

**The Attitudes of Computer Science Students and  
Instructors on Academic Social Network (ASN) Site:  
Case of University of Sulaimani**

**Mohammed Abubakr Ahmed**

Submitted to the  
Institute of Graduate Studies and Research  
in partial fulfillment of the requirements for the degree of

Master of Science  
in  
Information and Communication Technologies in Education

Eastern Mediterranean University  
January 2018  
Gazimağusa, North Cyprus

Approval of the Institute of Graduate Studies and Research

---

Assoc. Prof. Dr. Ali Hakan Ulusoy  
Acting Director

I certify that this thesis satisfies the requirements as a thesis for the degree of Master of Science in Information and Communication Technologies in Education.

---

Assoc. Prof. Dr. Ersun İşçiođlu  
Chair, Department of Computer  
Education and Instructional Technologies

We certify that we have read this thesis and that in our opinion it is fully adequate in scope and quality as a thesis for the degree of Master of Science in Information and Communication Technologies in Education.

---

Dr. Fatma Tansu Hocanın  
Supervisor

---

Examining Committee

1. Prof. Dr. Ođuz Serin

---

2. Assoc. Prof. Dr. Ersun İşçiođlu

---

3. Dr. Fatma Tansu Hocanın

---

## **ABSTRACT**

Nowadays, Internet, specifically Social Network Sites (SNS) have a great influence on the education system and academic life in universities. The main purpose of this study was to find out and discover instructors' and students' attitudes towards the use of both SNS and Academic Social Network (ASN) site in their academic life in university of Sulaimani. In addition, UoS\_ASN site was proposed and developed as an ASN site. The development of UoS\_ASN site was formulated by the design-based research approach. Later, it was tested and used by students and instructors in the same university then students' and instructors' attitudes and opinions were examined. The core purpose of UoS\_ASN site was to assemble instructors and students online which it gave opportunity to them to communicate and collaborate with each other, disseminate tutorials, research and academic papers as well as help them to express their ideas and opinions. In this research, both qualitative and quantitative research methods were administered. The semi-structure interview was used to collect qualitative data with the instructors and questionnaire tools were used to collect quantitative data with the students. The participants in this research consisted of 105 students and 11 instructors. The result of the research demonstrated that instructors and students mostly have a positive attitude toward the use of SNSs and UoS\_ASN.

**Keywords:** Social Network Sites, Academic Social Network, ICT, E-learning

## ÖZ

Günümüzde internet, özellikle, Sosyal Ağ Siteleri (SNS), eğitim sistemi ve akademik yaşam üzerinde güçlü bir etkiye sahiptir. Bu araştırmanın amacı Sulaimani Üniversitesi'ndeki öğrencilerin ve akademisyenlerin, SNS ve Akademik Sosyal Ağ (ASN)'larla ilgili olarak, her ikisinin akademik hayatlarındaki rolüne yönelik görüşlerini tespit edip belirlemeyi amaçlamaktadır. Bu sebeple, UoS\_ASN sitesi önerilmiş ve bir ASN sitesi meydana getirilmiştir. UoS\_ASN sitesinin geliştirilmesi, tasarıma-dayalı araştırma yaklaşımı ile formüle edilmiştir. Daha sonra aynı üniversitede öğrenci ve öğretim görevlileri tarafından kullanılarak test edilmiş, akabinde tutum ve düşünceleri incelenmiştir. Bu sitenin amacı, öğretmenleri ve öğrencileri aktif olarak bir araya getirip, birbirleriyle iletişim kurup işbirliği yapmalarını, araştırma ve akademik makaleleri yaymayı ve nihayetinde fikir ve düşüncelerini ifade etmelerinde yardımcı olmayı sağlamaktır. Bu çalışmada hem nicel hem de nitel veri toplama yöntemleri kullanılmıştır. Öğretmenlerle nitel veri toplamaya dayalı yarı-yapılandırılmış görüşme, öğrencilerle ise niceliksel veri toplamaya dayalı anket kullanılmıştır. Araştırmaya toplamda 105 öğrenci ve 11 öğretim elemanı katılmıştır. Çalışmanın sonucunda öğrencilerin ve öğretmenlerin büyük bir çoğunluğunun, SNS'ler ve UoS\_ASN'lerin kullanımına karşı pozitif tutum sergiledikleri tespit edilmiştir.

**Anahtar Kelimeler:** Sosyal Ağ Siteleri, ICT, Akademik Sosyal Ağ, E-Öğrenme

# DEDICATION

I would like to dedicate this thesis with love and affection:

- To my father and mother for their love and devotion.
- To my brothers and sister for their kindness and support.
- To the guide of my way, my dear supervisor.

## ACKNOWLEDGMENT

“In the Name of God, Most Gracious and Most Merciful”

Firstly, I would like to express my sincere gratitude to my advisor Dr. Fatma Tansu Hocanın for the continuous support of my master study. Her guidance helped me in all the time of research and writing of this thesis. I also have to thank the jury members Prof. Dr. Oğuz Serin, and Assoc. Prof. Dr. Ersun İşçioğlu.

I would like to express my very profound gratitude to my family: my parents and to my brothers and sister for supporting me spiritually throughout writing this thesis and my life in general.

In addition, I take this opportunity to express gratitude and thank to all instructors and students in Computer Science Department in university of Sulaimani who participated in this research, and helped me to collect the data.

To my friends who are my second family, I would like to express my gratitude; for their support and continuous interest in my progress particularly to my friends in dormitory. With all their help, they kept me calm, made me laugh, and gave me the self-confidence to finish the thesis.

I would like to thank all those who assisted, encouraged and supported me during this research, especially (M. Mohammed Anwar, Honar Hama Amin and Alan Mariwan) be assured that the God will bless you all for the contribution you made.

*Mohammed A. Ahmed*

# TABLE OF CONTENTS

ABSTRACT .....	iii
ÖZ .....	iv
DEDICATION .....	v
ACKNOWLEDGMENT .....	vi
LIST OF TABLES .....	xi
LIST OF FIGURES .....	xii
LIST OF ABBREVIATIONS .....	xiii
1 INTRODUCTION .....	1
1.1 Problem statement.....	4
1.2 The purpose of the study.....	5
1.3 Research questions.....	6
1.4 Significance of the study.....	6
1.5 Limitations .....	8
2 LITERATURE REVIEW.....	9
2.1 Social Networking Sites (SNS).....	10
2.2 The SNS in education .....	12
2.3 Academic Social Network (ASN) sites.....	14
2.4 Related research .....	17
3 METHODOLOGY.....	22
3.1 Quantitative research.....	22
3.2 Qualitative research.....	23
3.3 Design Based Research (DBR).....	24
3.4 Data collection tools.....	24

3.4.1 Questionnaire .....	24
3.4.2 Semi-structured interview .....	25
3.5 The case.....	26
3.6 Data collection procedure .....	29
3.7 Data analysis procedure .....	30
3.8 Validity and reliability .....	31
4 DEVELOPMENT OF THE UOS_ASN .....	33
4.1 Design Based Research (DBR) .....	34
4.2 Phases of DBR .....	35
4.3 The development of UoS_ASN .....	41
4.3.1 Client-side (Web client).....	42
4.3.2 Server-side (Web server) .....	43
4.3.3 Database server .....	43
4.4 UoS_ASN site .....	44
4.4.1 Main page .....	45
4.4.2 Home page (News feed) .....	46
4.4.3 User profile .....	47
4.4.4 User wall .....	48
4.4.5 Grouping .....	49
4.4.6 Student thesis .....	51
4.4.7 Messaging .....	52
4.4.8 Summary .....	53
5 FINDINGS AND DISCUSSIONS.....	54
5.1 Students' agreeability level toward SNS .....	55



5.2 What are the attitudes of computer science students on the use of SNS sites for their academic life in university? .....	55
5.3 Is there any significance difference on the usage of SNSs by students in their academic life in university according to gender?.....	58
5.4 Is there any significance difference on the usage of SNSs by students in their academic life in university according to age? .....	61
5.5 Is there any significance difference on the usage of SNSs by students in their academic life in university according to grade?.....	64
5.6 Students' agreeability level toward UoS_ASN.....	67
5.7 What are the attitudes of computer science students and instructors on the use of the UoS_ASN site for their academic life in university? .....	67
5.8 Is there any significance difference on the use of the UoS_ASN by students in their academic life in university according to gender? .....	74
5.9 Is there any significance difference on the use of the UoS_ASN by students in their academic life in university according to age?.....	77
5.10 Is there any significance difference on the use of the UoS_ASN by students in their academic life in university according to grade? .....	80
6 CONCLUSION .....	84
REFERENCES.....	87
APPENDICES .....	99
Appendix A: Key Definition.....	100
Appendix B: Questionnaire.....	101
Appendix C: Interview .....	106
Appendix D: Request letter for the application of the research.....	108
Appendix E: Confirmation letter.....	109

Appendix F: Ethics committee confirmation letter..... 110

## LIST OF TABLES

Table 1: Demographic information about students .....	27
Table 2: Demographic information about SNS usage by students .....	28
Table 3: The reliability of questionnaire data toward SNS and UoS_ASN.....	32
Table 4: Students' agreeable attitude level toward SNS .....	55
Table 5: Descriptive statistics of students' attitudes toward SNS.....	57
Table 6: Students' statistical information on SNS according to their gender .....	59
Table 7: ANOVA results on students' attitudes toward SNS according to gender ....	60
Table 8: Students' statistical information on SNS according to their age .....	62
Table 9: ANOVA results on students' attitudes toward SNS according to age .....	63
Table 10: Students' statistical information on SNS according to their grade .....	65
Table 11: ANOVA results on students' attitudes toward SNS according to grade ....	66
Table 12: Students' agreeable attitude level toward UoS_ASN.....	67
Table 13: Descriptive statistics of students' attitudes toward UoS_ASN .....	73
Table 14: Students' statistical information on SNS according to their gender .....	75
Table 15: ANOVA results on students' attitudes toward UoS_ASN according to gender .....	76
Table 16: Students' statistical information on UoS_ASN according to their age.....	77
Table 17: ANOVA results on students' attitudes toward UoS_ASN according to age .....	79
Table 18: Students' statistical information on UoS_ASN according to their grade ..	80
Table 19: ANOVA results on students' attitudes toward UoS_ASN according to grade .....	82

## LIST OF FIGURES

Figure 1: Four Steps of Design Based Research (Reeves, 2006, p. 52-66) .....	35
Figure 2: Client Server Architecture (Panta, 2009, p. 7) .....	42
Figure 3: Prototype of UoS_ASN Map.....	45
Figure 4: Main Page of the UoS_ASN.....	46
Figure 5: Home Page (News Feed) .....	47
Figure 6: User profile (Settings) .....	48
Figure 7: User Wall.....	49
Figure 8: Users Grouping.....	50
Figure 9: Student Thesis .....	52
Figure 10: Messaging.....	53

## **LIST OF ABBREVIATIONS**

ASNS	Academic Social Networking Sites
E-learning	Electronic Learning
ICT	Information and Communication Technology
OSN	Online Social Network
SNS	Social Network Sites
WWW	World Wide Web

# Chapter 1

## INTRODUCTION

Nowadays, technology have a great influence on the way people share information and connect with others in the world. In previous century, the people and members in the society could make a communication over face-to-face conversations, letters and phone calls. Though, at the time that information technology has been advanced, now people can communicate and exchange information through Internet (Chou & Chou, 2009). Also, in the twenty-first century, the distinctive and significant characteristic of education is the Internet-based computing, that offer various technical and logical options for learners. Information and Communication technology (ICT) is dynamically receiving more popularity to progress educational system and in other sectors of life.

