support and policies for the use of SoMeLT	• University support for using SoMeLT • Lack of clear policies regarding the use of SoMeLT

Table 6-1 Main themes of the qualitative interviews

6.4 **Theme One: Perceived Potential Benefits of SoMeLT**

To get a better idea of tutors' perceptions about SMTs in general and how they feel it is impacting their teaching, I asked the interviewees the following question:

"What do you think about using SoMeLT for teaching and learning?"

The interview participants gave a variety of answers to this question that were analysed and presented in the following sub-themes.

6.4.1 Overview of tutors' perceptions toward the use of SoMeLT

Four of the tutors expressed positive perceptions concerning the use of SM as effective instructional tools that could improve learning and teaching, as well as facilitate communication between tutors and students. They supported the integration of SM in teaching but felt that the actual benefit would depend on the specific ways they were used in the instructional process.

For example, (P1) said:

> "Using SMTs in learning and teaching is very helpful. They are about collaborating, networking, sharing and generating knowledge and content. They are used in the university context. They can make it clear if students are engaged in education and active in all academic activities, co-curricular activities and interactions with tutors and their colleagues".

(Respondent: P1; Humanities; Tutor; Q. No: 1; Male, Jan 24, 2018)

Four (out of 10) of the participants pointed out how SMTs can support collaboration and knowledge sharing in learning. P1 argued that these tools facilitate knowledge acquisition by granting learners access to a huge store of information that would be difficult to access through traditional means. P4 said:

> "I think it's a brilliant idea. Although people may think that it's a time-consuming in the class, I think it's something that we can use to take the stress out of our students. For example, if you explain grammar structure in the first day and we came in the second day and we found that the students could not understand what we explained to them in the first day, then we can use Facebook or Snapchat [to assist us in our teaching]. Where those people may explain it in a way that may be better than ours and the students may think that 'the teacher is not observing me now', so I am going to learn it because of no time limit and no stress. So, it's a brilliant idea to be used in the classes".

(Respondent: P4, Physics, Associate Tutor, Q. No: 1; Female, Feb 04, 2018)

Another participant talked about the use of SoMeLT at a time that most students are comfortable and familiar with the different websites and apps:

> "Nowadays most people have an account on one or more SM sites, especially teenagers (students). Using SM as part of the education system will help students to be more creative and give the students more space in education systems. Moreover, students are the most important part of the education system and using what they like in education will give them more motivation and more opportunity to achieve what they want".

(Respondent: P8, Humanities, Tutor, Q. No: 1; Female, Feb 01, 2018)

Young people are conversant in SMTs which can fulfil important roles in the classroom. These tools can be powerful when used with the intention of enhancing learning creativity and ambition. In the same vein, another participant stated:

> "I think SMTs are most definitely for learning and we have a lot to learn. I think these tools can help students how to read widely and deeply, encourage them to be curious and open-minded about the world and to reclaim the act of listening to other people".

(Respondent: P7, Chemistry, Assistant Tutor; Q. No: 1; Male, Feb 16, 2018)

SM provides an important opportunity to discuss topics or issues related to study purposes. Another tutor highlighted SM's potential to enhance communication:

> "People use SM for every part of their lives. They use it in their relationships, for entertainment, at work and in their studies; but the importance of using it is that it helps the people to communicate easily so that the world becomes like a small village. For example, people use SM sites, such as Facebook and Google, and that makes much easier for people to find one another and reconnect, even after a long time of being apart. Also, people can get information to develop their ability in their work by using the SM to share the ideas with each other and save their time that might spend on reading books to find any information they need".

(Respondent: P4, Physics, Associate Tutor, Q. No: 2; Female, Feb 04, 2018)

One interviewee highlighted the potential use of SM to provide access to informed opinions on different topics:

> "SMTs such as Facebook, Twitter, WhatsApp and YouTube are a treasure trove of information to enhance knowledge and get informed opinions. If you want to learn at a good level and want to enhance knowledge, then you should use these tools to keep you intellectually stimulated in any topic of your choice and share with professionals in the same area".

(Respondent: P1; Humanities; Tutor; Q. No: 2; Male, Jan 24, 2018)

It is brilliant to mention that SMTs gave learners the chance to control their own learning environment and allowed them to share their knowledge with other

students in different ways. SMTs such as Twitter, Facebook, YouTube, WhatsApp and Wikipedia are giving learners better learning opportunities to enhance their educational performance. Therefore, learners would prefer to find better ways of learning by changing their learning styles and connecting with an environment that has more dynamic social potential to enable users to learn more by using the readily-available online tools in an effective and comfortable way and not to study in isolated environments that provide traditional styles of learning.

Accordingly, out of the 10 study participants, six indicated that the use of SMTs was primarily limited to personal purposes, such as connecting with family and friends, and professional purposes, to connect with other educators on their Facebook pages, or to follow scholars on Twitter. Four out 10 participants indicated that SMTs gave their students opportunities for interacting and learning from their peers or tutors. However, P10 said that:

> "I think you have to be careful with SM as a teacher, especially with posting inappropriate information or using those tools inappropriately".

(Respondent: P10, Humanities, Associate Tutor, Q. No: 1; Feb 08, 2018)

In line the tutors' statements confirming their positive perceptions of using SoMeLT, both through the individual interviews and in their answers to the open-ended questions; the students also demonstrated positive perceptions in their answers to the open-ended questions in the students' questionnaire. Eighty out of 407 of the participants advocated integrating SM into the university curricula and believed that tutors should start using them as tools to aid learning. They have seen SMTs such as Facebook, YouTube, Wiki and Skype used as tools that work to streamline the learning process, allow users to document knowledge and share it with as many others as possible. Moreover, they expressed support for the use of SM in education and argued that SMTs can enrich the learning environment.

The participants stated that these tools must be used to support student learning but should not be used as a substitute for the traditional methods of teaching. Fourteen respondents observed that regular use of SM improves student interaction with their tutors or peers when exchanging feedback, as well

as assisting learning. This is in line with the opinions of four (out of 10) of the participants in the interviews who emphasised that using SoMeLT had improved student interaction with their tutors or peers and helped to facilitate the learning. Also, the participants complained that it was sad that tutors did not want to use these modern tools to support the learning process. They emphasised that it is imperative to change attitudes and increase Saudi educators' awareness of the importance of integrating SM technologies into the country's education system.

6.4.2 Developing social communication skills

SM can help students become media literate and teach collaboration, communication and critical-thinking skills they will need for future success in this technological age. Four out of the ten participants in this study indicated positive relationships between the utilisation of SMTs and college students' engagement. They mentioned that SMTs could encourage students to engage, participate and contribute by using discussion forums and collaborative authoring. Two of the participants said:

> "SMTs work to facilitate contact among tutors and students, make strong and deep connections, easy and effective collaboration, an increased rate at which information was provided or shared, peer group solutions to problems and more engagement in coursework".
>
> **(Respondent: P1; Humanities; Tutor; Q. No: 3; Male, 24, 2018)**

> "SMTs have the potential to encourage engagement, reflective thinking and collaborative learning and to expand learning content in different learning settings".

(Respondent: P8, Humanities, Tutor, Q. No: 2; Female, Feb 01, 2018)

It would be helpful to use SMTs for teaching and learning to create an interactive environment in which the learners and their tutors can share the information to one another because there are lots of important articles students and their teachers can link and share at any time out of the school hours. P7 emphasised that:

> "… these tools are good for learning and sharing, developing proper judgment and time-management skills, enhancing collaboration and professional development".

(Respondent: P7, Chemistry, Assistant Tutor; Q. No: 2; Male, Feb 16, 2018)

Additionally, P4 clarified this by saying:

> "Using SM as part of the education system will help students to be more creative and give the students more space in education systems".

(Respondent: P4, Physics, Associate Tutor, Q. No: 3; Female, Feb 04, 2018)

Using SoMeLT encourages learners to have meaningful discussions that can provide them with an arena to express new ideas and voice their opinions; as well as to listen to other students' opinions and think critically about their contributions and ideas. Not only that, it gets learners to think more critically about the topics and gives them the opportunity to challenge each other intelligently and build off each other's ideas.

This is in line with the ideas came from some participants responses that emphasised that WhatsApp, Facebook, Twitter, and YouTube could make learners more open-minded and creative and therefore, use these tools usefully and encourage them to work as a team. As one participant mentioned:

> "I have used WhatsApp and Twitter as tools to collaborate with my students inside or outside the classrooms. WhatsApp has allowed students to work together to make decisions based on creative thinking, communication and collaboration".

(Respondent: P8, Humanities, Tutor, Q. No: 3; Female, Feb 01, 2018)

Additionally, teaching by using SoMeLT provides a good opportunity to design a course where teachers can dialogue with students, students can communicate with other and students can connect to appropriate resources. Participants 1, 4, 7, 8 mentioned that using tools of SM inside the classroom enables the creation of small groups where students can assume responsibility to help and direct their classmates. Problem-solving forums or discussion boards can be set up where

students or student teams are assigned to monitor, support and direct questions, and provides opportunities for real-world learning experiences.

6.4.3 Supporting student learning

The responses revealed that using SM as tools for learning are valuable opportunities to improve the quality of teaching, share educational content, increase students' motivation and promote collaborative learning. This was emphasised by one participant in the interviews who revealed that:

> "Using technology as a learning tool, if properly facilitated and framed, can boost the educational process and therefore affect educational outcomes".

(Respondent: P7, Chemistry, Assistant Tutor; Q. No: 3; Male, Feb 16, 2018)

> "Publicly open SM sites provide students with access to more information and experiences than they would get in a closed environment alone".
>
> **(Respondent: P1; Humanities; Tutor; Q. No: 4; Male, 24, 2018)**

P2 believed that SMTs made learning accessible to both tutors and students everywhere, anywhere and around the world. As she noted, many EU tutors and students own the most recent Smartphone technology, which they use to quickly access SMTs or websites. This interviewee highlighted that:

> "Tutors' posted assignments or questions either on WhatsApp or Twitter and they were easily accessible to students".

SMTs also enabled students to collaborate on class presentations, assignments and quizzes and helped to build trust and confidence between the tutors and students. All of this may not happen unless the SMTs contributed to facilitating learning. She commented:

> "We deal with a new generation that loves technology, have different interests from the past and curricula must be parallel to their ideas and aspirations. Therefore, we should as tutors to use these tools to simplify and access learning"

(Respondent: P2, Computer Science, Assistant Tutor, Q. No: 1; Female, Feb 12, 2018)

P6 referred to the personalisation of learning that SMTs allow by bridging the gap between students and tutors, arguing that:

> "Through SM, tutors can meet learners where they are, assist them with their needs and ensure that they make the progress that they want them to make".

(Respondent: P6, Health Sciences, Associate Tutor; Q. No: 1; Female, Feb 26, 2018)

Additionally, P8 revealed that SMTs can be used to enhance teaching and learning. He said that:

> "I used the WhatsApp to create a summary of lessons taught, send links related to courses, ask questions regarding topics that had been discussed, and distributed duties. Students told me that it was challenging and enlightening experience that leads to better outcomes and performance".

(Respondent: P8, Humanities, Tutor, Q. No: 4; Female, Feb 01, 2018)

Similarly, participants 1, 4, 7 and 8 all agreed with the view that YouTube is the best SM tool to watch educational videos that have helped the students to gain wider knowledge. Additionally, P4 indicated that these tools opened up the possibilities of discovering and learning new information, sharing ideas and interacting with others. He stated that:

> "SMTs not only help people stay in touch with existing contacts but also aids in the formation of new alliances. These alliances are usually with people that share common interests that could be effective for supporting students learning processes".

(Respondent: P4, Physics, Associate Tutor, Q. No: 4; Female, Feb 04, 2018)

Furthermore, participants 1, 4, 7, 8 agreed that SMTs are the best way to collaborate and discuss ideas, problems, and solutions. For example, P7 indicated that:

> "Some students face challenges to do their assignments on time. In this case, students must have contact with their classmates through the various SMTs to overcome these issues and get the information they need".

(Respondent: P7, Chemistry, Assistant Tutor; Q. No: 4; Male, Feb 16, 2018)

Similarly, P4 mentioned that:

> "Students tend to help each other more frequently when they know a tutor's member is not available, and it is vital to build in options and opportunities for students to work together and individually".

(Respondent: P4, Physics, Associate Tutor, Q. No: 5; Female, Feb 04, 2018)

Additionally, P1 indicated that:

> "Students can work as a unit to gain information as well as developing a community by posting questions and sharing ideas in open forums or groups".

(Respondent: P1; Humanities; Tutor; Q. No: 5; Male, 24, 2018)

In the same vein, P8 emphasised that:

> "Tutors should provide students with examples of how they will communicate with them and dialogue online for future classes, assignments, and urgent inquiries".

(Respondent: P8, Humanities, Tutor, Q. No: 5; Female, Feb 01, 2018)

Additionally, four out of the ten participants referred to affective factors. Compared with traditional instructional methodologies, using SM can be fun, new, exciting and challenging and allow more creativity for tutors. These are critical in a period when HE is evolving to meet the needs of consumers and there is increased competition among students. Consequently, tutors who do not

use SM in their teaching are often considered out of date, out of touch and lacking the skills required for the future.

Two of the participants indicated that SMTs facilitated learning because they added excitement to the teaching process. For example, P3 posited that:

> "A student no longer enters a lecture hall and is bored by the traditional method which involves the tutor constantly talking and drilling information into the students".

(Respondent: P3, Engineering, Associate Tutor, Q. No: 1; Male, Feb 19, 2018)

> "SMTs have facilitated the hard acquisition of abstract scientific concepts and made them concrete. I think that my students benefit because my class becomes more interesting, more varied and more relatable".

(Respondent: P1; Humanities; Tutor; Q. No: 6; Male, Jan 24, 2018)

Therefore, SMTs have helped tutors to convey intangible concepts in a more tangible way, which helps students' grasp them more easily. These tools are available to all users today and thus, some participants agreed that learners can get the benefits of these tools to create strong and closer collaboration outside the classes. It is best to use a tool where the responses and content can be shared with everyone to exchange information about the given assignment. For example, that tool can be a program like WhatsApp or Twitter, which allows students to share questions in the discussion group throughout the day or night.

6.4.4 Accessible online educational resources and tools

Four out of the ten of the interview's participants reported that students prefer digital content that allows them to use their computer. If the content is not digital, it is as if it does not exist for students. Students want to learn the material within a given framework and when it is convenient for them, hence, it is often completed while multitasking. P8 demonstrated this when she said:

> "Students in KSA schools do not like to carry large and heavy textbooks and prefer content that can be accessed via Smartphone's, computers, and iPods"

(Respondent: P8, Humanities, Tutor, Q. No: 6; Female, Feb 01, 2018)

Most of the participants four (out of 10) held that SMTs benefit tutors by providing access to a vast pool of online resources, thereby enabling them to provide creative lessons. For example:

> "SMTs help save the teacher time in lesson preparation because they can quickly obtain information from the internet related to their subject"

(Respondent: P8, Humanities, Tutor, Q. No: 7; Female, Feb 01, 2018)

> "Tutors can benefit from SMTs by using them to search for new information, take notes, communicate and consult with experts, and interact with peers".
>
> **(Respondent: P7, Chemistry, Assistant Tutor; Q. No: 5; Male, Feb 16, 2018)**

Further, P8 said that:

> "YouTube is one of the most popular SM sites used by tutors in the classrooms. .... she used YouTube to provide video clips of speeches given by great men in the world for her public speaking course. This allowed her students to analyse great speakers and speeches"

(Respondent: P8, Humanities Tutor, Q. No: 8; Female, Feb 01, 2018)

Learning takes place both inside and outside the classroom; so, by using SM like WhatsApp, Twitter, Wikipedia, YouTube and Facebook, learning can proceed smoothly. These are tools to be leveraged and not avoided. Therefore, it is possible for the tutors to utilise all of the tools and technologies to engage students and potentially have a valuable resource for supporting student communication and collaboration with lecturers. Most importantly, the tutors and students should be encouraged to use SMTs in their regular instruction and regular work, as this is an effective tool for our learning right now, the 21st century of learning.

Student groups and educators from locations all across the world can now work together to exchange information. Indeed, students can show their projects, share books, or read original written pieces that can be the basis for rich communication between learners. Four out of the ten participants emphasised that they have used tools like WhatsApp, Facebook and Twitter to share links, articles and thoughts through creating closed groups to collaborate to develop ideas, exchange information and improve critical thinking between their peers and among their students.

[The same four participants] pointed out the possibility of using Skype in schools. They demonstrated that tutors and students can meet to plan their work, to conduct a conference, to teach lessons, or to touch base on progress towards specific academic goals. Teachers can plan workshops with a colleague or university student to provide information to students to improve their real-world experiences and develop professional networks. P4 and 7 indicated that tutors can form teaching teams with remote teachers, planning lessons or mentoring other teachers during the planning process. Students and tutors can share software or techniques during videoconferences and basic skills, such as learning to navigate the Internet or creating a web page, which can be done during a Skype training session.

Additionally, one of the participants indicated that:

> "Tutors can connect students within classrooms with guest experts such as scientists, politicians, or those with special expertise in a specific field of study. Skype and Google plus eliminate the global distance between the participants. In summary, distance is no longer a factor in holding a meeting, conducting a panel discussion, meeting with an author, or receiving feedback from experts".

(Respondent: P7, Chemistry, Assistant Tutor; Q. No: 6; Male, Feb 16, 2018)

With the good use of SoMeLT there is the opportunity to access a vast pool of online resources, exchange ideas, share knowledge, provide links and give personal information to others. Consequently, the participants mentioned the administrative benefits of these tools. One of them said:

> "The creation of closed groups in SMTs can help tutors and students to arrange group meetings, stay in touch with group members, discuss class work, share the latest version of documents, give feedback on each other's work and invite other tutors and students".

(Respondent: P1; Humanities; Tutor; Q. No: 7; Male, Jan 24, 2018).

> "SMTs enable the tutor to reach the students readily. Through SMTs, students can interact with tutors and receive feedback".

(Respondent: P4, Physics, Associate Tutor, Q. No: 6; Female, Feb 04, 2018)

These responses demonstrated the advantages of SM to access knowledge easily and simply. Indeed, learners can use any kind of SMTs to get different information from a different culture and share what they want with others, regardless of where they are in the world. Most importantly, SMTs are helping learners to be independent and self-educated. This is in line with the comments of one of the participants who stated:

> "SMTs support learners' knowledge developing by providing a variety of opportunities to visit libraries and learning centres around the world and to take advantage of these great information resources online at any time and from anywhere".

(Respondent: P7, Chemistry, Assistant Tutor; Q. No: 7; Male, Feb 16, 2018)

It is important to mention that learners use SMTs such as WhatsApp, Facebook, Twitter and Wikipedia to acquire information, and assess and react to the news. Thus, these tools have enabled knowledge consumers to be informed in real time about the newest information and topics of interest. Therefore, SM is an opportunity for learners to research information, obtain it in the easiest way, comment, criticise and give opinions about it, and share it with others with similar interests.

In short, using SoMeLT can contribute to providing learners with good opportunities for professional learning to develop their knowledge, expand their horizons, build relationships and learn from specialist scientists and experts and engage in learning different cultures that contribute to enriching information which they can then share with other interested users.

6.5 **Theme Two: Resistance to the use of SoMeLT**

Six participants expressed an objection to the use of SMTs in education. The answers they gave to Question 8 in the interview provided different justifications for this view. These reasons would fall in three groups which included the existence of factors that compromise the learning process, inherent risks to the students themselves, as well as practical considerations that stand in the way of tutors integrating SM use in their classrooms and teaching. Each of these is discussed below.

6.5.1 Factors compromising the learning process

6.5.1.1 Undisciplined use of SMTs as leading to distraction and lack of focus

Six of the ten participants in the face-to-face interviews, as well as most of the tutors responding to the open-ended question, noted the potential for distraction and loss of focus in the undisciplined use of SMTs. In their opinion, learners could easily be distracted from lessons if they used these tools for unintended purposes such as watching unrelated videos on YouTube, checking messages on Twitter, Facebook, play games, etc, whether in the classroom or beyond.

One participant provided an example:

> "However, I have noticed that some learners did not focus during my explanation. I asked them some questions during the explanation, but they seemed to be in another world. Their answers were totally removed from the lesson's topic. This convinced me that they were distracted by using SM during the lesson time and that this would affect their level and grades".

(Respondent: P6, Health Sciences, Associate Tutor; Q. No: 2; Female, Feb 26, 2018)

Another participant highlighted how the students' use of the internet for non-educational purposes could also prevent them from completing their assignments on time, resulting in lower grades. Furthermore, this created challenges and time-management problems for tutors as they attempt to regulate their students' use of SM. As one respondent noted:

> "I never use SMTs in my courses. However, I have noticed that most of my students use these tools during classes in the wrong way, either by texting friends, exchanging images or taking 'selfies' to share with their friends. I waste a lot of time policing them and this can be totally frustrating".

(Respondent: P10; Humanities, Associate Tutor; Q. No: 2; Female, Aug 2018)

> "Students have personal devices that are connected to the internet, and it is difficult to control what students view on their personal devices".

(Respondent: P2, Computer Science, Assistant Tutor, Q. No: 2; Female, Feb 12, 2018)

A similar argument was made the disruption when students claimed to be making or receiving emergency telephone by P3 and P6. This caused confusion and interrupted the learning process (P3) and led some students to miss important parts of the lesson (P3 and P6). One participant commented:

> "Students lie about their actions, and say that they are taking emergency calls, while merely socialising with their friends".

(Respondent: P6, Health Sciences, Associate Tutor; Q. No: 3; Female, Feb 26, 2018)

This supported the decision of these two tutors not to use SMTs for learning.

Two participants put forward some suggestions towards solving this issue, such as providing advice to learners 'on how to use these tools for the development of their learning' (Respondent: P3, Engineering, Associate Tutor, Q. No: 2; Male, Feb 19, 2018), as well as allocating a specific time in class for the use of SM sites (Respondent: P10, Humanities, Associate Tutor, Q. No: 2; Female, Feb 08, 2018).

6.5.1.2 Impeding critical engagement with content

Six out of the ten participants thought that the use of SMTs hindered the development of critical thinking skills among students as they did not engage in depth with the information they found. One participant stated that:

> "SMTs prevent learners from thinking about problems in depth and relating them to the concepts or theories taught in class. Instead of using their minds to find solutions to the problems, they depended on Google to get the answer directly, despite the fact that the information contained therein was often not verified or trustworthy".

(Respondent: P9, Computer Science, Assistant Tutor, Q. No: 1; Male, Feb 14, 2018)

This was supported by another participant who remarked that:

> "I did not know whether the students had learned anything from the lessons taught since they simply copied other people's answers and skipped the process of thinking and brainstorming, which are so important for enhancing their understanding of the concepts taught in classes".

(Respondent: P2, Computer Science, Assistant Tutor, Q. No: 3; Female, Feb 12, 2018)

This related to a concern shared by all the ten participants in this study, namely plagiarism. They described how many students copy and paste the answer or information from the internet without analysing the information or synthesising ideas to come to conclusions. This had implications for the future in that:

> "Learners will not be able to apply the newly studied concepts to real-world situations and if they have a challenging question, they will simply Google it, without being challenged to think."

(Respondent: P5; Maths; Assistant Tutor, Q. No: 1; Male, Jan 29, 2018)

As a result, P5 repeatedly warned his students about the implications for plagiarism.

6.5.1.3 Ignorance or lack of respect of intellectual property rights

With the frequent use of SM to exchange and share information with other users, knowledge of authorship and ownership rights is very important for users. Six out 10 of the participants considered that there is a general lack of understanding copyright rules and regulations for dissemination of content on SMTs among

young users. This related, on the one hand, to the unclear provenance of information available on SMTs as:

> "Most of [it] is copied and pasted without any respect to copyrights".

(Respondent: P5; Maths; Assistant Tutor, Q. No: 2; Male, Jan 29, 2018)

Two participants also expressed concern about lecture recordings and said:

> "Students use these modern devices to record classroom lessons and share them with other students without reference to the author or publisher of such information".

(Respondent: P4, Physics, Associate Tutor, Q. No: 7; Female, Feb 04, 2018).

They continued:

> "Recorded portions of the lesson… did not give a true picture of the lecturer's presentation or reflect the strategies used by the lecturer to teach the concept to the class".

(Respondent: P8, Humanities, Tutor, Q. No: 9; Female, Feb 01, 2018)

6.5.2 Risks to Students

6.5.2.1 Access to inappropriate material, cyber-bullying and cyber-security

Six tutors, who did not use SoMeLT, expressed concerns about the risks inherent in student internet usage, particularly those related to accessing 'immoral' websites and inappropriate material which, if not managed properly, this could result in inappropriate behaviour and posts by students. In addition, they were worried about the harm to students of cyber-bullying, breaches in cyber-security and preying by online sexual predators. For example, one of the tutors opposed to using SM in education and referred to complaints by his students of attacks and abuse received from their peers on SM (Respondent: P9, Computer Science, Assistant Tutor, Q. No: 2; Male, Feb 14, 2018). Some of the responses to the open-ended question also referred to the harassment experienced by some users with its negative psychological effects.

One interviewee voiced concern and said:

> "Strangers on SM may take advantage of the ignorance of some students, especially the young ones, to post malicious links, outrageous news and potentially inappropriate images or texts that contain fake videos and photos accompanied by offensive material relating to drug and alcohol use, sex or personal information".

(Respondent: P10, Humanities, Associate Tutor, Q. No: 3; Female, Feb 08, 2018)

To safeguard against these risks, one tutor, highlighted the importance of training. He commented:

> "Teen students are hungry to see everything on SM, whether it be positive or negative. I believe as an experienced lecturer, that students should learn and understand the importance of these tools, how these tools could contribute to facilitate and develop education and how learners can take advantage of SoMeLT".

(Respondent: P5; Math; Assistant Tutor, Q. No: 2; Male, Jan 29, 2018)

6.5.2.2 Privacy Concerns

The vast majority of participants, either in the face-to-face interviews or in the surveys, expressed concerns about privacy issues and risks to reputation which led them to tread carefully when using these modern tools. With ongoing developments in digital programmes and applications, it has become easier to modify photos or information displayed on SMTs and to reproduce them in other contexts. Therefore, the participants underlined the importance of privacy protection, particularly in a conservative society such as the KSA, where privacy issues are not only personal but a family matter.

Once again, training would be a possible way to protect the students:

> "It is crucial when using these tools in the educational process to educate users so as to create an aware community of users on these tools, reminding them of the importance of safeguarding their personal information and updating their privacy settings

and not disclosing their personal information to anyone who is not trusted".

(Respondent: P2, Computer Science, Assistant Tutor, Q. No: 4; Female, Feb 12, 2018)

6.5.3 Practical considerations concerning use of SMTs in teaching

6.5.3.1 English Language Barriers

With the majority of resources on SMTs being available in English and with a lack of relevant Arabic content, poor English language ability was a major concern for most participants in using SoMeLT. Participants 3, 5, and 6 cited that a low English level would hinder the user's ability to use most of the existing resources on SMTs.

Six out 10 of the participants referred to the sense of anxiety associated with using SMTs for non-English language speakers who would have difficulties in communicating in the online environment with their native English-speaking peers. This is a concern not only for students, but for the tutors as well, as most Saudi tutors may not speak English very well. This was clear when one participant pointed out that:

> "English language level was weak and was not sufficient to communicate with most of the tutors and students on the platforms".

(Respondent: P10, Humanities, Associate Tutor, Q. No: 4; Female, Feb 08, 2018)

6.5.3.2 Time Constraints

Time was a concern for the tutors at various levels. On the one hand, this related to the time they themselves would need to learn how to use SMTs in order to train their students to use it, as well as to integrate it into their teaching. To begin with, six of the 10 interview participants, and the majority of those responding to the open-ended question in the survey, felt that learning how to use SoMeLT was too time-consuming. P2 and P8 mentioned this in

relation to the additional time required to integrate it into their teaching. One of them said:

> "Although I know the role that SMTs are playing in this era to facilitate learning and make diverse knowledge among the hands of learners, I did not have time to learn how to use SM, let alone how to effectively integrate it into the curriculum despite students' familiarity with their use".

(Respondent: P2, Computer Science, Assistant Tutor, Q. No: 5; Female, Feb 12, 2018)

Other participants referred to their busy workload and family duties which made them reluctant to devote any additional time to using SMTs in teaching. For example, P5 said:

> "I cannot carry out SMTs in classrooms. I have tight time constraints with many management commitments and a heavy teaching load, in addition to research work"

(Respondent: P5; Math's; Assistant Tutor, Q. No: 1; Male, Jan 29, 2018)

> "In some cases, the participant that the students themselves required time for training, specifically students how to use SM for instructional purposes and to understand the ethical implications, etiquette, and rules of using those tools inside the classrooms"

(Respondent: P7, Chemistry, Assistant Tutor; Q. No: 8; Male, Feb 16, 2018)

Six out 10 of the participants had concerns about time management in the classroom, with the operation and preparation of these tools, taking away from the time devoted to the lecture, with the topics under discussion not receiving the attention required.

> "Lecture time is only one hour. Using a clip from YouTube, for example, takes about a quarter of the time to run the computer, search the Internet and run the projector. All this takes less than half of the original time of the lecture and I do not know whether the clip works or not because of the weakness of the Internet"

(Respondent: P3, Engineering, Associate Tutor, Q. No: 3; Male, Feb 19, 2018)

> "I did not know the operation of these tools and once tried to use a clip from YouTube. I failed to operate the projector machine which affected the explanation and completion of the lesson in real time of the lecture".

(Respondent: P6, Health Sciences, Associate Tutor; Q. No: 4; Female, Feb 26, 2018)

One participant pointed out that this is exacerbated by deficiencies in the infrastructure, such as a slow Internet connection and lack of display screens and projector devices.

6.6 **Theme Three: Reported Use of SM in Teaching**

Tutors' participants were asked to state SM types that they use or have accounts in it. WhatsApp, Twitter, and YouTube were the SMTs identified as being used mostly for personal purposes. Six of ten tutors interviewed reported they had a Twitter account. Most indicated they checked it daily. There was a consensus that WhatsApp and Twitter made the world a smaller place. The participants appreciated that it allowed for quick connection with friends and family when they had time. This created a sense of connectedness. The next sections will present the sub-themes that were emerged from this theme.

6.6.1 Professional use in the classrooms

Participants were asked how they use SM as tools in the educational process. Although six of the ten tutors stated that they did not use these tools for learning, three out of the six participants expressed that they use SMTs in their personal lives. Meanwhile, they recommended using SM in the educational process only according to clear and strict regulations. In general, they held that the tools offer interesting possibilities in terms of communication and forming connections.

Some participants, who favoured using SoMeLT, thought that using the tools in their private lives would encourage them to use them in their professional lives too. For instance, P3 suggested that using SM at home would make tutors aware of how to use the tools in education, make them able to identify their

advantages and disadvantages, as well as showing them how to utilise them in an effective manner. To this end, P7 stated:

> "I have used SMTs such as YouTube and WhatsApp as e-learning tools to develop creative thinking and develop the skills of critical thinking of students. They were brilliant tools that helped to engage students in different teams to discuss topics related to the lessons".

(Respondent: P7, Chemistry, Assistant Tutor; Q. No: 9; Male, Feb 16, 2018)

Undoubtedly, using SoMeLT will increase the chance of creating learners with many skills, such as develop ideas, making arguments, exchanging opinions and developing critical thinking. P7 reported that:

> "I have used Twitter with my students, but I make it optional, and I found that it is great to give students more space to upload and share images, videos and ideas to discuss each other's posts, through audio, video or text comments".

(Respondent: P7, Chemistry, Assistant Tutor; Q. No: 10; Male, Feb 16, 2018)

In the same vein, P8 commented:

> "I have found that using WhatsApp gives students a lot of options and flexibility in how to present themselves and also, in how to interact with a learning activity which is set up by their tutors, or between each other".

(Respondent: P8, Humanities, Tutor, Q. No: 10; Female, Feb 01, 2018).

This emphasised that SMTs are now influencing all the different aspects of education wherein it gives good enhancement for student's education. This is in line with what P2 highlighted that:

> "SMTs are used in the educational process very simply. I created a Facebook group and WhatsApp group to post some announcements, lectures, assignments and deadlines. This group's wall is a chance for students to ask and answer questions. When students get home and begin working on their homework, they can post a question that can be answered by me or by a classmate".

(Respondent: P2, Computer Science, Assistant Tutor, Q. No: 6; Female, Feb 12, 2018)

During individual interviews, some participants reported that they use SM to communicate with students in extracurricular organisations. For instance, P7, P6 connected with their students and announced homework information through WhatsApp group. P5 used Facebook to update student's events and important topics and lectures related to the courses to educate themselves. He said:

> "I have joined various educational pages that allow me to educate myself on the computer and mobile phone maintenance. English language education is also one of my priorities. I have joined TESOL pages as well".

(Respondent: P5; Maths; Assistant Tutor, Q. No: 3; Male, Jan 29, 2018).

In a similar way, P10 pointed out that:

> "I used Twitter and WhatsApp more than the other tools [and had] found great benefits with students and colleagues. These particular tools had made it faster and easier to communicate, to learn and to teach".

(Respondent: P10, Humanities, Associate Tutor, Q. No: 5; Female, Feb 08, 2018)

Throughout the data collection process, most of the interview's participants stated that using YouTube videos in classrooms is a way that teachers can utilize technology and reach a wider range of academic learners in their classrooms. They agreed that videos as important learning tools provide an opportunity for students to learn in a variety of ways. In detail, P4 stated that:

> "… videos allow teachers not only to tell students what they need to learn from a specific lesson, but they also illustrate examples to help develop students' understanding".

(Respondent: P4, Physics, Associate Tutor, Q. No: 8; Female, Feb 04, 2018)

Similarly, P7, 9, 10 confirmed that videos stimulate classroom discussion, reinforce lectures and reading, provide a common base of knowledge among students and help teachers teach more effectively. Videos can be powerful educational tools, but only when they are used as a means of achieving thoughtfully selected educational objectives. For example, P7 reported:

> "I have used short videos from YouTube before starting to explain the lesson. This gives students chances to think, brainstorming, argue, collaborate and to share their views regarding the topic that we discuss".

(Respondent: P7, Chemistry, Assistant Tutor; Q. No: 11; Male, Feb 16, 2018)

Indeed, P10 noted how:

> "... rather than only hearing the information, this generation of students loves watching clips of videos that support the delivered information".

(Respondent: P10, Humanities, Associate Tutor, Q. No: 6; Female, Feb 08, 2018)

Additionally, P1, P4, P8 illustrated that they used YouTube to find interesting videos related to their studies which can contribute to clarifying the subjects being studied and also enhance students' understanding. They saw YouTube as an attractive application as it is highly useful in teaching and learning practices. P8 commented:

> "YouTube has everything and it's simple to use. Just do a search and in moments, you have thousands of options. It has everything".

(Respondent: P8, Humanities, Tutor, Q. No: 11; Female, Feb 01, 2018)

Similarly, P1 observed:

> "The one that I use the most is YouTube because it has a lot of video clips and it supports the lesson with auditory and visual stimulus and thus is effective for the teaching and learning process".

(Respondent: P1; Humanities; Tutor; Q. No: 8; Male, Jan 24, 2018).

Additionally, when discussing studying physics, P4, noted:

> "It was very difficult to impart concepts that related to attractions and body masses to students verbally, they needed visual reinforcements".

She noted that many students found it difficult to understand such concepts and continued:

> "Therefore, I used YouTube to improve the quality of learning and increase its effectiveness".

(Respondent: P4, Physics, Associate Tutor, Q. No: 9; Female, Feb 04, 2018)

Moreover, P1, P2, P4, P7, P8 revealed that tutors can decide on short videos to discuss during class time. However, as P3 stated:

> "Careful planning is necessary when using YouTube as an educational tool because schools censor some materials or websites for age and content appropriateness".

(Respondent: P3, Engineering, Associate Tutor, Q. No: 4; Male, Feb 19, 2018)

Interestingly, P5 indicated that:

> "... many students are tempted to download videos from YouTube to show in classrooms. Sometimes, students do not have permission to use the videos. Now YouTube offers 'Creative Commons-Licensed Videos' which are free from educational copywriters, and thus, are safe to use. Students can even modify or edit them into their own videos using the YouTube Video Editor".

(Respondent: P5; Math's; Assistant Tutor, Q. No: 1; Male, Jan 29, 2018)

The same results were found in the responses to the open-ended question at the end of the tutors' survey. The participants who did agree with its use cited examples of beneficial SMTs that should be included in the learning environments. YouTube was one of the most popular tools mentioned. Almost all of the participants who did agree to use SM for learning saw YouTube as beneficial in teaching as they felt that watching videos related to the class content encourages student interaction and engagement. Those responses largely corresponded to students' responses to the open-ended question at the end of the student's survey.

A total of 80 (out of 407) of the students' responses to the open-ended question reported examples of beneficial SMTs that should be included in learning environments. YouTube was one of the most popular tools mentioned, with almost all participants seeing the platform as beneficial for their personal learning. They suggested that it would be beneficial if tutors used some clips from YouTube to introduce the subjects of the lessons to encourage students to discuss dialogue and exchange knowledge.

Forty-four (out of 80) participants claimed that YouTube "... supports collaborative and creative learning, critical assessment and the personalisation of information". Ultimately, the ten participants involved in this study, as well as participants in the open question, agreed that if SM was to be used, it needed to be quick and easy. They indicated that if SMTs take too long to learn then they are not worth using.

6.6.2 Professional use beyond the classrooms

Interview responses provided some insight into how the tutors first began using SoMeLT beyond the classroom and their reasons for doing so. For example, P4 explained that:

> "In 2016, I joined Facebook after my students recommended me to create an account and see the benefits of it. A year later, I got a Twitter account for personal purposes".

(Respondent: P4, Physics, Associate Tutor, Q. No: 10; Female, Feb 04, 2018).

WhatsApp was the first SMTs for many of the tutors interviewed. P8 clarified:

> "My first SM account was on WhatsApp. I joined college staff on a group to share information, exchange news, and experiences, attending workshops and seminars, and communicate with colleagues and students. The first time professionally was WhatsApp. When I discovered WhatsApp, it was the greatest thing in the world for its ease, flexibility, effectiveness and its role in simplifying communication, access to information, discussion and exchanging thoughts with learners in a short period of time".

(Respondent: P8, Humanities, Tutor, Q. No: 12; Female, Feb 01, 2018)

WhatsApp was the SMTs cited most frequently by the participants as a tool used in the classroom to communicate with students. Participants believed that WhatsApp provides a safe environment, in which users' privacy is respected; an important consideration when communicating in the virtual world, particularly in Saudi society. Six out of the 10 tutors used WhatsApp with their students to remind them about tests, due dates and general information. They mentioned that SMTs helped tutors and students to create a learning community and to share knowledge with other members of the WhatsApp group through instant messaging. For example, P3 observes:

> "I have used WhatsApp for connecting with students and colleagues, sending information, material dissemination, sharing photos, videos, news, and ideas for professional purposes only. I have found that WhatsApp is a very useful educational tool. It makes it faster and easier to communicate, to learn and to teach, and it allows tutors to reach a lot of academic services. Most importantly, it affords a high level of privacy protection. It is the main way to keep in contact privately with my students as a group, regarding their assignments, questions and any discussion related to our courses".

(Respondent: P3, Engineering, Associate Tutor, Q. No: 5; Male, Feb 19, 2018).

Similarly, P4 stated:

> "WhatsApp made teaching so much easier for me. I really like to exchange ideas with educators and students and encourage each other to develop our knowledge".

(Respondent: P4, Physics, Associate Tutor, Q. No: 11; Female, Feb 04, 2018)

The same results were found in the responses to the open-ended question at the end of the tutors' survey. Most of the participants saw WhatsApp as a good means of creating diverse groups and broadening the discussion between tutors and their students. Those responses largely corresponded to students' responses to the open-ended question at the end of the student's survey. Most of the students (71out of 80) saw WhatsApp as a good educational tool. They revealed that they created different WhatsApp groups to meet in to discuss ideas, homework, and exchange information. Accordingly, they suggested that tutors create diverse groups using the platform as a medium of communication and for students' questions and answers.

The use of WhatsApp as e-learning tool will work to bring together the educational process parties under one umbrella to discuss matters related to the curriculum. Thus, it will support the cooperative learning that based on sharing information, discusses, express opinions and exchange thoughts with other interested parties.

Respondents P2, P7, P4, and P8 started their SM journeys on Twitter, where they viewed tweets from experts of their fields of interest. These respondents stated that they usually keep in contact with their students, friends, and colleagues at national and international universities through this SM tool. Through Twitter, they send their students links, articles, video clips, texts, and share ideas related to their educational topics. The same results were found in the responses to the open-ended question at the end of the tutors' survey.

Most of the participants (57 out of 90) who did agree with the use of SoMeLT, thought that Twitter could be a useful tool for learning purposes as it allows exchanges of knowledge, the possibility to learn different languages and the chance to learn about the academic experiences of experts by following their

personal accounts. This suggests that the tutors were thinking of new ways of using those modern tools and evaluating the benefits and drawbacks of using these networks to support their work.

Those responses largely corresponded to responses given to the open-ended question at the end of the student's survey. These respondents viewed Twitter as a useful tool for sharing views and any materials related to the university courses. Fifty-seven (out of 80) of the participants offered the opinion that Twitter facilitates discussion outside the classroom, encourages careful listening and paying close attention among peers, as well as gathering information and multi-tasking.

On reviewing the interviewee's responses, it was evident that there is limited use of Skype amongst tutors who participated in this investigation. P2 and P6 reported that they use Skype only for personal purposes. However, for his academic work, P1 illustrated that:

> "... the main objective of using Skype in the educational setting is to keep in contact with experts in this field, or friends from other universities, locally or globally".

(Respondent: P1; Humanities; Tutor; Q. No: 9; Male, Jan 24, 2018)

This is a great way for tutors to engage in learning on various topics including sciences, cyber security, computer science, art, social studies, language arts and much more.

Although many of the tutors had created a SM account, some of the participants had not started to use these tools yet. Personal obligations and work hindered some tutors from using SMTs. Indeed, P6 declared:

> "I do not use SMTs at all. I don't have a Twitter account. However, I have used YouTube to look at different subjects, entertainment and visual solutions to solving problems, but I don't post or share anything on it".

(Respondent: P6, Health Sciences, Associate Tutor; Q. No: 5; Female, Feb 26, 2018)

6.6.3 Successful and unsuccessful experiences of incorporating SMTs into teaching

The majority of the participants were in agreement that, even with the advancement of modern training systems and computer technology, the lecture method is still widely used within the EU. A lecture is a spoken presentation given by a lecturer, trainer or speaker to students or an audience. It is a transmission method that can be used for a large group of students wherein topics can be covered in a structured manner, through the control of time and materials.

P9 and P7 stated that they did not use any kind of SoMeLT because they do not have the skills or familiarity to use these tools educationally. In particular, P9 pointed out:

> "I'm an older lecturer and I'm not familiar with modern technologies because of my age. I lack the necessary skills to use SoMeLT. Accordingly, I have seen that the traditional method or face-to-face method is the best way to deliver lessons inside the classrooms".

(Respondent: P9, Computer Science, Assistant Tutor, Q. No: 3; Male, Feb 14, 2018)

The interest of supporting tutors in general, especially the elderly, and supporting them with the courses and skills necessary to use SoMeLT, will positively reflect on the educational process. Furthermore, it will contribute to finding good educational outcomes by graduating students who have enough skills to effectively use such tools that contribute to the development of their knowledge and societies.

Participants 2, 3, 5, 6, 9, 10 agreed that the individual presentation method that tutors used is a technique through which students are motivated to express their own thoughts clearly, accept others' ideas, understand their topics better and provides teachers the opportunity to evaluate students' performance and understanding of different topics. These participants agreed that one of the advantages of using traditional teaching methods is that it encourages students

to participate more, listen to more, exchange experiences and present ideas so the teacher can extend learning. However, P7 explained:

> "I once tried using SMTs, such as WhatsApp, Facebook and Twitter, to connect with students and receive their submissions. Unfortunately, I failed to reach learners because of the students' ignorance of using these tools for e-learning".

(Respondent: P7, Chemistry, Assistant Tutor; Q. No: 12; Male, Feb 16, 2018)

Additionally, P10 attempted to communicate with her humanities students through both Facebook and Twitter. She discontinued using those tools after several bad experiences related to privacy issues, the impossibility of determining the identity of these sites' users, and the poor response from her students. She mentioned that a number of anonymous users could access her discussions on Twitter or Facebook and caused annoyance. Additionally, P6 stated:

> "... the extensive use of SMTs by students will lead to poor academic performance because of wasting students' time and distracting their minds".

(Respondent: P6, Health Sciences, Associate Tutor; Q. No: 6; Female, Feb 26, 2018)

Impersonation, hacking, penetration, insulting and anonymity are just a few examples of what can be seen on these tools. Once you become a user of these tools, you may be exposed to different and anonymous attacks from strangers in front of everyone, a possibility which she was not willing to risk, or accept. She concluded:

> "Using tools designed for education and controlled by the University, like Blackboard and Wiki, is better to protect students and tutors than these open spaces, especially as there are no clear policies about using SoMeLT at the University".

(Respondent: P10, Humanities, Associate Tutor, Q. No: 7; Female, Feb 08, 2018)

Nevertheless, Participants 1, 4, 7, 8 agreed that using SM as an instructional tool elevates the students' ability to problem solve, develop concepts and think critically. One of them said:

> "I have used some SMTs, such as YouTube, WhatsApp and Skype, as tools for e-learning in the courses that I teach. I experienced an improvement in the students' critical thinking skills and written communication skills. Also, they became more aware of their field of study, hence an improvement in their academic performance".

(Respondent: P7, Chemistry, Assistant Tutor; Q. No: 13; Male, Feb 16, 2018)

> "YouTube is a great teaching tool because it provides easy access to so many potentially good resources, such as news clips, interviews and documentaries. These things would be excellent supplements during the [lessons in] classrooms"

(Respondent: P4, Physics, Associate Tutor, Q. No: 12; Female, Feb 04, 2018).

Four (out of 10) participants emphasised that using SoMeLT enhanced collective and cooperative work. This was done through working as one team to search for information to be discussed and encouraging brainstorming to get an agreed opinion in order to exchange it among the group. Consequently, this stimulated the spirit of competition among students, and motivated and encouraged them to be more creative and developed. Moreover, they agreed that SMTs also allow students to get together outside of the classroom to collaborate and exchange ideas about projects and assignments. Also, these interviewees agreed that tutors can obtain the benefits of using technology by accommodating different learning styles, providing their students with immediate feedback and improving strategies to enhance their students' academic achievements.

This was emphasised by one participant who reported that:

> "I have used YouTube and WhatsApp to introduce the lesson before I start the explanation. Accordingly, I usually send a link to learners about the topic that we will have in the next lecture to let students interact between themselves and discuss the topic, exchange thoughts and thus, engage learners to be a part of the explanation".

(Respondent: P8, Humanities, Tutor, Q. No: 13; Female, Feb 01, 2018)

They also emphasised the ability of SMTs to deliver instruction outside the classrooms and emphasised that learning is no longer confined to exact periods. Students can access these tools whenever they have a question or can interact with classmates whenever they choose. Interestingly, during the interview, one tutor stated:

> "I have created a group WhatsApp for my class to give them more chances to ask questions, discuss, share ideas and exchange feedback. These tools were very wonderful, and the most fascinating thing was the exciting interaction between the students to discuss the topics emerging from the lesson".

(Respondent: P1; Humanities; Tutor; Q. No: 10; Male, Jan 24, 2018)

It is important to say that the increased use of SMTs has amplified the interaction between students and teachers. SMTs have opened a hotline for communication and encouraged cooperation and the sharing of views and/or information whilst maintaining the face to face method to explain lessons and using technology to support traditional methods when appropriate.

6.7 Theme Four: Institutional Support and Policies for the Use of SoMeLT

6.7.1 University support for using SoMeLT

In order to get a better idea of tutors' perceptions about SMTs in general and how they feel it is impacting their teaching, I asked the interviewees the following question: "What kind of university support is there available for using SM?" This question includes the kinds of activities or workshops available to train tutors at the EU in the use of SoMeLT. The interview participants gave a variety of answers regarding the training available to tutors in the use of SMTs. In short, most interviewees (6 out of the ten participants) either had no knowledge of the training offered in the EU regarding SMTs or believed that the EU does not have any training or workshops based on the use of SoMeLT.

These participants mentioned that the EU holds annual workshops regarding the in the use of e-learning in general, but not for using SoMeLT. They noted that training sessions do not focus on the use of SMTs such as WhatsApp, YouTube,

Facebook, Twitter, Wikipedia, Skype, and Instagram as instructional tools. Moreover, most of the participants who did not know how to use these tools asked other tutors, who are experts in the use of general technology, to train them to use these tools for learning and had not attended any course, either in-house or externally.

6.7.1.1 Workshops on the use of SoMeLT

During the interview, the respondents were asked a question regarding the kinds of activities or workshops that were available for training tutors in the use of SoMeLT at the EU. The interviewees gave a variety answers which were, at times, conflicting and contradictory. Eight of the 10 participants mentioned the importance of training for both tutors and students, as many were comfortable with new technologies. Even if they knew how to use those tools for communication or entertainment, most of the participants still needed guidance on how these tools could assist the learning process.

Eight out of the 10 participants of the face-to-face interviews, and the majority of the tutors' responses to the open-ended question, noted that the EU does not currently provide any training in how to use SMTs in instruction. They reported that although annual workshops were held at the EU on the use of technology, these did not focus on the use of SMTs such as Facebook, Twitter, WhatsApp, Wiki, Skype, Myspace, and Instagram as instructional tools. They mentioned that tutors who are expert at using technology tended to teach other tutors how to use technological tools. One participant said:

> "No sufficient or professional training".

(Respondent: P7, Chemistry, Assistant Tutor; Q. No: 14; Male, Feb 16, 2018)

> "I have attended several workshops for e-learning, but the trainers were not professionals".

(Respondent: P6, Health Sciences, Associate Tutor; Q. No: 7; Female, Feb 26, 2018)

Additionally, some problems relating to the organisational aspect of training programmes were raised by participants. They indicated that the times that

training programmes and workshop sessions took place were incompatible with the work circumstances of academics. P10 stated:

> "There are few options of times to attend training programs... the available training runs at an unsuitable time for my commitments".

(Respondent: P10, Humanities, Associate Tutor, Q. No: 8; Female, Feb 08, 2018)

On the other hand, six (out of 10) of the participants emphasised that the training programs and workshops were not announced in a way that encourages everyone to attend them. One participant said:

> "The announcements about training are usually late and training is conducted in insufficient time, with no encouragement to attend".

(Respondent: P3, Engineering, Associate Tutor, Q. No: 6; Male, Feb 19, 2018)

Another one said:

> "As a tutor's member, I have not been invited to any kind of workshop relating to the e-learning or educational technology".

(Respondent: P2, Computer Science, Assistant Tutor, Q. No: 7; Female, Feb 12, 2018).

Meanwhile, one of the participants highlighted the lack of financial and moral incentives to attend the training courses:

> "It is additional hard work without sufficient financial incentives".

(Respondent: P8, Humanities, Tutor, Q. No: 14; Female, Feb 01, 2018)

Another participant expressed his displeasure because of the lack of incentives and the delay in the disbursement and said:

> "Incentives are low and there is always a delay too... this is frustrating".

(Respondent: P6, Health Sciences, Associate Tutor; Q. No: 8; Female, Feb 26, 2018)

However, P1, P4 and P8 stated that the IT Department at EU offered workshops in personal and professional development and presenters have taught tutors how to use various technological tools linked to content presentation. P4 mentioned that the workshops taught tutors how to use technological tools to help them to teach effectively. In addition, P4 noted that workshops covered the use of technology, such as computers, Blackboard and iPads as tools for learning.

Moreover, P7, P6 and P9 noted that a few workshops were also coordinated by tutors who were more 'techno-savvy' than others. Further, four (out of 10) of the interviewees noted that the EU hosted training in the use of information and communications technology in general, and Blackboard specific. P5 described the Blackboard as technological software that enables tutors to effectively manage their classroom activities, such as attendance, mark sheets and grades.

6.7.1.2 The older generation and modern technology

The research demonstrated a clear correlation between age and a willingness to accept new technology, with the younger generations embracing it more easily. Most of the participants believed that SMTs were useful, especially with the younger tutors who were more comfortable with technology and techno-savvy in using these tools. This was emphasised by most students at the open-ended questions said:

> "… It is clear to see that there is a wide gap between old tutors and the current age students. The younger generations may be willing to adopt new technologies and look optimistically to the future, while some older tutors remain reluctant to change and tend to keep the traditional methods. Consequently, they need to equip themselves with the skills and knowledge required to thrive in a digitally charged future."

This is consistent with interview responses that revealed four out of the 10 participants stated that they are older and consequently, they did not have

enough skills to use these tools or know how to integrate them into learning. For instance, one of the participants commented:

> "...I do not simply understand computers and Smartphones and that I needed to know how to use them".

(Respondent: P9, Computer Science, Assistant Tutor, Q. No: 4; Male, Feb 14, 2018)

Similarly, P5 mentioned that:

> "... he lacks the skills necessary to use SoMeLT".

(Respondent: P5; Math; Assistant Tutor, Q. No: 1; Male, Jan 29, 2018)

In the same vein, P2 expressed that:

> "... she is far more comfortable with face-to-face encounters rather than use these tools in learning".

(Respondent: P2, Computer Science, Assistant Tutor, Q. No: 8; Female, Feb 12, 2018).

Additionally, as well as the lack of interest in learning to use these tools, the respondents revealed that they did not get training on how to use SMTs. Six out of 10 participants also confirmed that they too had not received specific training on how to use SM with their students, or for instructional purposes. One participant stated:

> "To be honest with you, I did not know how to use those tools in general, and I did not have accounts on those sites. I have noticed that youths are using them in the finer details of their lives, but I have a phobia about using them as learning tools. However, I have noticed there is a lack of training courses for academic staff to use these tools offered by the University administration. These tools are the tools of the age for the young people today, so I wondered and asked the following question: What are we doing to face the revolution of SM?"

(Respondent: P9, Computer Science, Assistant Tutor, Q. No: 5; Male, Feb 14, 2018).

Other participants (P3, P9, P6, and P10) stated that they did not believe in using SM sites as they saw no advantage in using them as e-learning tools to support learning. One of them exclaimed:

> "I think they are useless tools!"

(Respondent: P3, Engineering, Associate Tutor, Q. No: 7; Male, Feb 19, 2018)

They preferred to use old-fashioned methods of teaching, such as oral tutors. P6 admitted:

> "I don't know how to use them; therefore, I blocked my students from using those tools in my classroom".

(Respondent: P6, Health Sciences, Associate Tutor; Q. No: 9; Female, Feb 26, 2018)

6.7.2 Lack of clear policies regarding the use of SoMeLT

The tutors were asked if there any clear policies regarding the use of SoMeLT at the EU and a variety of answers were given. There was a common issue, cited by six (out of 10) of the participants in the face-to-face interviews, as well as 37 (out of 92) of the tutors' responses to the open-ended question. These respondents all confirmed that was a lack of a clear policy for the use of SM as educational tools at the EU. Moreover, six (out of 10) of the participants recognised that there was a need for crafting and implementing clearly stated institutional policies on the use of SM. The lack of a clear university policy preventing the integration of SM into the learning process was also raised.

Six (out of 10) of the participants stated that they were not sure whether or not they were in fact permitted to use SoMeLT inside their classrooms. They noted that most universities blocked the use of SM for the purpose of learning.

> "Despite its excessive use by the students, there is an ambiguity in the use of these tools in learning by tutors, and there was no clear decision by the University administration to support the use of those tools by the tutors as e-learning tools to encourage and stimulate the educational process".

(Respondent: P4, Physics, Associate Tutor, Q. No: 13; Female, Feb 04, 2018)

> "I have used SMTs in classes secretly because I do not know if I am allowed to use them or not"

(Respondent: P1; Humanities; Tutor; Q. No: 11; Male, Jan 24, 2018).

This was supported by another participant who remarked:

> "There were no clear laws governing the use of these modern tools in the educational process despite the many educational benefits".

(Respondent: P3, Engineering, Associate Tutor, Q. No: 8; Male, Feb 19, 2018)

Nevertheless, although the use of SM was banned at the EU, the students were still able to access it. Furthermore, most of the tutors did not support the use of SM in their classrooms.

Conversely, however, four (out of the 10) participants were aware of a SM policy at the EU. For example, one of them said:

> "Whenever a student or tutor opens the EU web page on the campus technological devices, the ICT Department displays a paragraph that states that using this computer needs to be in conformity with the policies of the university".

(Respondent: P8, Humanities, Tutor, Q. No: 15; Female, Feb 01, 2018).

This indicates that the EU has policies governing the use of the Internet, but none of these policies are specific to the use of SMTs.

6.8 **Conclusion**

Chapter 6 outlined the results of a qualitative examination of the current reality regarding usage of SoMeLT at the EU from the viewpoint of both tutors and

students. The qualitative data analysed in this chapter were collected from tutors and students using two methods: one-to-one semi-structured interviews and the questionnaire's open-ended questions. A thematic analysis was used to analyse the qualitative data collected by the two methods.

The researcher attempted to validate the findings of the tutors' questionnaire, dealt with in Chapter 4, by using the method to examine the compatibility and differences between the answers provided by the participants in the questionnaire and in the interviews. The data of the face to face interview and open-ended questions in this chapter were presented in a more detailed discussion, supported by illustrative tables and extracts of the participants' responses. The data analysis report of the semi-structured interviews and the open-ended questions in the questionnaire were displayed in four main themes. Each theme included several sub-themes; namely: perceived potential benefits of SoMeLT; resistance to the use SoMeLT; the reported use of SM in teaching; and institutional support and policies for the use of SoMeLT.

In conclusion, it was noted that qualitative data from the semi-structured interviews and open-ended questions agreed on several aspects related to the research issues, though there were differences in some other aspect. However, it is essential that the researcher takes into consideration the issues arising from all types of data, whether qualitative or quantitative. The discussion chapter, Chapter 7, will consider all the types of data obtained using the aforementioned research tools. [Further research] will be carried out to complete the picture of the current use of SoMeLT, as perceived by the tutors and students at the EU. Finally, a summary of results will be presented in order to adequately address the research questions.

Chapter 7: Discussion

7.1 Introduction

This chapter presents a critical analysis and discussion of the research findings and the key themes that emerged from them. Data was collected through questionnaires and interviews relating to the perceptions of students and tutors at the EU regarding the existing reality of using SoMeLT. A thematic analysis was carried out on the qualitative data collected during the interviews and from the open-ended questions in the questionnaire (see Chapter 6). The quantitative data gathered from the responses to the questionnaire were analysed descriptively using SPSS software whilst considering the participants' characteristics (see Chapter 5).

The interplay of these two stages provided a clearer map of the results via a robust comparison to see if similar results were being found. This triangulation was used to check and establish the validity of the mixed data obtained from multiple sources and data collection methods. In particular, the purpose of using triangulation in this mixed methods research was to examine, from the viewpoint of tutors and students, the existing reality of SM use as a tool in e-learning at an EU in the KSA.

The participants in the surveys were (N=290) tutors and (N=407) undergraduate students. The sample of the semi-structured interviews included (N=10) tutors only. The data were gathered in two stages (interviews and surveys) and triangulated in order to extrapolate overall insights and form the basis of a discussion. In this chapter, these findings are addressed and synthesised, alongside those of previous studies, with a view to answering the main research question.

What is the existing reality of using SoMeLT at an EU in the KSA from the viewpoint of tutors and students?

This research question is divided into sub-questions as follows:

1. To what extent are SMTs used by students and tutors for e-learning at the EU?

    a. What are the reported purposes of using SM?
    b. What are the reported experiences of using SM?

2. What are the perceptions of Saudi students and tutors regarding the advantages of using SoMeLT at the EU?

3. What are the perceptions of students and tutors at the EU regarding the disadvantages of using SoMeLT?

7.2 **Overview of Research Findings**

The results indicated that the students are using SMTs and their opinions largely coincided regarding the benefits and barriers associated with SM usage. In addition, the high rate of SM usage found among the students underlines the importance of using these tools for learning. On the other hand, the results indicate that most of the tutors use these tools on a personal level, despite the fact that the majority of them were opposed to using them for learning or teaching. WhatsApp, YouTube, Twitter and Facebook were the SMTs with which the participants had the greatest experience.

Ease of use, educational benefits and facilitation of tasks, such as searching for information, sharing educational resources and knowledge building, were the advantages most frequently mentioned by the students and tutors' participating in this study. In contrast, SM's potential to distract students, privacy concerns, inappropriate use, linguistic and cultural barriers, training requirements, issues with the quality of the Internet and technology, time constraints and the dangers of cyber-bullying were the main problems associated with the use of SoMeLT or barriers preventing their use in education.

The following sections discuss and interpret the findings in relation to the research questions underpinning the fieldwork. For clarity, the main findings and discussion are presented in relation to the main research themes (which come from the research questions); namely: the current reported use of SM by tutors

and students for e-learning and the students' and tutors' perceptions regarding SoMeLT, including its advantages and disadvantages.

Section 7.3 discusses the findings relating to the extent to which SM is used by students and tutors as an e-learning tool, the purposes for their use of SM and their concrete experiences of using SM. Section 7.4 addresses the perceptions of Saudi students and tutors regarding the advantages of using SoMeLT, while Section 7.5 presents findings related to the students' and tutors' perceptions regarding the disadvantages of using SoMeLT.

7.3 Students' and Tutors' Reported Use of SoMeLT

One aim of this research was to examine the extent, purposes and experiences of SoMeLT use among students and tutors at an EU in the KSA. The achievement of this aim derived from the analysis of the data gathered from the questionnaires and interviews. Sections 5.4.1 and 5.5.1 presented the descriptive statistics for 8 advantage items, and the main themes and sub-themes that emerged from the interviews are presented in Section 6.2.

In the first part of the survey, the participants were asked to rate how often they used SM for different purposes, including social communication, news, learning, entertainment or other purposes. Sections 5.4.3.1 and 5.5.3.1 displayed the descriptive statistics for these purposes. The results of the quantitative data analysis revealed that the students and tutors use different SM for different purposes.

7.3.1 Students' SM Use

The quantitative data clearly showed that most of the students used SMTs and for a range of purposes. To begin with, 84.3% (n=384 out of 407) of the students use SMTs mainly for personal communication with their friends, family and other contacts. Furthermore, 82.6% of the students involved in this research (n=336 out of 407) used these tools for educational purposes. From the results presented in the findings chapters, it also emerged that the SMTs that attracted the most usage among the student respondents were WhatsApp (85.8%), Facebook (78%), Twitter (71.9%), YouTube (69.6%) and Wikis (63.6%).

There are several possible explanations for this high use of SMTs. Firstly, most of the student's participants indicated in their responses to the questionnaire that they are interested in and have a desire to use these tools for learning. Secondly, as the participants of this research have grown up and live in the current digital era, they have acquired extensive experience in using these tools for communication, entertainment, news and learning. In other words, these students are more familiar with new information and communication technology than former generations and spend a lot of time with these digital technologies.

The qualitative data analysis confirmed the results of the quantitative data and revealed that most of the student participants used SM for communication and learning purposes. In particular, most responses to the open-ended question cited WhatsApp, Facebook, Twitter and YouTube as the tools the students used most frequently. This result is in line with the findings of Luttrell's (2016) study conducted at Syracuse University in the USA that showed that SMTs are used frequently by students there. In the current research, the students reported that they have formed several WhatsApp, Facebook and Twitter study groups and strongly believed that these groups are immensely useful for sharing information, question banks, and study tips. The findings also show that the activities for which the students most frequently used SM were accessing information, knowledge sharing, instant online discussions and engaging with professionals and experts in similar fields.

The communicative benefits of SMTs were highlighted by several students in their responses to the open-ended questions in the questionnaire. One student commented: “... it can be used to provide a way through which tutors achieve faster and more seamless communication with their students”. Another student participant stated: “... WhatsApp can increase the level of communication between students and create another venue for learning.” This advantage is in accordance with the tenets of Bandura’s SLT as the employment of SM is a great opportunity for learners to engage with each other and develop a sense of belonging within a community of students (Bandura, 1977).

Moreover, most of the participants stated that they used SMTs, most notably their WhatsApp group, Facebook and Twitter, to check with classmates about assignment due dates or to make sure that the assignments they were working

on were on target. WhatsApp was particularly useful in this regard. For instance, one survey participant mentioned that he used a WhatsApp group to ask other students for clarification about assignment requirements and said: “Sometimes, in class, I would get confused about what we had to turn in for a completed assignment because the professor was talking so fast, so after the class I would go to the WhatsApp group to ask my classmate's follow-up questions.” This supports the findings of Chen & Bryer (2012) and Del Valle et al. (2017), who revealed the value of using SM to build communities and promote active participation in the learning process.

According to the results of the open-ended questions, the second most used SM tool (mentioned by at least half of the students) was Twitter. The participants reported using Twitter to follow tutors, students and experts in other countries. Several students considered Twitter to be a valuable tool that allows them to communicate with tutors, scholars and experts locally, nationally and globally.

A number of the survey participants reported that they also liked to use Twitter because it gave them access to updated information related to education in general and science in particular. These result are consistent with those of Evans (2014); Liu (2010); Wang et al. (2012); Lederer (2012); Bista (2015), Rodriguez-Hoyos et al. (2015) and Chawinga (2017), all of which indicated that Twitter can be an effective tool to achieve learning objectives, expand and diversify course resources, improve student engagement both inside and outside of class, demonstrate the relevance of course content, and increase student-instructor and student-to-student interaction.

The quantitative data also show that 80.3% of the students used SM most frequently for social communication. This was supported by the responses of the participants to the open-ended question. Most of the responses indicated that students use SMTs for social communication, such as transmitting information, receiving instant feedback, and sharing content with their friends with minimal effort. One participant explained: “... I use WhatsApp and Twitter most of the time, to exchange information, news and pictures with friends. The pictures are worth a thousand words and SM has created the perfect medium to share these visual stories with friends”. Other uses mentioned related to following the news and remaining constantly updated.

For these students, modern technologies have facilitated social communication, enabled people from all over the world to share their culture and events and made the world a small village. This corresponds with the findings of Obiad (2011); Aljaad (2016) who revealed that students at Al-Imam Mohammad Bin Saud Islamic University and KSU, Riyadh, used SMTs to socially communicate with others, to form relationships with those interested in a particular scientific subject, to exchange experiences and information with them and obtain specialised scientific consulting.

These results suggest that SMTs should be incorporated as e-learning tools so that students are properly prepared for the future, including feeling at ease in using technology, having access to knowledge, being connected to others in a global world and able to contribute to their societies. When answering the open-ended question, most of the students stated that using SoMeLT enables them to develop the skills required in the 21st-century, including knowledge of the latest technologies and how to use them. Moreover, the tools help them to be open to other cultures and gain the knowledge required to develop their societies. Thus, they suggested that tutors should make a concerted effort to incorporate SMTs into the resources for all new student cohorts. The finding presented in this section are consistent with the results of the study conducted by De Wever et al. (2015), which indicated that SMTs provide several pedagogical opportunities in HE, including open publishing, new communication styles and texts, opportunities to express personal identity and experience, co-creation and collaboration, and content management.

7.3.2 Tutors' SM Use

7.3.2.1 Preferred Tools and Purposes of SMT use

The results revealed generally low levels of SMTs use among university tutors for educational purposes. In contrast with the students, the results of the quantitative data in Section 5.5.3.1 found that 57% of the tutors involved in this research reported that they never use SoMeLT for educational purposes, to communicate with students outside of classroom hours, to post/share student work on the web, or to communicate with their students' parents.

There was some similarity with the literature and findings of existing empirical studies which indicate a lack of comfort among tutors with using SM for instructional purposes (Lupton, 2014; Lomicka & Lord, 2016; Lopez at el, 2018; Luckin, 2018; Luttrell, 2018). Tutors in the current research stressed that they did not have enough training to effectively integrate SMTs into their classrooms. In responding to the open-ended question, one participant raised this as an issue and said: "... Despite the importance of SMTs, I have never heard of training in the use of these tools for e-learning in the campus. This is a great disappointment." Lack of time also contributed to their apathy towards becoming proficient in SM as the obligations of their academic schedules left them little time to learn to use these tools for learning.

Several researchers have emphasised that an effective way to encourage tutors to use newer SMTs in the classroom is to increase their level of competency (Joosten, 2012; Dunn, 2013; McKnight et al., 2016). In fact, SM-related training plays a crucial role in developing tutors' ability to use these modern tools to keep pace with modern times and increase learner's knowledge (Mayes et al., 2015). This is in line with the SLT that underlines the importance of training in developing self-efficacy, or a belief in one's ability to bring about certain outcomes (e.g. efficient use of SMTs in teaching) through their own actions (Bandura, 1977).

The results presented in Section 5.4.3.1 revealed that the frequency of SMT use was high only in the case of the two most popular SMTs; namely: WhatsApp (33.2%) and YouTube (35.2%). The respondents showed moderately low use of Wikipedia, Twitter (15.7%), Facebook (9.3%) and Skype (5.8%). The researcher identified a gap between the mean scores of these common tools and other SMTs such as multimedia programmes. This meant that the use of multimedia programmes was higher among students (88.2%) while the majority (67.2%) of university tutors reported that they never used some of these tools.

From the qualitative and quantitative data analysis results, WhatsApp, (69.3%), YouTube (38.6%), Twitter (31.7%), Facebook 13.4%), Wikipedia 11.0%), and Skype (2.4%) were specified as the SM adopted by 43.1% of tutors who have used SM specifically for instructional reasons. To some extent, this corroborates the findings of previous empirical work conducted in this field. Lomicka & Lord

(2016) as well as Chawinga (2017) found that most tutors have greater experience with tools such as WhatsApp, YouTube and Twitter than with other tools (e.g., Facebook, Google classrooms, Google education and distance education). This finding also accorded with the interview results. Four of the 10 tutors interviewed specified that they used some SMTs for professional purposes. During the face-to-face interview, one of the tutors in stated: "... I have used most of the common SMTs such as WhatsApp, Twitter, YouTube and Facebook to facilitate the process of getting information and sharing it with my students" (Respondent: P 1; Humanities; Tutor; Q. No: 14; Male, Jan 24, 2018).

Although tutors mentioned Twitter as an SM learning tool in their responses to the questionnaire, only 2 of the 10 tutors interviewed used it to interact with students. One of these users said: "... I have used Twitter as a tool for e-learning with learners in my courses to send them different links that help them understand the variety of concepts of chemistry which were difficult to explain during the lesson time. They gave great feedback about their experiences of using this tool." (Respondent: P4, Physics, Associate Tutor, Q. No: 14; Female, Feb 04, 2018). Another tutor's member stated that Twitter allowed him to "... connect with people I would have never had the opportunity to talk with at a face-to-face conference or meeting" (Respondent: P 1; Humanities; Tutor; Q. No: 13; Male, Jan 24, 2018). The experiences of these particular tutors are in line with the study findings of Carpenter & Kruka, (2014) which suggests that Twitter, WhatsApp and YouTube are by far the most used SMTs for instructional sharing by tutors in the United States.

For the most part, the tutors indicated in the face to face interviews that they used these tools as their primary form of SM mainly to interact with peers and other educators. Moreover, these tools provide a quick way to build their personal learning networks, as well as share and locate resources for their lessons. In line with the ideas of Bandura's SLT (1977), using SoMeLT allow tutors to create or participate in communities of practice.

7.3.2.2 Correlation of Tutors' SMT use with Other Variables

In this section, I will examine the correlation between the tutors' level of SMT use and their perceptions regarding SoMeLT with variables such as the type of

SMT used, gender, years of experience, subjects taught, the extent of training, internet and technology penetration, etc.

In terms of the SMTs used, the results presented in Section 5.5.3.2 revealed that the frequency of use was high only in the case of the two most popular SMTs; namely: WhatsApp (33.2%) and YouTube (35.2%). The respondents showed moderately low use of Wikipedia, Twitter (15.7%), Facebook (9.3%) and Skype (5.8%). The researcher identified a gap between the mean scores of these common tools and other SMTs such as multimedia programmes Like paint program, video editing programs, and image editor. This meant that the use of multimedia programmes was higher among students (88.2%) while the majority (67.2%) of university tutors reported that they never used some of these tools.

Unlike the findings of previous studies (Aifan, 2016; Ali et al., 2017; Mahdi, 2019), 55.6% of the women participating in this research were not more active and committed to using SMTs for learning. A possible explanation for this may be attributed to the poor communication between male and female sections in managing e-learning and the lack of adequate powers within female sections. It also suggests that female tutors need more training on how to use different SMTs to enhance the integration of their use in teaching. One female interviewee said, "... It is essential to get training to adopt using SoMeLT. I know how to use them in general, but I do not know how to use them for learning" (Respondent: P 8, Humanities, Tutor, Q. No: 17; Female, Feb 01, 2018).

The need for training was one of the most mentioned factors regarding ways to support and motivate the use of SMTs. Indeed, all of the respondents at the semi-structured interviews in section (6.7.1) emphasised the importance of specialised SM training. Moreover, they noted the benefits they would gain from receiving adequate training to meet and enhance their teaching and learning goals. A high percentage (70%) of tutors endeavoured to use these tools in their teaching, but with no suitable and pedagogical training, their practice was more trial and error.

The data from the questionnaires indicates that teaching experience did not appear to make a significant difference to the tutors' perceptions of using SoMeLT. However, as the number of years of teaching experience increased, a

positive attitude towards online instruction decreased. In other words, the tutors who had less experience with SMTs had a more disapproving perception of using them for e-learning. Therefore, increasing tutors' access to, and experience of modern technologies, may lead to more positive perceptions towards using SoMeLT. In line with SLT (Bandura, 1997), this may play a role in increasing their self-efficacy, and consequently, individuals with strong self-efficacy beliefs persist in the face of challenges and adversity in the pursuit of goals.

Additionally, the subject that tutors taught had an influence on their perceptions of using SoMeLT. There were no significant differences among tutors who taught the same subjects. However, according to the study results, tutors who taught subjects involving the use of computers held more favourable perceptions of using SoMeLT to support the educational process than those who taught Arabic language courses. Moreover, they also felt more confident in using the tools than those who taught the Arabic language and history.

One of the significant findings revealed by this study is that there is a wide agreement that the increase in the use of SoMeLT among students and tutors in the EU correlates with the availability of communication and smart devices such as laptops, smartphones and tablets. Through these modern devices, students and tutors can use these tools which are easily accessible and flexible in use. In line with TAM, Davis (1989) stated that when users have positives perceptions to use technologies for learning, these technologies become part of society and day-to-day life and become better able to take advantage of it. The use of new technology in education provides students and tutors with technology literacy, capacity for life-long learning, and other skills necessary for the 21st-century workplace (Davis, 1989).