There are a lot of studies and researches acknowledge that computer and Internet have a great influence on education also support learning process such as vigorous and vital portion of effective learning that makes and supports learner to be capable to connect with other people by using Internet-based computer (Weinberger & Fischer, 2006). However, by the growing of IT additionally, growth of Internet, the scholar and researcher attempt to join online social networks and research communities (Krause, 2012). They often exchange opinions, share academic resources, keep up with current research trends, follow each other's research, and furthermost, develop professional networks and social websites (Krause, 2012).

A Social Network Sites (SNS) is a website that allows the user to make a connection between people online, share pictures, audio, videos, and other personal information for instance LinkedIn, Facebook and Twitter (Home, 2017). Academicians and researchers have been keen on the role of social network platform in education and learning to make learners be active in course and course related activities. In addition, academicians have efforts to find out how to use SNSs for academic purpose meanwhile it has produced and published over an earlier few years (Özgen, 2012). When the phenomenon of social network is ongoing to raise at a quicker pace, it is very significant to comprehend its influence on the education system and academic process (Subramani, 2015). Dunlap and Lowenthal (2009) demonstrated that the significance of social techniques of learning furthermore how to use and rehearse SNS to offer opportunities and spaces that could be utilized in academical and social exercises in education.

Many colleges and universities have started to adopt and foster SNSs as official for the reason that it has been revealed to be popular with the arriving student. The social interactions or social activities that happen among students, instructors and their peers can play a substantial role in the process of teaching and learning (Dunlap & Lowenthal 2009). Dunlap and Lowenthal (2009) stated that in university, students and instructors generally are active users of the phenomenon of social network for personal use, communications, entertainment and academic purpose. Furthermore, Carosu and Salaway (2009) expressed most of the students use SNS generally on the way to make connection with colleagues and friends in university. On the other hand, the students presented that they interested in communication and interaction with their instructors and the assistants in their study via the same SNS mechanism as colleagues and friends and transfer file between them (Carosu & Salaway, 2009). A particular type of SNS is

the Academic Social Network (ASN) sites that gives another approach to academicians to distribute their productions and in addition to offer an inventive approach to make investigates and to encourage the progression of academic communication (Menendez, De Angeli, & Menestrina, 2012).

The term of ASN services refers to online devices, services and platforms which can assist and facilitate researchers and academicians to construct their qualified network system with other researchers as well as assist several activities during conducting research and investigation (Jeng, He, & Jiang, 2015). El-Berry (2015) defined that the ASNs are sites that seek to harness the social network sites frequently for academic issues. Also, Rodriquez and Pepe (2008) defined ASNs as “the social and academic groupings of their constituent members wherein these particular groupings are essentially made up of scholars, the various socio-academic characteristics of these scholars can be regarded as parallel” (p.3). There is some popular ASNs that works to share and make the connection between academicians like LinkedIn, ResearchGate and Academia.

On general, the ASNs provide almost the same features to their users similar to SNS. However, it has some specific characteristic that not found in other site that depends on the purpose and goals the website created for. Amongst the diverse social characteristics of ASNs, online grouping plays a predominantly significant role in communicating academicians and students with each other in academic environment. A grouping page inside an ASN can be seen as a stage and platform that clients can work together with their friends and classmates by conducting research discussions and share academic articles (Jeng, He, & Jiang, 2015).



In this thesis, by considering the poor perception on a specific usage of ASN in University of Sulaimani in Kurdistan Region of Iraq, a new ASN site have been proposed and developed under the name of UoS\_ASN (Appendix A), for that university in order to construct a virtual community for students and instructors to make communications and collaborations. Moreover, the opinions of the students and instructors of Computer Science Department about the proposed ASN site are analysis.

## **1.1 Problem statement**

In education process and academic life, by developing ICT the role of instructors and students have dramatically changed. Furthermore, there are many methods and techniques that instructors and students required to use in teaching and learning process.

SNSs are an undeniably significant part of academic life that can be a fantastic medium for connecting with friends and colleagues, collecting and spreading information in addition to support their work. However, it presents some challenging questions of how to involve SNS into academic life and how to represent yourself professionally. Also, universities and academic institutions require such a system like ASN site to assemble instructors and students on particular platform for communication, collaboration, publish tutorials and sharing ideas.

It is worth to mention that, there are very few studies and researches that have been conducted on the effect of SNS on instructors' and students' academic life in Kurdistan Region of Iraq. Furthermore, the instructors and students in University of Sulaimani were not more familiar with ASN site. Furthermore, there are not a specific ASN site to assemble instructors and students on particular platform to publish and share their idea also to communicate with their lecturer and colleagues. Additionally, this research

has observed a communication problem both instructors and students possibly are faced during the process of teaching and learning. This research proposed ASN site for University of Sulaimani to solve that previous problems and make a suitable environment for them.

## **1.2 The purpose of the study**

The purpose of this study is to obtain a profound understanding of the current usage patterns of social networks in academic life and to discover the influence and impact of SNS and ASN on students and instructors in teaching and learning. The benefits of how the ASN sites can be utilized as a platform to help instructors and students to exchange information and make communication is also identified. This research also, involves developing a website as an ASN site for the University of Sulaimani – Computer Science Department to construct a specific environment for instructors and students online. In addition, it gives opportunity to students and instructors to get in contact with other people, distribute tutorials, specific research and academic papers. This thesis also deals with the students' and instructors' satisfaction on the use of proposed ASN site and consider their recommendation for this research.

A proposed website was adopted and amended to be compatible and suitable for academic purpose which it is an attempt to combine social and academical life together. Firstly, the adopted website was a social network website then it was amended and adjusted to be an academic social network site by adding/removing some specific features then proposed site was published online.

### **1.3 Research questions**

The main goal of this research is to understand and obtain the answer of the following research questions as listed below.

1. What are the attitudes of Computer Science Students on the use of SNS sites for their academic life in university?
  - a) Is there any significance difference on the usage of SNSs by Computer Science Students in their academic life in university according to gender, age and grade?
2. What are the attitudes of Computer Science Students on the use of the UoS\_ASN site for their academic life in university?
  - a) Is there any significance difference on the use of the UoS\_ASN by Computer Science Students in their academic life in university according to gender, age and grade?
3. What are the attitudes of Computer Science Instructors on the use of UoS\_ASN sites for their academics purposes?

### **1.4 Significance of the study**

Meaningfully, there is a deficiency of research related to the implementation of ASN sites in University of Sulaimani and very inadequate researches available that most of them related to the SNSs on academic life in university. Several researchers suggest SNS should be lectured and taught in university to get their effects and influence on learning as well as teaching process (Ellison, Steinfeld, & Lampe, 2007)

However, after a comprehensive analysis of literature review, there are adequate studies and researches were revealed that most of the students in university use SNSs

actively. Furthermore, it gives a great opportunity to use such site in teaching and academic life for students and instructors. Academic and Social integration may be valuable notions to assist student in their academic life in university.

This research is an effort to combine social network with academic life in university. Instructors' and students' perspective could play an incredible role in learning and teaching process, this research efforts to attain instructors' and students' perception towards using UoS\_ASN site. A specific benefit of this site is to provide and supply a new way for students and instructors to disseminate their idea, curriculum, academic tutorials and publications additionally, to offer an advanced way to allow instructors and students to communicate online and exchange information.

There are two fundamental ways which show that this research was alleged to be significant. Firstly, this study proposed and published UoS\_ASN site for University of Sulaimani, Computer Science Department. This website includes almost all feature of SNS with some other features that make it so significant for academic purpose. This site enables to provide an enhanced, flexible and efficient atmosphere for teaching and learning regardless of place and time for instructors and students. Secondly, this research performs questionnaire and interview with the instructors and students to know and analyze their opinions toward SNS and UoS\_ASN.

The results of this research may be significant to assess and illustrate the impact of SNS and ASNs in academic life as well as several features of UoS\_ASN site may have a connection with student achievement.

## **1.5 Limitations**

Throughout the way toward writing this thesis the researcher met and experienced several things which verified to be a limitation for this study. The term of ASN site is not very common for instructors and students in University of Sulaimani. There are some difficulties in using this site because it needs a long-term testing to find out the benefits and influence in academic life that was difficult for researcher. In addition, it will be tested just in Computer Science Department. From another point, the students in the first grade was not participated in the questionnaire because the first grade was not commenced and new students was not coming when the questionnaire administered.

## **Chapter 2**

### **LITERATURE REVIEW**

The usage of computer and internet has presented an extraordinary progression in the historical backdrop of human life in all perspectives, which it includes the field of teaching and learning. Moreover, the Internet is a standout amongst the latest in a grouping of innovative changes that has affected social communications, at a scale never observed (Ravishankar, 2013). A research regarding the merging over Internet in the present setting unveiled how and why it has nowadays advanced to be a channel and medium which crosses with human regular daily life within techniques being both ubiquitous and distinctive (Burns & Polman, 2006).

The WWW is a standout amongst the most valuable and suitable service presented by the Internet services. There are three generations of it, in the first generation is Web 1.0, the users can just see the content of website also read the information. The second generation which called Web 2.0, the users can read or write on it (El-Berry, 2015). The Web 2.0 has rapidly attained comprehensive popularity through authorizing a huge number of users around the world to create content of the website, write blogs, share videos, tag photographs, write comment as well as make friends and colleagues over the web steadily (Liccardi et al., 2007). The third generation is an executable phase of WWW that can interpret information and distribute it to the user. The usage of Social Network Site (SNS) increased rapidly that has turned into worldwide phenomenon. Young adults and teenagers have particularly involved SNS such a way

to share information, make connection with their peers, showcase their social, and lives reinvent their personalities (Ellison, 2007). Furthermore, Wang et al. (2014) stated that the SNS have the ability to improve human live.

In the course of recent years, some of developed countries coordinates and integrates Information and communication Technology (ICT) with their educational system that increasingly receiving more beneficial use in the process of education and in some organizational and administrative sectors (Keller & Cernerud, 2002).

This chapter describes some of the basic concept that interrelated to the SNS and Academic Social Network (ASN) sites with its impact on students in university. It is intended to define what is a mean of it and to address the attributes, barriers and the role of it in empowering colleges and universities. The ASN is explained by offering some different resources of it and enlighten different thought about it. Similar studies that related to this field are ultimately revised and summarized. A substantial part of literature in both journals and academic has been motivated by means of SNS which it is a type of web 2.0 technology. This technology comprises SNSs, wikis, social bookmarks, blogs, instant messaging, video sharing sites and Internet telephony. In additions, blogs, SNSs, and wikis encourage user to actively involve the Web 2.0 (Baltacı-Göktalay & Ozdilek, 2010).

## **2.1 Social Networking Sites (SNS)**

The SNSs are an online platform which there is an enormous progress that has performed a fundamental modification and adjustment in the way people make communication, observe and share information with the members in that community (Berger & Luckman, 1966). According to Berger and Luckman (1966), all knowledge and information we have, is derived from and preserved by social relations including

the furthestmost elementary knowledge of daily life. Kim et al. (2011) stated that the students connect SNS mostly for getting information, social interaction, friendship. SNSs are a consequent assistance to analyze and investigate information, make decisions and collaborate ideas, share knowledge with the members of the website (Berger & Luckman, 1966).