There were some responses to the open-ended questions indicating that the emergence of modern communication devices encourages tutors, to a lesser extent, to use SoMeLT. This also correlated with the questionnaire results, explicated in Table 5-11 that indicated that most tutors had used SMTs (89.7%), Table 5-11 showed that 39.7% used laptops to access the SMTs, and 25.9% of them used smartphones. This data indicated that new technologies, such as

smartphones and laptops, contributed significantly to facilitate the use of SoMeLT.

These trends comply with what Alasfor (2016) reported in his study, which showed that almost 92% of SM users in KSA owned modern electronic devices such as laptops and smartphones. The increasing use of Smartphones and laptops allowed people to download free tools, such as Facebook, Twitter, YouTube, WhatsApp, Wikipedia and Skype. All these indications point to the importance of modern electronic devices in increasing the use of these tools among students and tutors at the EU in the KSA.

7.3.2.3 SoMeLT Use Among High-Level Users

Although the results reveal that tutors show low levels of SMTs used in general, in the interviews, some of the respondents (four out of 10) listed the SMTs that they used, including WhatsApp, YouTube, Wikipedia, Twitter and Facebook. As shown in Section 6.4, analysing the interview data collected reveals that some tutors (four out of 10) prefer to use Facebook, whereas others prefer to use Twitter and YouTube. Some of them prefer to use WhatsApp, whereas others prefer to use Blackboard and Wiki.

The researcher believes that those participants are to be considered high-level users of those technologies; they might be among the 40% who considered themselves very proficient when using SMTs. Also, most of the SMTs that were listed were used by tutors who teach science courses, such as mathematics, physics, computer science, and chemistry.

As they stated in the quantitative and qualitative data, they used those tools with students, both in their teaching and as a means of communication. They recognise the attention and time students give to tools like WhatsApp, Facebook, Twitter, YouTube or Wikis. As one participant stated: "... It is not as much a desire as it is a necessity, because it is the tools of the current generation that they want to use to connect and learn through" (Respondent: P7, Chemistry, Assistant Tutor; Q. No: 15; Male, Feb 16, 2018). They also realise that these can be a useful supplement to the formal activities and resources of

the classroom to build communities, improve engagement, open discussions, share resources and encourage student-student interaction.

Although most of the tutors (70%) agreed that SMTs began as mere networking sites, they developed into tools that help learners to tap into resources that were previously inaccessible and save time and effort while learning. Additionally, the data from the interviews and open-ended questions indicates that the majority of the tutors (78%) agreed that SMTs assisted in lesson delivery and explanations. They revealed that using tools like WhatsApp and YouTube in the classrooms can facilitate learning and help to explain difficult concepts.

Moreover, the data from the interviews and open-ended questions indicate that three-quarters of the tutors agreed that SMTs reinforce information and make it available subsequently for learners. They revealed that SMTs provide a variety of information from different cultures that can assist learners to be creative and critical. This was supported by one tutor in the interview who stated: "... I like to use most of the SMTs to get information from different sources. This has encouraged students to imitate me and learn from this" (Respondent: P1; Humanities; Tutor; Q. No: 12; Male, Jan 24, 2018). All these stated benefits would enhance the perceived usefulness of these tools and affect the extent to which they are used by tutors. In his TAM, Davis' (1989) suggests that utilitarian orientations of the perceived usefulness of SMTs are important determinants of a user's intention to use SMTs, which in turn, is the indicator of the actual usage of these tools.

This reinforces the view that SMTs have the potential to make a significant contribution to the learning and teaching process. It is important to say that we now live in an era in where teachers do not have to be the sole experts. Instead, teachers can use SMTs to find resources that can help learners to reinforce their information and share it with others. This finding is contrary to the study results of Lau (2017) which claims that the use of SM tools for learning negatively affects the time spent by students in the study and thus, affects their grade point average (GPA).

The KSA, like other Middle Eastern and Asian nations, gives tutors a special respectful status. In addition, the relationship between tutors and their students

is a one-way relationship, in which students are lectured and instructed, with little space for dialogue. This may have discouraged tutors from changing and admitting their need to learn and follow technological advances in their specialty fields, let alone learning from their own students. However, with the rise in the use of SMTs, tutors have begun to feel comfortable about using this new technology, admitting and recognising their need for new teaching approaches and special training.

This was demonstrated in this research, as most participating tutors viewed SMTs as useful in some way. One tutor, during the interview, emphasised that: "... SM is the language of this age; the new way of communication and young people find it more attractive" (Respondent: P7, Chemistry, Assistant Tutor; Q. No: 16; Male, Feb 16, 2018).

One of the participants in the face-to-face interview described an example of such use of SM. They commented: "...I made a group in my WhatsApp application that includes all the students I teach, to discuss and exchange opinions as if we were in the classroom" (Respondent: P4, Physics, Associate Tutor, Q. No: 16; Female, Feb 04, 2018). This finding is supported by that of Greenhow & Askari (2017), who revealed the advantages of using SoMeLT in promoting collaboration and active learning over traditional methods. In addition, Liaw et al. (2007) emphasised that when used effectively, mobile computing devices can support a collaborative, constructivist approach to learning. The characteristic features offered by these tools motivate and encourage people to use them.

7.3.3 Experiences with Specific SMTs

In the second part of the questionnaire, the participants were asked to rate their experience using popular SMTs, such as Facebook, Twitter, YouTube, WhatsApp, Wikipedia and Skype. Tables 5-3 and 5-12 in Chapter 5 presented the descriptive statistics for these seven items. The results showed that the most highly rated SMTs for students and tutors were WhatsApp, YouTube and Twitter. In this section, I will discuss tutors and students' experiences in using these three tools.

7.3.3.1 WhatsApp

The results indicated that the most highly rated tool in terms of how frequently it was used by students was WhatsApp. Reuters (2013) claimed that tech-savvy young Saudis are increasingly moving away from traditional telephony toward apps such as WhatsApp. One reason for this was that it is a free and easy-to-use communication tool.

As noted in Section 5.5.4.1, the questionnaire results showed that 94.1% of tutors used WhatsApp frequently. The analysis of the data collected via the open-ended questions in the questionnaire indicated some purposes of this use. The students mentioned that they used WhatsApp to communicate, discuss, collaborate and share information and documents in cooperative learning. Learners used WhatsApp to create private study-groups and share ideas, in addition to uploading files to support collaborative learning and group studies. The findings of other studies (Bansal & Joshi, 2014; Amry, 2014) also indicate that students find learning through WhatsApp interesting and educationally useful and that they used it to learn collaboratively.

The questionnaire results in Section 5.5.3.2 determined that 75.6% of the tutors used WhatsApp frequently. This also accorded with the interview results which showed that six out of 10 of the tutors had a WhatsApp account or had used it as a tool of e-learning. The results of the qualitative data analysis from the responses to the open-ended questions in the questionnaire revealed that (48 out of 90 responds) of the tutors used WhatsApp with their students, whether for communication, class announcements or answering and asking questions related to the courses. One of the interviewees noted: "...WhatsApp enables individuals to learn from anyone, to enhance their knowledge about any field for free, irrespective of their locations and educational background, and to exchange information by joining groups related to subjects of interest" (Respondent: P 7, Chemistry, Assistant Tutor; Q. No: 15; Male, Feb 16, 2018).

As an educational tool, WhatsApp supports both individual self-learning as well as cooperative learning. It allows student to ask questions of other members of the WhatsApp group, to brainstorm and collectively develop ideas and exchange information, whether with tutors or their peers. In addition, research conducted

by Mahdi (2019) demonstrated the effectiveness of WhatsApp social networking in comparison with face-to-face learning in the classroom. In addition, according to Haworth (2016), WhatsApp enables learners to learn from a wide range of experts and professionals while other research has found that WhatsApp mobile learning is an effective tool for improving community-level interaction and social presence among students. In the particular area of English language studies, a study conducted Plana et al. (2013) in Spain found that students reported a rise in communication and collaboration for reading in a foreign language. Overall, WhatsApp has proven to be beneficial for both students as well as to enhance teaching in higher education.

7.3.3.2 YouTube

From both sources of data (questionnaires and interviews), YouTube ranked the second highest in terms of experience and most frequently used SMT. Most of the students used YouTube to get a general vision of relevant subjects, to better understand topics or acquire skills via clips or tutorials. As can be seen in Section 5.4.3.1, the students' questionnaires indicated that more than 80% of respondents stated that they used YouTube for personal, professional and academic purposes. Additionally, students reported that they can create their own videos and share them with others. These responses largely correspond with the students' responses to the open-ended question at the end of the student questionnaire.

Perlov & Guzansky (2014) claim that the KSA's use of YouTube is the highest in the world, thus demonstrating the extent to which the Kingdom's population is connected. This has spawned a thriving industry that produces homemade videos that are pushing the boundaries of traditional Saudi programming. Comparing the literature with the findings of respondents in the current research, the Saudi students in this study reported positivity towards using these tools (especially YouTube) within courses to support their understanding of their field.

Almost all the students saw YouTube as beneficial in teaching and felt that watching videos related to the class content encourages learners to discuss, exchange knowledge and support collaborative creative learning and critical assessment. In answer to the open-ended question, one students' participant

emphasised: "...YouTube is the best tool for enabling teachers to simplify their lessons, install information in the learners' minds and support collaboration among them".

During the interviews and open-ended questions, the tutor participants indicated that there were many positive learning outcomes when using videos in the classroom Six out 10 of the tutors interviewed and (38.6%) from the tutors' questionnaire responds mentioned YouTube as the tool that provided the highest level of expert reliability. In addition, one of the tutors in the face-to-face interviews stated: "... YouTube clips simplify information through discussing the content of the clip, distributing the idea easily to students, speeding up understanding and encouraging collaborative action among students" (Respondent: P8, Humanities, Tutor, Q. No: 16; Female, Feb 01, 2018).

The literature on the use of YouTube in higher education supports the positive perceptions of these tutors. As Sherer & Shea (2011) argue, using YouTube as an e-learning tool increases participation and improves students' digital skills. Furthermore, Berk (2009) argued that videos can have a strong effect on the mind and senses. This also confirms the students' feedback on the use of YouTube within courses. YouTube has allowed users to interact through subscribing, posting comments and video response and by sharing videos. Furthermore, it presents a unique opportunity for students to use SM and make quality information available to all students.

7.3.3.3 Twitter

The results also showed that the third most frequently used tool by the students' participants was Twitter (76.9%). These findings are consistent with statistics from Peerreach (2013) regarding Saudis' usage of Twitter as an SM tool. The KSA 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 the world's tweets.

Bista (2015) indicated that Twitter provided space and opportunities to engage in academic activities. As can be seen in the Sections 5.4.3.2 and 6.4, the results reveal that 76.9% of students use Twitter because it promotes dialogue, allows

interaction and familiarity among peers and provides them with more opportunities to participate in class discussions, as well as increase learner motivation and mass intellectuality.

Veletsianos (2013) emphasised that Twitter can become a place where individuals collaborate, connect with others and create opportunities for creating, cultivating and sustaining relationships. Moreover, this result is consistent with the tutor participants' responses to the open-ended question when they rated their level of experience with SM. They demonstrated that they used Twitter to view tweets from experts when they are relevant to their own fields of interest. As a virtual communication method, those respondents confirmed that they usually kept in contact with their friends and colleagues through SMTs. Through Twitter, they sent their students links, articles, video clips, texts and shared ideas related to their educational topics.

The findings observed in this research mirror those of the previous studies that revealed that Twitter can be used as a professional development tool for tutors to create professional ties, exchange knowledge, share resources, offer assistance, focus on important concepts, and provide advice to students and colleagues alike (Gao et al., 2012; Carpenter & Kruka, 2014; Imlawi et al., 2015).

Throughout this section (7.3), I have examined how both tutors and students at the EU used SoMeLT, more specifically the percentage that used SM, their purposes both personal or educational, their preferred tools and the experiences they have had in using specific tools, especially WhatsApp, YouTube and Twitter in teaching and learning. In the next section, I will present the students' and tutors' perceptions regarding the advantages of using SoMeLT.

7.4 **Perceptions of students' and tutors' regarding the advantages of using SoMeLT**

7.4.1 Student perceptions

The second aim of this study was to examine the perceptions of students at an EU regarding the advantages of using SoMeLT. The second part of the survey contained 8 statements, and the students were asked to rate each statement.

The descriptive statistics were presented in Section 5.4.4. The overall perceptions of the students regarding the use of SoMeLT were positive. Added to that, many students reported their desire to use SM in all the courses they take. This is in line with the findings of other studies, including one conducted in Malaysia to examine student perceptions of the use of SoMeLT. The results revealed that most of the people in that study sample had a positive perception of the use of social networking in education (Tasir et al., 2011). Despite this consensus among the students in the current study, their reasons for wishing to use SM in education were different; some had personal and educational reasons, while others had social reasons. In the rest of this section, I will present these reasons as well as the perceived educational benefits of SMTs that students used to justify their SoMeLT use.

7.4.1.1 Familiarity and Comfort with SMT

Results from the questionnaires revealed that the students were familiar with SMTs, proving that they were associated with the technology in their hands. They lived through SM and dealt with it much of the time. Moreover, some participants stated that they liked the use of SoMeLT because they were familiar with it and thus, they found these tools easy to deal with, especially Twitter, YouTube, Wikipedia and Facebook. In agreement with TAM, Davis (1989) found that when people perceive any technology as easy to use and useful, as most digital natives would, they hold positive attitudes toward this technology. Perceived Ease of Use (PEOU) would also affect the use of a system.

7.4.1.2 Increased Communication and Self-Expression

The results of the quantitative data analysis revealed that 88.2% of the student participants agreed that using SoMeLT decreased the effort and cost required to communicate with teachers and friends. They also stated that these tools extend the opportunity for class members to interact beyond formal sessions. Furthermore, SMTs gave them the chance to post their responses from the comfort of their homes and at any time they wanted. This flexibility made SM an enjoyable and comfortable learning tool for students.

In answering the open-ended question, many participants (27 out of 90 responds) indicated that SMTs could support shy and insecure students who are afraid of

public speaking in expressing their ideas freely and participating more comfortably with other students, thus feeling closer to their colleagues and teaching staff. In this way, SMTs were ensuring their access to a good level of education and positive learning experience. In addition, most of the students (57 out of 90 responds) stated that they preferred using SoMeLT to communicate and wished that all their tutors would use these tools in their classes.

7.4.1.3 Enhanced Exchange and Collaboration Among Students

In their answers to the open-ended question, one of reasons that many students gave for why they enjoyed using SMT's is that they allowed exchange with their peers and the trading of opinions. In addition, 88.7% of the questionnaire respondents believed that online gatherings such as educational groups on SMTs are productive in terms of discussing topics of interest with other students. In his Social Learning Theory, Bandura (1977) argued that the act of individuals interacting with each other is a key component in the development of knowledge. At the open-ended question at the end of the students' questionnaire, (57 out of the 90 responds) displayed that in discussing interesting topics with colleagues, students will develop the ability to provide reasonable arguments with strong evidence and, at the same time, defend opposing views.

SMTs can also enhance exchange with tutors. Tutors can ask questions on SMTs, such as Facebook, WhatsApp and Twitter, and students can answer those questions, create a dialogue and thus, benefit from the feedback given by the tutors. This not only allows the tutors to provide the students with answers, it also allows other students to see what others are answering and create a dialogue.

Most students (88%) also believed that integrating tools such as Twitter, Facebook, YouTube, and WhatsApp into the learning environment helps connect and support people with similar interests. These outcomes are compatible with the findings that emerged from the studies led by Imlawi et al. (2012); Dunn (2013); Sim et al. (2014); Sarapin & Morris (2015), Saqr et al. (2018), which illustrated that SMTs are spaces where students can communicate with scholars and educators to share their common interests and express their opinions.

Students also felt that the creation of different groups which use these tools not only motivates collaboration between learners, but also increases the occurrence of mutual assistance to improve each other's weak points through the exchange of information and experiences. Hence, the students reported positive feelings regarding the contributions of SMTs to improving communication and collaboration among students. This is line with concept of Communities of Practice.

The students agreed that SMTs facilitated the access to and sharing of information with friends. Most of them emphasised that these tools encouraged them to discuss ideas and visions as one team for development and innovation. One participant, when answering the open-ended question, stated: "... As a single working group, we hold many different ideas about the educational issues related to the courses, but through the tools of SM, we agree on specific ideas that improve the outputs and develop cooperative work skills. This, in turn, reflects positively on the work by using these tools for learning."

SMTs also have great potential to act as a means for scholarly collaboration. Given the importance of collaboration in the learning process, it is salient that a great number of SMTs enable learners to gather and share information and resources from both internal and external collaboration networks. Students and educators can generate their own learning content and take advantage of collective knowledge. In this regard, the study's results revealed that 94.3% of students' participants mentioned that increased communication was one of the main purposes for students to use SMTs for creating channels of communication between students and tutors. These perceptions are compatible with those suggested by the connectivism theory that highlighted the importance of being connected with the society of knowledge and belonging to digital communities, through which experience and knowledge can be shared and contribute to enhancing learning.

In response to the 8 items showed in section 5.4.4.2, most of the participants (88.7%) emphasised that increased collaboration and exchange would generate creativity, excellence among users and encourage the further use of these tools for learning. The findings observed in this research mirror those of the previous studies that found that the use of these tools promotes collaboration,

professional communication with others, and facilitates the aggregation, organisation, and management of knowledge (e.g. Ajjan & Hartshorne, 2008; Odom et al., 2013; De Vries & Hennis, 2013; Cunha et al., 2016; Sarwar et al., 2019).

The students stated that using various SMTs effectively can create a collaborative learning environment and enhance cooperation and communication between learners and their tutors. This is consistent with the study of Greenhow & Askari (2017) who especially emphasised the potential of SMTs to increase interaction and networking between tutors and students as well as the co-creation of content in and out of the classroom. Furthermore, other researchers have also found that Wikis, YouTube, Facebook and Twitter are effective SMTs for building participation, collaboration and communication amongst students and tutors (Foroughi, 2011; De Vries & Hennis, 2013; Donelan, 2016; Alshehri & Lally, 2019).

It thus follows that several students responding to the open-ended question mentioned that tutors should explore different ways to make the classroom environment more interactive. One participant suggested that tutors should use SoMeLT to encourage students to do group assignments or projects, present the results to their peers in the classroom using these tools and then discuss the results with each other. Without a doubt, such tools give users the opportunity to work as a team and develop deeper and more collaborative approaches to learning. Although most of the tutors perceived no link between these tools and their main subjects, or felt that the students would not need them in their future studies, some of them tutors in their interviews pointed out that they struggled to use SMTs when the time scheduled for courses was not enough and there were large numbers of students in their classes.

The data from the questionnaire indicated that 86% of the students agreed that SMTs enhances students' learning experiences. This work will generate a richer experience, through the sharing of videos, resource web tools and tutorials between users. Further, researchers believe that Wikis, YouTube, Facebook and Twitter are effective SMTs for building participation, collaboration and communication amongst students and tutors (Foroughi, 2011; De Vries & Hennis, 2013; Donelan, 2016; Alshehri & Lally, 2019). In addition, the findings of other

studies (e.g. Ajjan & Hartshorne, 2008; Odom et al., 2013; De Vries & Hennis, 2013; Issa et al., 2016; Manca & Ranieri, 2016; Cunha et al., 2016; Draskovic et al., 2017) indicate that SMTs contribute to improving communication and collaborative activities among students, which results in more participation and discussion within the courses.

7.4.1.4 Greater Engagement and Self-Directed Learning

Overall, 83.8% of the student participants considered that SMTs enhanced their engagement with the educational process and developed their abilities in communication, which were motivating factors for them in employing these tools in learning and teaching practices. The data from the questionnaire also indicated that 86% of the students agreed that SMTs enhances students' learning experiences.

This in turn promotes students' self-learning and autonomy. The results revealed that SM helped students direct their own learning, increased engagement in the course material and promoted the development of informal learning communities. This indicates that Saudi students believe that using these tools for e-learning is a good learning experience because it encourages students to self-learn.

In answering the open-ended question, three-quarters of the students declared that SMTs empower learners to take charge of their own learning, prompting them to select resources to create, organise and package learning content. This was confirmed by one instructor during the interview when he mentioned: "... SMTs are inherently self-directed, placing the responsibility for organising learning on the individual" (Respondent: P 1; Humanities; Tutor; Q. No: 16; Male, Jan 24, 2018). In other words, using SoMeLT can boost the educational process as well as educational outcomes by promoting students' self-learning and autonomy.

In accordance with the present results, previous studies have demonstrated that SMTs are a pedagogical and technological vehicle for supporting students' self-learning. The role of the students' shifts from being a recipient of information to

a collector, organiser and designer of one's own learning experience (Dabbagh & Kitsantas, 2013; Haworth, 2016).

7.4.1.5 Facilitated Access to Diverse Sources of Knowledge and Knowledge Creation

Additionally, 85.9% of participating students believed that learning using SMTs enhances tutors' expertise by diversifying their knowledge, providing them with critical thinking skills, promoting the respect and acceptance of other opinions, and developing higher order thinking. This was confirmed by some tutors during the interview when they said that these tools were modern and unique means of providing opportunities for learners to diversify their knowledge and experiences and exchange them with peers and tutors. These perceptions are compatible with those of SLT that indicated that obtaining knowledge is the essential purpose of all learning activities taking place through collaborations and interactions.

A total of 86.2% of participating students felt that SMTs supported students and gave them an opportunity to acquire diverse knowledge. They believed that SMTs were important, useful and enjoyable to use to support their learning to acquire diverse knowledge, as well as to connect students with each other making learning more authentic and part of daily student activities. This is one of the main principles of the connectivism theory which emphasises that learning is a network of connecting information sources, whereas technology is a fundamental facilitator in acquiring knowledge.

In answering the open-ended question, one participant emphasised that using SoMeLT "... has become necessary to simplify the educational process, facilitate access to information and share knowledge and events with others interested and specialists." Clearly, the role of the tutor has changed from delivering lectures to facilitating learning activities and assisting learners in creating, collaborating and sharing knowledge through using SoMeLT. Similarly, students are no longer receiving knowledge passively, through educational material provided by others, but rather, they are playing an active role in sharing thoughts, interacting with others, and constructing new knowledge upon prior experience. Moreover, these modern tools, in general, give students more

opportunities to disseminate and receive feedback from their colleagues, friends or anyone interested and accordingly, develop and diversify their knowledge.

7.4.1.6 Development of Critical and Reflective Thinking

As most of the students stated in the open-ended question, using these tools in education to discuss relevant issues pertaining to any subject is an extremely beneficial way to develop critical and reflective thinking among students. This finding is consistent with the study of Sohoni (2019) who emphasised that using SoMeLT assists with several teaching goals, including knowledge retention, critical thinking skills and making real-world connections with class material. However, 6 out of the 10 tutors interviewed felt that although the students were professional users of these tools, they saw that there was a lack of teaching in critical thinking skills in regular educational sessions.

7.4.1.7 Student Preference for SoMeLT over traditional methods

Accordingly, the results of the questionnaire indicated that the majority of students (87.7%) either agreed or strongly agreed that these tools improve their participation and contribution within courses, allowing them to communicate and collaborate effectively with others more so than traditional methods. These results correlate with the results from the open-ended question which showed that these tools are more useful in terms of facilitating student participation and discussions with each other, as well as for reaching their tutors when they needed educational assistance.

Some responses by students indicated that they were more likely to participate and contribute more often in their courses via these tools than with traditional methods. They reported that those tools can result in more collaboration, participation and discussion within the courses. One of the significant findings is the wide agreement that SMTs allows students to find, share educational resources, and support student learning overall. In this regard, most students agreed that these tools help them to communicate and collaborate effectively with others. This result is also in line with the SLT of Bandura (1977) that emphasise that all learning is social and accomplished through social modelling and social interaction.

7.4.1.8 Concluding Remarks

The findings of the current research are consistent with those of many previous studies demonstrating that participants have positive perceptions of using SMTs for educational purposes (Estable, 2014; Alasfor, 2016). In a Saudi Arabian context, Alshareef (2013) surveyed 100 students about their level of satisfaction with the 'blog' medium, used as a supplement in a traditional communication course in KAU University. The students' satisfaction was significant in terms of ease of use and flexibility for extracurricular engagement; they felt that using social networking made the course more interesting.

In addition, these findings indicate several perceived educational uses of SoMeLT as discussed above. For example, 78.9% of participating students at the EU revealed that using SMTs for learning was a good way to develop and promote knowledge. This reflects the fact that the students believed that using these tools for learning were effective and helped learners to engage better in learning. They agreed that these tools encouraged them to participate and interact and they enhanced their communication and discussion skills. These results are in line with previous findings of studies by Wang, 2014; Mondahl & Razmerita, 2014; Greenhow & Askari, 2017; Alshehri, 2019). Among other benefits, these studies have emphasised the potential of SMTs to increase interaction and networking between tutors and students, as well as to co-create content in and out of the classroom. In addition, Manca & Ranieri (2016) stated that SM can be used to improve the quality of teaching, share educational content, increase students' motivation and promote collaborative learning.

In line with TAM, the perceived usefulness of SMT played a defining role in the positive perception and enthusiastic use of SM by students. More specifically, Davis's (1989) theory holds that perceived usefulness and perceived ease of use, are significant determinants of people's attitude toward adoption of technologies. In empirical studies conducted by Masrom & Hussein (2008), perceived usefulness has a significant impact on attitudes toward the adoption of electronic collaboration technology. TAM also states that when people perceive any technology as easy to use and useful, they would hold positive attitudes toward this technology. These positive perceptions will result in

accepting and using SoMeLT. The familiarity of digital natives, as most of these students are, would contribute in this latter respect.

7.4.2 Tutor perceptions

The second aim of this research was to examine the perceptions of tutors at an EU, especially regarding the advantages of using SoMeLT. In the second part of the tutor survey, participants were asked to rate their degree of agreement with 8 eight statements regarding the advantages of SoMeLT. The descriptive statistical analysis of the results was presented in Section 5.5.4.

7.4.2.1 Perceptions of SoMeLT

In analysing the quantitative data collected, it was revealed that most of the tutors participating in this research (72.7%) had positive perceptions of employing SoMeLT in their interactions with their colleagues and students. However, (27.3%) of the tutors had some concerns as to how to integrate these tools in education as presented in section 5.5.5.

The present research found that positive feelings were predominantly expressed by tutors who were confident users of SM. Conversely, the less confident users tended to have negative feelings as a result of their previous experiences with these tools. These findings are not new in this field of research, as Gruzd et al. (2018) found that the perceived usefulness and ease of use of SMTs affected attitudes towards their use. These results serve to support the TAM model in which Rogers (2003) argues that the higher the perceived usefulness, ease of use and compatibility of the technology, the more positive the attitude toward using technology. The perceptions of university tutors towards using SMTs have attracted increasing research attention, as recent studies have shown that successful implementation of SoMeLT depends, to a large extent, on the attitudes of tutors, which in turn determines the SMTs used in the classroom (Sobaih & Moustafa, 2016).

Many of the tutors interviewed for this current research reported their desire to use SM in all the courses they teach. As a matter of fact, when one of the participants was asked if he prefers using SM in learning, he replied: “... Yes, I use it and like it; I want to try using it in other courses” (Respondent: P7,

Chemistry, Assistant Tutor; Q. No: 17; Male, Feb 16, 2018). Another tutor declared in the interview that: "... she wished that all the tutors used SM in their classes." (Respondent: P4, Physics, Associate Tutor, Q. No: 17; Female, Feb 04, 2018).

In this regard, the findings of the current research do not support those of some previous studies. For example, Roblyer et al. (2010) found that faculty at a mid-sized southern public university in the USA often prohibited classroom uses of technologies that are frequently used by students. This means that faculty have negative perceptions of using SoMeLT whereas the tutors surveyed in this study had mainly positive perceptions. Alufi & Fulton (2014) argues that the presence of such perception is vital for any successful change in educational practice, as it requires the development of positive tutor attitudes towards the new technology.

Finally, it is important, however, to note that not all the tutors agreed on using SM as a learning tool. There were some who were completely opposed to using it for this purpose. Unlike those who reported their positive perceptions of SM, the majority of the tutors in the interviews (6 out of the 10) had a neutral or negative perception of SM in education. They were either still not sure how to use SoMeLT or, as some reported, they were only willing to use it under certain conditions.

7.4.2.2 Perceived Educational Benefits of SoMeLT

The tutors ascribed educational advantages to SoMeLT use that were in line with the perception of students presented in the previous section. The main benefits are increased communication and self-expression, greater student engagement and self-directed learning, greater interaction between tutors and students, enhanced collaboration and the creation of communities of practice, access to diversified sources of knowledge and the creation of new opportunities. All in all, SoMeLT enhanced the learning experience.

Researchers believe that SMTs are effective for building participation, interaction, collaboration and communication among students and tutors (Foroughi, 2011; De Vries & Hennis, 2013; Donelan, 2016). Accordingly, the

quantitative data analysis in this study revealed that 77.6% of the tutor participants agreed that using SMTs in the educational process enhances students' communication skills. In addition, SMTs offer students opportunities to express different opinions in order to promote knowledge, provide users with critical thinking skills, teach students to respect and accept other opinions and promote higher-order thinking.

68.6% of the participating tutors agreed that using SM in the educational process helps students engage better in learning. This was confirmed by some tutors during the interview when they said that these tools are modern and unique and work to provide diverse opportunities for learners to express their views, feelings and experiences, to exchange them with peers and tutors and thus develop their cultural knowledge. As one participant stated: "... I have used WhatsApp and Twitter to give more space for learners to express their opinions related to the topics. I found that it is essential to engage learners with the lesson plans and take their views seriously, because they are the basic elements of the educational process" (Respondent: P8, Humanities, Tutor, Q. No: 17; Female, Feb 01, 2018).

Wang (2014) emphasised that SMTs facilitate social interaction and collaboration among learners, increase the students' motivation to learn and promote their initiatives for social constructivist learning. This was supported by most tutors when they answered the open-ended question. They indicated that SMTs enhance their skills and develop their abilities in communication, thus providing motivation for them to employ these tools in learning and teaching practices. This concurs with Greenhow & Askari (2017) who emphasised the potential of SMTs to increase interaction and networking between tutors and students, as well as to co-create content in and out of the classroom.

The data derived from the tutors' questionnaire indicated that 81.4% of the respondents agreed that using SMTs in the educational process decreases the dependency of students on tutors and promote students' self-learning and their autonomy. Dabbagh & Kitsantas (2013) emphasised that SMTs have the potential to foster self-regulated learning in conjunction with knowledge building, information management, content aggregation and collaboration. The results revealed that SMTs helped students direct their own learning, increased

engagement in course material and promoted the development of informal learning communities.

This indicated that the tutors believed that using those tools for e-learning is a productive learning experience because it encourages students to self-learn and makes them independent of their tutors. Sarwar et al. (2013) confirmed that when learning is driven by the student's internal needs, interests, motivations and preferences, as is the case when using SMTs, personalisation becomes intrinsic to the learner and learning becomes a personal endeavour.

According to Bandura, "... self-efficacy refers to beliefs in one's capabilities to organise and execute the courses of action required to produce given attainments" (Bandura, 1997, p. 3). Three-quarters of tutors declared in their answers to the open-ended question, that SMTs empower learners to take charge of their own learning and prompt them to select resources to create, organise and package learning content to learn effectively and efficiently. In other words, SMT use contributes to their self-efficacy.

This was confirmed by one tutor during the interview when he commented: "... SMTs encourage learners to become effective, self-regulated learners, to gain personal knowledge and competence, and supports social interaction and cooperative work" (Respondent: P1; Humanities; Tutor; Q. No: 13; Male, Jan 24, 2018). This result matches those observed in an earlier study by (e.g. Dabbagh & Kitsantas, 2013; Haworth, 2016), which showed that SMTs are a pedagogical and technological vehicle for supporting students' self-learning, and the goal of the students shifts from being a recipient of information to a collector, organiser and designer of one's own learning experience.

One of the significant findings revealed by this research is that there is wide agreement about the benefit of using SoMeLT to engage tutors and learners with each other. The popularity of SMTs has encouraged social engagement on an unprecedented scale. In this regard, the results of the qualitative and quantitative data analysis revealed that most of the tutors (67.2%) believed that using SMTs is an effective way to discuss topics of interest with other teachers. This is consistent with the SLT by Bandura (1977), which purports that learning is an activity that takes place because of co-participation, mutual engagement,

and networks of relationships; therefore, they refused to accept the notion of separating knowledge from social engagement.

By using Facebook, Twitter, WhatsApp, Skype, Wikis and YouTube, students who hardly ever participate in class may get actively engaged in co-constructing their learning experience with their tutors, collaborating with their fellow colleagues. They also may feel more comfortable in expressing themselves and sharing their resources and ideas. Greenhow & Gleason (2012) argue that Twitter use supports increased student engagement with course materials and increased opportunities for tutor-student interaction, which potentially fosters a positive relationship. Moreover, most of the tutors' (82.7%) agreed that using tools such as Facebook, Twitter, WhatsApp and YouTube would enable students to develop their knowledge and gain access to valuable learning resources regardless of time and place, and thus enhance their learning experience.

The results of the quantitative data analysis revealed that (84.5%) of the tutors reported that SMTs allowed content to be shared, embedded and discussed, thus empowering users to be more creative and develop new business opportunities that encourage both active and passive engagement. The participants of this research used many SMTs to engage with students and other tutors, to develop their skills and knowledge in different fields. They stated that using such tools for education was enjoyable. During the interviews, one of the tutors said: "... these tools encouraged the discussion and collaboration among students inside and outside the classrooms, helped prepare students with a large and diverse cultural stock, and therefore encouraged the spirit of competition among learners" (Respondent: P7, Chemistry, Assistant Tutor; Q. No: 18; Male, Feb 16, 2018).

Analysing the interview data collected shows that some academics (four out of 10) used SMTs to engage students in their lessons. Two participants pointed out that they used these tools in their courses to improve student engagement, stating that they created a closed Facebook and Twitter group to engage and interact with learners in the classes. They found that they were good tools for learning and sharing, enhancing collaboration, professional development, and supporting learning communities. This result is consistent with findings from various prior studies (Junco et al., 2010; Gao et al., 2012; De Vries & Hennis,

2013; Northey et al., 2015; Foogooa et al., 2017; Sheeran & Cummings, 2018). SM is beneficial to student learning because of "... greater engagement, greater interest and students taking more control and responsibility for their education" (Blankenship, 201. p. 40).

7.4.2.3 Tutors' Reasons in Rejecting SoMeLT

It is interesting to observe some tutors in the interviews (six out of 10) making the argument that SM has no place in the classroom, but still agreeing that it is an important part of the current world. According to one tutor: "... it depends on the benefit of these tools and how the students use them as an e-learning tool" (Respondent P3, Engineering, Associate Tutor, Q. No: 12; Male, Feb 19, 2018). The tutors who were completely opposed to using SM in the classroom had issues because they were a distraction from everyday interactions among individuals. To them, intentionally bringing distractions into the classroom was unacceptable. One comment made was that: "... SM was a distraction that takes away from true communication". It is prudent to note that this particular tutor was not raised with SM and, therefore, did not see any value in it.

On the other hand, during the interviews, 4 participants reported their outright dislike of using SMTs in education. Interviewees 3, 5, and 9, for example, were explicit about their dislike of the use of SoMeLT; they gave many reasons for their negative perceptions. Apprehension, lack of confidence and competence and phobia about SMTs were the main reasons cited for favouring traditional learning methods (see Section 6.5 for more details).

Consequently, providing suitable and effective training for tutors that focusses on both SM skills and their utilisation in teaching and developing competence and confidence in using these tools are predicted to result in more positive feelings towards their use. Through this training, it is anticipated that tutors are likely to become more convinced of the value, usefulness, and importance of using SMTs in their teaching. However, there are other factors that are important for the development of tutors' SM competence and confidence, and hence, their positive feelings. These include, as these findings indicate, good access to SMTs, availability of sufficient time and reliable technical support (see Section 6.5.3 for more details).

In the end, the majority of the tutors (86.7%) stated that it is necessary to warn that these tools are a double-edged sword. As with the dissemination of positive ideas and the holding of effective discussions, there are those who use them to promote destructive or anomalous ideas that violate the values of the conservative societies. Accordingly, the student must be monitored by tutors and parental figures when using those tools, to identify its compatibility with Saudi values and religion and intervene and guide whenever necessary. These and other issues will be discussed in the next section.

7.5 **Disadvantages and Challenges of Using SoMeLT**

The third aim of this research was to examine the major barriers that could affect students' and tutors' usage of SoMeLT to support learning. Sections (5.4.5) and (5.5.5) presented the descriptive statistics for the 8 disadvantages items, and the main themes and sub-themes that emerged from the interviews were presented in Section (6.5). In this research, many factors were found to hinder the use of SoMeLT by the students and tutors. These factors, or barriers, also impact their perceptions toward using these tools for educational uses. The barriers that were most identified by students as limiting their use of SoMeLT were their potential to cause distraction, the danger of cyber-bullying, and privacy issues. Other issues were the threat of spam and phishing attacks, lack of control and inappropriate use, language and culture barriers, time constraints, the need for training, the quality of the Internet and technology.

7.5.1 Cyber-bullying

The most identified barrier that students reported as limiting their use of SMTs was the danger of cyber-bullying. The findings revealed that 49.4% of the students felt concerned about cyber-bullying, which can have profound psychosocial outcomes. Lederer (2012) found that about 22% of college students at the Dominican University in the USA experienced online harassment and 25% of this group reported that the harassment was through SMTs. In addition, the results of a study conducted by Erdur-Baker (2010) at Middle East Technical University in Turkey revealed that 32% of students were victims of both cyber and traditional bullying, while 26% of the students bullied others in both cyber and physical environments.