In the SNSs, the user can build personal profile that are consisted of a bunch of individual information like user name, surname, birthday, e-mail, location and his/her interests and hobbies. The members of SNSs can make connection to be online with their peers, colleagues and family members. Furthermore, it is used to find out new friends, uploading and sharing links, photos and videos (Ellison, 2007; Kord, 2008). The SNSs are differentiated with other virtual societies and platforms through empowering the members to make visible as well as articulate their social communications. They are various in their characteristic and in the type of users and members (Özgen, 2012). There are numerous and diverse types of SNS such as Twitter, LinkedIn, Facebook, Myspace, Friendster

De la Torre (2009) demonstrates that, in this contemporary world it is a right time for students and youths to surf and check out the Internet especially SNSs, by means of they are incorporate communications and technological proficiencies which are critical. To check out the world population, the teenagers and young adults are the heaviest computer and Internet users (Kirschner & Karpinski, 2010). Youngsters have completely consolidated SNSs into their lives. As well as, student's social life deeply affected by SNS (Yu, Tian, Vogel, & Kwok, 2010). They have turned into a perfect space in order to swap data and knowledge in a simple, immediate and appropriate technique. Instructors might have the capacity to benefit this circumstance, in addition,



the students' inclination to utilizing SNSs to join them into their learning and educating process (Gómez, Roses, & Farias, 2012).

## **2.2 The SNS in education**

The SNSs develop a student's intelligence in society, collaboration and sharing, fetches an extra responsibility and capability, that approximately various student and instructor discovery rather forced and inflexible (Eke & Odoh, 2014). Bereiter (1990) recommended that there is a diversity of accessible different resources to support learners and instructors in their way to higher level intellectual structures and cognitive structures. Educational system is enhanced by ICT which is required to be flexible to provide conformability to an actual virtual environment and online learning circumstances. DeAndrea, et al. (2012) indicated that site usage increased students' perceptions that they would have a diverse social support network during their first semester at college. Butler et al. (2002) designated and presented the recognized benefit of joining in SNSs into four categories: social benefits, information benefits, compassionate benefits as well as visibility benefits. In SNSs, the users can use voice and cams software to manage webinar and seminar online virtually that is tremendously advantageous for communication and collaboration where the users and partners communicate online in diverse locations in the world. By using it, instructors, students and academicians can express themselves, connect with others and create their profiles that demonstrate their experience and talent (Eke & Odoh, 2014).

About student performance, Tuckman (1975) explained it such as an obvious expression of understanding, ideas, knowledge, concepts, skill of an individual also anticipated that grades obviously represent the student performance. Student performance should be managed proficiently by keeping in sight entire factors that can

negatively or positively influence educational performance of student. Using technology such as computer and internet is a most significant factor that can affect students' performance positively or adversely (Tuckman, 1975). Academic performance of student is affected by an expansive number of components, but the effect of SNS on the student performance is more imperative and crucial than external and another factor (Eke & Odoh, 2014).

Students, as a user, is influenced by the SNS as well as this effect is regulated by the kind of internet operation. They are absolutely influenced by the educational usage of computer and Internet although having radical effect of leisure usage of it. Also, SNS is helpful to both instructors and students if it is used as a proper instrument of knowledge construction and broadcasting (Tuckman, 1975). Sánchez et al. (2014) stated that in university, Facebook should be used as a learning resources. Furthermore, in order to increase communication, collaboration, and participation in the teaching and learning process. The students and instructors should take advantage of the SNS like Facebook. On the other hand, Junco (2012) stated that Facebook use was significantly negatively predictive of engagement scale score and positively predictive of time spent in co-curricular activities. Moreover, Karpinski et al. (2013) stated that there is a negative relation between the use of SNS and student's GPA. In universities, most students and instructors use SNS to support interaction between instructors and learners furthermore, among the learners. In the meantime, most of the people are efforted to interact and collaborate together on virtual community, nowadays a significant way of communication and interaction is an online interaction (Smith & Curtin, 1998). Paul et al. (2012) argued that academic institutions and faculty are increasingly using social networking sites, such as Facebook and LinkedIn, to connect with current and potential students and to deliver instructional content. The

students in universities have developed by using the latest technologies and tools as rapidly as presented to the society.

### **2.3 Academic Social Network (ASN) sites**

The term of Academic Social Networking services refers to online devices, services and platforms that can assist and facilitate researchers and academicians to construct their qualified network system with further researchers. In addition, it assists several activities during conducting research and investigation (Jeng, He, & Jiang, 2015). The ASNs were created in 2008 because of these new requests that the researchers offered, in order to facilitating the tension between their work lives and personal lives (Gruzd, 2012). El-Berry (2015) defines that the ASNs are website that seeks to harness the social web mostly for academic issues. Also, Rodriquez and Pepe (2008) define ASN site as “the social and academic groupings of their constituent member wherein these particular groupings are essentially made up of scholars, the various socio-academic characteristics of these scholars can be regarded as parallel” (p.3). There is some popular ASNs that works to share and make the connection between academicians like LinkedIn, ResearchGate and Academia.

Generally, the ASNs provide similar benefits and features to their users like social network sites. However, the ASNs have some specific characteristic that did not found in other site that depend on the purpose and goals the website created for. Amongst the diverse social characteristics of it, online grouping plays a predominantly significant role in communicating academicians and students with each other in academic environment. A grouping page inside an ASNs, can be seen as a stage and platform that clients can work together with their friends and classmates by conducting research discussions and share academic articles (Jeng, He, & Jiang, 2015). An ASNs will help

students to share their scientific project, academic interests, personal profiles, preferences, their historical investigations (Bonaiuti, 2015).

The term of ASNs is associated to several different terms from different spheres, such as Research Networking (RN) platform where RN cares more about health and biomedical associated domains and fields (Schleyer et al., 2008) and Network Participatory Scholarship (NPS) which it cares more about education (Veletsianos & Kimmons, 2011). There are several common features and characteristics of ASNs that includes in LinkedIn, ResearchGate, Mendeley and Academia. In additions, it permits users to make personal profiles with academic properties, create online groups and upload their publications (Oh & Jeng, 2011). Some ASNs, such as Zotero and Mendeley, propose software applications, like bibliographic application to help academics and researchers to supervise their activities, citations and documents.

The ASNs can support students and scholars work from different aspects such as online personal management, collaboration, documents management, research dissemination and impact measurement (Espinoza & Caicedo, 2015). While there has been understanding and increasing interest in non-academic SNS (such as Twitter or Facebook) that help researchers' investigation activities (Priem & Costello, 2010). As well as insufficient experiential researches have been executed on academics' use of ASNs furthestmost concentrate on that features that are linked to scientometrics, studies, new bibliometrics and predicted citation networks (Li, Thelwall, & Giustini, 2011).

In the most recent period, there has been a rise of ASNs. All of the sites offer its own abilities, tools and different features to help research activities, networking,

collaboration and communication. Provide diverse options, it may be challenging for scholars and users to assess as well as utilize them (Espinoza & Caicedo, 2015). Non-academic SNSs such as Twitter, Instagram, Facebook, Google+ are more popular in the world, in addition, the researchers have the ability to collaborate and communicate with another person on SNSs. On the other hand, there are some researches and investigations demonstrate that there are some difficulties also issues of utilizing those websites to construct a professional network account for academic users (Gruzd, 2012). Therefore, it is beneficial for scholars and academicians to involve SNS which has some features that designed exactly for academic purpose that called ASNs. Amongst the several features of ASNs, create group pages between members play a particularly significant role in joining the users with other as well as with academics.

The group paging in an ASNs, could be observed as a stage that members can communicate and collaborate with their friends by conducting research discussions and sharing academic articles. As an instance, there is a group function in ResearchGate named (Project) which allow members of the website to begin a workplace with many users (benches). In that time each bench could be utilized and exploited by the users in order to exchange studies information, ideas, papers and articles. The same group activity for discussing and presenting researches and studies are provided by Zotero and Mendeley (Jeng, He, & Jiang, 2015). Some extra features that ASNs, offer is to supervise a huge amount of information, literature, documents researchers compile and references (Bullinger, 2010). In addition, ASNs can supply measures of academic impact. Although academic publishing by tradition has been assessed in citation terms that counts as well as the article's quality that an article were published (Bullinger, 2010).

Academia, Mendeley, LinkedIn and ResearchGate, have different tools and features for scholars to discover other researches as well as reveal other findings. They permit to upload their publication, contact with other members. ResearchGate and Academia permit users to link with non-academic social network accounts such as Facebook, Google+ and Twitter (Espinoza & Caicedo, 2015). Mendeley is the only site that facilitates uploading and managing a library of documents, managing as well as uploading a library of documents, Mendeley is a strong website that provide facilitation then it has features that can import references also libraries from other services and websites. It has desktop application program to manage citation and reference (Espinoza & Caicedo, 2015). ResearchGate has RG Score which it is a point system for all uploaded file that combines citations, publications downloads, number of views and participation in discussion board. In addition, Impact Story offers citation counts, as well as the researchers' impact in non-academic social network channels (Espinoza & Caicedo, 2015). Academia enables users to talks, list their books, interests and papers on personal profile page, alongside their full name and surname, a photo and associated information. All of the ASNs offer communication features, nevertheless Mendeley make available the furthestmost communication features (Espinoza & Caicedo, 2015).

## **2.4 Related research**

There are several researches which inspected when and how the innovative technologies were utilized by instructors and students as well as suitable use of the SNS in learning process (Kord, 2008). Roblyer et al. (2010) examined that how possible instructors and students in universities utilize Facebook for educational purpose. The study results presented that students and instructors in university are more probable than their faculty to use Facebook as well as expressively exposed to

the likelihood of operation Facebook for learning and teaching purposes (Roblyer et al., 2010).

Tiryakioglu and Erzurum (2010) administered a study with 67 instructors that they have different academic titles in university in turkey. The study results propose that 75 % of instructors have social network accounts as well as there is not a specific difference between male and female members' perspective about SNS (Tiryakioglu & Erzurum, 2010). Tiryakioglu and Erzurum (2010) initiated that the two third of the instructors contemplated that SNSs have a potentiality to use online social interaction amongst students and to interconnect amid the instructors and students. but then, instructors over 45 years old specified that they didn't want to use Social Network in education (Tiryakioglu & Erzurum, 2010).

In the southeastern of United State of America at a large university another study conducted and express that 56% of faculty member thought that the SNSs would be advantageous for student to student and student to instructor interactions (Ajjan & Hartshorne, 2008). Instructors have nowadays commenced discovering substitute stands to prepare students and instructors with the communication apparatuses that easy to use, fluid online discussions, identity management and pedagogical freedom (Ajjan & Hartshorne, 2008).

In the Sultanate of Oman, Nizwa College of Applied Sciences a study conducted by Mehmood and Taswir (2013). This study was about the effects of SNS on students' academic performance and how to implement SNS as a platform for educational purpose. The participants of this study were the college students, undergraduate program that 100 students were participated. From this study, all the students used

SNS for social and academic purpose. Furthermost of the students expressed that they use SNS to write their course tasks as well as there are two types of interaction between student with student and student with instructor. in accordance with the result, it can be determined that the SNS can be suitable tool and environment to increase students' academic performance and assist students to learn. However, this environment should be designed and constructed for a specific students' educational requirements without other features that mislead students (Mehmood & Taswir, 2013).