Some tutors reported that one challenge preventing them from using SoMeLT is the students' fears of such issues as online extortion and harassment and the exposure to pornographic and sexual materials. This result was consistent with other researchers who found that the dangers of cyber-bullying are a significant barrier that limits the use of technology in teaching and learning (Ybarra et al., 2006; Hinduja & Patchin, 2010; Lenartz, 2013).

The majority of tutors reported that they did not use most SM, and this is due to the fact that 60% of them believed that most common SMTs have a lot of users whom they did not know or were not related to their school. This can result in cyber-bullying, which can subsequently lead to problems including damage to reputation, depression, anxiety, severe isolation and even suicide. The majority of tutors in this current research (70%) also indicated repeatedly that they had concerns with over-sharing when using SM. They reported the fear of posting something that might be misconstrued or possibly warrant reprimand by their administrations.

These cases discouraged tutors from using SM extensively and prompted some to not use SM at all. As one interviewee explained: "... I've heard things in the past, where tutors did things in their private life that somehow or another got smeared across SM and it caused them to lose their job. As a result, I don't have any SMT accounts" (Respondent: P1; Humanities; Tutor; Q. No: 14; Male, Jan 24, 2018). Also, in the open-ended question, several participants reported that the administration of the university and parents need to monitor and supervise the use of technology by students. In addition, they need to have good relationships with students so they can provide support, educate and communicate openly. Similarly, Mehari & Farrell, (2018) found that teachers and parents can be a powerful protective factor against youths experiencing victimisation and cyber-bullying.

7.5.2 Privacy

Privacy was also found to be an important barrier that limits students' use of SoMeLT. The student's participants responding to the questionnaire (70%) reported that they felt concerned about privacy when using SM in the classrooms. As a result, they stressed the need of having their privacy protected,

or at the least, they felt they should be made aware of the consequences of posting personal information by being offered workshops by the university to assist them to use those tools wisely. This concern about privacy is consistent with the findings of Kuzma (2011); Mao (2014); Lupton (2014), who documented concerns regarding risky issues related to privacy leakages, users' confidentiality and information sharing hazards when SM is used for e-learning in classrooms. In a study conducted at higher education institutions in KSA, Alsurehi & Al Youbi (2015) also found out that privacy and security concerns continue to be the biggest challenges inhibiting the usage of SMTs, particularly among female students.

This was supported by the qualitative (6 out of the 10) and quantitative data (56.9%) gathered on the tutors' responses as they also reported concerns about the privacy and security issues related to SM usage, especially in a closed society such as the KSA, where any action conducted by individuals, whether positive or negative, reflects not only on the individuals but also on their families. The whole family is proud or ashamed of what its members achieve or do, therefore, the privacy issue is considered not only a personal matter for the user but also a social concern.

As noted in the analysis of the interviews (see Section 6.5.2), most (six out of the 10) of the tutors pointed out that they needed to be careful about whom they followed on SM and to be aware in turn of who was following them. When commenting on this issue, one participant stated: "... I must be careful not to tweet or post about my life or something that may affect learners because many of them follow me on Twitter. I have to be a role model for all students when I use this influential tool" (Respondent: P1; Humanities; Tutor; Q. No: 15; Male, Jan 24, 2018).

Privacy for SM users is a major challenge that needs to be investigated in depth, not only in the KSA, but in other areas of the world as well. In other settings, there are also privacy concerns. For example, Lo (2013) reports, in a study conducted at the University of Arkansas in the USA: "... Some participants also made comments on how privacy was an obstacle between the learners and the tutor" (p. 72). Having said that, society's traditions and morals play a role in making Saudi students and tutors more concerned about their privacy. They are

perhaps more aware of such issues than those in other countries. Islam also asks people to be careful in dealing with these kinds of tools and accustoms them to not seek to cause any harm to others or use them in unlawful activities against, or to contradict, other religions. As a result, in a closed and conservative society such as the KSA, there is growing concern over how SMTs enable Saudis to collect and use the personal information of others and how this information is shared by the Saudi people.

Although the data collected reveals that the participants of this research have some serious concerns related to educational, societal and cultural aspects in Saudi society as well as the privacy worries, the majority of the participants (79.2%) believed that integrating SM into the educational setting can be an effective solution in the case of the KSA for overcoming the spatial segregation between men and women and for gathering people together in online teaching and learning sessions. As a result, due to both the educational benefits and privacy risks of using SoMeLt in KSA, it is essential that the owners of SMTs employ a multi-dimensional technical, administrative and training approach to address online privacy and provide their users with higher levels of private and secure data protection, as recommended by scholars such as Levin & Abril (2008) and Kuzma (2011).

7.5.3 Threats: spam, phishing attacks, lack of control and inappropriate use

Another significant barrier that limited students' use of SoMeLT was the threat of spam, phishing attacks, lack of control and inappropriate use. Based on their practical experiences, Hung & Yuen (2010) at two public universities in Taiwan note that some educators are concerned about the threat of spam and phishing attacks. The results of a study conducted by Jones et al. (2011) in higher education institutions (HEIs) in the United Kingdom affirmed that the posting of inappropriate comments leading to users' information disclosure and defamation or harassment were highlighted as major causes for concern. Reputation is extremely important, particularly in a conservative society such as the KSA.

As expected, this investigation shows that most participating tutors (56.2%) and students (69.3%) were concerned about their image, identity, and reputation on

these social tools, and were dealing cautiously with these online communities. As noted in Sections 5.4.5 and 5.5.5, the responses to the questionnaires indicated the majority of the participants felt concerned about the threat of spam that includes openly discriminatory language, sexually suggestive material and profanity. This result is supported by Chretien et al. (2009) who, following their study, reported that 60% of American medical colleges found that their students posted unprofessional online content, while at 52% of them used profanity. Moreover, 48% of American medical colleges reported their students used openly discriminatory language, and 38% said their students posted sexually suggestive material.

Analysing quantitative data collected has shown that around half of the female participants (50.5%) did not use their real names or personal photos in their profiles on SMTs due to the fear of defamation and harassment. Instead, they used nicknames or pseudonyms and symbolic pictures to present themselves online, due to the sensitivity and significance of these issues in Saudi society. The participants explicitly stated that the major reason behind using nicknames was their worry about their privacy, as well as their desire to participate freely, without having any connection to their academic or social status.

This finding illustrates how this matter is particularly significant for women in the Saudi society. Furthermore, it is consistent with Gross & Acquisti (2005) who found that 37% of female participants used their real names on social networking accounts and only 13% of the female academics used their photos on their profiles. In the same vein, the majority of interviewees (82%) revealed that they understood and respected this case of privacy and agreed that posting a personal photo of a woman is a sensitive issue in Saudi society from a cultural and social perspective.

During the face-to-face interviews, most of the tutors (six out of 10) expressed their concerns about using SM, despite their generally positive attitudes towards it. A few of the tutors who regularly used Twitter, WhatsApp and YouTube also warned users to proceed with caution, because there are uncertainties that coincide with students using these modes of technology. They seem to be in agreement with Bolkan (2015) who stated: "... It is essential to train tutors in digital citizenship so that they can educate students about preserving their

online integrity. Indeed, one mistake can have ramifications for years to come" (p.81).

Some of the interview participants stated that they asked their students to turn off their phones or computers inside classes in the school to deter the playing of inappropriate games. So, even though there are so many benefits associated with adopting SMTs, it is almost impossible to avoid the many negative issues that come with it. In answering the open-ended question, several students mentioned that they received photos on their Facebook pages that contained inappropriate materials and suggestions to meet the person who had sent them. They reported stopping using their pages for a while to put a halt to the threat coming from online strangers. This result is in line with the ideas published in other studies (e.g. Martinez-Aleman & Wartman, 2009; Gao et al., 2012; Odom, et al., 2013; Kahveci, 2015; Alshehri, 2018).

7.5.4 Distraction

The potential for SM to serve as a distraction was found to be another important barrier that limits students' and tutors use of SoMeLT. The analysis of the quantitative data revealed that most of the tutor (56.9%) and student (53.3%) participants expressed a concern that SM represented a distraction in the classrooms and could cause a lack of focus, thereby reducing true communication. They seem to be in agreement with Lederer (2012) who argues: "... Facebook and Twitter divert students' attention away from what's happening in class and are ultimately disruptive to the learning process" (p. 1).

Most of the tutors participating in this study (six of the ten participants in the face-to-face interviews) reported that one factor that discourages them from using SM in their teaching environments is the distractions that students were exposed to which prevents the learners from focussing on the course content. They also mentioned that students do not take the integration of SMTs into the learning environments seriously. As one interviewee said: "... During the explanation of the lesson, I noticed that some students were playing on their phones. When I asked them what I was talking about, their answer was about unrelated topics. This emphasised that these tools are inappropriate in learning"

(Respondent: P6, Health Sciences, Associate Tutor; Q. No: 10; Female, Feb 26, 2018).

In the quantitative data, most of the tutor participants (56.2%) also expressed their concerns regarding the need to monitor students while they were using SM. As one participant during the interview stated: "... I'm of the opinion that SM should not be used as tools for e-learning. These tools separate students from their learning environment and distract them from focusing on their teachers" (Respondent P3, Engineering, Associate Tutor, Q. No: 13; Male, Feb 19, 2018). These findings seem to be consistent with other studies (e.g. Lederer, 2012; Odom et al., 2013; Flanigan & Babchuk, 2015; Aifan, 2016; Alshehri & Lally, 2019), which found that one factor that discourages using SM in teaching environments is the distractions they pose to students which prevents learners from focusing on the course content.

As noted in the analysis of the interviews in this study (see Section 6.5.1.1), most of the tutor's participants (six out of 10) expressed a concern that using SoMeLT can lead to poor writing by students. For instance, one tutor stated during the interview: "... I face many challenges when reading the writing of my students. I found that most of my students have bad hand-writing and low-quality writing styles" (Respondent: P7, Chemistry, Assistant Tutor; Q. No: 19; Male, Feb 16, 2018).

The results also revealed other concerns among tutors concerning the long-term effects of their students' growing use of digital devices. As an example, one participant at the open-ended question reported that he believed that constant use of SMTs hampered students' attention spans and their ability to persevere in the face of challenging tasks. About 60% of the tutors surveyed in this study said it hindered students' ability to write and communicate face-to-face and severely reduced their attention span. Their beliefs are in line with those of Purcell et al. (2013) in the theory of digital nativity, which argues that digital technologies were creating an easily distracted generation with short attention spans and served more to distract students than to help them academically.

Furthermore, the analysis of the qualitative data indicated that negative discourses have developed around issues related to the use of SoMeLT. For

example, most of the tutors (six out of 10) saw it as contributing to heightened disengagement, alienation and the disconnection of learners from education, and having a detrimental effect on 'traditional' skills and literacy. Most of the tutors who participated in this research indicated that SM could be a contributing factor to the intellectual and scholarly degradation of a Google generation of students who are incapable of independent critical thought. Due to this, one participant reported that: "... I have banned students from using SMTs, like Twitter, Facebook, YouTube, WhatsApp, Wiki and Skype in all the lessons that I teach" (Respondent: P7, Chemistry, Assistant Tutor; Q. No: 20; Male, Feb 16, 2018).

7.5.5 Language and cultural barriers

Language and cultural barriers were also found to limit students' and tutors' use of SoMeLT. An analysis of quantitative data revealed that the majority of the tutor (67.9%) and student (51.9%) participants felt that they did not speak the English language well as their mother tongue is Arabic. This is a significant issue because most online technologies, as well as the studies and the research available on the Internet, are in English. Thus, Saudi tutors and students who understand English are the prime beneficiaries of these technologies.

Language barriers are not just an issue in KSA. Alturise & Alojaiman (2013) reported that many international students could potentially be facing language barriers when using technology since most software and tools use English and can be worded in unfamiliar jargon. Therefore, before students can use technology to complete their assignments, they must first learn the basics of the language used for relevant software tools. This is confirmed by the findings of studies by Almaraee (2004); Al-Kahtani et al. (2006); Li & Kirkup (2007); Liu et al. (2010); Habib et al. (2014); Yee (2015), which reveal that tutors' and students' lack of skills in the English language limited their use of SoMeLT and research.

On a related note, participating tutors also experienced problems in finding suitable Arabic resources. The lack of such resources was considered a barrier for both tutors and students, who are the target end users of these resources. Albirini (2006) emphasised the importance of developing apps that better suit

Arabic culture and identity. Therefore, enhancing tutors' and students' English language proficiency and, at the same time, creating more Arabic educational web tools will increase the use of these modern tools in the classroom.

Language is also connected to other issues of cultural identity and the importance of the mother tongue. This concern was expressed by one tutor, as follows: "... The reason that I do not use SoMeLT is that I do not know the English language. I believe in encouraging learners to use their mother language and that maintaining [this language] is the main objective of learning, rather than learning other languages" (Respondent: P1; Humanities; Tutor; Q. No: 16; Male, Jan 24, 2018). Similarly, many tutors in the interviews (six out of 10) were reluctant to use SoMeLT because they feared being influenced by Western ideology. They argued that the Internet, in general, and these tools in particular, are seen as an access point for Westerners to attack the Islamic culture and Arab identity and negatively influence the youth.

As a researcher, I believe that the dominance of the English language and the spread of Western web tools contribute to these sentiments. As the majority of the participants in this research referred to this issue, whether at the quantitative (67.9%) or qualitative (6 out of the 10 participants), it is clearly one that should be taken into consideration. Such personal reasons for not using SMTs are the hardest to tackle because as Jones (2004) has pointed out, it is the tutors themselves who need to bring about the required changes.

Cultural issues relate to religion as well as language. As can be seen in the Sections 5.4.4 and 5.5.4, most of the participants have a good idea of the role that SMTs play in our current digital age. However, the use of SoMeLT is influenced by the Islamic religion, which is a religion that respects knowledge and encourages Muslims to pursue it wherever it is found (see Sections 5.4.5 and 5.5.5). In a study carried out by Alshehri (2018), he found that most of the users declared that some contents of SM oppose Islamic religious teachings. Therefore, they were reluctant to use SoMeLT because they feared being influenced by Western ideology and losing their Islamic culture and Arab identity.

The KSA is the location of two of Islam's holiest places: Makkah and Madinah (see Section 2.2). In addition, the Saudi society is a very conservative and

religious society, and, to a large extent, people are spiritually rather than materialistically motivated. Therefore, it is crucial to reassure students and tutors that this new technology, usually associated with Western culture, is compatible with their values, faith, and beliefs, and that it offers assistance for the learning process. Additionally, students and tutors may be encouraged to use these tools by promoting the idea that by using SoMeLT, tutors are not only likely to be better tutors but will also be better Muslims, since Islam encourages learning and the acquiring of new knowledge. Such considerations will, I think, positively influence their perceptions towards using SoMeLT.

7.5.6 Problems of training, internet connectivity, equipment and infrastructure

Prior studies have noted that there are certain barriers to using new technologies that are strongly influenced by other key issues that can be considered barriers themselves. For example, a lack of training, technical support and maintenance were considered by many tutors as a hindrance. The reason is that they have a direct effect on tutors' confidence as a result of their constant fear of technical breakdowns or failures that could cause frustration and resistance among tutors (Al Zumor et al., 2013; Kutbi & Zhang, 2016). This was also the case in this study.

To begin with, the lack of effective training was found to be an important barrier limiting tutors and students in their use of SoMeLT. The result of the qualitative and quantitative data analysis revealed the importance of providing training for tutors and students as not all tutors and students were comfortable with new technologies. Even if they knew how to use SMTs for communication or entertainment, the majority of the participants still needed guidance on how these could assist the learning process. In the questionnaires, as noted in Section 5.5.5, most of the tutor participants reported that they did not receive any training courses on how to use SoMeLT.

In addition, the few tutors who attended some training courses offered by the university stated that the university employed a complex and centralised approval process for new training courses. The process was highly bureaucratic, and its lack of flexibility resulted in courses that were soon out-dated and

irrelevant to current events, particularly as current information and procedures were always available from the Internet. Three-quarters of the tutor's participants responding to the questionnaire reported that course times were inappropriate; two-thirds said that such courses were not available, and half said they had insufficient time to attend the courses. This indicated that courses were not sufficiently robust, frequent or scheduled at appropriate times.

Despite this, most of the tutors (six out of 10) still declared that they needed more training on how to use SM effectively to enhance their teaching. They recommended that institutions provide workshops that show how different SMTs can positively influence classrooms so that tutors develop proficiency in selecting the most useful SMTs that meet specific pedagogical goals. Moreover, the lack of effective training as discussed in Section 6.7.1 suggests that to improve the use of technology, tutors' professional development in technology use is vital.

Similarly, there is a need to increase provision of and access to up-to-date technological equipment to reach more effective levels of SMT use in HE institutions. An analysis of the qualitative data from the tutor participants revealed that most of them (six out of 10) observed that the lack of administrative and technical support acted as a major obstacle to tutors use of SoMeLT. As one tutor stated during the face-to-face interview: "... I used to use YouTube during my lessons, suddenly, the Internet went away. I requested the technical support team resolve this Internet outage and it took almost a month to solve it. Learners were without the Internet and we were cut off from the outside world" (Respondent: P4, Physics, Associate Tutor, Q. No: 18; Female, Feb 04, 2018).

Through seeing these tools used within courses, students can in turn learn how to use these same tools for different ends in their learning. As a result, it is important for e-learning tutors to learn how to deal with technology to facilitate students' learning. Alshehri (2018) focused on the importance of external support offered to tutors because it plays a critical role in using SoMeLT. Tutors' lack of confidence can be resolved by offering training courses and technical support. This can assist in making tutors feel secure during their use of SoMeLT as technicians can ensure that everything proceeds normally, and disruption is

reduced. The availability of both training and prompt technical support can contribute positively to the tutors' self-efficacy or their belief that they can produce definite results through their actions. As Wulfert (1993) argues concerning Social Cognitive Theory, self-efficacy is a fundamental self-regulation aspect.

Along with the training and technical support problems, other challenges that most of the participants indicated are a lack of access to high-speed Internet, an inability to connect to the Internet and the high cost of connecting to the Internet (see Section 6.7.1). The analysis of the qualitative data indicated that access to the Internet inside and outside of the university appeared to have an impact on tutors' perceptions toward using SoMeLT. Some of tutors (four out of 10) who had the ability to access the Internet held more favourable perceptions toward using SMTs than those who did not have this access (six out of 10). Thus, having access to the Internet will facilitate tutors adopting SoMeLT while the lack of access will negatively influence tutors' attitudes.

In previous studies, issues related to access to the internet and the absence of timely technical support was also regarded a concern and viewed as a barrier to integrating SoMeLT into the curriculum (e.g. Van Braak, 2001; Kutbi & Zhang, 2016; Donelan, 2016; Uerz et al., 2018; Alshehri, 2018). The poor connection supplied by Internet providers can frustrate the users and make them avoid using Internet technology. Moreover, these technical problems can create frustrations for students and tutors. As a matter of fact, this was the main reason behind the negative perception of SM for most of the interviewees. They complained about the poor Internet connection and how this problem affected their use and stressed them. This problem led to their hating to deal with SM, not only in education but also for entertainment. In short, Internet problems can negatively affect the students and tutors because frustration has a sociological impact on their motivation to learn.

Evidence of the underlying factors that discouraged the use of SoMeLT is discussed in Section 6.5.3.2. Among them are time constraints faced by the tutors. The tutor participants mentioned an increasing and burdensome workload which left no time for them to learn SM skills, develop professionally, try new hardware and software and prepare resources for lessons from these

tools. In the quantitative data, the participating tutors (62.1%) reported that the limited time for lectures and the huge curriculum that needed to be taught led them to reduce their use of SM. This correlated with the results from the interviews, where tutors (six out of 10) also expressed that learning how to use SM for instructional purposes was too time-consuming. They complained that they did not have time to learn how to use SM, let alone how to effectively integrate it into the curriculum. In Innovation Diffusion Theory, time is an important affecting the adoption of an innovation, such as SoMeLT. In fact, Rogers (2000) argues that tutors need time to develop new course materials, learn new skills and adjust their attitudes toward the role technology holds in teaching and learning.

Unfortunately, time constraints can be a barrier even to tutors who might be open to SoMeLT. For example, one tutor said: "... I would like to use these tools in the classroom to enhance the lesson, collaborative work and self-learning. SMTs are popular with students and they use them fluently but, unfortunately, I do not know how to use these tools and I do not have enough time to use them" (Respondent P3, Engineering, Associate Tutor, Q. No: 14; Male, Feb 19, 2018). Similarly, the tutors participating in Western studies identified time as a barrier, obstacle and hindrance because a lack of time makes the good use or implementation of modern technologies difficult (Van Braak, 2001; Al Zumor et al., 2013; Kutbi & Zhang, 2016) and will also negatively influence the integration of SMTs into the classrooms and courses (Al Zumor et al., 2013). Moreover, adequate time for training has also been noted as a condition for good SM implementation in schools (Collins & Halverson, 2018).

7.6 **Framing the Findings through Theory**

"The search for truth should be the goal of our activities; it is the sole end worthy of them" (Poincare, 1907, p. 11). Engagement with theory is one path in the search for truth. The theoretical framework for this study as outlined in my literature review was SLT and the TAM. A theory is a way to organise information and make predictions. Therefore, these theories were used to help guide the selection and interpretation of data, propose explanations of the underlying causes or influences of observed phenomena, provide the research with a direction and set its boundaries as well as inspire future research. Theories also

enable researchers to connect a single study to the immense base of knowledge to which other researchers have contributed as well as increases the awareness of the broader significance of data.

This study is situated in a pragmatic methodological paradigm which called for a mixed method approach. The theory was integrated throughout the various aspects of this study. It supported the qualitative and the quantitative research design, determining the questions asked in the survey and the interview. More specifically, the theory functioned to scaffold both the questionnaire design and the interview schedule in order to effectively "... explore learners' thoughts, attitudes and actions in relation to using technologies" (Bandura,1976). In the discussion above, I consistently linked findings to relevant theories.

In Bandura's Social Learning theory, all learning is perceived as social. In applying this theory in the study, I examined the willingness of Saudi tutors and students to learn socially through utilising SMTs to support their learning. The theory was strongly supported by the tutors' and student's engagement in using SoMeLT and in highlighting the benefits inherent in its social nature as it served to increase communication, mutual learning and collaboration.

In addition, the theories I used suggested that the extent of actual use is based on participants' intentions. "... Intentions are assumed to capture the motivational factors that influence a behaviour that indicates how hard people are willing to try and how much effort they are planning to exert, in order to perform the behaviour" (Ajzen, 1991, p. 181). Also, as demonstrated throughout this chapter, intentions to use SMTs would be greater when the users have control over the use. This means that when students and tutors 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.

After the results of the research became clear, most of the students and tutors indicated that the use of SMTs established the concept of social education as individuals learning and gathering information through imitation, observation, and modelling, and this is what SLT indicated. The acquisition of new knowledge requires hard work and thus social learning reduces the work required. In this

regard, the SLT gives priority to maintaining collaboration, and interaction with information sources and the society of knowledge and look at this particular aspect as an essential requirement to support ongoing learning in this digital age.

In line with the aims of TAM, the results indicated that most students have positive perceptions to use SoMeLT because they belong to the digital generation who grew up with these modern technologies. Therefore, the use of SoMeLT has become a requirement for this generation which is consumed by digital technology as communication devices and a way of life and has demonstrated a clear preference for digital devices, the Internet, and SM to serve in facilitating the educational process and allowing access to diverse knowledge and cultures. However, not all the tutors who participated in the current study agreed to use these tools as e-learning tools to support the learning of their students for the reasons discussed in Section 7.5.

To optimise the use of SoMeLT, TAM argues that perceived ease of use (PEOU) and the benefit of use (Perceived Usefulness) are two essential elements for adopting these tools in education. Therefore, the results of the current research indicated that most students and teacher's decision to use SoMeLT is related to the variety of perceived educational uses and advantages in SM, identified above. The results also indicated that the benefit behind adopting these tools was one of the reasons for using this theory in the current research.

To summarise, the results illustrated that building a professional network on SMTs can help students and tutors to work as an online learning community. They discuss issues that interest them to gain a greater understanding and solve problems or overcome barriers they may face as they plan for the future. Most importantly, this provides them the opportunity to practice their learning and teaching activities as a community. Therefore, it can be seen that these actions of learning and communicating through these online groups on SMTs represent an apparent pattern identified in SLT and TAM. Thus, these theories can be viewed as a process of social and communication learning, which mostly takes place through social participation via technology.

Ultimately, theories were integral in the shaping of the project and in the reading of the findings. My position, in relation to my paradigms, understanding of context and the findings I extracted from the data, are due to the lens of theories that I applied to the research design and subsequent analysis of the data. In this way, the theory shaped my Ph.D.

7.7 **Conclusion**

To conclude, this section discussed the implications of the results of this research. As mentioned in the introduction of this chapter, the tutor and student participants involved in this research had positive perceptions about using SoMeLT, despite a mixed response from tutors. WhatsApp, YouTube, Twitter and Facebook were the highest-rated tools. Ease of use, enhanced communication, exchange and collaboration among students, access to diverse knowledge sources, greater student engagement and increased self-directed learning, were the most frequently mentioned advantages of using SoMeLT by both students and tutors.

The main barriers identified by participants as limiting their use of SoMeLT were their potential to cause distraction, privacy concerns, inappropriate use, language and culture barriers, time constraints, the training required, the low quality of the Internet and technology and the dangers of cyber-bullying. Based on these results, the next chapter will present the conclusions and recommendations of this research.

Chapter 8: Conclusions and Recommendations

8.1 Introduction

The current study aimed to contribute to the existing literature on the topic of integrating SM into HE by examining the existing reality of using SoMeLT at an EU in the KSA from the viewpoint of tutors and students. Both SLT and TAM were employed in order to construct a theoretical framework for the thorough interpretation of the research findings. A mixed-methods methodology was applied, using both qualitative and quantitative data collection instruments that were implemented simultaneously. The data collection instruments were developed carefully and examined using applicable validity and reliability tests and procedures.

The participants consisted of three groups: 407 students and 290 tutors for the surveys, and 10 tutors for face-to-face interviews. The qualitative data were analysed thematically, and the quantitative data were analysed descriptively, using SPSS. The results were discussed critically along with related literature in order to examine the current use of SoMeLT.

By applying a mixed methods approach and adopting this theoretical framework, the present examination successfully answered the key question of this research, as well as its sub-questions, and provided an in-depth perception of the researched phenomenon. This final chapter aims to summarise the main findings of the research, examining them against the research aim and objectives. It also presents the research's contributions to the current body of knowledge, its strengths and limitations, its educational implications and recommendations for future research.

8.2 Research Aim and Questions

To arrive at a comprehensive understanding of the existing reality of using SoMeLT at the EU in the KSA from the viewpoint of tutors and students, the following objectives were formulated:

8.2.1 Objectives of this research

1. To examine the current usage of SoMeLT among students and tutors at the EU, including its purposes, main SMTs used and reported experiences of SoMeLT.

2. To examine the perceptions of students and tutors at the EU regarding the advantages of using SoMeLT.

3. To examine the disadvantages and barriers of using SMTs to support learning at the EU, as perceived by students and tutors.

8.2.2 Key questions for this research

To reach these objectives, the following key questions were established.

The main research question

What is the existing reality of using SoMeLT at an EU from the viewpoint of tutors and students?

The main research question had three sub-questions:

1. To what extent are SMTs used by students and tutors for e-learning at the EU?
    a. What are the reported purposes of using SM?
    b. What are the reported experiences of using SM?
2. What are the perceptions of Saudi students and tutors regarding the advantages of using SoMeLT at the EU?
3. What are the perceptions of students and tutors at the EU regarding the disadvantages of and barriers to using SoMeLT?

8.3 Summary of the Research Findings

This study aimed to investigate the extent to which SoMeLT is used to support teaching and learning at the EU. From the perspectives of both tutors' and students', it explored their actual experiences, perceived advantages and

disadvantages to their use in education, as well as the barriers which prevent the greater integration of these tools in HE institutions. The main findings, organised based on the research sub-questions, are presented in the following sections (see Section 8.2.2).

8.3.1 Students' and tutors' usage of SoMeLT

The first objective was to explore some experiences related to the use of SoMeLT at the EU. The findings confirm that SM tools are used significantly by students and tutors to connect and interact with each other. All participating students use SMTs, with the majority (75.2%) using laptops and Smartphones to access SMTs. For learning purposes, students prefer WhatsApp, YouTube and Twitter, which they use frequently. They found learning through WhatsApp very interesting, educationally useful, and felt that they were learning collaboratively.

Seventy percent of tutors use SMTs generally, with the over half (65.6 percent) using laptops and Smartphones to access SMTs. However, tutors rarely use SM for educational purposes, with (51%) reportedly having never used some of these tools. A minority of tutors who engage in using SoMeLT use WhatsApp frequently with their students. The evidence confirms that YouTube iss also one of the most frequently used tools in the classroom**.**

8.3.2 Students' and tutors' perceptions regarding advantages of using SoMeLT

8.3.2.1 Student perceptions

Overall, the students were positive; with (92.8%) expressing their desire to use SM in all of their courses and agreed that SMTs support both individual and collaborative e-learning. They attributed a range of educational benefits and advantages associated with SoMeLT; namely: the ability to express themselves and communicate with each other more easily, as well as developing relationships between tutors and students. Students' felt that SoMeLT helped them build critical thinking skills, promoted higher-order thinking, acquire diverse knowledge, and learn how to provide reasonable arguments with strong evidence.

Additionally, SMTs developed their ability for self-directed learning and autonomous study, prompting students to select the tools and resources for creating and organising their own personalised learning content. Consequently, SoMeLT was considered positive, and increased their engagement and learning motivation. Compared with traditional teaching methods, SoMeLT was considered more effective. In fact, (87%) complained that traditional methods were *boring* or *intimidating*, whereas SoMeLT encouraged them to become active participants, rather than passive consumers of content.

8.3.2.2 Tutor perceptions

In comparison, 55% percent of tutors had positive perceptions regarding SoMeLT and their interactions with colleagues and students. While this percentage is lower than the students', it indicates that tutors are beginning to recognise the importance of SM as learning tools. Positive feelings were particularly expressed by the tutors more confident in using IT and SM tools; with many (40%) highlighting a number of educational benefits, similar to those expressed by the students.

These tutors believed that SM facilitates increased student-instructor interactions and decreases student dependency on tutors. Other positive views included the belief that SMTs are a modern and unique means for providing diverse opportunities for learners to express their views, feelings and experiences, and exchange these with peers and tutors, thus developing their cultural knowledge. This empowers learners to take charge of their own learning.

8.3.3 Disadvantages of, and Barriers to Using SoMeLT

Although many participants provided numerous benefits associated with SoMELT, others expressed reluctance and apprehension, highlighting their perceived disadvantages and concerns. The threats most frequently identified by both tutors and students were cyber-bullying (60% and 72.7% respectively), and privacy (56.9% and 70% respectively). In addition to the profound negative psychosocial outcomes, there were concerns around damage to reputation,

especially in a closed society such as the KSA, where privacy is considered not only a personal matter but a social concern.

To emphasise its significance, half of the participating female tutors used pseudonyms, without photos in their profiles when using SMTs, due to the fear of defamation and harassment. For this reason, many students expressed the need to protect their privacy, or at the very least, to be made aware of the consequences of posting personal information through university-run workshops. Other threats related to spam, phishing attacks, lack of control and inappropriate use. Students and tutors were concerned about exposure to discriminatory language, sexually suggestive material, and profanity through spam. Hence, some tutors who regularly used SM had warned their students to proceed with caution due to these uncertainties and potential risks.

More than half (56.9%) of tutors and (53.3%) of students agreed that distraction was a major disadvantage. More specifically, using SMTs for non-educational purposes could cause distractions, lack of focus, and negatively affect users' direct communication in classrooms; thus, serving more to distract, rather than help students academically.

Linguistic and cultural issues, such as poor proficiency in the English language, where identified as barriers which prevented more tutors and students from using SoMeLT. Indeed, the study results showed that (67.9%) of tutors and (48.1%) of students, could not speak English. Furthermore, many tutors are reluctant to use SoMeLT because they fear that Western ideologies, foreign to Islamic and Arab cultures and identities, would negatively influence their students.

Finally, a number of institutional barriers were mentioned by the tutors. These included problems with Internet speed and connectivity, issues with equipment and software, frequent technical problems and the lack of timely technical support, all of which cause frustration and disruption for students and tutors alike. The lack of, or inadequacy of training was also raised, and the need for more appropriate and relevant training courses was expressed.

8.4 Contributions of the Research

The aims of this research (see Chapter 1, Section 1.4) have been accomplished through the adoption of a mixed methods approach and a theoretical framework synthesised from SLT and TAM. As such, the findings that have emerged from this research contribute to the body of existing literature on the integration of SMTs in Learning and Teaching, in general, and in the context of Saudi Arabian HE institutions in particular. This subject was approached through the prism of the experiences and perceptions of both tutors and students. The contributions of this study can be recognised in three aspects: contribution to knowledge, contributions to practice, and contributions to theory.

8.4.1 Contribution to knowledge

Scholars have repeatedly noted the relative lack of research in the area of using SoMeLT in education and the need for more studies (for example, Alwagait et al., 2015; Eid & Al-Jabri, 2016; Allam & Elyas, 2016; Naguib et al., 2018; Nadir et al., 2018; Alqahtani & Issa, 2018). Therefore, this mixed methods study contributes to filling this gap in the literature by exploring this issue from the viewpoint of tutors and students in non-Western, conservative societies, taking the Saudi context as an example.

The current research conducted a mixed methods approach (qualitative and quantitative) in order to obtain in-depth answers to the research questions. This involved analysing the quantitative results from the two questionnaires relating to the students' and tutors' experiences and perceptions of SoMeLT. This was followed by the analysis of the students' and tutors' responses to the open-ended questions in the questionnaires as well as the qualitative analysis of the interviews with 10 Saudi tutors.

This study built upon the existing literature on SoMeLT, with a special focus on studies that explored experiences with SMTs, the stated purposes for using these tools, and perceptions regarding advantages and problems associated with the use of SoMeLT. The research was then designed to explore these same issues in the KSA. The emphasis was on examining how social factors influence users'

attitudes and behaviours in using SoMeLT and the extent to which individuals respect or challenge their social restrictions.

This research has shown how students and tutors at the EU attempt to steer an acceptable middle course with SMTs in a conservative society. More specifically, most of the participating students and tutors, to varying extents, have sought to integrate SMTs into their educational settings in order to facilitate learning, teaching and communicating between both genders, while maintaining respect for religious principles and traditional cultural values.

Previous studies in the KSA have not critically approached this specific topic. They have not explicitly asked students and tutors about their SM usage nor practically investigated how these social networks can affect teaching and learning. The current research, on the other hand, investigated past experience of using SoMeLT and its purposes, perceptions of educational advantages and the concerns of Saudi Arabian students and tutors regarding the utilisation of SMTs in education.

In this manner, this investigation has managed to draw a comprehensive picture of the topic from all relevant aspects. It has provided a detailed discussion about various essential issues, such as the technologies used to deliver information, e-learning technology in education, research into e-learning in the KSA, tutor and student perceptions of using e-learning tools in education, the current state of e-learning at emerging universities, students' and tutors' perceptions of using SMTs, SM tools most frequently used in HE, the use of SMTs in the KSA HE, the advantages of these tools, and the problems associated with using SoMeLT.

By applying a mixed methods approach, the participants' responses have provided detailed perceptions regarding their experiences with SoMeLT, the advantages of and issues with incorporating SM into academic settings. It also explored how problems associated with the use of SoMeLT could have an impact on students' and tutors' perceptions towards and usage of SoMeLT for educational purposes.

The direct interaction and communication with students and tutors have contributed to the provision of a mix of evidence, which expands knowledge

about the existing use of SoMeLT at an EU in the KSA. Hopefully, the findings will help students, tutors and educational policymakers alike to gain a more comprehensive understanding of the possible advantages of and concerns surrounding the integration of SMTs in the field of education.

8.4.2 Contribution to practice

By reviewing the current use of SMTs for learning in HE, this research presents students, tutors, the EU's administration, decision makers and other researchers with an overview of the factors and interrelationships that shape the perceptions that influence the implementation of this technology. In addition, it illustrates the perceived advantages and disadvantages of such tools. These can inform a better utilisation of SoMeLT.

The results of this research also show that overall, the use of SMTs enriches learning environments in the EU in terms of providing more opportunities with different variables and concepts. These findings may accelerate the implementation of SoMeLT in HE. Furthermore, SMTs clearly offer various pedagogical affordances in HE. This study reveals some of these affordances to be collaboration, reflection, stimulation, online discussion and learner-created contents.

Additionally, SM tools are perceived to improve critical thinking and problem-solving, communication, creativity and innovation for students and tutors, in combination with the appropriate pedagogy. Most importantly, SMTs can be used effectively to support learning in HE in the KSA, by facilitating self-learning, dialogue and criticism, active learning, and high-quality collaboration among students and tutors.

Hence, students and tutors should carefully consider the benefits of employing SMTs in their learning, as this can lead to them becoming more interactive and creative individuals in the educational process. Therefore, it is strongly recommended that learners should take advantage of these tools to work cooperatively with others in order to extend their existing knowledge and also to gain new knowledge. It is also recommended that tutors should be aware of the

significant impact these tools can have on interactivity with learners, as this will lead to the effective use of these tools for learning.