In the thesis that entitled as "Social networking sites utilization for teaching and learning" that completed by Özgen (2012) stated that students and instructors could get a wide range of benefits from Facebook for educational purpose. The students preferred Facebook as Content Management System (CMS) to make communication effortlessly, to maximize their activity in class contribution and interact with their course correctly (Özgen, 2012).

In the article of "The Academic Use of Social Networks among University Students" (Gómez, Roses, & Farias, 2012) stated that the usage of SNSs by students for learning and teaching is very high. In addition, the students demonstrate a satisfactory opinion toward using SNS for academic purpose by instructors. The usage of SNS for academic purpose was limited and very low, in additions, the instructors use it for some specific work that perceived low academic support for SNS. Despite that fact, the SNSs can help students in teaching and learning. The students' positive attitude toward SNS as well as the massive possibilities for communication of SNS authorize the educational use of the SNS and the instructors can appropriately plan and manage it as educational tool (Gómez, Roses, & Farias, 2012).



Ravishankar (2013) executed a study of using SNS as a platform for learning, collaboration and develop students' skills. The usage of SNS have been verified to be a good substitution for developing students' academic experience by involving students into online collaboration and interaction. A user interface of an academic Social Network (ASN) platform that called Creators@SIU used by students that proposed by the researcher. The result from this study indicated that this platform that incorporate the correct concoction of several different features suits the students' requests. Furthermore, satisfies the target of students, has the ability to improve academic experience of students (Ravishankar, 2013). This research correspondingly, explicates that this platform could conceivably assist students to solve several apprehensions that associated to student disengagement as well as privacy, that are crucial whereas surfing SNS. On the other hand, it could provide a good environment for students and academicians to make a communication, collaboration as well as publishing academic topics (Ravishankar, 2013).

Childers (2011) discussed significance of SNS nowadays and the diverse levels of receptivity which students have towards it, while utilized into the academic sector. This article clarifies the framework of SNS by elucidating how instructors and students at university have commenced to use SNSs for educational and academic purposes. In addition, this article demonstrates that SNS have a great influence on academic life specifically in communication between students and students with instructors.

The educational benefit of SNSs has been assessed such as Brady et al., (2010) demonstrated that education-based SNSs have the ability to be the furthestmost effective in the courses of distance education such as a scientific instrument for enhanced communications technology amongst students in higher education. The Ning

system in educational process was used as an education-based SNS to evaluate students' attitudes toward it, that based on their previous attitudes toward SNS. This study identifies and examines students' attitudes toward using Ning in educations for educational purpose. In addition, this research can present direction and guidance on how to use Ning to encounter the students' needs in distance education learning (Brady, Holcomb, & Smith, 2010). The students and instructors specified the prospective benefits of Ning usage in education, that offer a feasible alternative for instructors that attempt to reveal the educational benefits related with SNSs (Brady, Holcomb, & Smith, 2010).

## **Chapter 3**

### **METHODOLOGY**

The influence of research method on the achievable result of every research can never be over emphasized. The methodology clears the way to achieve a reasonable result from the research and make beneficial research that other people use it as a useful resource for learning and studying. In this chapter, the research approaches, methods, procedure of data collection and analysis that are used to conduct this study are explained which there are qualitative and quantitative methods. The survey in this research was carried out in the form of interview to collect qualitative data and questionnaire to collect quantitative data. On the other hand, research design, demographic information of the participants, population and sample, validity and reliability has been explained.

In this research, quantitative and qualitative approaches were used to collect data for the purpose of obtaining information from participants in order to get answers and to reach a reasonable solution for the research questions. A design-based research (DBR) approach was selected to construct and develop the UoS\_ASN site for students and instructors.

#### **3.1 Quantitative research**

Quantitative research method endeavors to amplify replicability, objectivity, and generalizability of discoveries, then are normally inspired through prediction (Harwell, 2011). This method studies statistic, number and anything that is quantifiable

systematically of examination of phenomena. In addition, it is utilized to response inquiries on connections inside measurable factors by a purpose to clarify, anticipate and control phenomena. Moreover, it offers a logical and systematic way to provide a reasonable answer for research questions (Leedy, 1993). Quantitative methods are regularly defined as deductive approach, it is the great technique to set up cause-effect connection amongst factors and their consistency in a causal relationship. This technique is thought to be the decent one since it accommodates a high level of control over incidental factors and the control of variables. It increases reliability and decreases bias. It tests hypotheses and theories of fundamental connection amongst factors and variables. It additionally allows drawing derivations around causality (Amutha & Ramganes, 2013).

Key elements of numerous quantitative research are the usage of instruments, such as, surveys to collect data. tests, and dependence on likelihood theory to test arithmetical hypothesis which relate to research question (Harwell, 2011). The studies are more unbiased and examined data can be applied as a part of testing the hypothesis. For this research, the questionnaires as a famous type of tool for performing quantitative research were used.

### **3.2 Qualitative research**

Qualitative research method concentrates on understanding and discovering the perspectives, experiences, and contemplations of members, qualitative research examines importance, reason, or reality (Hiatt, 1986). Qualitative research methods are typically represented as approving a point by point examination of a theme of enthusiasm for which data is congregated by a researcher over interviews, ethnographic work, case studies, and so on (Harwell, 2011). It is additionally defined as inductive, expert may

build hypotheses or theories, conceptualizations, and clarifications from points of interest gave by a member (Harwell, 2011). The strong point of qualitative research is its capability to grant compound literary explanation of how individuals confront a research matter. It gives evidence that the human side of an issue which it is the often-conflicting behaviors, relationships of individuals, sentiments, beliefs, opinions (Mack et al., 2005). In this thesis, semi-structure interviews have been used, that is used broadly in qualitative researches.

### **3.3 Design Based Research (DBR)**

In order to create and adjust UoS\_ASN the researcher uses DBR approach. It is a research approach that focus on how a specific problem and issue explored and investigated in education system that purify theory and practice over describe the educational result. In addition, precisely it concentrates on how to construct a situation and environment that strengthen and support learner's ability (Wang & Hannafin, 2005).

### **3.4 Data collection tools**

The essential part of the research and investigation in the field of education is the data collection. There are plentiful ways of collecting data and these depend on the purpose and aims of the research. Data were collected in this study through qualitative and quantitative methods. Research instrument in this study is semi-structured interview and questionnaire to gather data from instructors and students.

#### **3.4.1 Questionnaire**

Questionnaires were designated for the investigation in this study as the key evidence source which were provided for students. Kumar (2005) expressed that a questionnaire is a list of questions that written by the researcher, the answers are record by respondents. In questionnaires respondents read the questions, interpret what is

expected and then write down the answers (Kumar, 2005). The implementation of questionnaire in this research was aimed at gaining generalizable results from a large population of students in Department of Computer Science in University of Sulaimani.

A questionnaire that used in this study is adopted from three references in order to collect the data first one is from Özgen (2012), and second one is from Brady, Holcomb, & Smith, (2010), the third one is from Ravishankar (2013). The questionnaire consisted of three sections (Appendix B). The first section, focused on the demographic information. The researcher asked some basic demographic questions about participants in the form of one-answer and multiple-answer questions. In the second section, the questionnaire is more about how the participants use social network and technology for academic purpose. There are Likert-scale questions between 1 to 5 (Strongly Agree: 5, Agree: 4, Neutral: 3, Strongly Disagree: 1, Disagree: 2). In the third section, the questionnaire is about the reflections and opinions of students toward UoS\_ASN site after testing the first version of the site.

#### **3.4.2 Semi-structured interview**

A semi-structure interview questions that used in this study is adopted from Brady, Holcomb, & Smith, (2010), in order to collect qualitative data. This study employed interviews as a second data collection technique. An interview is fundamentally a conversation between two persons, where the first person is the researcher of the study and the another one is the instructors (Gray, 2009). According to Harrell and Bradley (2009) “Semi-structured interviews are often used when the investigator wants to delve deeply into a topic and to understand thoroughly the answers provided, in semi-structured interviewing, a guide is used, with questions and topics that must be covered” ( p. 27). In this study, semi-structure interview was used for the qualitative

method that gives extra opportunity to the interviewee in order to answer the questions properly.

The interview was carried out with instructors in Computer Science Department that participated voluntarily. All the questions are open-ended questions which all are about instructor's experiences and their opinions on the use of UoS\_ASN site (Appendix C). In the first section, the researcher questioned the participants to introduce themselves. In the second section, the researcher asked about UoS\_ASN site which the participants used before then they explain the effects and functionality of the system with their benefits in academic life in university. All interview's discussions were recorded. The duration of each interview took approximately 10 to 15 minutes.

### **3.5 The case**

The case in this study is in 2017-2018 in fall semester, in University of Sulaimani and Computer Science Department was chosen as the study field. In the study, as well as using a qualitative research method, among the case study designs "Single Case with Embedded Units" suggested by Yin (2003) was used. The instructors have been interviewed as well as administered questionnaire with the students that constituted the data sources of the study. As for the data collection instruments, semi-structured interview and questionnaire were used. The data obtained from interviews and questionnaire were combined together to create a data set. Polit and Hungler (1999) stated that the population as an entirety or combined all the subjects, objects or member that conform to a bunch of specifications (Polit & Hungler, 1999). Simply a sample is a subset of the population. The idea of sample arises from the incapability of the researchers to test all the individuals in a given population. The sample should be representative of the population from which it was drawn and it should have good size

to warrant statistical analysis. The prime function of the sample is to permit the researcher to conduct the research to individuals from the population so that the results of their study can be used to derive conclusion that will apply to the whole population. This questionnaire aimed to measure the usage of SNS for students as well as UoS\_ASN as an academic and social environment for student and instructors in their academic life in. The students that participate in this study are females and males. They are undergraduate students in the second, third and fourth grade. Also, an interview was conducted with the instructors, who will evaluate and assess the UoS\_ASN, in order to collect their opinions and recommendations.

The quantitative data sample was collected from a population of Computer Science Department, School of Science, University of Sulaimani. The researcher distributed 113 questionnaires for students in second, third and fourth grade then 105 responds were received. According to the Table 1, There are four questions toward students gender, age, grades and instructors level. The data shows that 62.9% of the students are male and 37.1 % are female. Moreover, 22.9 % of students are between 18 and 20 years old, 64 % of the students are between 21 and 24, 16.2 % are older than 25 years old. The significant point in the student age is that most student age are between 21 and 24 years old. Most of the student in the second grade were participated in this questionnaire by 41.0 %, then the fourth-grade student by 35.2 %, and the third grade by 23.8 %. On the other hand, the table 1 shows that 9 instructors are a master degree holder and 2 instructors are a PhD holder.

Table 1: Demographic information about students

		Frequency	Percentage
Gender	Male	66	62.9
	Female	39	37.1
	Total	105	100.0



Age	18-20	24	22.9
	21-24	64	61.0
	25 – older	17	16.2
	Total	105	100.0
Grade	2nd grade	43	41.0
	3rd grade	25	23.8
	4th grade	37	35.2
	Total	105	100.0
Instructors Level	Master	9	81.8
	PhD	2	18.2
	Total	11	100.0

Table 2, shows how much time students spend on social network, kind of communities that students subscribed, the purpose of using social network, students feeling about collaboration in group project and students' opinions on the barriers in using social network. As it can be seen from the table, most of the students such that 32.4 % spend more than three hours on it. Furthermore, most of the students selected the informational communities by 44.8%. There are several purposes of using social network, that most of the student use it for chatting by 76.0%. In collaboration and group project, 53.3% of the students are very interesting in and said it is very useful. In the last question, about the barriers students confronted during the use of social network for learning, most of the student said that the main barriers are a time consuming by 70.5%. in this question, the participants have the opportunity to select more than just one option in the questionnaire because of this reason, each choice is independent in percentage average.

Table 2: Demographic information about SNS usage by students

Questions	Options	Frequency	Percentage
Time spend on social network sites per a day.	30 minutes	11	10.5
	1 hour	13	12.4
	Two hours	30	28.6
	Three hours	17	16.2
	More than three	34	32.4
	Total	105	100.0

A kind of communities' student subscribed on social networking sites.	Educational	24	22.9
	Entertainment	41	39.0
	Informational	47	44.8
	Other	19	18.1
The purpose of using social network sites.	Downloading music/video.	66	62.9
	Uploading music/video.	23	21.9
	Posting photos.	37	35.2
	Blogging.	0	0
	Creating polls/quizzes or surveys.	0	0
	Chatting.	80	76.0
	Submitting articles to website.	0	0
	Communication with teachers and class fellows.	3	2.9
Students' feelings toward collaborations in group project on social network sites	Other.	0	0
	Problematic	9	8.6
	Somewhat useful	39	37.1
	Very useful and interesting	56	53.3
Students' opinions on the barriers in using social network site for teaching and learning.	Other	1	1.0
	Lack of integrity.	12	11.4
	Privacy concerns.	42	40.0
	Time consumption.	74	70.5
	Lack of training to use online mechanisms.	5	4.8
	Lack of all required features in a networking platform.	0	0
	Lack of knowledge to use the platforms.	4	3.8
Others.	0	0	

### 3.6 Data collection procedure

In order to get a permission, the head of Education and Instructional Technologies Department, in Faculty of Education, at Eastern Mediterranean University (EMU) has written a formal letter (Appendix D) to University of Sulaimani in order to get permission to carry out the data collection. The researcher sent a sample of semi-structured interviews questions and questionnaire with the request letter to that university. The permission request was approved by the head of the Directorate of International Academic Relation and Media Directorate (See appendix E) to apply this study in the Computer Science Department. The questionnaires and interviews had done between September and December. At the very beginning of this research, the

researcher gave the link of UoS\_ASN site as (<http://academicsns.online>) to the students and instructors, then the user can create user name and password. The researcher and admin of the website should give an enrolment key to the user because they should get that code in order to get permission to create account and use it.

The researcher provides consent form for the participant in order to get their permission to participate in the research. After that participant answer the question in the questionnaire form, then return it to the researcher. Semi-structured interview has been chosen for the qualitative method by the researcher. Face-to-face interview were administered to gather essential information with the instructors. In addition, the interview with the instructors were recorded with a mobile recorder. The permission to use mobile to record the audio was taken from the instructors. Students and instructors on a voluntary basis responded the questionnaire and interview questions, as well as they reflected their ideas and opinions about the SNS and UoS\_ASN site through their usage.

### **3.7 Data analysis procedure**

SPSS (Statistical Package for the Social Sciences) is a statistical software version 22.0 was used in this study to examine the quantitative data. SPSS is a computer software that have a high functionality in investigating statistical data then providing exact statistics in graphical as well as descriptive format (Flynn, 2003). The Likert-scale questions were used as well as the collected data were examined by utilizing descriptive statistics to discover the means, frequencies of the variables, percentages and standard deviations in this study. Such data involved students' demographic information and students' opinions toward SNS and UoS\_ASN site from quantifiable questionnaire questions. So, one-way Analyses of Variance (ANOVA) was used to

test differences between means concerning students' opinions in accordance with their gender, age and grades.

The qualitative data were collected through semi-structure interview. The collected data in this study were subjected to content analysis. In addition, content analysis is a technique and procedure that permits researcher to examine human actions and thier actions indirectly, during the inspection of their interaction (Fraenkel et al., 2011). The gathered data were purified to remove irrelevant parts then it was typed. The typed data were read by researcher to specify relevant information on the order of the questionnaire questions. All interview data were read to detect meaningful parts and grounded on the research questions as well as it was allocated descriptive codes to these parts.

### **3.8 Validity and reliability**

Reliability and validity of all instruments that used in the research and data collection can be different for quantitative and qualitative approaches. The research conduction need to be valid to be able to answer the research question. Validity refers to the degree of that an examination measures what we essentially wish to measure, however, reliability refers to a measurement that supplies consistent result (Blumberg et al., 2005). In spite of the fact that there are numerous methods and test that help the researcher to measure the reliability and validity of the tools and instruments that used, On the other hand, the researcher indicates piloting test for both semi-structure interview and questionnaire questions and check reliability of the questionnaires.

The question of validity is elevated in the context of these three points, the purpose of the test, the form of the test as well as the population for whom it is envisioned. Also, the researcher used content validity. To perform it the researcher, discover the entire

content of the behavior, construct area that it characterized in the test then compare the test task with the content of the behavior. The content validity is a logical method not an empirical method (Frankfort-Nachmias & Nachmias, 2007).

As parts of this research, the researcher gave the UoS\_ASN site to the instructors and students in order to use it as an academic social website. Then the final purified drafts of questionnaires and interview questions were given to instructor and students as a sample population after correcting and analyzing the questionnaires and semi-structure interview questions. All interviews with the instructors were recorded with the consent of instructors. Also, the questionnaire was performed with the consent of the participants. The questionnaire and interview questions in this study were approved by Research and Publication Ethics Board in Eastern Mediterranean University (Appendix F).

The reliability of the questions in the questionnaire were examined and presented by using Cronbach alpha coefficients in SPSS program as shown in Table 3, the reliability level of the students toward SNS and UoS\_ASN is .715 and .755, respectively. Eventually, it means that the collected data through questionnaire are acceptable and reliable (Cronbach, 1951).

Table 3: The reliability of questionnaire data toward SNS and UoS\_ASN

	n	Items	Cronbach alpha	Cronbach alpha based on standardized items
The reliability of questionnaire data toward SNS	105	11	.715	.722
The reliability of questionnaire data toward UoS_ASN	105	14	.755	.761

## Chapter 4

### DEVELOPMENT OF THE UoS\_ASN

The design-based research (DBR) approach has been defined in this chapter then explains the reason of its use in the research. The DBR was used to guide and explore the development and construction process of UoS\_ASN site. UoS\_ASN is described as an intelligent learning and communicating platform for students and instructors. This websites' features have been conceptualized to offer a space for students and instructors in university to make communications, posting and publishing academic subjects and articles, yet in the meantime not leaving much extension for diversion and distraction to unessential substance and irrelevant content. The design and environment of this website is more similar to LinkedIn and Facebook website which it gives a good sense to student in order not to get upset when they use it because of the students and instructors are more familiar with those websites. The aim of this website is to enhance students' skills and experience in university also to get involve with their subject. In addition, this environment helps students feel further convenient, comfortable and indirectly increase their knowledge through using it.

There are some components that is accessible on LinkedIn and Facebook also used in UoS\_ASN in order to actuate worries of student integrity and privacy. Some instances of those features and components are chatting, create profile and posting personal information, like post, write comment and share specific post etc. However, there are some specific features in this website which depend on the university policy and

student situation in the university so as to help student get sufficient benefits of this website.

#### **4.1 Design Based Research (DBR)**

Design-based Research, also known as design experiments and development research (van der akkar et al., 2006), formative research (Newman, 1990), which it has many essential definition as Wang and Hannafin (2005) states that DBR is “a systematic but flexible methodology aimed to improve educational practices through iterative analysis, design, development, and implementation, based on collaboration among researchers and practitioners in real-world settings, and leading to contextually-sensitive design principles and theories “(p. 6). In another perspective, it is not a methodology; nevertheless, it is a research approach. While quantitative alongside with qualitative methods may be used, it is worth noting that: researcher in DBR concentrate on particular processes and objects within definite contexts; researcher doesn't put emphasis on separated variables, s/he attempts on the way to study those by means of meaningful phenomena plus integral (Wang & Hannafin, 2005).

Also, from different definitions, DBR has the ability to modify the ways that scientists and professionals together explore and tackle huge instructive issues in effective ways also can adapt with difficult situation (Herrington & Reeves, 2011). In additions it mixes experimental instructive research with the hypothesis-driven design of learning circumstances, is an essential philosophy for seeing how, at the point why and when instructive developments work in. In additions, DBR is a method designed by as well as for instructors that effort to expand the exchange, effect, and interpretation of education investigation into the enhanced practice. In addition, it stresses the requirement and constraint for hypothesis and theories for building and advancing of

outline rule that guide, advice, and enhance both practice and research in instructive settings (Anderson & Shattuck, 2012).

## 4.2 Phases of DBR

DBR approach was utilized that comprising four important expansive iterative steps which are an approach the researcher can use all of them or remove one or two of them. When the researcher reaches final step, it is not finished, it should return to first step to continue on this process to recheck the work in multiple times and in each step the research progress until all aspect of the research and study is finished (Reeves, 2006).

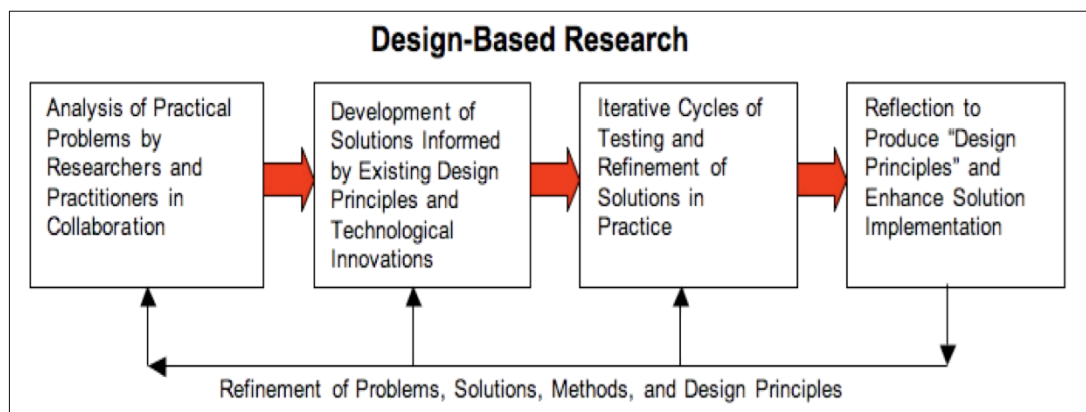


Figure 1: Four Steps of Design Based Research (Reeves, 2006, p. 52-66)

In the first phase, researchers and practitioners analyze practical problems in collaboration. This phase is a beginning of research which contains an exploration as well as investigation of the issue including a literature review also, discussion with practitioner to investigate the degree and nature of the issue of rising advancements and their viable use in instructor education (Herrington & Parker, 2013). In other words, the issue was investigated seriously, not exclusively from academic point of view, but rather in the primary case, from the viewpoint of the people who manage the issue on an everyday premise before the end of this phase.



In this study, problems are identified in the real-world context. There are some precise explanations about the issue. Furthermore, for defining the problems, the practitioners' experiences and guidance who encounter the same or similar problems was explained. It's instructive setting, conduct a wide-ranging literature review to discover and reveal the nature of the problem, a summary analysis of practitioners' perspectives, and introductory research questions (Herrington, Reeves, & Oliver, 2010).