Most of the learners in this study indicated that they preferred using SMTs to support their learning by sharing content related to the subject of study or other relevant areas of interest. However, it is important to mention that the problems associated with the use of SoMeLT may affect their successful implementation in education, as this may influence or discourage students and tutors from taking advantage of these technologies. Consequently, the provision of appropriate environments in which to use these modern tools to facilitate learning is vital for everyone.

8.4.3 Theoretical contributions

This study used the Social Learning Theory (SLT) and Technology Acceptance Model (TAM) as frameworks through which to consider the existing reality of using social media as e-learning tools at an Emerging University in Saudi Arabia from the viewpoint of tutors and students (Bandura,1971; Davis,1989). What appeared in the findings closely resembled behaviours anticipated by these two theories?

Bandura's social learning theory (1971) posits that people learn from one another through observation. Consequently, this research argues that social learning can be considered as an essential factor for the use of social media as e-learning tools. In fact, 87.4 percent of the student participants in this research indicated that using SoMeLT encourages social learning and enhances interaction and collaboration among learners. In addition, one of the major arguments in favour of social learning is that it permits a social presence, which is a human need for all participants to interact and collaborate, not only within classrooms, but also in the virtual world of SMTs (Hilscher, 2013).

A learner's capacity to learn by observation enables him to acquire large, integrated units of behaviour by example without having to build up the pattern gradually by tedious trial and error (Bandura, 1971). The findings demonstrated that more than 88.3% of the participants, whether in quantitative or qualitative data, believe that modern technologies have facilitated social communication,

enabled people from all over the world to share their culture, content, events, and receive instant feedback with their friends with minimal effort. The use of social learning theory (SLT) was useful in considering the attention, retention, reproduction, and motivations which impact students' and tutors' selection and ongoing use of SMTs for different purposes across their everyday lives and as part of their academic study. This theory appeared influential for analysing evidence that is gathered at different stages of the mixed method research and it yields clear and different levels of extracted data.

One of the significant findings revealed by this study is that there is a wide agreement on the importance of active participation by both tutors and students in online discussions and communication, the development of online activities to help students challenge themselves, and the use of SMTs to encourage students who are unlikely to participate otherwise to contribute by building their confidence and self-efficacy. The results revealed that 88.2% of the students and tutors' participants use SMTs mainly for social communication with their teachers, peers, and experts in order to enrich knowledge, exchange experiences, and hone different skills. Meanwhile, 49.5% of the participating tutors believed that getting involved in groups using SMTs can contribute to creating a learning community. Through these online gatherings, the tutors and students practice what they have studied and sought advice about their learning difficulties or academic obstacles from other tutors and also their classmates.

The TAM, introduced by Davis (1989), is a highly popular research model that can predict the use and acceptance of the technology. An individual's choice regarding whether or not to adopt information technology is determined by two key factors: namely, the Perceived Usefulness (PU) and Perceived Ease-of-Use (PEU) of the technology. The research findings confirm that these two factors influence users' perceptions towards and actual SoMeLT use. Concerning PEU, three-quarters of the students' participants confirmed that they use SMTs for learning because of its ease of use to get the newest information and communicate with other experts and learners.

These technologies can be seen as useful whether for personal or educational use. Undoubtedly, using SoMeLT will increase the chance of developing among learners' skills, such as searching for information, developing ideas,

argumentation, exchanging opinions, sharing educational resources, and critical thinking. The students' satisfaction was significant in terms of ease of use, flexibility for extracurricular engagement and a heightened interest in their courses due to social networking. These views were shared by many of the tutors, although not all as some restricted the usefulness of technology to their personal lives.

However, the use of technology can also be seen as harmful. In this research, the participants, both students and tutors, mentioned a number of dangers and educational disadvantage associated with the use of SoMeLT. These included distractions, cyber-bullying, and privacy issues. These perceived harms are essential for a full understanding of the Perceived Usefulness of SoMELT as they may negatively affect and diminish it. In addition, the participants listed factors that negatively affected the Perceived Ease of Use of SMTs, mainly the lack of training.

As for PU, both students and tutors perceived a great number of educational benefits and uses of SoMeLT. The quantitative data analysis revealed that 89.9 percent of the student participants agreed that perceived usefulness has a significant impact on attitudes towards the adoption of electronic collaboration technology. Among these perceived uses, the data found that SM plays a key role in improving students' knowledge, encouraging collaboration, saving time, and supporting self-learning. For example, where three-quarters of the students' participants that they use these modern tools to facilitate getting new knowledge and exchange it with other learners. Likewise, 40% of the tutors also mentioned some perceived uses of SMTs, such as that they help students and tutors to engage with each other to exchange ideas, experiences, and build knowledge.

The study provided the opportunity to listen to the voices of students born in this digital era concerning their academic and learning experiences in particular. The findings both clarified and validated these experiences by providing a framework to compare the different experiences reported by the participants. In particular, the findings indicated that digital students are looking for teachers to make better connections to their students emotionally as people and virtually with technology. In this regard, SLT gives priority to observational learning,

interaction, and collaboration. This type of online collaboration and interaction provides social learning and immediate feedback, which is very important in social learning theory. Consequently, the findings served to inform stakeholders (polices makers, tutors, parents, and administrators) about 21st-century students' voice and their concerns.

The study has contributed to theory-building in the field of educational technology by proposing the Social Learning Theory (SLT), and Technology Acceptance Model (TAM) for examining the existing reality of using social media as e-learning tools at an Emerging University in Saudi Arabia from the viewpoint of tutors and students. From the analyses of the data collected, it has been concluded that social media is playing a key role in several aspects of the students' and tutors' experience, from observing, facilitating learning, active interaction, and engagement to developing the classroom atmosphere.

The results of this research demonstrated that students' and tutors' perceptions and anxieties all affect students' and tutors' behavioural intention to use SoMELT and that tutors' educational experiences affects actual use. This is useful for other researchers who are interested in developing conceptual frameworks for exploring social media tools and use within their own educational contexts.

The theoretical framework based on the Social Learning Theory (SLT) and Technology Acceptance Model (TAM) provides a clear explanation of the research results. The findings show that a lack of clarity and proper implementation of education policies regarding the use of social media were negatively affecting teachers' intentions to accept and use social media in their practice. Furthermore, inadequate tools, technical support, and resources and lack of experience and training leading to anxieties concerning the use of social media as e-learning tools were impediments to their actual use in teaching at the emerging university.

In line with TAM, all these factors play a negative role in Perceived Ease of Usefulness. In addition to providing a framework to understand the process that users go through in order to accept and use modern technologies including using SoMeLT, TAM may also serve to predict the future use and acceptance of the technology through the concepts of PU and PEO. SoMELT provides students and

tutors an opportunity to work together online and share knowledge. In this regard, SLT argues that SoMeLT provides learners a framework to develop communities that foster and encourage social learning.

These theories have provided some understanding of the major factors that explain variance in behavioural intention to use these technologies at an emerging university in southwest of Saudi Arabia particularly by tutors. These theories could usefully be applied in similar contexts, such as other emerging universities in Saudi Arabia; and it can be helpful to decisionmakers at the emerging university in developing strategies to successfully implement social media as e-learning tools to support learning.

The novel use of these two theories is in their application to a non-Western context, although Saudi tutors and students appear to share many attitudes and concerns with their Western counterparts. In line with the principles of SLT, the results of this research indicated that students and tutors have strong positive perceptions of using SoMELT due to the 'social' aspect of these tools and how they support cooperation, interaction, and observation which are necessary for social learning. For example, 88.2% of the participants indicated that these tools encourage students and tutors to communicate as a team and share ideas, facilitate the acquisition, development, and promotion of knowledge whilst also supporting work continuity and efficiency.

Another novel use of SLT in this thesis is applying it to a context where education is segregated based on gender. The majority of the participants (79.2%) believed that integrating SM into the educational setting can be an effective solution in the case of the KSA for overcoming the spatial segregation between men and women and for gathering people together in online teaching and learning sessions. This study reveals that SMTs contribute to meeting the need for social learning and connection to other learners and sources of knowledge, particularly for women, as face-to-face settings do not enable them to effectively take part in most social interactions (for further information, see Section 7.5.3). As a result, employing technology to overcome social restrictions in the context of the KSA is the first motivation for the majority of participating tutors to engage in such online communities. It appears that SoMeLT might be

key to ensuring social learning in this and similar contexts of educational separation, whether based on gender or other factors.

Applying both SLT and TAM provides a more complex explanation of the factors affecting the perceptions of and willingness to use SoMeLT. According to TAM, the ease of use and utility of these tools plays a strong role in positive perceptions of the use SoMeLT. However, SLT suggests that there are other important factors, such as the links of communication and exchange SMTs open between students and with tutors. Overall, SoMeLT supports social, cooperative, and self-directed learning at the same time.

The use of TAM is this research also suggested another way of approaching Perceived Usefulness (PU), one of the main concepts in the model. More specifically, it helped the research to examine the perceived disadvantages of applying SMTs in learning as participants were asked to present their viewpoints regarding both the advantages and disadvantages of SoMeLT. Despite the many benefits of using SoMeLT, many participants felt that the use of technology can also be harmful. Both students, and tutors mentioned harms and dangers of SoMeLT, such as increased distraction, cyber-bullying, and privacy issues). The literature shows that these concerns are shared by students and tutors in other contexts (e.g. Odom et al., 2013; Saini & Abraham, 2015; Donelan, 2016; Hashim et al., 2019; Alshehri & Lally, 2019). These and other perceived harms are an important counterpart to the Perceived Usefulness of SoMeLT.

To conclude, the current study has examined the applicability to the Saudi society of perspectives and theories proposed in a Western context. The KSA is a conservative country and it is essential to see how religious, cultural and social factors affect how Saudi students and tutors use SMTs interact and collaborate with each other or how the use of SM may be faced with various obstacles. In general, the findings that emerge from this study illustrate that these two theories are useful in helping us to understand the benefits that learners in Saudi society gain from using SoMeLT and the factors that affect their perceptions of the benefits and influence whether they use SMT in education. They also help to assess and refine the body of theoretical knowledge on using SoMeLT in higher education.

8.5 **Implications for Educational Practice**

Saudi universities are currently in the initial stages of recognising the educational benefits of adopting SoMeLT, and a high level of attention is currently being paid to the development of education by the Saudi Government at all levels. The government's objective is to enhance student learning and improve the teaching methods of educators, in line with the current technical era and the 'KSA Vision 2030', which aims to make the Saudi education system one of the top 10 educational systems in the world. The findings that have emerged from this study could help policymakers, administrators, tutors and students gain a comprehensive understanding of the perceptions and concerns that currently exist surrounding the integration of SMTs in the field of education.

To begin with, these findings can help the EU's administration have a clear vision regarding the extent of SMT use by university students and tutors as well as the most frequently used and preferred SMTs. The findings show that the vast majority of students (94.3 percent) and tutors (67.6 percent) involved in this research have positive perceptions towards using SoMeLT and that they are already using these social tools for educational purposes. The main SMTs which attract significant usage among academic respondents are WhatsApp (88.9 percent), YouTube (88 percent), Twitter (84 percent), Facebook (78 percent), Wikipedia (63.6 percent) and Skype (60.6 percent). On the basis of this knowledge, the EU administration may develop solutions to help facilitate the further use of these tools in the educational process and make the most appropriate decisions when it comes to educational development and improvement.

As highlighted in the literature review, the dominant style of teaching in the KSA is the lecturing method whereby students, for the most part, have no role to play, except to listen to and memorise the information that the teacher provides. The possibility of giving students an opportunity to discuss and share opinions with the whole class is very limited due to the school curriculum, the high number of students in the class, the lecture time, and the lack of training in different teaching methods.

Therefore, introducing SMTs into academic settings in a formal manner would give rise to a fundamental change in teaching methods and learning styles at the EU. As this study shows, using SoMeLT would support collaborative learning, allow students and tutors to generate and improve content, enhance students' and tutors' communication skills and self-learning, and encourage critical and reflective thinking. A greater awareness of such benefits would encourage students and tutors to use SoMeLT.

The research findings have implications concerning the use of SMTs to help overcome the challenge of spatial gender segregation in the Saudi educational system, with the assurance of conserving Islamic values while using these tools. Tutors and students of both genders can use SMTs in the university environment to interact with each other virtually during online teaching and learning sessions.

In the context of Saudi education, it is necessary to pay attention to the social and cultural aspects which play a major role in influencing the perceptions of students and tutors in the use of SoMeLT. In a similar way, obtaining sufficient knowledge about the problems associated with the use of SM will assist the students, tutors, policymakers, and the administration of the EU in the KSA to develop educational policies which will, in turn, allow students and tutors to keep up with digital developments - one of the requirements of the current technical era- without sacrificing their cultural integrity.

One of the major concerns for the participants of this study is cyber bullying, with 65.6 percent of participants expressing related worries when using SMTs. Training was another major concern for tutors participating in this study with 65.5 percent of them highlighting the issue. These statistics give an indication that students and tutors are in particular need of training sessions regarding appropriate strategies and techniques when it comes to the effective integration of SoMeLT into education. For example, there are many SMTs that can be used to create interactive online spaces, including a Facebook group, WhatsApp group, and Twitter group. Having these digital skills will assist them in being informed about the advantages of these tools in teaching and learning activities and will also make them aware of their drawbacks such as cyber-bullying, privacy, time-consumption and distraction, and how to avoid them.

Ultimately, it is vital for HT institutions to develop strategies for policy and practice governing the use of SMTs based on the practical experiences of students and tutors applying these tools in learning and teaching. Furthermore, an awareness of the existing perceptions of students and tutors regarding the advantages and disadvantages of using SMT in education is also needed to design these policies and take concrete steps to integrate SMTs into the academic setting.

8.6 **Strengths of the Research**

This thesis derives its strength from several attributes, including the nature of the research subject, the context studied and its research methodology which combine to ensure that the study expands the current understanding of using SoMeLT. From the literature review, it emerged that the use of SMTs for learning has been investigated globally, but there is a continuing need to study the subject in different national contexts. In the KSA specifically, this area of study has only received a little attention. Conducting a study on a subject such as this within the cultural environment of the KSA necessitates paying close attention to religious, cultural and factors. In addition, the objectives of this study are consistent with the "KSA Vision 2030" Initiative, recently launched to develop the current educational system and integrate within it with the newest educational technologies. While some research has already been conducted in the KSA to study certain SMTs in the context of education, they have not critically approached the topic to examine the use of SoMeLT. This study goes some way towards filling this gap.

In addition, this research has the advantage of being the first to examine the existing reality of using SoMeLT at the EU as well as presenting the main advantages and drawbacks of and barriers to employing these tools from the viewpoint of tutors and students. Furthermore, it tackles these issues as the EU is in the initial stages of establishing its educational system and recognising the educational benefits of SMTs. With this study, there is now an authenticated account of the use of different SMTs, such as Twitter and Facebook, for education at the EU as well as many of the advantages and disadvantages of SoMeLT use as experienced by both tutors and students.

One major strength of the current study is its use of mixed methods (qualitative and quantitative research methods and analysis) to explore and acquire an in-depth understanding of the research subject. Concerning the quantitative data collection, the selection of the research sample from the EU campus and its branches has helped to build a well-balanced sample of the study's population, both tutors and students. It resulted in equally representing the university students and tutors' genders and different degree subjects. In addition, having participants within a wide range of ages (18 to 60 years), wide ranging teaching experience for tutors (1 to 35 years), and from the various faculties and academic departments, can contribute to obtaining a variety of perceptions, based on their practical experience and academic background. In addition, using face-to-face interviews with tutors provided an opportunity to ask in-depth questions in order to obtain more detailed answers and more clearly identify attitudes towards the issues that are being investigated.

Hopefully, the study's findings will help students, tutors, the administration of the EU and the educational policymakers to gain a more comprehensive understanding of the perceptions, usage, purposes, experiences, advantages, and problems associated with the use of SoMeLT. Furthermore, through providing an image of the reported advantages of using SoMeLT, this study may help overcome the challenges that prevent the widespread use of these tools for learning, especially among Saudi youths, who are classified among the world's most assiduous users of SM.

8.7 **Limitations of the Study**

In its examination of the existing reality and perceptions among tutors and students of using SoMeLT at an EU in the KSA, this study might have been affected by several limitations.

Firstly, the study sample was limited only to Saudi students and tutors. It would be useful to conduct a further study involving non-Saudi tutors and staff. Another limitation relates to the methodology applied. A mixed methods approach was used to achieve the goals of this study, with the researcher using questionnaires and interviews. An additional tool, such as observations, could have been used in order to enhance the credibility of the data gathered through

the questionnaires and interviews, especially in relation to the existing use of SoMELT, and to ensure the triangulation of the data gathered through different methods.

Some tutors were hesitant to participate as they were afraid that the results would affect their relationship with the staff or the university deans and, consequently, affect their appraisals. To encourage tutors to participate, the researcher explained and emphasised very clearly that none of the findings would be linked to a specific faculty. Hence, this study has not analysed the data according to the tutors or field, but rather across the whole sample. A focus on specific faculties or fields would have provided more specific details about the existing use of SoMeLT at the EU.

Although the SLT and TAM shed light on technology acceptance in the specific context of the EU, the research showed that more investigation is required of both the influence of demographic and environmental factors on use and on the effect that the factors have on each other in explaining teachers' intentions to accept using SoMeLT.

Lastly, it is essential to reaffirm that the main purpose of conducting this research is not to generalise its findings to other settings, but rather to examine the existing reality of using SoMeLT specifically at the EU in KSA.

8.8 **Recommendations**

This study has revealed that SMTs provide support to learning aims and meet the needs of the digital generation of students and tutors. However, it could be difficult to use SoMeLT unless the educational environment is ready. In the KSA, the learning system is competitive rather than collaborative, while the curriculum inhibits the development of knowledge and skills such as the adoption of SMTs as e-learning tools or the use of modern educational technology such as blackboards, virtual reality technology, and augmented reality technology. Therefore, the curriculum should be revised to promote problem-solving, collaboration, and other necessary skills, by integrating SMTs into the educational system and putting knowledge into the hands of learners.

Consequently, the EU should develop plans that focus on improving and developing students' and tutors' skills that are in line with the current digital age, such as communication, collaboration, creativity, innovation, critical thinking and problem-solving, and a 'thinking together' approach. These plans should be continuous and consider the students' and tutors' training and classroom curricula. Although the SMTs develop and support the skills required for the current era, whilst carrying out this research I have found that both students and tutors need to acquire further skills such as the ability to employ various technologies in the educational process, design and production skills, management skills, in order to use these tools in the best way for their learning.

Furthermore, the study also shows that more educational support in digital literacy is urgently needed, especially for the more experienced tutors. Consequently, the EU administration should develop plans to prepare students and tutors for the use of SMTs in the academic environment by providing access to training programmes, workshops and conferences. Moreover, the university should adopt the position that SMTs can serve as aids and supportive tools, not as replacements for traditional classroom instructions and methods.

During this study, the findings indicated in sections (5.4.3; 5.4.4.2; 6.6) that most of the students possess the minimal necessary skills to use SoMeLT such as communication skills, creative mindset, writing skills, proficiency in foreign languages, curious, and critical thinking, whereas some tutors do not. In this respect, careful consideration should be taken by educators to keep up to date with any new developments in the technological field in order to modernise their approach to teaching and use the same language as the youth as well as build and optimise the skills necessary to use SoMELT of students for less proficient students.

Tutors should also take into consideration the students' perceptions regarding which SM tools could be used most beneficially in the learning environment such as WhatsApp, YouTube, Twitter, and Wikipedia. Moreover, tutors need to develop the necessary skills to employ SMTs as well as facilitate and support their students' interaction and discussion in online environments. Consequently, tutors should be supported by being provided with quality training and continuing professional development programmes.

I would suggest that these programmes aim to identify and spread best practice in the use of SMT sites in pedagogy so that it leads to authentic practice. Additionally, it is important to provide students and tutors with courses that help them develop their English language competencies in order to help them better understand SM and the Internet web-based applications that are in the English language. This would play a role in allowing them to adopt such technologies effectively for learning and academic purposes.

This study has revealed that Internet connections and browser speeds are currently not sufficient for all students and tutors; therefore, the EU should provide resources to upgrade its infrastructure to ensure better Internet access for all. Another recommendation is that the EU should publish its policies on using SoMeLT on campus, making them clear for all users so that they can benefit from these tools in order to improve their knowledge and avoid any problems associated with their use.

Finally, because of the nature of the Saudi society, the EU, its students and its tutors, should consider any religious and cultural norms when using SM and the Internet in the classroom by setting regulations that define the use of these tools, with an emphasis on their use for the purposes of learning. This will help to avoid exposing students to inappropriate material that is not in line with the values of the Islamic religion and the traditions of this conservative society.

8.9 Suggestions for Future Research

The findings that have emerged from this study reveal that Saudi students and tutors have positive perceptions regarding the use of SoMeLT; however, there were concerns about various issues. Due to the lack of research in the area of SoMeLT use, it is recommended that similar future research is conducted in other Saudi universities to investigate the factors and barriers that might affect Saudi students' and tutors' perceptions regarding using SMTs to support learning.

Additionally, because the KSA has an ambitious vision aimed at developing education using modern technology and its integration into the educational process, future studies with the same or a different sample from Saudi

universities could be studied longitudinally in order to observe changes over time concerning SoMeLT use, and any relevant matters.

Investigating the roles that SM play in the classroom for both tutors and students will open new opportunities for more questions to be explored, such as: What tangible impact does SM have on student collaboration and social interaction within the learning environment? What impact does SM have on student collaboration with their tutors? How do different types of SM differently affect students' learning performances? What are the impacts on student grades, test scores, and GPAs when SM is used as a tool for e-learning? Also, an exploration might be carried out of the negative impacts of SMTs on learning environments, and how they might affect student learning and academic performance. Likewise, it is worth investigating the different barriers that students and tutors face when they utilise SM for learning, especially regarding the lack of a digital library and modern devices for tutors and students, deficient internet access in the classroom, and misgivings about using SoMeLT.

Another area worth researching within conservative cultures, such as that of the KSA, would be the impact of using SoMeLT on religious, cultural and societal traditions. The Saudi society is a conservative society that follows the teachings of the Islamic religion, as represented in legislation, as well as the preservation of tribal traditions and customs as well as Islamic values and ethics. Anything that disturbs these traditions tends to be avoided.

Some of the responses in this study have indicated a belief that the tools of SM are merely Western instruments whose main aim is to destroy Islamic values, customs and social traditions, and some have called for liberation from all the above. Future research needs to examine the impact of SMTs on all of these aspects. Lastly, this study interviewed just 10 tutor participants who were asked to report on their experience using SM. A larger number of experienced tutors should be interviewed in order to establish further results of their deeper perceptions of using SoMeLT, as well as gaining information about the strategies used when designing SM activities for the classroom.

References

Aifan, H.A. (2016) Usage of Social Media Technologies by Saudi Tutors at King Abdul-Aziz University to Support students' Learning., 5 (6), pp.74–76.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes,* 50(2), 179-211.

Ajjan, H. & Hartshorne, R. (2008) Investigating tutors' decisions to adopt Web 2.0 technologies: Theory and empirical tests. *The Internet and Higher Education,* 11 (2), pp.71–80.

Akbari, E., Naderi, A., Yazdi, M., H., Simons, R., & Pilot, A. (2016). Attitude of teachers and students towards formal learning through online social networks. *Journal of Interactive Learning Research*, 27(2), 101-123.

Ali, M., Yaacob, R. A. I. B. R., Al-Amin Bin Endut, M. N., & Langove, N. U. (2017). Strengthening the academic usage of Social Media: An exploratory study. *Journal of King Saud University - Computer and Information Sciences*, 29(4), 553–561. https://doi.org/10.1016/j.jksuci.2016.10.002

Ally, M. (2004). Foundations of educational theory for online learning. Theory and practice of online learning, 2, 15-44.

Allam, M., & Elyas, T. (2016). Perceptions of Using Social Media as an ELT Tool among EFL Teachers in the Saudi Context. English Language Teaching, 9(7), 1-9.

Amry, A. B. (2014). The impact of WhatsApp mobile social learning on the achievement and attitudes of female students compared with face to face learning in the classroom.

Anderson, G., & Arsenault, N. (2005). *Fundamentals of educational research*. Routledge.

Arkın, E. İ. (2003). *Teachers' attitudes towards computer technology use in vocabulary instruction* (Doctoral dissertation, Bilkent University).

Asterhan, C. C., & Rosenberg, H. (2015). The promise, reality and dilemmas of secondary school teacher-student interactions in Facebook: The teacher perspective. *Computer & Education*, 85, 134-148.

Alahmari, A. (2017). The state of distance education in Saudi Arabia. *Quarterly Review of Distance Education*, 18(2), 91-98.

Alamri, J. M. (2016) *'the perception of interpersonal relations between tutors and students as experienced within classroom and online communication: a mixed method case study of undergraduate women in a Saudi institution'*, PQDT - UK & Ireland.

Alanazy, S. (2011). Saudi students' attitudes, beliefs, and preferences toward coeducational online cooperative learning.

Alasfor, K. A. (2016). Social Media adoption among university instructors in KSA.

Al-Asmari, A. M., & Rabb Khan, M. S. (2014). E-learning in KSA: Past, present, and future. *Near and Middle Eastern Journal of Research in Education, 2.*

Al-Asmari, A. M., & Khan, M. S. R. (2014). E-learning in Saudi Arabia: Past, present and future. *Near and Middle Eastern Journal of Research in Education*, 2014(1), 2.

Al-Aufi, A. S., & Fulton, C. (2014). Use of social networking tools for informal scholarly communication in humanities and social sciences disciplines. *Procedia-social and behavioral sciences*, *147*, 436-445.

Albalaw, A. S. (2017). Mathematics Teachers' Perception of Using Social Media in Their Teaching in Tabuk, Saudi Arabia. *International Electronic Journal of Mathematics Education, 12(2), 111-131.*

Albalawi, A. M. (2013). Attitude of Saudi Female Math Teachers toward Integrating E-learning in Teaching Math at High Schools in Saudi Arabia.

Albirini, A. (2006). Teachers' attitudes toward information and communication technologies: The case of Syrian EFL teachers. *Computers & Education*, *47*(4), 373-398.

Aldhafeeri, F., & Male, T. (2016). Investigating the learning challenges presented by digital technologies to the College of Education in Kuwait University. Education and Information Technologies, 21(6), 1509-1519.

Al-Eisa, E. S., & Smith, L. (2013). Governance in Saudi Higher Education. In *Higher Education in Saudi Arabia* (pp. 27-35). Springer, Dordrecht.

Al Gamdi, M. A., & Samarji, A. (2016). Perceived barriers towards e-Learning by tutors' members at a recently established university in Saudi Arabia. *International Journal of Information and Education Technology,* 6(1), 23.

Al-Ghmadi, A., & Al-Saadat, E. (2002). The Development of the Educational System in Saudi Arabia. Riyadh: Tarbiat Al Ghad.

Algahtani, H., Shirah, B., Bukhari, H., Alkhamisi, H., Ibrahim, B., Subahi, A., & Aldarmahi, A. (2020). Perceptions and attitudes of different healthcare professionals and students toward interprofessional education in Saudi Arabia: a cross-sectional survey. Journal of Interprofessional Care, 1-6.

Alqahtani, S., & Issa, T. (2018). Barriers to the adoption of social networking sites in Saudi Arabia's Higher Education. *Behaviour & Information Technology,* 37(10-11), 1072-1082.

Alqarni, A. A. (2015). Educational technology in Saudi Arabia: A historical overview. *International Journal of Education, Learning and Development*, 3, 62-69.

Alhashem, A. M. (2015). *Social media use and acceptance among health educators in Saudi Arabia*. Southern Illinois University at Carbondale.

Alhazzani, N. (2014, June). Students Interaction with E-Learning Environment (Blackboard) at King Saud University. In *EdMedia+ Innovate Learning* (pp. 417-431). Association for the Advancement of Computing in Education (AACE).

Alhowaish, A. K. (2014). *Exports, Imports and Economic Growth in Saudi Arabia: An Application of Cointegration and Error-Correction Modeling.* Retrieved from http://www.penseejournal.com

Aljaad, N. H. M. (2016). The Role of Social Communication Tools in Education from the Saudi Female Students' Perceptions. *International Education Studies*, 9(8), 194.

Aljaber, A (2018) E-learning policy in Saudi Arabia: Challenges and successes. *Research in Comparative and International Education* 13(1): 176–194.

Al-Kahtani, N., Ryan, J. and Jefferson, T. (2006) How Saudi female tutorsperceive Internet technology usage and potential. *Information Knowledge Systems Management*, 5 (2005/2006), pp. 227–243.

Alkhalaf, S., Drew, S., & Alhussain, T. (2012). Assessing the impact of e-learning systems on learners: A survey study in the Saudi Arabia. *Procedia-Social and Behavioral Sciences*, 47, 98-104.

Al-Khalifa, H. S., & Garcia, R. A. (2013). The state of social media in Saudi Arabia's higher education. International Journal of Technology and Educational Marketing (IJTEM), 3(1), 65-76.

Almalki, A. (2011). Blended learning in higher education in Saudi Arabia: A study of Umm Al-Qura University.

Almaraee, M. A. (2004). Improving competencies of mathematics teachers' use of technology at colleges of education in Saudi Arabia (CESA).

Al-Masaud, K. A., & Gawad, A. M. A. (2014). Impediments of activating e-learning in Higher Education institutions in Saudi Arabia. *International Journal of Advanced Computer Science and Applications*, 5(4), 12-18.

Almohaisen, I. (2007). E-learning in the Kingdom of Saudi Arabia. In *National Centre for Distance and E-Learning Seminar. Riyadh: Keynote speech*.

Al Mulhem, A. (2014). Developing an e-learning training package for academic staff in one university in Saudi Arabia.

Al-Munajjed, M. (1997). Women in Saudi Arabia today. New York: St. *Martin's*.

Al-Nuaim, H. A (2012) The use of virtual classrooms in E-learning: a case study in King Abdulaziz University, Saudi Arabia. *E-Learning and Digital Media*, 9(2), 211-222.

Al-Najdi, S. (2011). A hybrid learning system: Jusur a Saudi web-based system providing a learning management system in Saudi Arabia universities. *Association for the Advancement of Computing in Education* (AACE).

Al-Rahmi, W., Othman, M., Yusof, L., & Musa, M. (2015). Using Social Media as a tool for improving academic performance through collaborative learning in Malaysian Higher Education. *Review of European Studies*, 7, 265e273.

Alrashidi, A. (2013). *An exploration of e-learning benefits for Saudi Arabia: Toward policy reform* (Doctoral dissertation, University of La Verne).

Al-Saggaf, Y., & Simmons, P. (2015). Social media in Saudi Arabia: Exploring its use during two natural disasters. Technological Forecasting and Social Change, 95, 3-15.

Al-Sarrani, N. (2010). *Concerns and professional development needs of science faculty at Taibah University in adopting blended learning* (Doctoral dissertation, Kansas State University).

Al-Seghayer, K. (2011). *English teaching in Saudi Arabia: Status, issues, and challenges.* Hala.

Alshareef, M. (2013). Evaluate Student Satisfaction for Social Learning Network at King Abdulaziz University. *Advances in Internet of Things,* 3, 41–44.

Alshathri, S., & Male, T. (2015). Students and instructors' perceptions of blended learning in the first electronic university in the Arab world (Saudi Electronic University). In *The 11th Annual Conference of the British Education Studies Association (BESA)*.

Alshehri, O. A. (2020). THE VIEWS OF PH. D. SAUDI STUDENTS AT THE UNIVERSITY OF GLASGOW TO UTILISE SOCIAL MEDIA TOOLS TO SUPPORT LEARNING. *International Journal of Research-GRANTHAALAYAH*, 8(4), 1-6.

Alshehri, O., Lally, V. (2019). 'Students' Perceptions of the Use of Social Media in Higher Education in Saudi Arabia. *World Academy of Science, Engineering and Technology, International Science Index 145, International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering,* 13(1), 28 - 31.

Alshehri, O. (2019) "Usage and Perceptions of Social Media Tools among Higher Education Instructors," *International Journal of Information and Education Technology* vol. 9, no. 7, pp. 493-497. http://www.ijiet.org/vol9/1252-JR347.pdf

Alshehri, O. (2018). Using Social Media in Higher Education as Tools for Learning: What do tutors think? *Global Advanced Research Journals*, 7(1), 1–5.

Alshehri, A.M. (2010). E-learning in KSA: 'To E or not to E, that is the question'. *Medical Education*, 17(3), pp.*147*–150.

Alshehri, A. M. (2005). *Assessing tutors' attitudes toward the significant factors for facilitating the implementation of online courses at the Institute of Public Administration in Saudi Arabia.* (Ph.D., Mississippi State University).

Alsolamy, F. (2017). *Social networking in Higher Education: academics' attitudes, uses, motivations and concerns* (Doctoral dissertation, Sheffield Hallam University).

Alsurehi, H. A., & Youbi, A. A. A. (2014). Towards applying social networking in Higher Education: Case study of Saudi Universities. *International Journal of Academic Research*, 6(5), 221-229.

Alsuraihi, A. K., Almaqati, A. S., Abughanim, S. A., & Jastaniah, N. A. (2016). Use of Social Media in education among medical students in Saudi Arabia. *Korean Journal of Medical Education*, 28(4), 343-354.

Alturise, F., & Alojaiman, B. (2013). Benefits and challenges of using ICT in KSA universities: A literature review. *In International conference on advanced in computing, Engineering and Learning Technologies* (Vol. 2, pp. 2-46).

Alwalidi, A., & Lefrere, P. (2010). Making E-Learning Invisible: Experience at King Khalid University, Sauid Arabia. *Educational Technology*, 50(3), 4.

Alwagait, E., Shahzad, B., & Alim, S. (2015). Impact of Social Media usage on students' academic performance in Sauid Arabia. *Computers in Human Behavior*, 51, 1092-1097.

Al Zumor, A., Al Refaai, I., Eddin, E., & Al-Rahman, F. (2013). EFL Students' Perceptions of a Blended Learning Environment: Advantages, Limitations and Suggestions for Improvement. *English Language Teaching*, 6(10), 95 .

Babbie, E., & Rubin, A. (2011). Research methods for social work. *California, USA: Thomson Brooks/Cole*.

Bailenson, J. N., Yee, N., Blascovich, J., Beall, A. C., Lundblad, N., & Jin, M. (2008). The use of immersive virtual reality in the learning sciences: Digital transformations of teachers, students, and social context. *The Journal of the Learning Sciences*, *17*(1), 102-141.

Bandura, A. (1977). *Social Learning Theory*. Englewood Cliffs, NJ: Prentice Hall.

Bansal, T., & Joshi, D. (2014). A study of students' experiences of WhatsApp mobile learning. *Global Journal of Human-Social Science Research.*

Barzegar, S., Shojafar, M., and Keyvanpour, K. (2008). Improvement User Interface in Virtual Learning Environment. International Journal of Digital Society. 1(3). 221- 229.

Bayliss, G. (2013). Exploring the cautionary attitude toward Wikipedia in higher education: Implications for higher education institutions. *New Review of Academic Librarianship*, *19*(1), 36-57.

Bennett, S., Maton, K., & Kervin, L. (2008). The 'digital natives' debate: a critical review of the evidence. *British Journal of Educational Technology*, 39(5), 775–786.

Berk, R. A. (2009). Multimedia teaching with video clips: TV, movies, YouTube, and mtvU in the college classroom. *International Journal of Technology in Teaching and Learning,* 5(1), 1-21.

Biesta, G. (2010). Pragmatism and the philosophical foundations of mixed methods research. *Sage handbook of mixed methods in social and behavioral research,* 2, 95-118.

Binyamin, S., Rutter, M., & Smith, S. (2017). Factors Influencing the Students' Use of Learning Management Systems: A Case Study of King Abdelaziz University. *In International Conference on e-Learning* (pp. 289-297).

Bista, K. (2015). Is Twitter a pedagogical tool in Higher Education? Perspectives of education graduate students. *Journal of the Scholarship of Teaching and Learning*, 15 (2), 83.

Boeree, G. (1999). Social learning. Shippensburg, PA: Shippensburg University. Retrieved Mar. 9, 2009, from http://webspace.ship.edu/cgboer/socpsy.html

Bodle, (2011) Social Learning with Social Media: Expanding and Extending the Communication Studies Classroom. In *Teaching Arts and Science with the New Social Media* (pp. 107-126).

Bolkan, S. (2015). Intellectually stimulating students' intrinsic motivation: The mediating influence of affective learning and student engagement. *Communication Reports*, 28(2), 80-91.

Boswell, C., & Cannon, S. (2018). *Introduction to nursing research.* Jones & Bartlett Learning.

Boyatzis, R. E. (1998). *Transforming qualitative information: TA and code development.* sage.

Boyd, D. M., & Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-mediated Communication*, 13(1), 210-230.

Blankenship, M. (2011). How Social Media can and should impact Higher Education. *Education Digest*, 76, 39–42.

Bracken, B. A., & Barona, A. (1991). State of the art procedures for translating, validating and using psychoeducational tests in cross-cultural assessment. *School Psychology International*, 12(1-2), 119-132.

Brailas, A., Koskinas, K., Dafermos, M., & Alexias, G. (2015). Wikipedia in education: Acculturation and learning in virtual communities. *Learning, Culture and Social Interaction*, 7, 59-70.

Braun, V., and Clarke, V. (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology*. Vol. 3, No. 2, pp.77-101.

Briggs, A. R., Morrison, M., & Coleman, M. (2012). *Research methods in educational leadership and management*. Sage Publications.

Brinkmann, S., & Kvale, S. (2005). Confronting the ethics of qualitative research. *Journal of constructivist psychology*, 18(2), 157-181.

Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of cross-cultural psychology*, 1(3), 185 216.