Through both personal reflection and discussions with other practitioners and researchers, it becomes clear that social network site has been used by students and instructors widely. Beside personal usage, the students and instructors in university operated it to publish and achieve academic topics regarding to their subjects in university as well as communicate with classmate and teacher. The social network is a public website used by many people who have different background from different location. But the problem is that, when the students on social network site, it takes their attention to use it for long time and look at some other topics which published outside of their schedule in university.

There are a lot of researches that discuss these issues. In this research, there are a several related works that explains and shows that the usage of social network site. It was obviously stated that students required more opportunities to reach academic topics and to have academic environment. It is crucial to have a specific academic social network site to assemble instructors and students on particular platform to publish and share their idea also to communicate with their lecturer and colleagues. By using this information, the researcher was being able to obviously recognize the matters that linked to social network, mainly those associated to deficiency of world revelation to social network usage in academic life.

In the second phase, solutions development informed through technological innovations and existing design principles. The process of design solution is implemented in this stage which it is the environment of learning was generated to coordinate within the principles of design in authentic learning as well as evolving technology such as cognitive tool. The design of this unit is done, so as to student can involve by means of a diversity of technologies tool, when and as required, to reach a genuine purpose in generating genuine production rather than humble skill which can be tested off as completed and finished (Herrington & Parker, 2013).

Draft's production standards to the design of an intersection takes watchful thought and investigation in view of the need to consider relevant learning hypotheses together with existing standards, and in addition thoughts from the practitioner (Herrington & Reeves, 2011). Before the conclusion of this procedure, draft standards have been prepared from the audit of issues and research literature, from meetings with practitioner, and from past research and they will have guided the design and improvement of a mediation to address an outstanding instructive issue (Herrington & Reeves, 2011).

In the light of identified problem, this research discovers how to use a learning environment for specific university therefore online community can be utilized efficiently to address issues and clear a way to find solutions. The nature and context of the problem was characterized to build the learning environment. In the process of investigation, it describes the second phase of this investigation with the development of an initial design solution. Students have interest in engaging collaborating and experiences outside classroom with their friends and instructors on their subjects or group projects over online community. This social network site was adopted on

internet, then some features were added to this website to adapt it as academic social network site. The origin of the website was from a vasplus programming blog website (Wall Script, n.d.). The researcher got permission to use this website in this research.

After examining online learning environments some features have proven suitable for students and instructors, the design of the site was more reviewed. After re-assessing some functionality and organizational matters in the website, the final design of prototype was finished. The researcher plans to integrate some features in the design of the UoS\_ASN site which it has the following features and functionalities. The UoS\_ASN was originally created to use by students and academicians as an academic social network site. The domain name that selected was <http://www.academicnsnsonline/> . Now the prototype of the website is accessible on the Internet. One of the core purposes of this prototype of the website was to offer online community for instructors and students in university to make communication, collaboration as well as publish topics and announcement. The UoS\_ASN provides friendly communication between students and instructors, giving students a pure purpose for participating, as well as provide sufficient procedures for participation. In this website six main content page has been provided on the website: Login, main wall, student thesis, create group, messages, settings.

Beside the main features of UoS\_ASN, there are two other features. The first one is an enrolment key to login page. The user who want to register in this site need a specific enrolment key by the admin of the site. The user asks the admin to get enrolment key in order to create account. This feature helps admin just to allow students and instructors inside university to make an account. The second feature is a student thesis

page which in this page all user can publish academic thesis. It would help another student easily find related thesis of all participant and download it.

List of several tasks in UoS\_ASN

- A user-friendly search engine, the user can search for content of the website.
- Ability to post thesis in the thesis page.
- Ability to generate specific groups or group chat.
- Ability to upload, documents, images, academic work, links and videos.
- Ability to like, comment on each other's work and share posts.
- Ability to be a friend with others.
- Ability to Chat and Messaging with others.
- With some other functions.

In the Third phase, refinement and iterative cycles of testing of solution in practices. Once a learning situation or mediation has been designed and built up, the following period of DBR incorporates the implementation also assessment of the suggested clarification practically speaking. DBR is not in itself a system, but rather a research approach (Herrington & Reeves, 2011). A proposal of research would incorporate subtle elements of the methodology of the usage and assessment of the proposed solution, as it generally constitutes the information examination and accumulation phases of the study (Herrington & Reeves, 2011).

It is a third phase of DBR that was used to test UoS\_ASN in practice as well as to accumulate the data and information the researcher needs to address and answer the research questions. After UoS\_ASN had been published in august 2017, the researcher conducts questionnaire and interview in the University of Sulaimani – Computer

Science Department. Students' and instructors' participation in this research was completely voluntary. Firstly, the link of UoS\_ASN was given to the participants to register in this site and use it. In first of October, then, the questionnaire was administered with the student. The questionnaire consists of three sections. First section is about students' demographic information. The second section is about the social network usage by student. The third section about student opinions about UoS\_ASN.

In the fourth phase, reflection to enhance solution implementation and produce design principles. DBR suggests earnings as both information and products. While these yields are hard to indicate in progress in the examination proposition, it is valuable to have the capacity to describe the procedure of their improvement (Herrington & Reeves, 2011). Once a learning environment or interaction has been executed, assessed and refined in cycles, design principles can be achieved to involve the shareable, distributed yield from the research so as to educate future improvement and usage choices (Herrington & Reeves, 2011). Also, in other perspectives, this would be done within iterative cycle in refinement which aren't determined till agreeable outcome have been got according to whole concern (Reeves, 2006).

The last phase of this research, a learning environment or interference has been applied, assessed as well as refined in cycles, this phase is to produce design principles that can enlighten implementation decisions as well as future progress. The main draft principles of the website that have directed the plan and design of the solution required to be revised and s after the evaluation and implementation of the proposed solution. After the process of analysis and reflection, the researcher also needs to revise the main principles of the website in order to reflect the findings. In this step, after completion

of the process of creation and put in practice, the product was discussed to extent the ideas and solutions which provided through the research as well as to the identified problems and answer the research questions.

Beside of practical suggestions about how to guiding the principles to implement on the website, the researcher take into consideration all notes about the website then adjust it to be fixed. Through previous phases, the researcher took some notes from the participants and user of the website. Those notes reflect the researcher to adjust some parts of the website. Some of the participant worries about the security of the website and suggest some features to added to the website. Also, they suggest that online learning should provide and offer the opportunity to the user to have more ability to contact with other.

### **4.3 The development of UoS\_ASN**

This section explains the details of the UoS\_ASN site and how it was created. Now in the world, websites are the most appropriate approach to disseminate and demonstrate information to the most extreme number of people in the world. Nowadays, almost all organizations and institutes have a specific website to publish their activity, product and to communicate with website users. The website is a giant container of important and related information organized in a legitimate way (Panta, 2009). For academicians, it is a most convenient place to publish and get academic papers and articles in the world.

The prepared social network website adopted on internet. It means that the design and the detail of the website was created before, however, the researcher just added two features and made some changes in the websites. The architecture of the website as well as some aspects of programming code will be considered and explained when it

is necessary. The system of web site is a client-server architecture that have three main components as shown in Figure 2, The client machine of the website sends a request for the server machine then to access service the server validates the request, possibly from website database (Panta, 2009). These three-main components explained in the following.

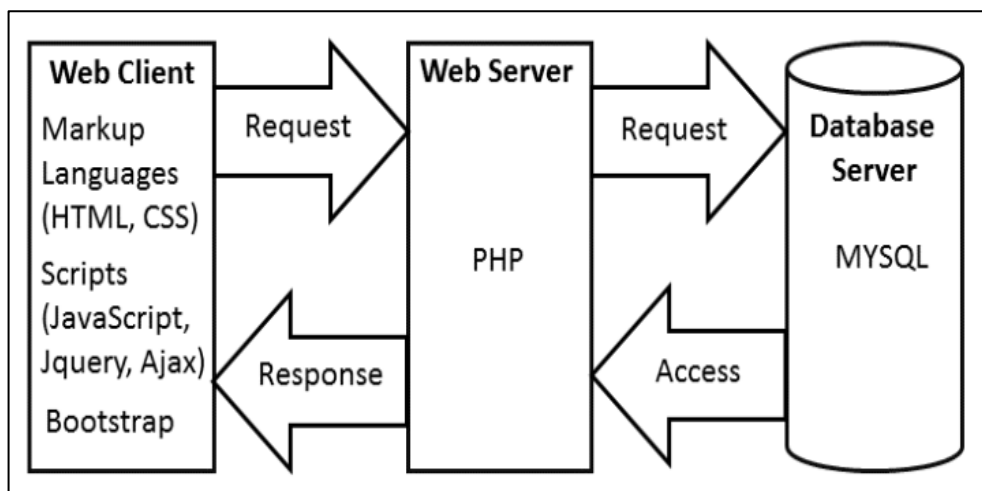


Figure 2: Client Server Architecture (Panta, 2009, p. 7)

#### 4.3.1 Client-side (Web client)

It is a real front-end interface of the website that the user interacts with it and see the detail of the website. Web browser is a computer application such as Google Chrome, IE on the client device transfers request service data to the web server program (Apache, Tomcat) that run on the server device. The web server transfers a page that requested by the client machine otherwise creates another page then transfers to the client machine consequently.

The web page of client side in UoS\_ASN site is built by HTML, CSS, scripting language like JavaScript and bootstrap. The HTML is a computer programming language that used to create a website. It represents Hyper Text Markup Language

(Vainionpää, 2014). The CSS represents Cascading Style Sheets, it is a document type utilized for adjusting the content appearance of the website. CSS is reinforced by every contemporary browser (Vainionpää, 2014). JavaScript generally is used by the programmers of web application which it is an object-oriented programming language. Based on the html, the programmer can develop dynamic interactive web pages by using JavaScript (Zhang, 2010). Bootstrap is an intuitive, powerful and sleek mobile front-end framework for easier and faster web development. It uses and integrates HTML, JavaScript as well as CSS (Point, 2017).

#### **4.3.2 Server-side (Web server)**

Server side is that action performed by a server and the website that control logical part of it. The web container (Apache, Tomcat) is running under the server machine device and holds the client request, then it was validated by the server-side program which written by PHP (Vainionpää, 2014). After that, it creates a proper page, otherwise traces an existing suitable page then transfers that page as respond to the client side. PHP is the abbreviation of Hypertext Processor that is a one of the best tools for generating dynamic websites and web application. It can be embedded into XHTML because of it is an open source scripting language (Vainionpää, 2014). The PHP programming language is free as well as it is supported by UNIX, Apache and Windows. Apache Software Foundation was developed PHP language (Zeldman, 2007). Generally, PHP is used for displaying, managing, creating and deleting information as well as for dynamic website management it is indispensable (Vainionpää, 2014).

#### **4.3.3 Database server**

In client-server architecture, database is a back-end. The information and data that kept in the database is assembled, systematized and designed as well as saved in database



tables. The web server has the ability to retrieve data by the support of a database server such as (Microsoft SQL, MYSQL, and Oracle) then appropriate it into a specific webpage as well as transfers it as a respond to the client request. MySQL database is used in UoS\_ASN site. It is a one of the well-known open source database. In addition, it has a high performance, ease-of-use and reliability. The MySQL is one of the best database choice for the back-end of the website, Furthermore, it is a tremendously special type for embedded database (Oracle MySQL, n.d.).

#### **4.4 UoS\_ASN site**

This UoS\_ASN site is a proposed academic social network site that provides interactive learning environment for students and instructors in Computer Science Department in University of Sulaimani. The students and instructors can use it as an academic community as well as to make communications between users, publish university's announcements, subjects and topics according to their academic life. This website has been controlled by admin to allow the user to create account and persist on it. The admin has authority to delete any user on any bad habits online. The system is consisted of some pages with some other activities. The first page is a main page which it is a gateway to the website that include login and signup pages. After that, the user can see the home page that it is linked with other pages in the website. The website prototype enlightened at figure 3 comprises of some different page. These pages include main page, home, user profile, user wall, news feed, groups, student thesis and messages. In the following, those pages were explained.

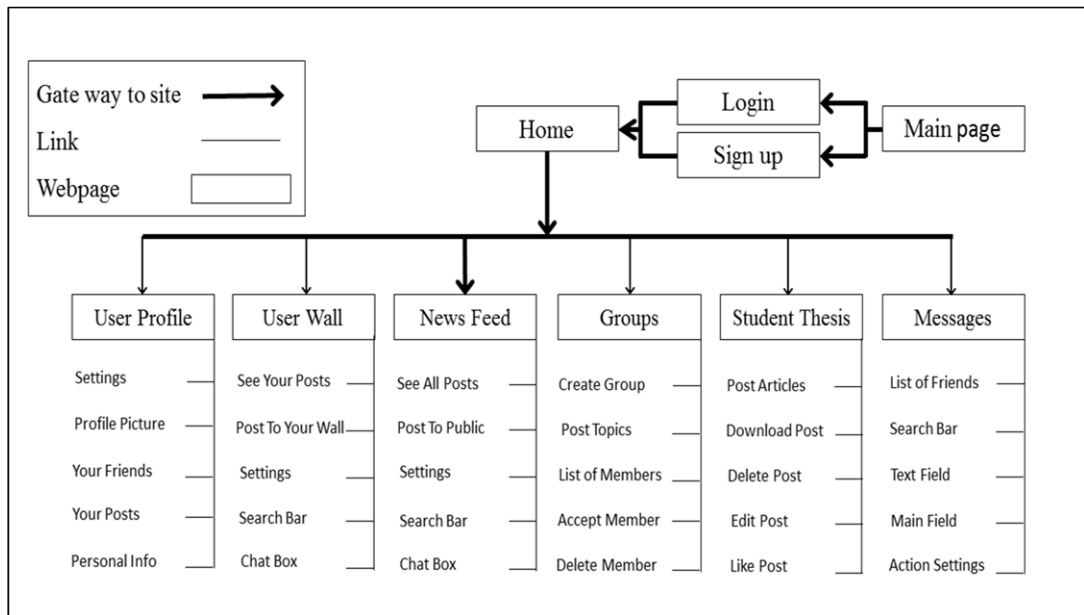


Figure 3: Prototype of UoS\_ASN Map

#### 4.4.1 Main page

The first page of this website is a main page that include login field and signup field. The main page is deliberately completed to look simply, it is not included many activities, colors and graphics because of it loading the page don't need too much time. In order to login to the website, the user must register in the site by filling the signup field correctly. The requirement to signup includes username, full name, email, password and enrolment key. To get the enrolment key the user should ask the admin of the website and the researcher to get that code. The enrollment key used by the admin in order to allow just students and instructors inside the university. Other users outside of the university are not allowed to register in this website. If the user filled all signup field correctly, the user will be allowed to log in into the system. Otherwise a toolbar below login field indicate that the information entered were incorrect. The login field just include username and password field the user must enter correct username and password that registered before.

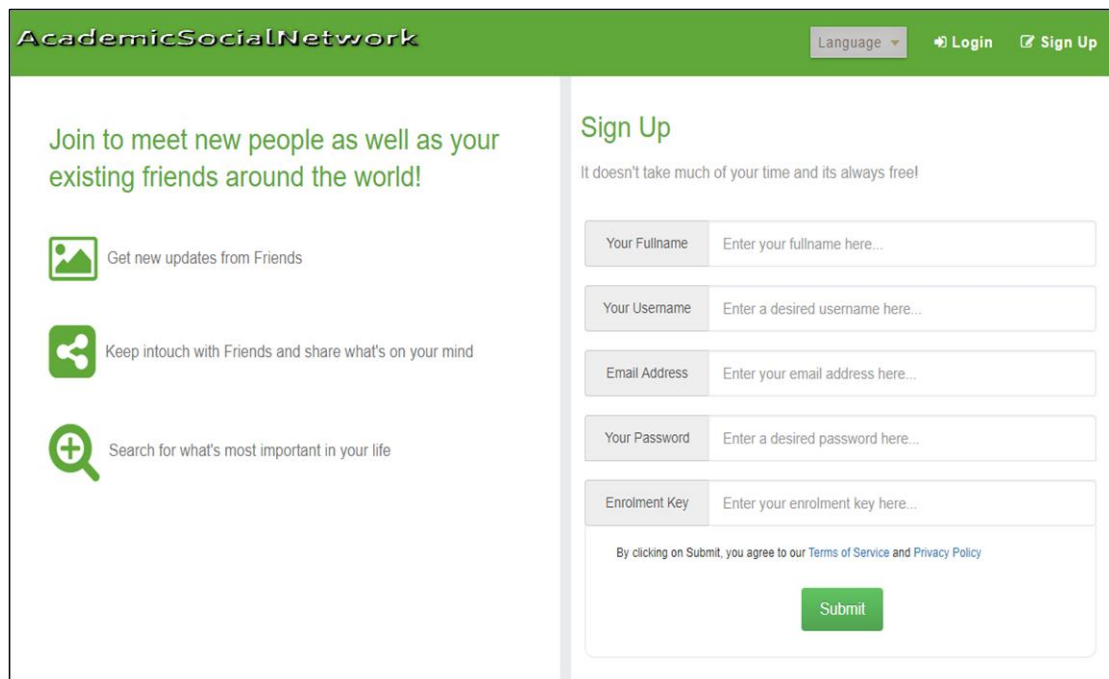


Figure 4: Main Page of the UoS\_ASN

#### 4.4.2 Home page (News feed)

When the user logins to the website, directly the home page appears. As shown in Figure 5, this page includes many activities. In this page, the user can see all posts of his/her friends. On the top, there is search engine, settings language options, message icon, notification, friend request, user name and home button. In the right side, there are two button that guide the user to student thesis page and create a group. On the left side there are a user profile picture, list of groups, list of friends with user video and photo. On the top of middle, there is a field used to post something you want. In the middle the use can see all posts also can like it, write comment and share it. In the bottom of left side there is a chat box that include the name of all friends. The list of friends who online appears with a green light. The user can make a chatting with anyone he/she wants and create group chatting with more than one person. The user can make his/her posts as public and private. In the top right side of every post there is a specific icon which has two options for update and delete the published post.

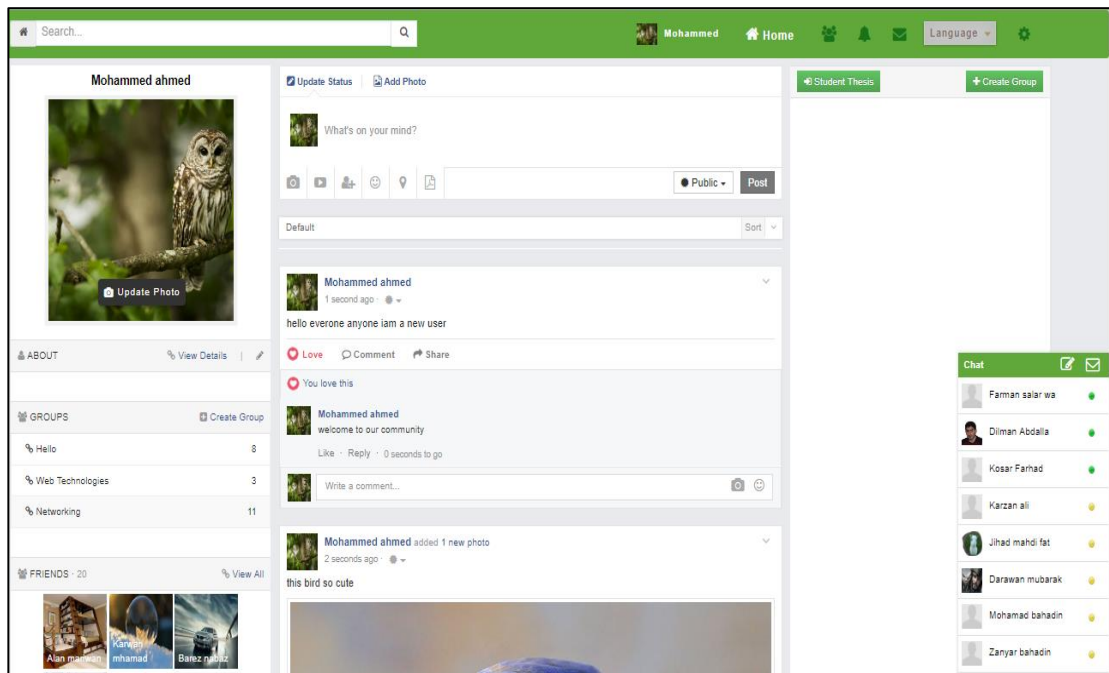


Figure 5: Home Page (News Feed)

#### 4.4.3 User profile

As shown in the Figure 6, the page includes user profile and settings. The user can change and adjust his/her profile. The profile picture is in the right side that the user can update it. The content of profile is in the middle of the page. The user can change the full name and add some description about his/her personality. The address of the user can be added with phone number. The age of the user can be shown and hidden. This page also includes some other features from other pages like chatting box, list of friends, student thesis and create group button. Finally, the user has to save the changes.

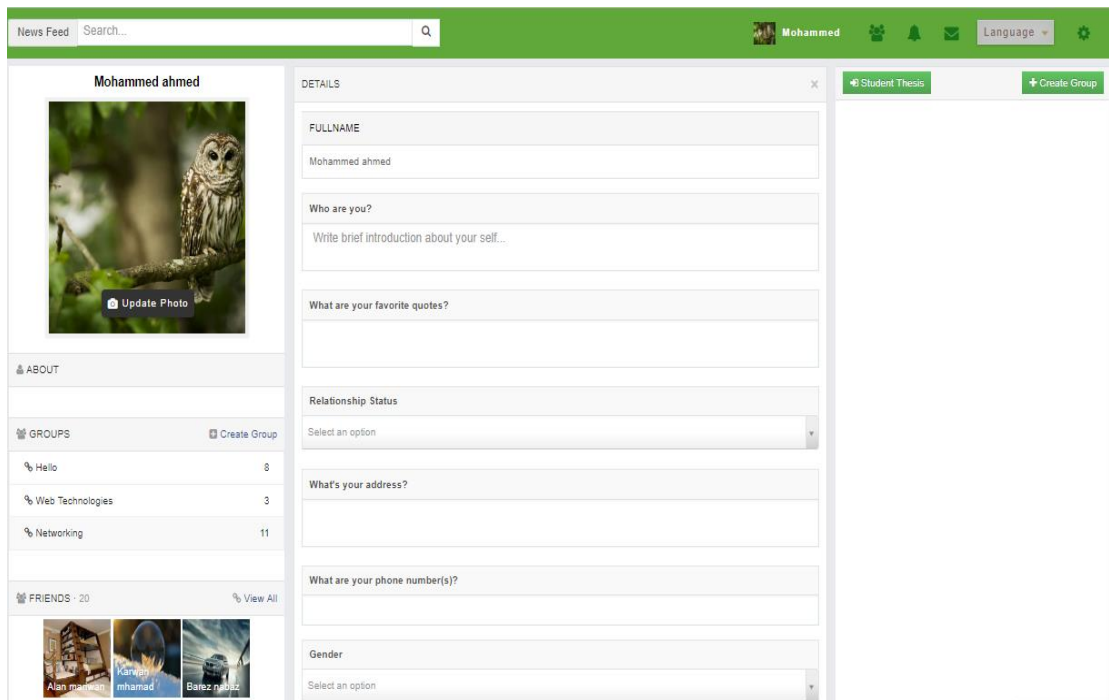


Figure 6: User Profile (Settings)

#### 4.4.4 User wall

As shown in Figure 7, in this page, the user can see all his/her posts in the middle of the page. It means that it is a collection of all posts that the user was posts before. If the user posts any other things to his/her wall, it would just be posts in the wall not in the home page. There is an icon on the right top of every post to update and delete a specific post. Also, in this page the user can chatting with others and see notification and messages from others. Generally, this page is like other page but instead to see all posts the user just sees his/her posts.