Brunet, T. A. (2013). Accommodating the Wikipedia Project in higher education: A University of Windsor case study.

Bryman, A. (2003). *Quality and Quantity in Social Research*. New York: Routledge.

Burgess, J., & Green, J. (2018). *YouTube: Online video and participatory culture*. John Wiley & Sons.

Bush, T. (2007). Authenticity in research–reliability, validity and triangulation. *Research methods in educational leadership and management*, 91.

Capo, B. H., & Orellana, A. (2011). Web 2.0 technologies for classroom instruction: High school teachers' perceptions and adoption factors. *Quarterly Review of Distance Education*, 12(4), 235-253.

Carr, C. T., & Hayes, R. A. (2015). Social media: Defining, developing, and divining. *Atlantic journal of communication*, *23*(1), 46-65.

Carpenter, J. P., & Krutka, D. G. (2015). Engagement through microblogging: Educator professional development via Twitter. *Professional development in education*, *41*(4), 707-728.

Caruso, J. B., & Salaway, G. (2008). The ECAR study of undergraduate students and information technology, 2008: Key findings. *Boulder: EDUCAUSE Center for Applied Research. Accessed January 5*, 2011.

Casey, G. G., & Wells, M. M. (2015). "Remixing to design learning: Social Media and peer-to-peer interaction". *Journal of Learning Design*, Vol.8(1), pp.39-54.

Chanchary, F. H., & Islam, S. (2011). Is Saudi Arabia ready for e-Learning? A case study. *Najran University, KSA.*

Chatti, M. A., Jarke, M., & Quix, C. (2010). Connectivism: The network metaphor of learning. International Journal of Learning Technology, 5(1), 80-99.

Chawinga, W. D. (2017). Taking Social Media to a university classroom: teaching and learning using Twitter and blogs. *International Journal of Educational Technology in Higher Education*, 14(1), 3.

Chen, B., & Bryer, T. (2012). Investigating instructional strategies for using Social Media in formal and informal learning. *The International Review of Research in Open and Distance Learning*, 13, 87-104.

Chen, H. Y., & Boore, J. R. (2010). Translation and back translation in qualitative nursing research: methodological review. *Journal of clinical nursing*, 19(1 2), 234-239.

Chen, P., Teo, T., & Zhou, M. (2016). Relationships between digital nativity, value orientation, and motivational interference among college students. Learning & Individual Differences, 5049-55.

Chipunza, P. R. C. (2013). Using mobile devices to leverage student access to collaboratively-generated re-sources: A case of WhatsApp instant messaging at a South African University. *International Conference on Advanced Information and Communication Technology for Education* (ICAICTE 2013).

Church, K., & de Oliveira, R. (2013). What's up with whatsapp? comparing mobile instant messaging behaviors with traditional SMS. *15th International Conference on Human-Computer Interaction with Mobile Devices and Services* (pp. 352-361). ACM.

Clark, R. C., & Mayer, R. E. (2016). *E-learning and the science of instruction: Proven guidelines for consumers and designers of multimedia learning.* John Wiley & Sons.

Chretien, K. C., Greysen, S. R., Chretien, J. P., & Kind, T. (2009). Online posting of unprofessional content by medical students. *JaMa*, 302(12), 1309-1315.

Cohen, L., Manion, L., & Morrison, K. (2007) *Research Methods in Education*, 6th Ed. London & New work: Routledge, Taylor and Francis.

Colbran, S., & Al-Ghreimil, N. (2013). The role of information technology in supporting quality teaching and learning. In Higher Education in Saudi Arabia (pp. 73-82). Springer, Dordrecht.

Collins, A., & Halverson, R. (2018). *Rethinking education in the age of technology: The digital revolution and schooling in America.* Teachers College Press.

Collis, J., & Hussey, R. (2013). *Business research: A practical guide for undergraduate and postgraduate students*. Macmillan International Higher Education.

Colvin, R., & Mayer, R. (2008). E-learning and the science of instruction.

Cox, M. J. (2013). Formal to informal learning with IT: research challenges and issues for e-learning. Journal of computer assisted learning, 29(1), 85-105.

Creswell, J. (2009). *Research design: qualitative, quantitative, and mixed methods Approaches. 3rd ed. California: SAGE Publications*.

Creswell, J., & Clark, V. L. (2007). *Designing and Conducting Mixed Methods Research.* Thousand Oaks, California: Sage.

Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process. Sage.*

Cunha Jr, F. R. D., van Kruistum, C., & van Oers, B. (2016). Teachers and Facebook: using online groups to improve students' communication and engagement in education. *Communication Teacher,* 30(4), 228-241.

Dabbagh, N., & Kitsantas, A. (2013). The role of Social Media in self-regulated learning. *International Journal of Web Based Communities*, 9(2), 256-273.

Dabbagh, N., & Reo, R. (2011). Impact of Web 2.0 on Higher Education. In *Technology integration in Higher Education: Social and organizational aspects* (pp. 174-187). IGI Global.

Dhar, R., & Wertenbroch, K. (2000). Consumer choice between hedonic and utilitarian goods. *Journal of marketing research*, *37*(1), 60-71.

David, L. (2015). Social learning theory (Bandura). *Learning Theories. Retrieved from https://www. Learning theories. com/social- learning-theor ybandura. html*.

Davis, F. D. (1989). Perceived usefulness perceives ease of use, and user acceptance of information technologies. *MIS Quarterly*, 13 (3), 319-340.

Davis, C., III, Deil-Amen, R., Rios-Aguilar, C., & GonzalezCanche, M. S. (2012). Social Media in Higher Education: A literature review and research directions.

Dawson, C. (2007*). A practical guide to research methods: A user's friendly manual for mastering research techniques and projects.* How to Books.

Deanship of Academic Development in KFU (2012) Final annual report of Deanship of Academic Development 2011-2012. King Faisal University. [In Arabic]

Deanship of e-learning in KKU (2011) Criteria of E-learning in King Khalid University. [Online] Available at: http://elc.kku.edu.sa/sites/default/files/ERules.pdf [Accessed: 24 Jan 2018]. [In Arabic]

Deanship of e-learning in KKU (2013) Deanship of E-learning in King Khalid University: *Launch of Master Courses Project*. [Online] Available at: http://elc.kku.edu.sa/en/node/1426 [Accessed: 24 Jan 2018].

Deanship of E-learning and Distance Education in KAU (2012) Deanship of eLearning and Distance Education: *All Technology Used*. [Online] Available at: http://elearning.kau.edu.sa/Content.aspx Site_ID=214&lng=EN&cid=213192 [Accessed: 20 Jan 2018].

De Wever, B., Hämäläinen, R., Voet, M. and Gielen, M. (2015), "A wiki task for first-year university students: the effect of scripting students' collaboration". *The Internet and Higher Education*, Vol. 25, pp. 37-44.

Denzin, N. K., & Lincoln, Y. S. (2008). *The landscape of qualitative research* (Vol. 1). Sage.

Denscombe, M. (2008). Communities of practice: A research paradigm for the mixed methods approach. *Journal of mixed methods research*, *2*(3), 270-283.

De Vries, P., & Hennis, T. (2013). Social Media to foster self-organized participatory learning for disengaged learners. *International Journal of Advanced Corporate Learning*, 6(1).

Dickie, V.A. & Meyer, H. (2015). The Facebook Tutor: Networking Education. *Ubiquitous Learning: An International Journal.*

Dommett, E. J. (2019). Understanding student use of twitter and online forums in higher education. *Education and Information Technologies*, *24*(1), 325-343.

Donelan, H. (2016). Social Media for professional development and networking opportunities in academia. *Journal of Further and Higher Education,* 40(5), 706-729.

Downes, S. (2012). Connectivism and connective knowledge: Essays on meaning and learning networks.

Draskovic, N., Korper, A.K. & Kilian-Yasin, K. (2017). Student attitudes toward use of Social Media in the learning process: A comparative study of Croatian and German students. *International journal of management cases*, 19(2), 53-64.

Drever, E. (1995). *Using Semi-Structured Interviews in Small-Scale Research. A Teacher's Guide.*

Dunn, L. (2013). Teaching in Higher Education: can Social Media enhance the learning experience?

Durham, M. G., & Kellner, D. M. (2009). Media and cultural studies: Key works. John Wiley & Sons.

Dupuis, S. L. (1999). Naked truths: Toward a reflexive methodology in leisure research. *Leisure Sciences*, 21, 43–64.

Eady, M. J., & Lockyer, L. (2013). Tools for learning: technology and teaching strategies', Learning to Teach in the Primary School. *Queensland University of Technology, Australia, 71.*

Eid, M. I., & Al-Jabri, I. M. (2016). Social networking, knowledge sharing, and student learning: The case of university students. *Computers & Education*, 99, 14-27.

El-Sayed, H., & Westrup, C. (2011). *Adopting Enterprise Web 2.0 collaborative technologies in business: The implications for management accountants*. CIMA.

Erdur-Baker, O. (2010). Cyberbullying and its correlation to traditional bullying, gender and frequent and risky usage of internet-mediated communication tools. New media & society, 12(1), 109-125.

Esmail, H. (2015). Factors of Economic growth in KSA an empirical analysis from 2000:2014. International Journal of Business and Economic Development, 3(3). Retrieved from http:// www.ijbed.com/

Espejo, B., Mana, M. & Bato, S. (2003). Current issues and trends of internet-based education in Philippines. In Fawzi Albalooshi, Virtual Education: Cases in learning & teaching technologies. London: IRM Press.

Esteve Del Valle, M., Gruzd, A., Haythornthwaite, C., Paulin, D., & Gilbert, S. (2017). Social Media in educational practice: Tutors present and future use of Social Media in teaching. In *Proceedings of the 50th Hawaii International Conference on System Sciences.*

Evans, C. (2014). Twitter for teaching: Can social media be used to enhance the process of learning? *British Journal of Educational Technology*, *45*(5), 902-915.

Fatany, S. (2012) The influence of Saudi social media. Retrieved from http://www.saudigazette.com.sa/index.cfm method=home.regcon& contentid=20120728131344

Fewkes, A., & McCabe, M. (2012). Facebook: Learning tool or distraction? *Journal of Digital Learning in Teacher Education,* 28(3), 92-98.

Flanigan, A.E., & Babchuk, W.A. (2015). Social Media as academic quicksand: A phenomenological study of student experiences in and out of the classroom. *Learning and Individual Differences*. 44(1), 40-45.

Filep, B. (2009) Interview and translation strategies: coping with multilingual settings and data. *Copernicus Publications*. Vol. 4, pp. 59-70.

Filstead, W. J. (1979). Qualitative methods: A needed perspective in evaluation research. *Qualitative and quantitative methods in evaluation research*, 33-48.

Foogooa, R., & Ferdinand-James, D. (2017). use of Facebook for enhancing student engagement in a Higher Education blended engineering course. *Innovative Issues and Approaches in Social Sciences*, 10(1), 8-31.doi:10.12959.

Foroughi, A. (2011). A research framework for evaluating the effectiveness of implementation of Social Media in Higher Education. *Online Journal of Workforce Education and Development*, 5(1), 5.

Franco, T. (2013). Understanding digital natives' learning experiences. RBLA, Belo Horizonte, 13(3), 643-658. Retrieved from http://www.scielo.br.ezproxy.liberty.edu:2048/pdf/rbla/v13n2/aop05 3.pdf

Freire, T., & Li, J. (2016). Using Wikipedia to enhance student learning: A case study in economics. *Education and Information Technologies*, *21*(5), 1169-1181.

Freudenberg, B., Cameron, C., & Brimble, M. (2010). "The importance of self: Developing students' self-efficacy through work integrated learning ". *International Journal of Learning*, Vol.17(10), pp.479-496.

Friedman, T. (2005). The World Is Flat: A Brief History of the Twenty-First Century. Farrar, Straus. *Giraux*.

Gao, F., Luo, T., & Zhang, K. (2012). Tweeting for learning: a critical analysis of research on microblogging in education published in 2008e2011. *British Journal of Educational Technology*, 43(5), 783e801.

Garrison, D. R. (2011). *E-learning in the 21st century: A framework for research and practice*. Routledge.

Giesler, M. (2012). How doppelgänger brand images influence the market creation process: Longitudinal insights from the rise of botox cosmetic. *Journal of Marketing*, *76*(6), 55-68.

Graham, M. (2014). Social Media as a Tool for Increased Student Participation and Engagement outside the Classroom in Higher Education. *Journal of Perspectives in Applied Academic Practice* [online], 2 (3), 16-24.

Gratton, C., & Jones, I. (2010). *Research methods for sports studies.* Routledge.

Gray, D. E. (2004) *Doing Research in the Real World. London*: Sage Publication Ltd.

Green, J. C., Caracelli, V. J., & Graham, W. F. (1989). Toward a conceptual framework for mixed-method evaluation designs. *Educational evaluation and policy analysis*, 11(3), 255-274.

Greenhalgh, T., Robert, G., Macfarlane, F., Bate, P., Kyriakidou, O., & Peacock, R. (2005). Storylines of research in diffusion of innovation: a meta-narrative approach to systematic review. *Social science & medicine*, *61*(2), 417-430.

Greenhow, C., & Askari, E. (2017). Learning and teaching with social network sites: A decade of research in K-12 related education. *Education and information technologies*, *22*(2), 623-645.

Greenfield, P. M. (2014). *Mind and media: The effects of television, video games, and computers*. Psychology Press.

Greenhow, C., & Gleason, B. (2012). Twitteracy: Tweeting as a new literacy practice. In *the Educational Forum* (Vol. 76, No. 4, pp. 464-478). Taylor & Francis Group.

Gross, R., & Acquisti, A. (2005). Information revelation and privacy in online social networks. In *Proceedings of the 2005 ACM workshop on Privacy in the electronic society* (pp. 71-80). ACM.

Gruzd, A., Haythornthwaite, C., Paulin, D., Gilbert, S., & del Valle, M. E. (2018). Uses and gratifications factors for Social Media use in teaching: Tutors' perspectives. *New Media & Society*, 20(2), 475-494.

Guest, G., MacQueen, K. M., & Namey, E. E. (2011). *Applied thematic analysis*. Sage Publications.

Guba, E. G. (1990). The paradigm dialogs. In *Alternative Paradigms Conference, Mar 1989, Indiana U, School of Education, San Francisco, CA, US*. Sage Publications, Inc.

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. *Handbook of qualitative research*, 2(163-194), 105.

Guraya, S. Y., Almaramhy, H., Al-Qahtani, M. F., Guraya, S. S., Bouhaimed, M., & Bilal, B. (2018). Measuring the extent and nature of use of Social Networking Sites in Medical Education (SNSME) by university students: Results of a multi-center study. *Medical education online,* 23(1), 1505400.

Habib, L., Johannesen, M., & Leikny, Ø. (2014). Experiences and challenges of international students in technology-rich learning environments. *Journal of Educational Technology & Society*, 17, 196-206.

Hakami, A. (2010). King Abdullah bin Abdulaziz public education development project: Tatweer. *Retrieved*, 2(28), 2012.

Hamid, S., Waycott, J., Kurnia, S., & Chang, S. (2015). Understanding students' perceptions of the benefits of online social networking use for teaching and learning. *Internet and Higher Education*, 26, 1e9.

Hammond, M., & Wellington, J. (2012). *Research methods: The key concepts.* Routledge.

Hansen, J.T., (2004). Thoughts on Knowing Epistemic Implications of Counseling Practice. *Journal of Counseling and Development*, 82(2), pp.131–138.

Hashim, K., Al-Sharqi, L., & Kutbi, I. (2019). Perceptions of Social Media Impact on the social behavior of students: A comparison between students and faculty. *In Multigenerational Online Behavior and Media Use: Concepts, Methodologies, Tools, and Applications* (pp. 92-103). IGI Global.

Hatch, J. A. (2002). *Doing qualitative research in education settings*. Suny Press.

Hatkevich, B. A. (2008). *Motivational factors of the traditionalist, baby boomer, generation x, and generation y student enrolled in a community college*. Ph.D. dissertation, Capella University, United States — Minnesota. Retrieved September 11,2008, from Dissertations & Theses: Full-Text database. (Publication No. AAT 3304461).

Haworth, R. (2016). Personal Learning Environments: A solution for self-directed learners. *TechTrends*, 60(4), 359-364.

Hay, C. (2011). Interpreting interpretivism interpreting interpretations: The new hermeneutics of public administration. *Public administration*, *89*(1), 167-182.

Hays, D. G., & Singh, A. A. (2012). *Qualitative inquiry in clinical and educational settings.* Guilford Press.

Henderson, M., Selwyn, N., & Aston, R. (2017). What works and why? Student perceptions of useful digital technology in university teaching and learning. *Studies in Higher Education*, 42(8), 1567-1579.

Hibberts, M. F., & Johnson, R. B. (2012). Mixed methods research. *Research Methods in Educational Leadership & Management, 3rd ed., SAGE, Los Angeles*, CA, 122 139.

Hilscher, J. (2013). A case study examining how students make meaning out of using Facebook as a virtual learning community at a Midwestern university.

Hinduja, S., & Patchin, J. W. (2010). Bullying, cyberbullying, and suicide. *Archives of suicide research*, 14(3), 206-221. ISO 690

Hockly, N. (2011). The digital generation. *ELT journal*, *65*(3), 322-325.

Huang, W-H.D., Denice, W.H., &Sun, J. Y. (2013). Gender divide and acceptance of collaborative Web 2.0 applications for learning in Higher Education. *Internet and Higher Education*. 16, 57-65.

Hughes, John and Sharrock, Wes (1997), The Philosophy of Social Research, 3rd edition, Pearson: Essex.

Hung, H. T., & Yuen, S. C. Y. (2010). Educational use of social networking technology in Higher Education. *Teaching in Higher Education*, 15(6), 703-714.

Internet Al Saudia. (2016). Internet in KSA. Retrieved 1 Des 2018, from http://internet.sa/ar/

Internet Word Stats. (2001a, Sep 2014). Internet World Stats Middle East Retrieved 3 Mar 2018, from http://www.internetworldstats.com/middle.htm#sa

Irwin, C., Ball, L., Desbrow, B., and Leveritt, M. (2012). Students' perceptions of using Facebook as an interactive learning resource at university. *Australasian Journal of Educational Technology*, 28(7), 1221-1232.

Imlawi, J., Gregg, D. & Karimi, J. (2015) Student engagement in course-based social networks: The impact of instructor credibility and use of communication. *Computers & Education*, 88 (C), pp.84–96.

Islam, N., & Azad, N. (2015). Satisfaction and continuance with a learning management system. *The International Journal of Information and Learning Technology,* 32(2), 109–123.

Issa, T., Isaias, P., Kommers, P. A. M., & SpringerLink (Online service). (2016). Social networking and education: *Global perspectives*. Cham: Springer.

Ito, M., Horst, H. A., Bittanti, M., Stephenson, B. H., Lange, P. G., Pascoe, C. J., ... & Martínez, K. Z. (2009). *Living and learning with new media: Summary of findings from the Digital Youth Project*. MIT Press.

Jill, M. D., Wang, D., & Mattia, A. (2019). Are instructor generated YouTube videos effective in accounting classes? A study of student performance, engagement, motivation, and perception. *Journal of Accounting Education*, 47, 63-74.

Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational researcher*, 33(7), 14-26.

Jones, T., & Cuthrell, K. (2011). YouTube: Educational potentials and pitfalls. *Computers in the Schools,* 28(1), 75-85.

Jones, J., Gaffney‐Rhys, R., & Jones, E. (2011). Social network sites and student–lecturer communication: an academic voice. *Journal of Further and Higher Education*, 35(2), 201-219.

Joosten, T. (2012). *Social Media for educators: Strategies and best practices.* John Wiley & Sons.

Jukes, I., McCain, T., & Crockett, L. (2010). *Understanding the digital generation: Teaching and learning in the new digital landscape*. Corwin Press.

Junco, R., Heibergert, G., & Loken, E. (2010). The effect of Twitter on college student engagement and grades. *Journal of Computer Assisted Learning*, 27, 119-132.

Kahveci, N. G. (2015). Pre-service teachers' conceptions on use of Social Media in social studies education. *International Journal of Progressive Education*, 11(1), 82-100.

Kennedy, G., Krause, K. L., Gray, K., Judd, T., Bennett, S. J., Maton, K. A., ... & Bishop, A. (2006). Questioning the net generation: A collaborative project in Australian higher education.

Karsenti, T. (2009). Panafrican Research Agenda on the pedagogical integration of ICTs: Phase II.

Keskin, N. O., & Metcalf, D. (2011). The current perspectives, theories and practices of mobile learning. *Turkish Online Journal of Educational Technology-TOJET*, *10*(2), 202-208.

Kietzmann, H. (2012). "Social Media? Get serious! Understanding the functional building blocks of Social Media". *Business Horizons* 54: 241–251.

Kitsantas, A., & Dabbagh, N. (2013). *Learning to Learn with Integrative Learning Technologies (ILT): A Practical Guide for Academic Success (Chinese Edition)*. IAP.

Kivunja, C. (2015). Innovative Methodologies for 21st Century Learning, Teaching and Assessment: A Convenience Sampling Investigation into the Use of Social Media Technologies in Higher Education. *International Journal of higher education* [online], 4 (2), 1-26.

Knight, C., & Pryke, S. (2012). Wikipedia and the university, a case study. *Teaching in Higher Education,* 17(6), 649-659.

Kop, R., & Hill, A. (2008). Connectivism: Learning theory of the future or vestige of the past?. The International Review of Research in Open and Distributed Learning, 9(3).

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30(3), 607-610.

Krishnakumar, R. & Rajesh, K. M. (2011) Attitude of teachers of HE towards e-Learning. *Journal of Education and Practice*, 2 (4), pp. 48-53.

Krumsvik, R. J. (2014) Teacher educators' digital competence. *Scandinavian Journal of Educational Research*, Vol. 58, No. 3, pp 269-280.

Kruskal, W. H., & Wallis, W. A. (1952). Use of ranks in one-criterion variance analysis. *Journal of the American Statistical Association, 47*(260), 583-621.

Krutka, D. G., & Carpenter, J. P. (2016). Why Social Media must have a place in schools. *Kappa Delta Pi Record*, 52(1), 6-10.

Kutbi, A., & Zhang, Z. (2016). Challenges That Face Saudi Female Undergraduate Students When They Use Social Media as a Learning Tool. In E-Learn: *World Conference on E-Learning in Corporate, Government, Healthcare, and higher education* (pp. 1046-1056).

Kuzma, J. (2011). Empirical study of privacy issues among social networking sites. J. *Int'l Com. L. & Tech.,* 6, 74.

Kvale, S. (1996). *Interviews: An introduction to qualitative research interviewing*. Sage.

Lanier, J. Q. (2016). *Social media: Implications on the personal learning of high school seniors* (Doctoral dissertation, University of West Georgia).

Lankshear, C. J., & Knobel, M. (2008). Introduction: Digital literacies: Concepts, policies and practices. Peter Lang Publishing.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge university press.

Lee, J., Lee, Y., & Kim, M. H. (2015). Perceptions of teachers and students towards the educational application of SNS and its educational effects in middle school class. *Turkish Online Journal of Educational Technology*, 14(4), 124-134.

Lederer, K. (2012). Pros and cons of Social Media in the classroom. *Campus Technology*, 25(5), 1-2.

Lenartz, A. J. (2012). *All my rowdy 'friends': The use of social mediain higher education* (Doctoral dissertation, Northern Arizona University).

Levin, A., & Abril, P. S. (2008). Two notions of privacy online. *Vand. J. Ent. & Tech*. L., 11, 1001.

Li, N., & Kirkup, G. (2007). Gender and cultural differences in Internet use: A study of China and the UK. *Computers and Education*, 48(2), 301e317.

Liaw, S. Huang H. & Chen G. (2007). Surveying instructor and learner attitudes toward e-learning. *Computers & Education*, 49, 1066 -1080.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry* (Vol. 75). Sage.

Liu, Y. (2010). Social Media Tools as a learning resource. *Journal of Educational Technology Development and Exchange*, 3(1), 101e114

Liu, X., Liu, S., Lee, S.-h., & Magjuka, R. J. (2010). Cultural differences in online learning: International student perceptions. *Journal of Educational Technology & Society*, 13, 177- 188.

Lo, Y. H. (2012). What is the participant learning experience like using YouTube to study a foreign language?

Lodico, M. G., Spaulding, D. T., & Voegtle, K. H. (2010). *Methods in educational research: From theory to practice* (Vol. 28). John Wiley & Sons.

Lohnes, S., & Kinzer, C. (2007). Questioning assumptions about students' expectations for technology in college classrooms. Innovate: *Journal of Online Education, 3*(5), 2.

Lomicka, L., & Lord, G. (2016). Social networking and language learning. *The Routledge handbook of language learning and technology*, 255-268.

Lopez, S. J., Pedrotti, J. T., & Snyder, C. R. (2018). *Positive psychology: The scientific and practical explorations of human strengths*. Sage Publications.

Luckin, R. (2018). *Enhancing Learning and Teaching with Technology: What the Research Says*. UCL IOE Press. UCL Institute of Education, University of London, 20 Bedford Way, London WC1H 0AL.

Lupton, D. (2014). 'Feeling better connected': Academics' use of Social Media.

Luttrell, R. (2018). *Social media: How to engage, share, and connect*. Rowman & Littlefield.

Mahdi, M. (2019). Undergraduate Students' Perceptions toward Social Media Usage and Academic Performance: A Study from KSA. *International Journal of Emerging Technologies in Learning,* 14(3).

Mann, H. B., & Whitney, D. R. (1947). On a test of whether one of two random variables are stochastically larger than the other. *The annals of mathematical statistics*, 50-60.

Manca, S., & Ranieri, M. (2016). "Yes, for sharing, no for teaching!": Social Media in academic practices. *The Internet and higher education*, 29, 63e74.

Mao, J. (2014). Social Media for learning: A mixed methods study on high school students' technology affordances and perspectives. *Computers in Human Behavior*, 33, 213-223.

Margaryan, A., Littlejohn, A., & Vojt, G. (2011). Are digital natives a myth or reality? University students' use of digital technologies. Computers & education, 56(2), 429-440.

Martinez-Aleman, A.M. & Wartman, K.L. (2009). *Online social networking on campus: Understanding what matters in student culture.* Routledge.

Martins, J., & Nunes, M. B. (2016). The temporal properties of e-learning: an exploratory study of academics' conceptions. *International Journal of Educational Management*.

Marton-Williams, J. (1986). Questionnaire design. In R. Worcester & J. Downham (Eds.), *Consumer market research handbook* (pp.111 – 146). New York: Elsevier Science.

Marton, F., & Booth, S. A. (1997). Learning and awareness. Psychology Press.

Masrom, M. & Hussein, R (2008). *User acceptance of information technology: Understanding theories and model.* Published by Venton.

Mathur, R. (2004). Students' perceptions of a mobile application for college course management systems (Doctoral dissertation).

Mayes, R., Natividad, G., & Spector, J. M. (2015). Challenges for educational technologists in the 21st century. *Education Sciences*, 5(3), 221-237.

Mehari, K. R., & Farrell, A. D. (2018). Where does cyberbullying fit? A comparison of competing models of adolescent aggression. *Psychology of Violence*, 8(1), 31.

Meseguer, A., Aibar, E., Lladós, J., Minguillón, J., & Lerga, M. (2016). Factors that influence the teaching use of Wikipedia in Higher Education. *Journal of the Association for Information Science and Technology*, 67(5), 1224-1232.

McKnight, K., O'Malley, K., Ruzic, R., Horsley, M. K., Franey, J. J., & Bassett, K. (2016). Teaching in a digital age: How educators use technology to improve student learning. *Journal of research on technology in education*, 48(3), 194-211.

McCrum-Gardner, E. (2008). Which is the correct statistical test to use? *British Journal of Oral and Maxillofacial Surgery*, *46*(1), 38-41.

McNamee, M.J., Olivier, S. & Wainwright, P., (2007). *Research Ethics in Exercise, Health, and Sports Science, Oxon:* Routledge.

McNiff, J. (2006). *Teaching as learning: An action research approach*. Routledge.

Ministry of Education. (2018). *Higher Education in Saudi Arabia*. Retrieved from http://www.moe.gov.sa/ar/Pages/default.aspx

Ministry of Higher Eeducation. (2010a). *Higher Eeducation in numbers and figures.* 2nd ed. Riyadh:

Ministry of Higher Eeducation. (2010b). *Ministry of Higher Eeducation's plan to achieve excellence in science and technology.* Riyadh: MoHE.

Ministry of Higher Eeducation. (2014). Observatory on Higher Eeducation. Higher Eeducation in the Saudi Arabia. *National Indicators and International Comparisons*. Riyadh: MoHE.

Mirzajani, H., Mahmud, R., Ayub, A. F. M., & Wong, S. L. (2015). A review of research literature on obstacles that prevent use of ICT in pre-service teachers' educational courses. *International Journal of Education & Literacy Studies*, 3(2), 25-31.

Misman, J., Gafar, S. Z., Atan, M. A., & Nordin, N. A. (2019). Integrating Social Media Platforms in the 21st Century Classrooms: Recommendations for English Educators. *International Journal of Language Education and Applied Linguistics*, 15-25.

MoCT. (2005). *the National Communications and Information Technology Plan, The Vision Towards the Information Society*. Retrieved 22 March 2018 from http://www.mcit.gov.sa/english/NCITP/AboutNCITP/.

Modell, S. (2009). In defence of triangulation: A critical realist approach to mixed methods research in management accounting. *Management Accounting Research*, 20(3), 208-221.

Mondahl, M., & Razmerita, L. (2014). Social Media, Collaboration, and Social Learning--A Case-Study of Foreign Language Learning. *Electronic Journal of e-Learning*, 12(4), 339-352.

Moran, M., Seaman, J., & Tinti-Kane, H. (2011). Teaching, Learning, and Sharing: How Today's Higher Eeducation Tutors Use Social Media. *Babson Survey Research Group*.

Morgan, D. L. (2007). Paradigms lost and pragmatism regained: Methodological implications of combining qualitative and quantitative methods. *Journal of mixed methods research*, 1(1), 48-76.

Morrison, D. (2003). *E-learning strategies: How to get implementation and delivery right first time*. John Wiley & Sons.

Morrison‐Love, D. (2017). Towards a transformative epistemology of technology education. Journal of Philosophy of Education, 51(1), 23-37.

Morrison, M. (2012). Understanding methodology. *Research methods in educational leadership and management*, 14-28.

Mourlam, D. (2013). Social Media and education: Perceptions and need for support. *I-Manager's Journal of School Educational Technology, 9*(3), 23.

Muijs, D. (2010). *Doing quantitative research in education with SPSS*. Sage.

Nadir, R., Bashir, K., Nasir, M. A., & Khan, H. A. (2018). Social Networking Sites (SNSs) in medical education: a student's perspective. *Medical education online*, 23(1), 1524689-1524689.

Nagar, R. (2015). Social Media: The not so social consequences. *Indian Journal of Medical & Health Sciences, 2*(1), 41-46.

Naguib, G. H., Al Yamani, I., Alnowaiser, A. M., & Hamed, M. T. (2018). Social Media Usage and Self-Perception among Dental Students at King Abdelaziz University, Saudi Arabia. *Journal of Medical Education*, 17(2).

National Center for E Learning and Distance Education. (2012). The aims. Retrieved from http://www.elc.edu.sa/portal/i dex.php mod=content&page=24. NCeL: Riyadh, Saudi Araiba. (12 July 2018)

Neuman, W. L., & Wiegand, B. (2000). *Criminal justice research methods: Qualitative and quantitative approaches*. Boston: Allyn and Bacon.

Newland, B., Jenkins, M., & Ringan, N. (2006). Academic experiences of using VLEs: overarching lessons for preparing and supporting staff. In *Technology supported learning and teaching: a staff perspective* (pp. 34-50). IGI Global.

Ng'ambi, D., & Lombe, A. (2012). Using podcasting to facilitate student learning: A constructivist perspective. *Journal of Educational Technology & Society*, *15*(4), 181-192.

Nochumson, T. C. (2020). Elementary school teachers' use of Twitter: exploring the implications of learning through online social media. *Professional development in education*, *46*(2), 306-323.

Northey, G., Bucic, T., Chylinski, M., & Govind, R. (2015). Increasing student engagement using asynchronous learning. *Journal of Marketing Education*, 37(3), 171-180.

Oblinger, D., Oblinger, J. L., & Lippincott, J. K. (2005). *Educating the net generation*. Boulder, Colo.: EDUCAUSE, c2005. 1 v.(various pagings): illustrations..

Odom, S. F., Jarvis, H. D., Sandlin, M. R., & Peek, C. (2013). Social Media Tools in the Leadership Classroom: Students' Perceptions of Use. *Journal of Leadership Education*, 12(1), 34–53.

Oliver- Hoyo, M. & Allen, D. (2006) the Use of Triangulation Methods in Qualitative Educational Research, *Journal of College Science Teaching*, pp. 42 47

Oppenheim, A. N. (1992) *Questionnaire design, interviewing, and attitude measurement*. New York City: St. Martin's Press.

Oppenheim, A.N. (2001) *Questionnaire Design, Interviewing and Attitude Measurement.* London: Continuum

Owen, N., Fox, A., & Bird, T. (2016). The development of a small-scale survey instrument of UK teachers to study professional use (and non-use) of and attitudes to Social Media. *International Journal of Research & Method in Education*, 39(2), 170-193.

Palfrey, J. G., & Gasser, U. (2011). Born digital: Understanding the first generation of digital natives. ReadHowYouWant. com.

Pallant, J. (2010). *SPSS survival manual: a step by step guide to data analysis using the SPSS program*, 4th ed, England: Open University Press.

Palloff, R.M. and Pratt, K. (2007). *Building Online Learning Communities: Effective Strategies for the Virtual Classroom*. John Wiley & Sons.

Panda, S. & Mishra, S. (2007) E-learning in Mage Open University: Tutors attitude barriers and motivators*. Educational Media International*, 44 (4), pp. 323-338.

Parahoo K (2006) Nursing Research: Principles, Process and Issues. 2nd edn. Palgrave Macmillan, Houndmills Basingstoke

Patalong, F. (2016). Vision 2030 and the Transformation of Education in Saudi Arabia. *Al Tamimi & Company*.

Pettenati, M. C., & Cigognini, M. E. (2007). Social networking theories and tools to support connectivist learning activities. International Journal of Web-Based Learning and Teaching Technologies (IJWLTT), 2(3), 42-60.

Plana, M. G. C., Escofet, M. I. G., Figueras, I. T., Gimeno, A., Appel, C., & Hopkins, J. (2013). Improving learnersâ€™ reading skills through instant short messages: A sample study using WhatsApp.

Piotrowski, C. (2015). Emerging research on Social Media use in education: A study of dissertations. *Research in Higher Education Journal*, 27, 1-12.

Polit, D. F., Beck, C. T., & Hungler, B. P. (2001). Essentials of. *Nursing Research Methods, Appraisal*.

Ponterotto, J. G. (2005). Qualitative research in counseling psychology: A primer on research paradigms and philosophy of science. *Journal of counseling psychology*, 52(2), 126.

Powell, T. C. (2001). Competitive advantage: logical and philosophical considerations*. Strategic management journal*, 22(9), 875-888.

Prensky, M (2001), 'Digital Natives, Digital Immigrants', *On the Horizon*, Vol. 9 No. 5, pp. 1–6. doi:10.1108/10748120110424816

Prensky, M. (2006). Listen to the natives. (School should improve teaching). *Educational Leadership, 63*(4), 8-13.

Prensky, M. (2012). Brain gain: Technology and the quest for digital wisdom. St. Martin's Press.

Prensky, M. (2016). Education to Better Their World: Unleashing the Power of 21st-Century Kids. New York: Teacher College Press.

Prescott, J. (2014). Teaching style and attitudes towards Facebook as an educational tool. *Active Learning in Higher Education*, *15*(2), 117-128.

Punch, K. F. and Oancea, A. (2014). *Introduction to Research Methods in Education*. SAGE.

Purcell, K., Heaps, A., Buchanan, J., & Friedrich, L. (2013). How teachers are using technology at home and in their classrooms. *Washington, DC: Pew Research Center's Internet & American Life Project*.

Qualman, E. (2012). *Socialnomics: How social media transforms the way we live and do business*. John Wiley & Sons.

Rescher, N. (2001). *Cognitive pragmatism: The theory of knowledge in pragmatic perspective.* University of Pittsburgh Pre.

Ritchie, J., Spencer, L., Bryman, A., & Burgess, R. G. (1994). Analysing qualitative data.

Roblyer, M., McDaniel, M., Webb, M., Herman, J., & Witty, J. (2010). Finding on Facebook in Higher Education: a comparison of college tutors and student uses and perceptions of social networking sites. *Internet and higher education*, 13,134e140.

Robson, C., & McCartan, K. (2016). *Real world research*. John Wiley & Sons.

Rogers, E. M (2003), *Diffusion of innovations*, 5th ed New York Free Press.

Rogers, P. L. (2000). Barriers to adopting emerging technologies in education. *Journal of educational computing research*, 22(4), 455-472.

Roth, W. D., & Mehta, J. D. (2002). The Rashomon effect: Combining positivist and interpretivist approaches in the analysis of contested events. *Sociological methods & research*, *31*(2), 131-173.

Roopchund, R., Ramesh, V., & Jaunky, V. (2019). Use of Social Media for Improving Student Engagement at Université des Mascareignes (UDM). *In Information Systems Design and Intelligent Applications* (pp. 11-20). Springer, Singapore.

Russell, C., Malfroy, J., Gosper, M., & McKenzie, J. (2014). Using research to inform learning technology practice and policy: A qualitative analysis of student perspectives. *Australian Journal of Educational Technology*, 30(1), 1–15

Ryan, A. B. (2006). Post-positivist approaches to research. *Researching and Writing your Thesis: a guide for postgraduate students*, 12-26.

Saqr, M., Fors, U., Tedre, M., & Nouri, J. (2018). How social network analysis can be used to monitor online collaborative learning and guide an informed intervention. *PloS one*, 13(3), e0194777.

Saha, N., & Karpinski, A. C. (2018). The influence of social media on international students' global life satisfaction and academic performance. In *Campus support services, programs, and policies for international students* (pp. 57-76). IGI Global.

Saini, M. C., & Abraham, J. (2015). Using Social media for educational purposes: Approaches and Challenges. In *International Education Conference 2015 on Learning Technologies in Education*.

Sait, S., Al-Tawil, K., Sanaullah, S., & Faheemuddin, M. (2007). Impact of Internet Usage in KSA: A social Perspective. *International Journal of Information Technology and Web Engineering*, 2(2), 81-107.

Salem, F. (2017). Social media and the internet of things towards data-driven policymaking in the Arab world: potential, limits and concerns. *The Arab Social Media Report, Dubai: MBR School of Government*, *7*.

Salmon, G. (2004). E-moderating: The key to teaching and learning online, Routledge Falmer.

Samin, N. (2012). Saudi Arabia, Egypt, and the social media moment. *Arab Media & Society*, *15*, 146-65.

Sammons, P., & Teddlie, C. (2010). Applications of mixed methods to the field of Educational Effectiveness Research. In *Methodological Advances in Educational Effectiveness Research* (pp. 129-166). Routledge.

Sarapin, S. H., & Morris, P. L. (2015). Tutors and Facebook friending: Instructor-student online social communication from the professor's perspective. *The Internet and higher education*, 27, 14-23

Sarwar, B., Zulfiqar, S., Aziz, S., & Ejaz Chandia, K. (2019). Usage of Social Media tools for collaborative learning: The effect on learning success with the moderating role of cyberbullying. *Journal of Educational Computing Research*, 57(1), 246-279.

Saudi Electronic University (2012) *Saudi Electronic University*: About the University. [Online] Available at: http://seu.edu.sa/en/index.php/pages/view/35/ [Accessed: 22 Jan 2013].

Saudi Arabia Social Media Statistics (October 29th, 2019) Retrieved from https://www.globalmediainsight.com/blog/saudi-arabia-social-media-statistics/

Saudi Digital Library (SDL), Saudi Arabia (n.d) viewed 1 November 2016 http://portal.sdl.edu.sa/english/

Saudi Arabia's Vision 2030, (2016). *National Transformation Program 2020*. [Online]. Viewed 11 August 2016, http://vision2030.gov.sa/en/ntp

Saudi Arabia Ranks First on Twitter Worldwide! (2013, November 17). The Social Clinic. Retrieved from http://goo.gl/DmKKuZ

Saunders, M., Lewis, P., & Thornhill, A. (2009). Research methods for business students. Essex. *Financial Times/Prentice Hall*.

Schwandt, T. A. (1994). Constructivist, interpretivist approaches to human inquiry. *Handbook of qualitative research*, *1*, 118-137.

Schwandt, T. A. (2014). *The Sage dictionary of qualitative inquiry*. Sage Publications.

Scott, D. and Morrison, M. (2007). *Key Ideas in Educational Research*. London: Bloomsbury Academic.

Seaman, J., & Tinti-Kane, H. (2013). *Social media for teaching and learning*. London, England: Pearson Learning Systems.

Selwyn, N. (2012). Social Media in Higher Education. *The Europa world of learning*, 1-10.

Sen, S. (2005). The Effect of Technology Acceptance on Post-Secondary African-American Students Achievement in Mathematics: A Path Analytic Inquiry.

Seo, K. (2012). *Using Social Media Effectively in the Classroom: blogs, wikis, twitter, and more*. Routledge.

Sheeran, N., & Cummings, D. J. (2018). An examination of the relationship between Facebook groups attached to university courses and student engagement. *Higher Education*, 76(6), 937-955.

Sherer, P., & Shea, T. (2011). Using online video to support student learning and engagement. *College Teaching*, *59*(2), 56-59.

Siemens, G. (2014). Connectivism: a learning theory for the digital age. 2004. Online: http://www. elearnspace. org/Articles/connectivism. htm (accessed October 2012).

Sim, T. Y., Naidu, D., Apparasamy, D., Ganapathy, M., Rana, H., Lal, M., & Bortolozzi, F. (2014). Improving student's engagement through Social Media: a case study of a private university in Malaysia using Facebook. *International Journal of e-Education, e-Business, e-Management and e-Learning*, 4(6), 396-409.

Smith, L., & Abouammoh, A. (2013). Higher education in Saudi Arabia: Reforms, challenges and priorities. In *Higher Education in Saudi Arabia* (pp. 1-12). Springer, Dordrecht.

Sobaih, A. E., & Moustafa, M. (2016). Speaking the same language: the value of social networking sites for hospitality and tourism HE in Egypt. *Journal of Hospitality & Tourism Education*, 28(1), 46e56.

Sohoni, T. (2019). Harnessing the Power of Social Media in the Classroom: Challenging Students to Create Content to Share on Social Media Sites to Improve Learning Outcomes. *Journal of Criminal Justice Education*, 1-18.

Stufft, C. J. (2013). It started with an iced cappuccino: Social Media and social good. *A Journal of the Texas Council of Teachers of English Language Arts, 43*(2), 23 28.

Sugimoto, C. R., Work, S., Lariviere, V., & Haustein, S. (2017). Scholarly use of Social Media and altmetrics: A review of the literature. *Journal of the Association for Information Science and Technology*, 68(9), 2037-2062.

Tashakkori, A., Teddlie, C., & Teddlie, C. B. (1998). *Mixed methodology: Combining qualitative and quantitative approaches* (Vol. 46). Sage.

Tashakkori, A., & Teddlie, C. (2010). *Sage handbook of mixed methods in social & behavioral research*. Sage.

Tasir, Z., Al-Dheleai, Y. M. H., Harun, J., & Shukor, N. A. (2011). Student's Perception towards the Use of Social Networking as an e-Learning Platform. In *10th WSEAS International Conference on Education and Educational Technology, Penang: Malaysia* (pp. 70-75).

Tatweer (2012). *Tatweer, King Abdullah Project for General Education Development*. Retrieved 1 Mar 2019, from http://www.tatweer.edu.sa/

Teddlie, C., & Tashakkori, A. (2009). *Foundations of mixed methods research: Integrating quantitative and qualitative approaches in the social and behavioral sciences*. Sage.

Teijlingen, E. R., & Hundley, V. (2001). The importance of pilot studies. Social Research UPDATE, (35). Guildford: University of Surrey.

The General Authority for Statistics (2018). *Population by Age Groups, Sex and Nationality.* available at https://www.stats.gov.sa/en/5680 [accessed 2018. 22-5-2018].

The National Center for E-Learning and Distance learning http://www.elc.edu.sa/portal/index.phpmod=content&page=1

The New London Group. (1996). A pedagogy of multiliteracies: Designing social futures. *Harvard Educational Review, 66*(1), 60-93.

Thomas, D. R. (2006). A general inductive approach for analysing qualitative evaluation data. *American journal of evaluation*, *27*(2), 237-246.

Uerz, D., Volman, M., & Kral, M. (2018). Teacher educators' competences in fostering student teachers' proficiency in teaching and learning with technology: An overview of relevant research literature. *Teaching and Teacher Education*, 70, 12-23.

Valtonen, T., Tedre, M., Mäkitalo, K., & Vartiainen, H. (2019). Media literacy education in the age of machine learning. *Journal of Media Literacy Education*, *11*(2), 20-36.

Van Braak, J. (2001). Individual characteristics influencing teachers' class use of computers. *Journal of educational computing research*, 25(2), 141-157.

Veletsianos, G. (2013). Open Practices and Identity: Evidence from Researchers and Educators' Social Media Participation. *British Journal of Educational Technology*, 44(3), 639-651.

Venkataraman, S. & Sivakumar, S. (2015). Engaging students in group-based learning through e-learning techniques in Higher Education system. *International Journal of Emerging Trends in Science and Technology*, 2(1), 1741-1746.

Verhagen, P. (2006). Connectivism: A new learning theory.

Villar, E. & Albertin, P. (2010). "It is who knows you." The positions of university students regarding intentional investment in social capital. *Studies in Higher Education*, 35(2), 137-154.

Wang, Y. C. (2014). Using wikis to facilitate interaction and collaboration among EFL learners: A social constructivist approach to language teaching. *System*, 42(1), 383–390.

Weisgerber, C., & Butler, S. (2010). Editor's introduction: Special issue on communication pedagogy in the age of Social Media. *Electronic Journal of Communication*, 20(1-2), 1.

Welzer, T., Hölbl, M., Družovec, M., & Brumen, B. (2011). Cultural awareness in social media. In *Proceedings of the 2011 international workshop on DETecting and Exploiting Cultural diversiTy on the social web* (pp. 3-8).

Wellington, J. (2000). *Educational research: Contemporary issues and practical approaches.* Bloomsbury Publishing.

Williams, M., & May, T. (1996). *Introduction to the philosophy of social research*. London: UCL Press.

Williams, A. (2003). How to… Write and analyse a questionnaire. *Journal of orthodontics*.

Wingo, N. P., Ivankova, N. V., & Moss, J. A. (2017) Tutors perceptions about teaching online: exploring the literature using the technology acceptance model as an organizing framework, *Online Learning* 21(1), 15-35.

Wisker, G. (2008): *The postgraduate research handbook*. 2nd Edition. Houndmills: Palgrave Macmillan.

Wulfert, E. (1993). Social learning theory: Albert Bandura. In F.N. Magill (Ed.), Survey of Social Science: Psychology, pp.2304–2310. Pasadena, CA: Salem Press.

Yang, R. (2003). Globalisation and higher education development: A critical analysis. International Review of Education, 49(3-4), 269-291.

Ybarra, M.L., Mitchell, K.J., Wolak, J., & Finkelhor, D. (2006). Examining characteristics and associated distress related to Internet harassment: Findings from the second youth Internet safety survey. *Pediatrics*, 118, 1169–1177.

Yee, R. C. S. (2015). Perceptions of online learning in an Australian University: Malaysian students' perspective—Support for learning. *International Journal of Information and Education Technology*, 5, 587-592.

Yin, R. K. (1994). Designing single-and multiple-case studies. *Improving Educational Management: Through Research and Consultancy*, 135-155.

Yin, R. K. (2011). *Qualitative research from start to finish*. New York, NY: The Guilford.

Yin, R. K. (2014). *Case study research: Design and methods.* Thousand Oaks, CA: SAGE.

Zabadi, A. M., & Al-Alawi, A. H. (2016). University Students' Attitudes towards E-Learning: University of Business & Technology (UBT)-KSA Jeddah: A Case Study. *International Journal of Business and Management*, 11(6), 286.

Zakharov, W., Horton, A., Reid, P., Willis, J., & Attardo, D. (2017). Social media: An integration guideline for teaching and learning in higher education. In *Learning and knowledge analytics in open education* (pp. 149-169). Springer, Cham.

Zgheib, G. (2014). *Social Media Use in Higher Education: An Exploratory Multiple-Case Study* (Doctoral dissertation).

Ziyadah, S. M. (2012). Saudi female attitudes toward distance learning in higher education (Doctoral dissertation, Indiana State University).

Zou, D., Xie, H., Wang, F. L., & Kwan, R. (2020). Flipped learning with Wikipedia in higher education. *Studies in Higher Education*, 1-20.

Appendices

Appendix 1: Research Ethics Committee Approval

University of Glasgow

College of Social Sciences

8 March 2017

Dear Omar Abdullah Omar Alshehri

College of Social Sciences Research Ethics Committee

Project Title: Examining the existing reality of using Social Media as e-learning tools at an emerging university in Saudi Arabia from the viewpoint of tutors and students.

Application No: 400160101

The College Research Ethics Committee has reviewed your application and has agreed that there is no objection on ethical grounds to the proposed study. It is happy therefore to approve the project, subject to the following conditions:

- Project end date: _ 28/09/2019 _
- The data should be held securely for a period of ten years after the completion of the research project, or for longer if specified by the research funder or sponsor, in accordance with the University's Code of Good Practice in Research: (http://www.gla.ac.uk/media/media_227599_en.pdf)
- The research should be carried out only on the sites, and/or with the groups and using the methods defined in the application.
- Any proposed changes in the protocol should be submitted for reassessment as an amendment to the original application. The *Request for Amendments to an Approved Application* form should be used: http://www.gla.ac.uk/colleges/socialsciences/students/ethics/forms/staffandpostgraduateresearchstudents/

Yours sincerely,

Dr Muir Houston
College Ethics Officer

Muir Houston, Senior Lecturer
College of Social Sciences Ethics Officer
Social Justice, Place and Lifelong Education Research
University of Glasgow
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Appendix 2: Request for Amendments- Research Ethics Committee Approval for tutors Interview

University of Glasgow

College of Social Sciences

College Research Ethics

Request for Amendments - Reviewer Feedback

Ethics Committee for Non-Clinical Research Involving Human Subjects

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Application Details

Staff Research Ethics Application ☐ Postgraduate Student Research Ethics Application ☒

Application Number: 400160101

Applicant's Name: Omar Abdullah Omar Alshehri

Project Title: Establishing Standards for an Adaptive E-Learning Environment, with a View to Enhancing the Study Skills in Students of Educational Technology in Saudi Arabia.

Original Date of Application Approval: 8 March 2017

End Date of Application Approval: 28/09/2018

Date of Amendments Approval: 20/10/2017

Outcome: Amendments Approved

Reviewer Comments

Please retain this notification for future reference. If you have any enquiries, please email socsci-ethics@glasgow.ac.uk.

University of Glasgow
College of Social Sciences
Florentine House, 53 Hillhead Street. Glasgow G12 8QF
The University of Glasgow, charity number SC004401
E-mail: socsci-ethics@glasgow.ac.uk
PP

Appendix 3: Consent Form in English

University of Glasgow

College of Social Sciences

Consent Form

Title of Project:
Establishing Standards for an Adaptive E-Learning Environment, with a View to Enhancing the Study Skills in Students of Educational Technology in Saudi Arabia. .....

Name of Researcher: Omar Abdullah Alshehri
Name of Supervisor: Prof: Vic Lally

Basic consent clauses

I confirm that I have read and understood the Plain Language Statement for the above study and have had the opportunity to ask questions.

I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.

Confidentiality and Anonymity

I acknowledge that participants will be referred to by pseudonym in quotes from interviews, and that relevant authorities may be consulted in some circumstances (see Plain Language Statement).

Where dependent relationship exists

I acknowledge that there will be no effect on my grades/employment arising from my participation or non-participation in this research.

Clauses relating to data usage and storage

- The material will be destroyed once the project is complete.
- I agree to waive my copyright to any data collected as part of this project.
- The material will be treated as confidential and kept in secure storage at all times.

Basic consent clause, tick box format

I agree to take part in this research study ☐
I do not agree to take part in this research study ☐
I consent to the interview being audio recorded ☐

Name of Participant: ..... Signature
Date .....
Name of Researcher: Omar Abdullah Omar Alshehri
Signature O. Alshehri
Date .....
End of consent form .....

Appendix 4: Plain language statement-Interview

University of Glasgow

College of Social Sciences

Plain Language Statement

Study title and Researcher Details

My name is Omar Abdullah Omar Alshehri. I am a student at the University of Glasgow. For my doctoral studies I am carrying out a research project. The title of the project is:

Examining the existing reality of using Social Media as e-learning tools at an emerging university in Saudi Arabia from the viewpoint of tutors and students

This research is supervised by Prof Victor Lally at the University of Glasgow (victor.lally@Glasgow.ac.uk, telephone: 0141 3303424) Dr: David Morrison-Love (email: David.Morrison-Love@glasgow.ac.uk, telephone: 0141 330 3095 and Dr: Kristinn Hermannsson (email: Kristinn.Hermannsson@glasgow.ac.uk, telephone: 0141 330 3095) at the University of Glasgow

Thank you for taking the time to read this.

Invitation

I would like to invite you to take part in this research study. Before you decide whether you would like to take a part it is important for you to understand why the research is being done and what it will involve. Please take the time to read the following information carefully and discuss it with me if you wish. Please feel free to ask questions about anything in which you are unclear. Please take your time to consider whether you wish to take part. If you would like to have more information, please contact me.

The purpose of the study

The main purpose of the study is to understand the use of Social Media in teaching and learning through examining current and actual uses of Social Media for educational purposes. The study will also highlight obstacles involved in the implementation of Social Media in university in Saudi Arabia. In addition, this research aims to help in developing better use of smartphones in higher education and to investigate instructors and students uses and experiences with Social Media and Social Media in education.

What is required of you?

I would like to interview you for approximately 30 minutes and make a recording of the interview. This will take place by arrangement with you. The interview will be conducted by skype or phone or face-to- face at a mutually convenient time. The data from this interview may be used in my doctoral thesis, and any publications arising from it. You may request a copy of these documents from me when the research is completed. I may also ask you to complete a short online questionnaire.

How participant's personal details will be kept confidential

The data will be gathered and coded by numbers or letters rather than the names of participants, and once the data has achieved its purpose, it will be destroyed. Access to computer files to be available by password only and, after analysis, the data will be destroyed in the presence of the researcher and the supervisors.

Confidentiality

Please note that assurances on confidentiality will be strictly adhered to unless evidence of wrongdoing or potential harm is uncovered. In such cases the University may be obliged to contact relevant statutory bodies/agencies.

Organisation funding the research

Bisha University in Saudi Arabia

This project has been considered and approved by the College of Social Sciences Research Ethics Committee at the University of Glasgow, UK

Contact for Further Information

For further information, please contact Prof Victor Lally at the University of Glasgow (victor.lally@Glasgow.ac.uk, telephone: 0141 330 3036 Dr: David Morrison-Love (email: David.Morrison-Love@glasgow.ac.uk, telephone: 0141 330 3095 and Dr: Kristinn Hermannsson (email: Kristinn.Hermannsson@glasgow.ac.uk, telephone: 0141 330 3095) at the University of Glasgow

If you have any concerns regarding the conduct of this research project you can contact the College of Social Sciences Ethics Officer, Dr Muir Houston, email: Muir.Houston@glasgow.ac.uk

Appendix 5: Research Informed Consent (Arabic Version)

الباحث الرئيسي:
الأسم: عمر عبد الله عمر الشهري. طالب دكتوراه في التعليم والتصميم الإلكتروني في جامعة غلاسكو .
عنوان الدراسة:
فحص استخدام وسائل التواصل الأجتماعي كادوات للتعلم الإلكتروني في العملية التعليمية من خلال دراسة الاستخدامات الحالية والفعلية لتلك الادوات الاجتماعية لأغراض تعليمية في جامعة بيشة في المملكة العربية السعودية .
ويشرف على هذا البحث البروفسور فيكتور لالي في جامعة غلاسكو victor.lally@Glasgow.ac.uk ، هاتف: 01413303424
شكرا لك على أخذ الوقت لقراءة هذا.
دعوة للمشاركة :
أود أن أدعوكم للمشاركة في هذه الدراسة البحثية. قبل أن تقرر ما إذا كنت ترغب في المشاركة من عدمها. من المهم بالنسبة لك أن تفهم لماذا يجري البحث وما سوف تنطوي عليه. يرجى أخذ الوقت الكافي لقراءة المعلومات التالية بعناية ومناقشتها معي إذا كنت ترغب في ذلك. لا تتردد في طرح الأسئلة حول أي شيء غير واضح. يرجى أخذ وقتك للنظر فيما إذا كنت ترغب في المشاركة. إذا كنت ترغب في الحصول على مزيد من المعلومات، يرجى الاتصال بي.
الغرض من الدراسة
الغرض الرئيسي من الدراسة هو فحص استخدام وسائل التواصل الأجتماعي كادوات للتعلم الإلكتروني في العملية التعليمية من خلال دراسة الاستخدامات الحالية والفعلية لتلك الادوات الاجتماعية لأغراض تعليمية. وستسلط الدراسة الضوء أيضا على العقبات التي تعترض استخدام وسائل التواصل الاجتماعي كادوات للتعلم الإلكتروني في جامعة بيشة في المملكة العربية السعودية. وبالإضافة إلى ذلك، يهدف هذا البحث إلى المساعدة في استخدام وسائل التواصل الأجتماعي في التعليم العالي من خلال تطوير اعضاء هئية التدريس والطلاب من خلال إقامة الدورات التدريبية الغعالة التي تسهم في تبني مثل هذه الادوات.
إجراءات الدراسة:
أود أن اعمل مقابلة معك لمدة 20 دقيقة تقريبا. المقابلة سوف تكون مسجلة. بعد الترتيب والتنسيق معك، ستجرى المقابلة بواسطة سكايب أو الهاتف أو وجها لوجه في وقت مناسب للطرفين. بيانات هذه المقابلة سوف تستخدم لاغراض البحث العلمي فقط. يمكنك طلب نسخة من هذه الوثائق من الباحث عند الانتهاء من البحث. قد يطلب منك أيضا إكمال استبيان قصير على الإنترنت.
الخصوصية:
سيتم جمع البيانات وترميز ها بالأرقام أو الحروف بدلا من أسماء المشاركين، وبمجرد أن تحقق البيانات غرضها، سيتم حذفها. ستحفظ المعلومات في الكمبيوتر الشخصي للباحث وسوف يكون محمي برقم سري لا يعرفه سوى الباحث فقط. بعد التحليل، سيتم حذف البيانات بحضور الباحث والمشرفين.
الموسسة الممولة للباحث
جامعة بيشة في المملكة العربية السعودية
وقد تم النظر في هذا المشروع والموافقة عليها من قبل عمادة البحث العملي وكلية الاجتماعية في جامعة غلاسكو، المملكة المتحدة
الاستفسارات :
يرجى الاتصال أ.د: فيكتور لالي - جامعة غلاسكو victor.lally@Glasgow.ac.uk، هاتف: 01413303424
إذا كان لديك أي مخاوف بشأن سلوك هذا المشروع البحثي يمكنك الاتصال كلية الأخلاقيات العلوم الاجتماعية، الدكتور موير هيوستن، البريد الإلكتروني: Muir.Houston@glasgow.ac.uk

Appendix 6: Approval to Conduct the Study

الرقم: ٣٩٩٠٩/٢١/٥٨ التاريخ: ١٤٣٨/١١/١٦ عدد المرفقات: *

المملكة العربية السعودية
وزارة التعليم
جامعة بيشة

Kingdom of Saudi Arabia
Ministry of Education
University of Bisha

الي من يهمه الامر

السلام عليكم ورحمة الله وبركاته وبعد :-

تفيد جامعة بيشة بانه لا مانع لديها من قيام المبتعث لبريطانيا لدرجة الدكتوراه والذي هو احد منسوبيها المبتعث عمر عبدالله عمر هزاع الشهري من الموافقة له على القيام برحلة علمية لمدة ثلاثة اشهر تبدا في شهر ديسمبر 2017م والقيام بدراسة ميدانية في مقر الجامعة الرئيسي في محافظة بيشة والفروع التابعة لها اعتبارا من تاريخ 2017/12/15 حتى 2018/3/15م علما بان البحث متعلق بمجال (التعليم الالكتروني) تحت عنوان (استخدام مواقع التواصل الاجتماعي كأدوات للتعليم الالكتروني) لمرحلة الدكتوراه في جامعة جلاسكو ببريطانيا وسوف يشرف عليه قسم تكنولوجيا التعليم بكلية التربية بالجامعة طوال فترة اجراء الطالب لدراسته الميدانية خلال الفترة الموضحة أعلاه.

وبالله التوفيق . وتفضلوا بقبول وافر احترامي وتقديري

وكيل الجامعة

للدراسات العليا والبحث العلمي

د. مهدي بن علي القرني

ص/ لمكتبنا
ص/ لكلية التربية
ص/ للابتعاث والتدريب ص/ للصادر؛

الرقم / التاريخ / 14هـ المرفقات /

Appendix 7: Students Electronic Survey –Arabic

استبيان الطلاب الإلكتروني

السلام عليكم ورحمة الله وبركاته ،،،
أدعوكم للمشاركة في هذه الدراسة حول استخدام وسائل التواصل الاجتماعي كأدوات للتعلم الالكتروني في إحدى الجامعات الناشئة في المملكة العربية السعودية. لاستكمال هذه الاستبانة، تحتاج إلى ١٠دقائق.

مشاركتك في هذا الاستبيان تطوعية ولا يوجد أي تعويض للمشاركة، ويمكنك الانسحاب في أي وقت. علماً بأنه لن يتم طلب أي اسم من المشاركين والمشاركات وسوف تحفظ جميع البيانات بكل سرية.

إذا كان لديك استفسارات حول المشاركة أو معرفة هذه الدراسة، يرجى التواصل مع الباحث من خلال الايميل التالي:
o.alshehri.1@research.gla.ac

ولكم جزيل الشكر والتقدير،،،
عمر عبدالله عمر الشهري
تقنيات التعليم- جامعة جلاسكو الحكومية
المملكة المتحدة البريطانية

الجزء الأول: معلومات عامة	
1. ما هو الجنس؟	
☐ ذكر	☐ أنثى
2. العمر	
☐ أقل من 20 سنة	☐ 20 - 25
☐ 25 - 30	☐ أكثر من 30 سنة
3. تخصصك الدراسي	
☐ التخصصات الطبية ، الهندسية، والعلمية	☐ التخصصات الانسانية، التربوية، والشرعية
4. أجهزة الكترونية تمتلكها	
☐ لابتوب	☐ إيفون
☐ إيباد	☐ أو سامسونغ
5. هل تستخدم وسائل التواصل الاجتماعي؟	
☐ نعم	☐ لا

الجزء الثاني. استخدام وسائل التواصل الاجتماعي وأغراضها

ضع أمام كل عبارة فيما يأتي إشارة (✓) في الخانة التي تتوافق مع إجابتك.

1. مدى استخدامك أدوات التواصل الأجتماعي للأغراض المذكورة

الأداة	كثيراً	غالباً	أحياناً	نادراً	أبداً
1. التواصل الاجتماعي					
2. الأخبار					
3. التعلم					
4. الترفيه					
5. اخرى					

2. مدى استخدامك لكل نوع من أنواع وسائل التواصل الأجتماعي المذكورة

الأداة	كثيراً	غالباً	أحياناً	نادراً	أبداً
1. الفيسبوك					
2. توتير					
3. اليوتيوب					
4. الواتساب					
5. الويكي او ويكيبيديا					
6. الاسكايب					
7. اخرى					

3. مدى استخدام المدرسين لأي من وسائل التواصل الاجتماعي التالية في عرض/ دعم المواد الدراسية

الأداة	كثيراً	غالباً	أحياناً	نادراً	أبداً
1. الفيسبوك					
2. توتير					
3. اليوتيوب					
4. الواتساب					
5. الويكي او ويكيبيديا					
6. الاسكايب					
7. اخرى					

الجزء الثالث: آراء الطلاب في مزايا وسائل التواصل الاجتماعي لدعم عملية التعلم

ضع أمام كل عبارة فيما يأتي إشارة (✓) في الخانة التي تتوافق مع إجابتك.

العبارة	أوافق بشدة	أوافق	محايد	لا أوافق	لا أوافق بشدة
1. وسائل التواصل الاجتماعي تسمح بمناقشة المواضيع الدراسية بين الطلاب					
2. تسمح لي وسائل التواصل الاجتماعي بالبحث عن الموارد التعليمية وتبادلها					
3. استخدام وسائل التواصل الاجتماعي كأداوات تعليمية تنمي المعرفة وتعززها					
4. تعزز وسائل التواصل الاجتماعي من خبرات التعلم لدى الطلاب					
5. الطلاب أكثر تفاعلا مع العملية التعليمية باستخدام وسائل التواصل الاجتماعي كادوات للتعلم الالكتروني					
6. تعمل وسائل التواصل الاجتماعي على صقل شخصية الطالب من خلال سعة ثقافته وتنوعها					

7. تساهم وسائل التواصل الاجتماعي بتلاقي أصحاب الهوايات المختلفة وتعزيزها						
8. وسائل التواصل الاجتماعي تقلل الجهد والتكلفة للتواصل مع المعلمين والاصدقاء						

الجزء الرابع: المخاوف والمشاكل المتعلقة باستخدام وسائل التواصل الاجتماعي

ضع أمام كل عبارة فيما يأتي إشارة (✓) في الخانة التي تتوافق مع إجابتك.

العبارة	أوافق بشدة	أوافق	محايد	لا أوافق	لا أوافق بشدة
1. استخدام وسائل التواصل الاجتماعي في العملية التعليمية يمكن أن يصرف انتباه الطلاب عن التعلم الأكاديمي					
2. أشعر بالقلق إزاء الخصوصية عند استخدام وسائل التواصل الاجتماعي في العملية التعليمية.					
3. أشعر بالقلق إزاء تهديد البريد المزعج وهجمات التصيد عند استخدام وسائل التواصل الاجتماعي في العملية التعليمية.					
4. استخدام وسائل التواصل الاجتماعي لنشر وتوصيل الدروس اليومية مباشرة يستغرق وقتا طويلا جدا.					
5. لدي مخاوف بشأن القضايا التي تتعلق بحقوق المؤلف والملكية الفكرية في وسائل التواصل الاجتماعي					
6. أستطيع التعامل وفهم مواقع وسائل التواصل الاجتماعي التي باللغة الإنجليزية					
7. بعض محتويات وسائل التواصل الاجتماعي تعارض تعاليم الدين الاسلامي					
8. أشعر بالقلق إزاء من يراقب وسائل التواصل الاجتماعي وكيفية التعامل معه					
9. أدوات وسائل التواصل الاجتماعي تمنع أوتحد من قدرتي على التعبير عن أفكاري وآرائي					
10. أشعر بالقلق من مخاطر الاستخدام غير السليم للتكنولوجيا من قبل الطلاب					
11. مخاطر التسلط عبر الإنترنت تشعرتي بالقلق لانها تسبب نتائج نفسية واجتماعية عميقة					

الجزء الخامس: سؤال مفتوح

أ. هل لديك تعليقات أو أفكار أخرى بشأن استخدام وسائل التواصل الاجتماعي كأدوات للتعلم الإلكتروني لدعم التعلم؟

أشكر لك مشاركتك

Appendix 8: Tutors Electronic Survey –Arabic

استبيان أعضاء هيئة التدريس الإلكتروني

السلام عليكم ورحمة الله وبركاته ،،،
أدعوكم للمشاركة في هذه الدراسة حول استخدام وسائل التواصل الاجتماعي كأدوات للتعلم الالكتروني في إحدى الجامعات الناشئة في المملكة العربية السعودية. لاستكمال هذه الاستبانة، تحتاج إلى ١٠دقائق.

لكي تشارك، يجب أن تكون عضو هيئة تدريس (أستاذ، أستاذ مشارك، أستاذ مساعد، محاضر، معيد، او مدرس).

مشاركتك في هذا الاستبيان تطوعية ولا يوجد أي تعويض للمشاركة، ويمكنك الانسحاب في أي وقت. علماً بأنه لن يتم طلب أي اسم من المشاركين والمشاركات وسوف تحفظ جميع البيانات بكل سرية.

إذا كان لديك استفسارات حول المشاركة أو معرفة هذه الدراسة، يرجى التواصل مع الباحث من خلال الايميل التالي:
o.alshehri.1@research.gla.ac.uk

ولكم جزيل الشكر والتقدير،،،
عمر عبدالله عمر الشهري
تقنيات التعليم- جامعة جلاسكو الحكومية
المملكة المتحدة البريطانية

الجزء الأول: معلومات عامة	
1. ما هو الجنس؟	
☐ ذكر	☐ أنثى
2. العمر	
☐ 20 - 30	☐ 31 -40
☐ 41 - 50	☐ 51 - 60
3. تخصصك الدراسي	
☐ التخصصات الطبية ، الهندسية، والعلمية	☐ التخصصات الانسانية، التربوية، والشرعية
4. كم عدد سنوات خبرتك التعليمية؟	
☐ أقل من 5 سنوات	☐ 5 - 10 سنوات
☐ أكثر من 10 سنوات	☐ غير ذلك
4. أجهزة الكترونية تمتلكها	
☐ لابتوب	☐ إيفون
☐ إيباد	☐ أو سامسونغ
5. هل تستخدم وسائل التواصل الاجتماعي؟	
☐ نعم	☐ لا

الجزء الثاني: استخدام وسائل الإعلام الاجتماعية وأغراضها

ضع أمام كل عبارة فيما يأتي إشارة (✓) في الخانة التي تتوافق مع إجابتك.

1. مدى استخدامك أدوات التواصل الأجتماعي للأغراض المذكورة

الاداه	كثيراً	غالباً	أحياناً	نادراً	أبداً
1. التواصل الاجتماعي					
2. الأخبار					
3. التعلم					
4. الترفيه					
5. اخرى					

2. مدى استخدامك لكل نوع من أنواع وسائل التواصل الأجتماعي المذكورة

الأداه	كثيراً	غالباً	أحياناً	نادراً	أبداً
1. الفيسبوك					
2. توتير					
3. اليوتيوب					
4. الواتساب					
5. الويكي او ويكبيديا					
6. الاسكايب					
7. اخرى					

3. مدى استخدامك لأي من وسائل التواصل الاجتماعي التالية في عرض/ دعم المواد الدراسية

الأداه	كثيراً	غالباً	أحياناً	نادراً	أبداً
1. الفيسبوك					
2. توتير					
3. اليوتيوب					
4. الواتساب					
5. الويكي او ويكبيديا					
6. الاسكايب					
7. اخرى					

الجزء الثالث: آراء أعضاء هيئة التدريس في مزايا وسائل التواصل الاجتماعي لدعم عملية التعلم

ضع أمام كل عبارة فيما يأتي إشارة (✓) في الخانة التي تتوافق مع إجابتك.

العبارة	أوافق بشدة	أوافق	محايد	لا أوافق	لا أوافق بشدة
1. وسائل الاعلام الاجتماعية تسمح بمناقشة المواضيع الدراسية بين الطلاب					
2. تسمح لي وسائل التواصل الاجتماعي بالبحث عن الموارد التعليمية وتبادلها					
3. استخدام وسائل التواصل الاجتماعي كأدوات تعليمية تنمي المعرفة وتعززها					
4. تعزز وسائل التواصل الاجتماعي من خبرات التعلم لدى الطلاب					
5. الطلاب أكثر تفاعلا مع العملية التعليمية باستحدام وسائل التواصل الاجتماعي كادوات للتعلم الالكتروني					
6. تعمل وسائل التواصل الاجتماعي على صقل شخصية المعلم من خلال سعة ثقافته وتنوعها					

7. تساهم وسائل التواصل الاجتماعي بتلاقي أصحاب الهوايات المختلفة وتعزيزها					
8. وسائل التواصل الاجتماعي تقلل الجهد والتكلفة للتواصل مع المعلمين والطلاب					

الجزء الرابع: المخاوف والمشاكل المتعلقة باستخدام وسائل التواصل الاجتماعي

ضع أمام كل عبارة فيما يأتي إشارة (✓) في الخانة التي تتوافق مع إجابتك.

العبارة	أوافق بشدة	أوافق	محايد	لا أوافق	لا أوافق بشدة
12. استخدام وسائل التواصل الاجتماعي في العملية التعليمية يمكن أن يصرف انتباه الطلاب عن التعلم الأكاديمي					
13. أشعر بالقلق إزاء الخصوصية عند استخدام وسائل التواصل الاجتماعي في العملية التعليمية.					
14. استخدام وسائل التواصل الاجتماعي لنشر وتوصيل الدروس اليومية مباشرة يستغرق وقتا طويلا جدا.					
15. لدي مخاوف بشأن القضايا التي تتعلق بحقوق المؤلف والملكية الفكرية في وسائل التواصل الاجتماعي					
16. أستطيع التعامل وفهم مواقع وسائل التواصل الاجتماعي التي باللغة الإنجليزية					
17. بعض محتويات وسائل التواصل الاجتماعي تعارض تعاليم الدين الاسلامي					
18. أشعر بالقلق إزاء من يراقب وسائل التواصل الاجتماعي وكيفية التعامل معه					
19. أدوات وسائل التواصل الاجتماعي تمنع أوتحد من قدرتي على التعبير عن أفكاري وآرائي					
20. قلة الدورات التدريبية المقدمة للمعلمين على كيفية استخدام مواقع التواصل الاجتماعي لدعم عملية التعلم تشعرني بعدم جدوى إستخدامها.					
21. مخاطر التسلط عبر الإنترنت تشعرتي بالقلق لانها تسبب نتائج نفسية واجتماعية عميقة.					

الجزء الخامس: سؤال مفتوح

أ. هل لديك تعليقات أو أفكار أخرى بشأن استخدام وسائل التواصل الاجتماعي كأدوات للتعلم الإلكتروني لدعم التعلم؟

أشكر لك مشاركتك

Appendix 9: Tutors Electronic Survey-English

To examine the existing reality of using social media as tools in e-learning at Bisha University from the viewpoint of instructors and students?

Social media are a group of online tools that support people in creating and sharing ideas in virtual communities. These tools include: Facebook, Twitter, Wikis, YouTube, WhatsApp, Skype, and other emerging social media technologies.

Part 1: Demographic Information

1. Gender?	
▪ Male	▪ Female
2. Age	
▪ 18 – 22	▪ 27 – 30
▪ 23 -26	▪ 30 – 40
3. What is your major?	
▪ Science Studies	▪ Human Studies
4. Do you have any of the smart devices (e.g., Laptop, iPhone, iPad, Samsung)?	
▪ Yes	▪ No
5. Do you use social media?	
▪ Yes	▪ No

Part 2: Social Media Usage and Purposes

A. To what extent do you use social media for the following purposes?

Statement	Never	Rarely	Sometimes	Often	Frequently
1. Social communication					
2. News					
3. Learning					
4. Entertainment					
5. Other					

B. Examples of Social Media Tools

To what extent do you use each of the following social media?

Social Media Categories	Never	Rarely	Sometimes	Often	Frequently
1. Facebook					
2. Twitter					
3. YouTube					
4. WhatsApp					
5. Wikis or Wikipedia					
6. Skype					
7. Other.....					

C. Saudi instructors' eexperiences to use social media as e-learning tools

To what extent do you have experiences to use the following social media tools?

Social Media Categories	Never	Rarely	Sometimes	Often	Frequently
1. Facebook					
2. Twitter					
3. YouTube					
4. WhatsApp					
5. Wikis or Wikipedia					
6. Skype					
7. Other.....					

Part 3: Saudi instructors' perceptions regarding the advantages of using social media as e-learning tools to support learning.

A. To what extent did instructors use any of the following social media for any classes?

Statements	Never	Rarely	Sometimes	Often	Frequently
1. Facebook					
2. Twitter					
3. YouTube					
4. WhatsApp					
5. Wikis or Wikipedia					
6. Skype					
7. Other.....					

B. To what extent do you agree or disagree with the following statements?

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Using social media as a tool of e-learning allows me to discuss topics of interest with other students.					
2. Social media allows me to find and share educational resources.					
3. Using social media as educational tools develop and promote knowledge.					
4. Social media as a tool of e-learning enhances students' learning experiences.					
5. Students are more engaged with the educational process by using social media as tools for e-learning.					

6. Social media as a tool of e-learning contributes to collect the owners of the various hobbies and encourage them.					
7. Social media as a tool of e-learning works to refine the instructor's personality through the diversity of his knowledge.					
8. Social media as a tool of e-learning decreases the effort and cost to communicate with teachers and friends.					

Part 4: Saudi instructors' perceptions regarding the disadvantages of using social media as e-learning tools to support learning.

To what extent do you agree or disagree with the following statements?

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I am concerned about privacy, security, and problems related to the use of social media in the educational process.					
2. Using social media to supplement face-to-face courses can become too time intensive.					
3. I have concerns about vague copyright and intellectual property issues involved in social media					
4. I can understand the social media websites that are in English.					
5. Some contents of social media oppose Islamic religious teachings					
6. I am concerned about who is monitoring the social media for inappropriate or offensive use and thus how we deal with it.					
7. Social media tools inhibit my ability to express my thoughts and opinions.					
8. I'm concerned about the decreases of training courses for teachers to use social media as e-learning tools to support learning.					

9. I feel concerned about the dangers of cyberbullying that can cause profound psychosocial outcomes					

Part 5: Open-Ended Question

A. Do you have other comments or thoughts regarding using social media as tools of e-learning to support learning?

Thank You for your participation....

Appendix 10: Students Electronic Survey-English

To examine the existing reality of using social media as tools in e-learning at Bisha University from the viewpoint of instructors and students?

Social media are a group of online tools that support people in creating and sharing ideas in virtual communities. These tools include: Facebook, Twitter, Wikis, YouTube, WhatsApp, Skype, and other emerging social media technologies.

Part I: Demographic Information

1. Gender?	
▪ Male	▪ Female
2. Age	
▪ 18 – 22	▪ 27 – 30
▪ 23 -26	▪ 30 – 40
3. What is your major?	
▪ Science Studies	▪ Human Studies
4. Do you have any of the smart devices (e.g., Laptop, iPhone, iPad, Samsung)?	
▪ Yes	▪ No
5. Do you use social media?	
▪ Yes	▪ No

Part 2: Social Media Usage and Purposes

A. To what extent is social media used for the following purposes?

Frequency of Use / purposes	Never	Rarely	Sometimes	Often	Frequently
1. Social communication					
2. News					
3. Learning					
4. Entertainment					
5. Other					

B. Examples of Social Media Tools

To what extent do you use each of the following social media?

Statements	Never	Rarely	Sometimes	Often	Frequently
1. Facebook					
2. Twitter					
3. YouTube					
4. WhatsApp					
5. Wikis or Wikipedia					
6. Skype					
7. Other					

C. Saudi students' eexperiences to use social media as e-learning tools

To what extent do you have experiences to use the following social media tools?

Social Media Categories	Never	Rarely	Sometimes	Often	Frequently
1. Facebook					
2. Twitter					
3. YouTube					
4. WhatsApp					
5. Wikis or Wikipedia					
6. Skype					
7. Other.....					

Part 3: Saudi students' perceptions regarding the advantages of using social media as e-learning tools to support learning.

A. To what extent did teachers use any of the following social media for any classes?

Statements	Never	Rarely	Sometimes	Often	Frequently
1. Facebook					
2. Twitter					
3. YouTube					
4. WhatsApp					
5. Wikis or Wikipedia					
6. Skype					
7. Other.....					

B. To what extent do you agree or disagree with the following statements?

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Using social media as a tool of e-learning allows me to discuss topics of interest with other students.					
2. Social media allows me to find and share educational resources.					
3. Using social media as educational tools develop and promote knowledge.					
4. Social media as a tool of e-learning enhances students' learning experiences.					
5. Students are more engaged with the educational process by using social media as tools for e-learning.					
6. Social media as a tool of e-learning works to refine the instructors' personality through the diversity of their knowledge.					

7. Social media as a tool of e-learning contributes to collect the owners of the various hobbies and encourage them.					
8. Social media as a tool of e-learning decreases the effort and cost to communicate with teachers and friends.					

Part 4: Saudi students' perceptions regarding the advantages of using social media as e-learning tools to support learning.

To what extent do you agree or disagree with the following statements?

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Social media usage in educational process could distract students' focus on academic learning					
2. I feel concerned about privacy when using social media in the classroom					
3. I feel concerned about the threat of spam and phishing attacks when using social media in the classroom.					
4. Using social media to supplement face-to-face courses can become too time intensive.					
5. I have concerns about vague copyright and intellectual property issues involved in social media					
6. I can understand the social media websites that are in English.					
7. Some contents of social media oppose Islamic religious teachings.					
8. I am concerned about who is monitoring the social media for inappropriate or offensive use and thus how we deal with it.					
9. Social media tools inhibit my ability to express my thoughts and opinions.					
10. I feel concerned about the dangers of improper use of technology by students.					
11. I feel concerned about the dangers of cyberbullying that can cause profound psychosocial outcomes.					

Part 5: Open-Ended Question

A. Do you have other comments or thoughts regarding using social media as tools of e-learning to support learning?

Thank You for your participation....

Appendix 11: Tutors' Interview Questions

Interview questions:

1. What social media do you use and why?
2. What do you think about using social media tools for teaching and learning and why?
3. How important do you think using social media tools in today's society and why?
4. How do you use social media tools in general in the educational process and why?
5. How do you measure the success of social media tools for learning?
6. What is the possibility of using social media tools in Saudi Arabia classes? Please explain?
7. What kind of university support is there available for using social media?
8. What are the factors that might prevent you from using social media tools in the class?
9. Do you have suggestions for how they can overcome these factors?
10. Is there anything else that you would like to add about your use of technology or social media that you think is relevant?

Appendix 12: The Tutors' interviews' Questions (Arabic)

أسئلة المقابلة :

1. ما هي أدوات التواصل الاجتماعي التي تستخدمها؟
2. ما رأيك في استخدام أدوات التواصل الاجتماعي للتدريس والتعلم؟
3. ما مدى أهمية استخدام وسائل التواصل الاجتماعي في مجتمع اليوم؟
4. كيف تستخدم أدوات وسائل التواصل الاجتماعي بشكل عام في العملية التعليمية؟
5. كيف تقيس نجاح أدوات التواصل الاجتماعي للتعلم؟
6. ما هي إمكانية استخدام أدوات التواصل الاجتماعي في الفصول الدراسة؟ يرجى التوضيح؟
7. ما هو نوع الدعم الجامعي المتاح لاستخدام أدوات التواصل الاجتماعي كأدوات للتعلم الإلكتروني؟
8. ما العوامل التي قد تمنعك من استخدام أدوات التواصل الاجتماعي في الفصول الدراسية؟
9. هل لديك اقتراحات لكيفية التغلب على هذه العوامل؟
10. هل هناك أي شيء آخر تود إضافته حول استخدامك للتقنية أو أدوات التواصل الاجتماعي التي تعتقد أنها ذات صلة؟

Appendix 13: Participation consent form - Interview (Arabic)

استمارة الموافقة

عنوان البحث: دراسة الواقع الحالي لاستخدام أدوات التواصل الاجتماعي كأدوات للتعلم الإلكتروني من وجهة نظر المعلمين والطلاب.

اسم الباحث: عمر بن عبدالله الشهري

1. أوكد أنني قرأت البيان التوضيحي للدراسة المذكورة أعلاة وقد أتيحت لي الفرصة للأستفسار وطرح الأسئلة.
2. أن أدرك أن مشاركتي تطوعية وأن أي الحرية في الأنسحاب في أي وقت دون أن أقدم أي سبب.
3. بموجب هذه الأستمارة أنا أقبل بان يتم تسجيل المقابلة صوتياً.
4. أنا أوافق على المشاركة في الدراسة المذكوره أعلاه.

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التوقيع	التاريخ	اسم المشارك
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التوقيع	التاريخ	الباحث

Appendix 14: Mann-Whitney test regarding the advantages of using SoMeLT, based on specialising.

Statements	specialising	N	Mean Rank	Sum of Ranks	Z value and Sig.
1. Using social media allows me to discuss topics of interest with other students.	Science Studies	204	211.78	43203.00	-1.522
	Human Studies	203	196.18	39825.00	$P > 0.05$
2. Social media allows me to find and share educational resources.	Science Studies	204	209.95	42830.55	-1.178
	Human Studies	203	198.02	40197.50	$P > 0.05$
3. Social media develops and promotes knowledge.	Science Studies	204	206.02	42028.00	-0.399
	Human Studies	203	201.97	41000.00	$P > 0.05$
4. Social media enhances students' learning experiences.	Science Studies	204	205.43	41907.50	-0.275
	Human Studies	203	202.56	41120.50	$P > 0.05$
5. Students are more engaged with the educational process when using social media for learning.	Science Studies	204	199.53	40704.00	-0.856
	Human Studies	203	208.49	42324.50	$P > 0.05$
6. Social media enhances tutors' expertise by diversifying their knowledge.	Science Studies	204	204.18	41653.50	-0.035
	Human Studies	203	203.82	41374.50	$P > 0.05$
7. Social media helps connect and support people with similar hobbies.	Science Studies	204	209.66	42771.50	-1.110
	Human Studies	203	198.31	40256.50	$P > 0.05$
8. Social media decreases the effort and cost required to communicate with teachers and friends.	Science Studies	204	209.98	42835.50	-1.173
	Human Studies	203	197.99	40192.50	$P > 0.05$

Appendix 15: Kruskal Wallis test regarding the advantages of using SoMeLT, based on age.

Statements	Age	N	Mean Rank	Z value and Sig.
1. Using social media allows me to discuss topics of interest with other students.	Less than 20	111	222.17	13.023** $P < 0.01$
	From 20 to 25	213	204.92	
	From 26 to 30	54	194.06	
	From 31 and more	29	146.17	
2. Social media allows me to find and share educational resources.	Less than 20	111	211.32	5.696 $P > 0.05$
	From 20 to 25	213	207.62	
	From 26 to 30	54	196.45.	
	From 31 and more	29	163.43	
3. Social media develops and promotes knowledge.	Less than 20	111	214.70	7.672 $P > 0.05$
	From 20 to 25	213	205.30	
	From 26 to 30	54	202.69	
	From 31 and more	29	155.91	
4. Social media enhances students' learning experiences.	Less than 20	111	219.55	7.756 $P > 0.05$
	From 20 to 25	213	205.92	
	From 26 to 30	54	182.66	
	From 31 and more	29	170.14	
5. Students are more engaged with the educational process when using social media for learning.	Less than 20	111	217.80	4.605 $P > 0.05$
	From 20 to 25	213	203.61	
	From 26 to 30	54	192.23	
	From 31 and more	29	175.97	
6. Social media enhances tutors' expertise by diversifying their knowledge.	Less than 20	111	214.86	8.729* $P < 0.05$
	From 20 to 25	213	207.82	
	From 26 to 30	54	193.98	
	From 31 and more	29	153.00	
7. Social media helps connect and support people with similar hobbies.	Less than 20	111	219.31	10.087* $P < 0.05$
	From 20 to 25	213	206.92	
	From 26 to 30	54	185.83	
	From 31 and more	29	157.81	
8. Social media decreases the effort and cost required to	Less than 20	111	211.16	6.769 $P > 0.05$
	From 20 to 25	213	210.48	
	From 26 to 30	54	176.37	

Appendix 16: Kruskal Wallis test regarding the advantages of using SoMeLT, based on electronic devices owned.

Statements	Electronic devices that they own	N	Mean Rank	Z value and Sig.
1. Using social media allows me to discuss topics of interest with other students.	Samsung	59	172.59	10.692* $P < 0.05$
	iPhone	147	208.64	
	Laptop	159	217.60	
	iPad	42	180.37	
2. Social media allows me to find and share educational resources.	Samsung	59	176.08	5.698 $P > 0.05$
	iPhone	147	212.44	
	Laptop	159	207.75	
	iPad	42	199.45	
3. Social media develops and promotes knowledge.	Samsung	59	187.11	8.737* $P < 0.05$
	iPhone	147	201.12	
	Laptop	159	220.18	
	iPad	42	176.54	
4. Social media enhances students' learning experiences.	Samsung	59	175.46	7.767 $P > 0.05$
	iPhone	147	204.11	
	Laptop	159	217.88	
	iPad	42	191.18	
5. Students are more engaged with the educational process when using social media for learning.	Samsung	59	180.47	6.702 $P > 0.05$
	iPhone	147	198.33	
	Laptop	159	219.17	
	iPad	42	199.48	
6. Social media enhances tutors' expertise by diversifying their knowledge.	Samsung	59	178.91	6.835 $P > 0.05$
	iPhone	147	198.83	
	Laptop	159	218.76	
	iPad	42	201.44	
7. Social media helps connect and support people with similar hobbies.	Samsung	59	182.82	5.842 $P > 0.05$
	iPhone	147	206.09	
	Laptop	159	215.05	
	iPad	42	184.63	
	Samsung	59	185.57	3.162

Statements	Electronic devices that they own	N	Mean Rank	Z value and Sig.
8. Social media decreases the effort and cost required to communicate with teachers and friends.	iPhone	147	211.72	$P > 0.05$
	Laptop	159	206.26	
	iPad	42	194.29	

Appendix 17: Mann-Whitney test regarding the disadvantages of using SoMeLT, based on gender.

Statements	Gender	N	Mean Rank	Sum of Ranks	Z value and Sig.
1. Social media usage in the educational process could distract students' focus away from academic learning	Male	198	202.65	40125.50	-0.232
	Female	209	205.28	42902.50	$P > 0.05$
2. I feel concerned about privacy when using social media in the classroom	Male	198	195.65	38739.50	-1.468
	Female	209	211.91	44288.50	$P > 0.05$
3. I feel concerned about the threat of spam and phishing attacks when using social media in the classroom.	Male	198	197.25	39055.50	-1.191
	Female	209	210.39	43972.50	$P > 0.05$
4. Using social media to supplement face-to-face courses can become too time intensive.	Male	198	208.07	41197.50	-0.698
	Female	209	200.15	41830.50	$P > 0.05$
5. I have concerns about vague copyright and intellectual property issues involved in social media	Male	198	196.07	38822.00	-1.394
	Female	209	211.51	44206.00	$P > 0.05$
6. I can understand the social media websites that are in English.	Male	198	202.30	40056.00	-0.290
	Female	209	205.61	42972.00	$P > 0.05$
7. Some contents of social media oppose Islamic religious teachings.	Male	198	198.43	39389.50	-0.958
	Female	209	209.28	43738.50	Not sig.
8. I am concerned about who is monitoring social media for inappropriate or offensive use and thus how we deal with it.	Male	198	197.04	39014.00	-1.235
	Female	209	210.59	44014.00	$P > 0.05$
9. Social media inhibits my ability to express my thoughts and opinions.	Male	198	200.18	39636.00	-0.656
	Female	209	207.62	43392.00	$P > 0.05$
10. I feel concerned about the dangers of improper use of technology by students.	Male	198	194.01	38414.00	-1.773
	Female	209	213.46	44614.00	$P > 0.05$
11. I feel concerned about the dangers of cyber bullying that can cause profound psychosocial outcomes.	Male	198	199.86	39572.00	-0.744
	Female	209	207.92	43456.00	$P > 0.05$

Appendix 18: Mann-Whitney test regarding the disadvantages of using SoMeLT, based on specialising.

Statements	specialising	N	Mean Rank	Sum of Ranks	Z value and Sig.
1. Social media usage in the educational process could distract students' focus away from academic learning	Science Studies	204	197.03	40194.00	-1.240
	Human Studies	203	211.00	42834.00	$P > 0.05$
2. I feel concerned about privacy when using social media in the classroom	Science Studies	204	203.85	41585.00	-0.028
	Human Studies	203	204.15	41443.00	$P > 0.05$
3. I feel concerned about the threat of spam and phishing attacks when using social media in the classroom.	Science Studies	204	206.71	42168.00	-0.492
	Human Studies	203	201.28	40860.00	$P > 0.05$
4. Using social media to supplement face-to-face courses can become too time intensive.	Science Studies	204	201.60	41127.00	-0.424
	Human Studies	203	206.41	41901.00	$P > 0.05$
5. I have concerns about vague copyright and intellectual property issues involved in social media	Science Studies	204	207.24	42276.00	-0.586
	Human Studies	203	200.75	40752.00	Not sig.
6. I can understand the social media websites that are in English.	Science Studies	204	200.40	40881.00	-0.634
	Human Studies	203	207.62	42147.00	$P > 0.05$
7. Some contents of social media oppose Islamic religious teachings.	Science Studies	204	199.09	40614.00	-0.870
	Human Studies	203	208.94	42414.00	$P > 0.05$
8. I am concerned about who is monitoring social media for inappropriate or offensive use and thus how we deal with it.	Science Studies	204	200.77	40957.50	-0.590
	Human Studies	203	207.24	42070.50	$P > 0.05$
9. Social media inhibits my ability to express my thoughts and opinions.	Science Studies	204	196.76	40140.00	-1.280
	Human Studies	203	211.27	42888.00	$P > 0.05$
	Science Studies	204	202.93	41398.00	-0.195

Statements	specialising	N	Mean Rank	Sum of Ranks	Z value and Sig.
10. I feel concerned about the dangers of improper use of technology by students.	Human Studies	203	205.07	41630.00	$P > 0.05$
11. I feel concerned about the dangers of cyber bullying that can cause profound psychosocial outcomes.	Science Studies	204	208.39	42511.00	-0.812
	Human Studies	203	199.59	40517.00	$P > 0.05$

Appendix 19: Kruskal Wallis test regarding the disadvantages of using SoMeLT, based on age.

Statements	Age	N	Mean Rank	Z value and Sig.
1. Social media usage in the educational process could distract students' focus away from academic learning	Less than 20	111	185.26	6.036 $P > 0.05$
	From 20 to 25	213	214.96	
	From 26 to 30	54	210.02	
	From 31 and more	29	184.05	
2. I feel concerned about privacy when using social media in the classroom	Less than 20	111	208.03	3.723 $P > 0.05$
	From 20 to 25	213	202.54	
	From 26 to 30	54	219.22	
	From 31 and more	29	170.97	
3. I feel concerned about the threat of spam and phishing attacks when using social media in the classroom.	Less than 20	111	215.54	3.184 $P > 0.05$
	From 20 to 25	213	198.02	
	From 26 to 30	54	214.41	
	From 31 and more	29	184.36	
4. Using social media to supplement face-to-face courses can become too time intensive.	Less than 20	111	186.14	4.077 $P > 0.05$
	From 20 to 25	213	212.84	
	From 26 to 30	54	202.43	
	From 31 and more	29	210.40	
5. I have concerns about vague copyright and intellectual property issues involved in social media	Less than 20	111	214.36	6.742 $P > 0.05$
	From 20 to 25	213	203.89	
	From 26 to 30	54	209.63	
	From 31 and more	29	154.69	
6. I can understand the social media websites that are in English.	Less than 20	111	191.89	9.760* $P < 0.05$
	From 20 to 25	213	201.70	
	From 26 to 30	54	204.65	
	From 31 and more	29	266.03	
	Less than 20	111	197.99	3.497

Statements	Age	N	Mean Rank	Z value and Sig.
7. Some contents of social media oppose Islamic religious teachings.	From 20 to 25	213	210.76	$P > 0.05$
	From 26 to 30	54	182.06	
	From 31 and more	29	218.21	
8. I am concerned about who is monitoring social media for inappropriate or offensive use and thus how we deal with it.	Less than 20	111	215.15	2.957 $P > 0.05$
	From 20 to 25	213	200.14	
	From 26 to 30	54	209.53	
	From 31 and more	29	179.40	
9. Social media inhibits my ability to express my thoughts and opinions.	Less than 20	111	200.68	0.231 $P > 0.05$
	From 20 to 25	213	205.87	
	From 26 to 30	54	201.04	
	From 31 and more	29	208.48	
10. I feel concerned about the dangers of improper use of technology by students.	Less than 20	111	211.90	1.028 $P > 0.05$
	From 20 to 25	213	200.16	
	From 26 to 30	54	207.31	
	From 31 and more	29	195.83	
11. I feel concerned about the dangers of cyber bullying that can cause profound psychosocial outcomes.	Less than 20	111	221.33	7.819* $P < 0.05$
	From 20 to 25	213	200.27	
	From 26 to 30	54	206.81	
	From 31 and more	29	159.83	

Appendix 20: Mann-Whitney test regarding the advantages of using SoMeLT, based on gender.

Statements	Specialising	N	Mean Rank	Sum of Ranks	Z value and Sig.
1. Social media tools allow discussing topics of interest with other teachers.	Science Studies	137	139.03	19047.50	-1.306
	Human Studies	153	151.29	23147.50	$P > 0.05$
2. Social media tools allow finding and sharing educational resources.	Science Studies	137	144.67	19832.50	-0.154
	Human Studies	153	146.16	22362.50	$P > 0.05$
3. Social media tools promote knowledge development.	Science Studies	137	150.62	20634.50	-1.064
	Human Studies	153	140.92	21560.50	$P > 0.05$
4. Social media enhances students' learning experiences.	Science Studies	137	145.75	19967.50	-0.051
	Human Studies	153	145.28	22227.50	$P > 0.05$
5. Students are more engaged with the educational process by using social media tools	Science Studies	137	141.33	19362.00	-0.842
	Human Studies	153	149.24	22833.00	$P > 0.05$
6. Social media tools connect people with similar hobbies.	Science Studies	137	147.59	20220.00	-0.424
	Human Studies	153	143.63	21975.00	$P > 0.05$
7. Social media tools help diversify tutors ' knowledge.	Science Studies	137	142.46	19517.00	-0.627
	Human Studies	153	148.22	22678.00	$P > 0.05$
8. Social media tools decrease the effort and cost required to communicate with teachers and friends.	Science Studies	137	147.97	20272.50	-0.513
	Human Studies	153	143.28	21922.50	$P > 0.05$

Appendix 21: Mann-Whitney test regarding the advantages of using SoMeLT, based on specialising.

Statements	Gender	N	Mean Rank	Sum of Ranks	Z value and Sig.
1. Social media tools allow discussing topics of interest with other teachers.	Female	126	137.64	17343.00	-1.470
	Male	164	151.54	24852.00	$P > 0.05$
2. Social media tools allow finding and sharing educational resources.	Female	126	151.14	19044.00	-1.092
	Male	164	141.16	22151.00	$P > 0.05$
3. Social media tools promote knowledge development.	Female	126	157.78	19880.00	-2.365*
	Male	164	136.07	22315.00	$P < 0.05$
4. Social media enhances students' learning experiences.	Female	126	146.46	18453.50	-0.181
	Male	164	144.77	23741.50	$P > 0.05$
5. Students are more engaged with the educational process by using social media tools	Female	126	143.62	18096.50	-0.351
	Male	164	146.94	24098.50.	$P > 0.05$
6. Social media tools connect people with similar hobbies.	Female	126	155.06	19538.00	-1.795
	Male	164	138.15	22657.00	$P > 0.05$
7. Social media tools help diversify tutors ' knowledge.	Female	126	150.92	19016.00	-1036
	Male	164	141.34	23682.50	$P > 0.05$
8. Social media tools decrease the effort and cost required to communicate with teachers and friends.	Female	126	146.92	18512.50	-0.274
	Male	164	144.41	23682.50	$P > 0.05$

Appendix 22: Kruskal Wallis test regarding the advantages of using SoMeLT, based on age.

Statements	Age	N	Mean Rank	Z value and Sig.
1. Social media tools allow discussing topics of interest with other teachers.	20 – 30	68	160.16	5.796
	31 - 40	138	146.69	$P > 0.05$
	41 – 50	52	138.31	
	51 – 60	32	120.89	
2. Social media tools allow finding and sharing educational resources.	20 – 30	68	160.49	6.380
	31 - 40	138	143.84	$P > 0.05$
	41 – 50	52	146.54	
	51 – 60	32	119.13	
3. Social media tools promote knowledge development.	20 – 30	68	159.14	4.483
	31 - 40	138	145.24	$P > 0.05$
	41 – 50	52	140.84	
	51 – 60	32	125.23	
4. Social media enhances students' learning experiences.	20 – 30	68	163.35	11.488**
	31 - 40	138	149.87	$P < 0.01$
	41 – 50	52	131.41	
	51 – 60	32	111.64	
5. Students are more engaged with the educational process by using social media tools.	20 – 30	68	170.96	14.332**
	31 - 40	138	139.89	$P < 0.01$
	41 – 50	52	149.44	
	51 – 60	32	109.19	
6. Social media tools connect people with similar hobbies.	20 – 30	68	163.56	8.252*
	31 - 40	138	144.26	$P < 0.05$
	41 – 50	52	143.92	
	51 – 60	32	115.05	
7. Social media tools help diversify tutors ' knowledge.	20 – 30	68	170.26	11.906**
	31 - 40	138	143.87	$P < 0.01$
	41 – 50	52	134.29	
	51 – 60	32	118.13	
8. Social media tools decrease the effort and cost required to	20 – 30	68	161.85	7.385
	31 - 40	138	143.83	$P > 0.05$
	41 – 50	52	146.10	

Statements	Age	N	Mean Rank	Z value and Sig.
communicate with teachers and friends.	51 – 60	32	116.97	

Appendix 23: Kruskal Wallis test regarding the advantages of using SoMeLT, based on the electronic devices they own

Statements	Electronic devices that they own	N	Mean Rank	Z value and Sig.
1. Social media tools allow discussing topics of interest with other teachers.	Samsung	27	161.56	2.504 $P > 0.05$
	iPhone	75	146.44	
	Laptop	115	146.88	
	iPad	6	156.67	
	All the previous	67	134.61	
2. Social media tools allow finding and sharing educational resources.	Samsung	27	174.52	9.107 $P > 0.05$
	iPhone	75	129.67	
	Laptop	115	147.39	
	iPad	6	105.58	
	All the previous	67	151.85	
3. Social media tools promote knowledge development.	Samsung	27	174.81	8.190 $P > 0.05$
	iPhone	75	128.93	
	Laptop	115	147.78	
	iPad	6	122.42	
	All the previous	67	150.39	
4. Social media enhances students' learning experiences.	Samsung	27	166.46	2.697 $P > 0.05$
	iPhone	75	138.16	
	Laptop	115	144.62	
	iPad	6	136.75	
	All the previous	67	147.56	
5. Students are more engaged with the educational process by using social media tools.	Samsung	27	158.46	3.934 $P > 0.05$
	iPhone	75	141.34	
	Laptop	115	145.49	
	iPad	6	199.25	
	All the previous	67	14014	

Statements	Electronic devices that they own	N	Mean Rank	Z value and Sig.
6. Social media tools connect people with similar hobbies.	Samsung	27	158.30	2.669 $P > 0.05$
	iPhone	75	133.49	
	Laptop	115	148.52	
	iPad	6	147.00	
	All the previous	67	148.46	
7. Social media tools help diversify tutors ' knowledge.	Samsung	27	165.46	4.088 $P > 0.05$
	iPhone	75	134.35	
	Laptop	115	143.32	
	iPad	6	158.33	
	All the previous	67	152.53	
8. Social media tools decrease the effort and cost required to communicate with teachers and friends.	Samsung	27	162.93	6.303 $P > 0.05$
	iPhone	75	133.29	
	Laptop	115	145.00	
	iPad	6	104.17	
	All the previous	67	156.72	

Appendix 24: Kruskal Wallis test regarding the advantages of using SoMeLT, based on the years of teaching.

Statements	Years of teaching	N	Mean Rank	Z value and Sig.
1. Social media tools allow discussing topics of interest with other teachers.	Less than 5 years	74	155.87	1.723 $P > 0.05$
	5 – 10 years	96	143.21	
	More than 10 years	120	140.93	
2. Social media tools allow finding and sharing educational resources.	Less than 5 years	74	155.86	2.810 $P > 0.05$
	5 – 10 years	96	136.03	
	More than 10 years	120	146.68	
3. Social media tools promote knowledge development.	Less than 5 years	74	157.78	7.804 $P > 0.05$
	5 – 10 years	96	132.33	
	More than 10 years	120	148.46	
4. Social media enhances students' learning experiences.	Less than 5 years	74	165.19	6.218* $P < 0.05$
	5 – 10 years	96	139.40	
	More than 10 years	120	138.24	
5. Students are more engaged with the educational process by using social media tools.	Less than 5 years	74	170.78	10.082** $P < 0.01$
	5 – 10 years	96	139.02	
	More than 10 years	120	135.10	
6. Social media tools connect people with similar hobbies.	Less than 5 years	74	163.80	5.844 $P > 0.05$
	5 – 10 years	96	134.61	
	More than 10 years	120	142.92	
7. Social media tools help diversify tutors ' knowledge.	Less than 5 years	74	166.66	7.301* $P < 0.05$
	5 – 10 years	96	138.55	
	More than 10 years	120	138.01	
8. Social media tools decrease the effort and cost required to communicate with teachers and friends.	Less than 5 years	74	160.40	4.140 $P > 0.05$
	5 – 10 years	96	136.25	
	More than 10 years	120	143.71	

Appendix 25: Kruskal Wallis test regarding the disadvantages of using SoMeLT, based on age.

Statements	Age	N	Mean Rank	Z value and Sig.
1. I am concerned about privacy, security, and problems related to the use of social media in the educational process.	20 – 30	68	137.83	4.451 $P > 0.05$
	31 - 40	138	143.55	
	41 – 50	52	143.66	
	51 – 60	32	173.20	
2. Using social media to supplement face-to-face courses can become too time intensive.	20 – 30	68	131.01	5.674 $P > 0.05$
	31 - 40	138	145.67	
	41 – 50	52	147.72	
	51 – 60	32	171.95	
3. I have concerns about vague copyright and intellectual property issues involved in social media.	20 – 30	68	130.54	11.499** $P < 0.01$
	31 - 40	138	143.61	
	41 – 50	52	143.29	
	51 – 60	32	189.06	
4. I can understand the social media websites that are in English.	20 – 30	68	143.37	5.319 $P > 0.05$
	31 - 40	138	140.39	
	41 – 50	52	143.01	
	51 – 60	32	176.11	
5. Some contents of social media oppose Islamic religious teachings.	20 – 30	68	183.83	29.430** $P < 0.01$
	31 - 40	138	146.88	
	41 – 50	52	150.67	
	51 – 60	32	106.55	
6. I am concerned about who is monitoring the social media for	20 – 30	68	136.43	8.725* $P < 0.05$
	31 - 40	138	142.16	
	41 – 50	52	141.94	

Statements	Age	N	Mean Rank	Z value and Sig.
inappropriate or offensive use and thus how we deal with it.	51 – 60	32	184.98	
7. Social media tools inhibit my ability to express my thoughts and opinions.	20 – 30	68	130.88	10.796* $P < 0.05$
	31 - 40	138	140.63	
	41 – 50	52	153.33	
	51 – 60	32	184.88	
8. I'm concerned about the decreases of training courses for teachers to use social media as e-learning tools to support learning.	20 – 30	68	132.89	9.461* $P < 0.05$
	31 - 40	138	142.66	
	41 – 50	52	144.90	
	51 – 60	32	185.53	
9. I feel concerned about the dangers of cyber bullying that can cause profound psychosocial outcomes.	20 – 30	68	134.34	8.211* $P < 0.05$
	31 - 40	138	139.37	
	41 – 50	52	156.57	
	51 – 60	32	177.66	

Appendix 26: Kruskal Wallis test regarding the disadvantages of using SoMeLT, based on the electronic devices that they own.

Statements	Electronic devices that they own	N	Mean Rank	Z value and Sig.
1. I am concerned about privacy, security, and problems related to the use of social media in the educational process.	Samsung	27	119.78	4.595 $P > 0.05$
	iPhone	75	139.19	
	Laptop	115	150.41	
	iPad	6	138.08	
	All the previous	67	155.16	
2. Using social media to supplement face-to-face courses can become too time intensive.	Samsung	27	115.17	6.801 $P > 0.05$
	iPhone	75	141.55	
	Laptop	115	151.00	
	iPad	6	110.00	
	All the previous	67	155.89	
3. I have concerns about vague copyright and intellectual property issues involved in social media	Samsung	27	134.98	3.340 $P > 0.05$
	iPhone	75	140.03	
	Laptop	115	150.27	
	iPad	6	101.00	
	All the previous	67	151.67	
4. I can understand the social media websites that are in English.	Samsung	27	110.15	7.172 $P > 0.05$
	iPhone	75	151.71	
	Laptop	115	149.66	
	iPad	6	111.75	
	All the previous	67	148.67	
5. Some contents of social media oppose Islamic religious teachings.	Samsung	27	141.02	1.860 $P > 0.05$
	iPhone	75	140.32	
	Laptop	115	145.63	
	iPad	6	120.92	
	All the previous	67	155.07	

Statements	Electronic devices that they own	N	Mean Rank	Z value and Sig.
6. I am concerned about who is monitoring the social media for inappropriate or offensive use and thus how we deal with it.	Samsung	27	157.98	1.294 $P > 0.05$
	iPhone	75	149.37	
	Laptop	115	142.65	
	iPad	6	154.17	
	All the previous	67	140.25	
7. Social media tools inhibit my ability to express my thoughts and opinions.	Samsung	27	140.72	1.774 $P > 0.05$
	iPhone	75	137.51	
	Laptop	115	148.43	
	iPad	6	129.00	
	All the previous	67	152.81	
8. I'm concerned about the decreases of training courses for teachers to use social media as e-learning tools to support learning.	Samsung	27	147.26	4.406 $P > 0.05$
	iPhone	75	157.09	
	Laptop	115	134.47	
	iPad	6	126.83	
	All the previous	67	152.43	
9. I feel concerned about the dangers of cyber bullying that can cause profound psychosocial outcomes.	Samsung	27	127.31	3.375 $P > 0.05$
	iPhone	75	148.03	
	Laptop	115	152.11	
	iPad	6	112.92	
	All the previous	67	141.57	

Appendix 27: Kruskal Wallis test regarding the disadvantages of using SoMeLT, based on the years of teaching.

Statements	Years of teaching	N	Mean Rank	Z value and Sig.
1. I am concerned about privacy, security, and problems related to the use of social media in the educational process.	Less than 5 years	74	142.68	6.868* $P < 0.05$
	5 – 10 years	96	130.44	
	More than 10 years	120	159.28	
2. Using social media to supplement face-to-face courses can become too time intensive.	Less than 5 years	74	130.77	3.818 $P > 0.05$
	5 – 10 years	96	146.18	
	More than 10 years	120	154.04	
3. I have concerns about vague copyright and intellectual property issues involved in social media.	Less than 5 years	74	126.13	8.298* $P < 0.05$
	5 – 10 years	96	141.91	
	More than 10 years	120	160.32	
4. I can understand the social media websites that are in English.	Less than 5 years	74	138.76	4.654 $P > 0.05$
	5 – 10 years	96	135.68	
	More than 10 years	120	157.51	
5. Some contents of social media oppose Islamic religious teachings.	Less than 5 years	74	185.65	36.128** $P < 0.01$
	5 – 10 years	96	153.16	
	More than 10 years	120	114.62	
6. I am concerned about who is monitoring the social media for inappropriate or offensive use and thus how we deal with it.	Less than 5 years	74	139.06	0.624 $P > 0.05$
	5 – 10 years	96	147.52	
	More than 10 years	120	147.85	
7. Social media tools inhibit my ability to express my thoughts and opinions.	Less than 5 years	74	122.18	15.186** $P < 0.01$
	5 – 10 years	96	137.30	
	More than 10 years	120	166.44	
8. I'm concerned about the decreases of training courses for teachers to use SoMELT.	Less than 5 years	74	141.83	3.324 $P > 0.05$
	5 – 10 years	96	135.77	
	More than 10 years	120	155.55	
9. I feel concerned about the dangers of cyber bullying that can cause profound psychosocial outcomes.	Less than 5 years	74	130.10	14.828** $P < 0.01$
	5 – 10 years	96	130.31	
	More than 10 years	120	167.15	