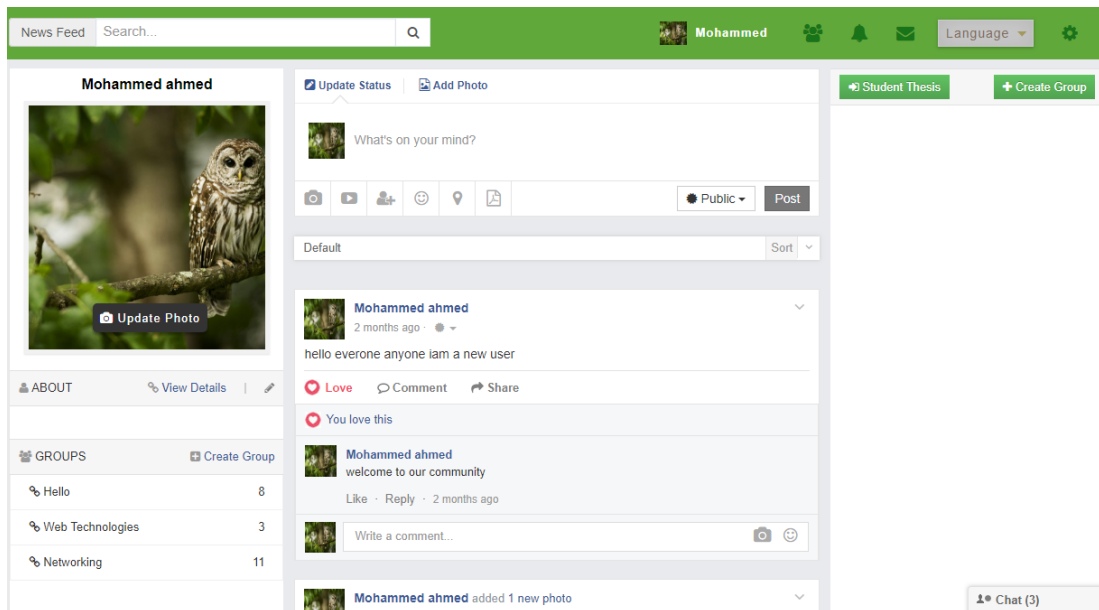


Figure 7: User Wall

#### 4.4.5 Grouping

One of the crucial parts of social network is groupings. In UoS\_ASN, as shown in Figure 8, the user can create a group for a specific purpose. The instructor can create a group for his/her class and the student would be a member of this groups. It would be very helpful for posting the schedule and academic topics in university beside it, the instructor can publish the announcement to inform the students. In this site by clicking on the create group the user sees another window. In this window there is a detail about the group, the user writes the name of the group and a description about it and specify the member of the group and choose some member into the group. The group should have a specific photo which the user browses to choose a photo to it. Another important feature is a privacy, the user can make it as a public and secret by tick the box beside public word or secret word. Then the user clicks on the create button to create it.

In the middle of the of the page, the group detail appears. In discussion parts, the user can create a post and publish video audio and pdf file. Other can like it, comment on it and share it. In the member part the user can see all member of this group also can added new member and delete it. The admin has authority to edit the group and delete it. The member just has ability to post and see the post in this group. All groups that the user is a member appears in the lift side below the profile picture. The user can see all the photo and video that have been posted in the group in the photo part and video part. The user who want to be a member in any groups should send a join request to that groups then the admin of the group see the request to accept it or not. All the group that made before will appear on the right side of the window.

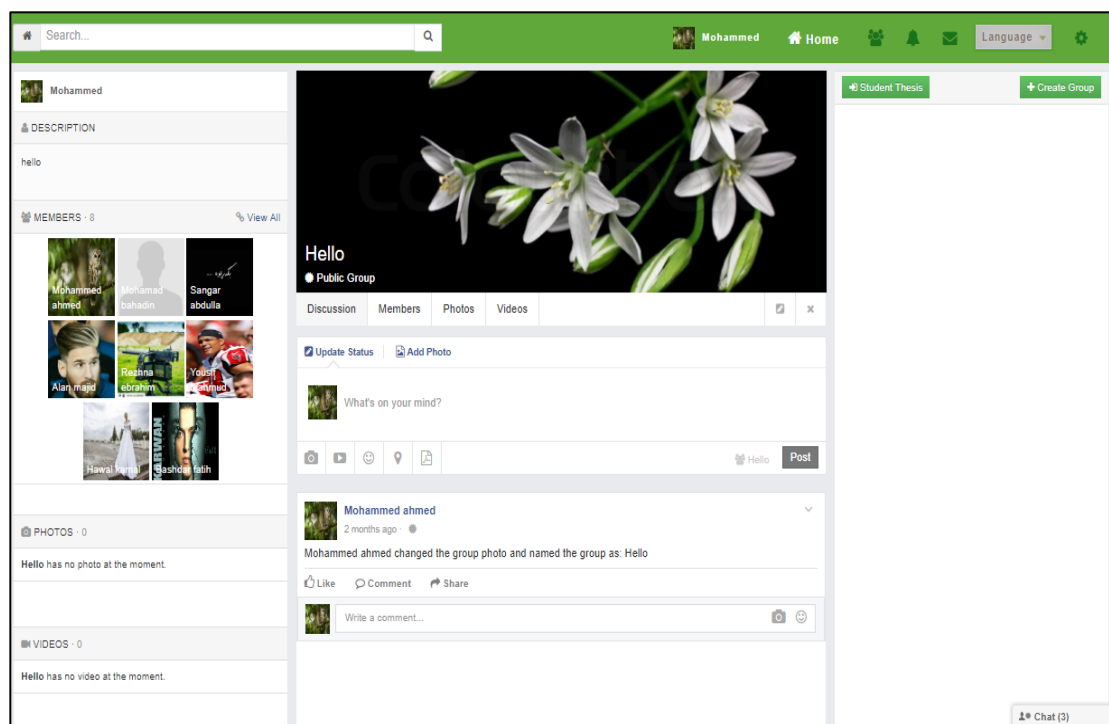


Figure 8: Users Grouping

#### **4.4.6 Student thesis**

As shown in Figure 9, the student thesis page, is an important part of this website. This page helps students and instructors to publish their academic topics, thesis and articles. An issue was noticed by the researcher in University of Sulaimani about the research of the 4th year Graduate Students. The research of student after graduation would not be available online for other students. This part helps student to publish his/her 4th years graduate research in order to use by other student and researcher to get a wide benefit of the research. When the user clicks on the thesis button this part appears in the middle of the window. On the top, there is a text field to make a post and the user allowed to just post pdf file. Before posting the file, the user can identify the privacy of the post to make it as public and private. After posting the file, it would appear below the text field. The site categories all the post by years. It means that in the right side the list of years appears, when the user clicks on the specific year, the site automatically shows all posts that posted before in that years. This feature help users to find a specific post and files.



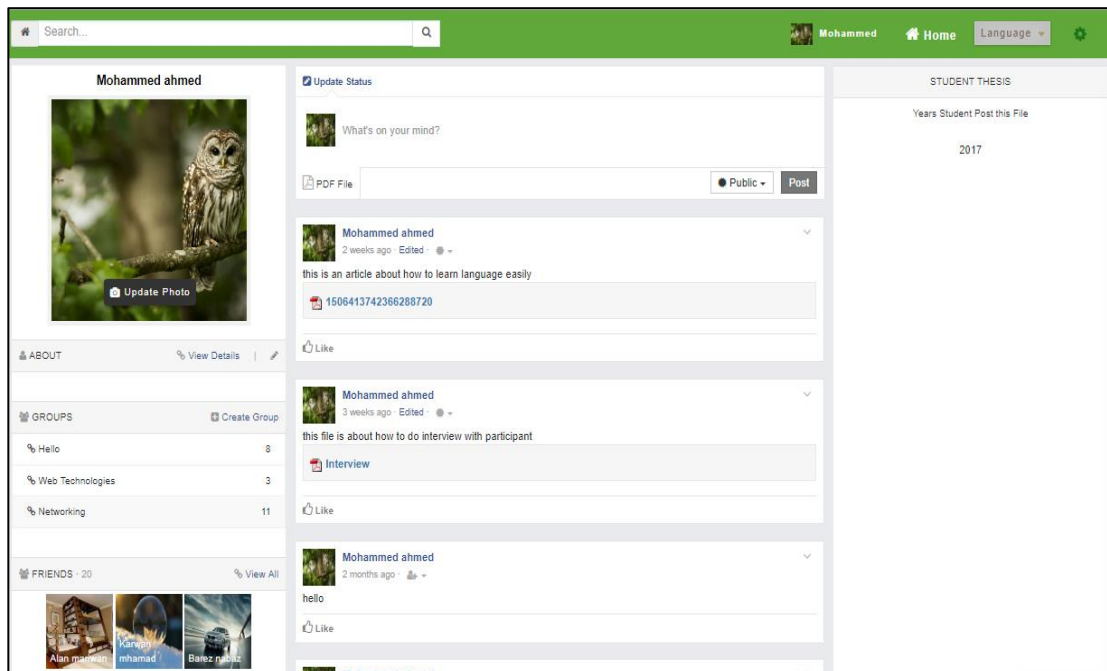


Figure 9: Student Thesis

#### 4.4.7 Messaging

One of the main purpose of this website is a communication. The messaging system is a useful instrument for communication and collaboration that is responsible provide messaging system between users that shown in Figure 10. To reach this page the user should click on the message icon on the right top of the main page. the message page includes some activities to make conversation with others. In the left box there is a list of other people that have a conversation with a user also to search for a specific people, there is a search engine. In the left side there is a list of conversation with a specific person then below it there is a text field to send a text to receiver. The user can send picture, audio video and file to receiver. In the setting part there are some activity for the user. The user can leave conversation, delete conversation and messages also the user can report spam or abuse by other people. A good point in this messaging system is that the user can make a group messaging with more than one person in the same time. It works as a group conversation. The system notify user for new messages

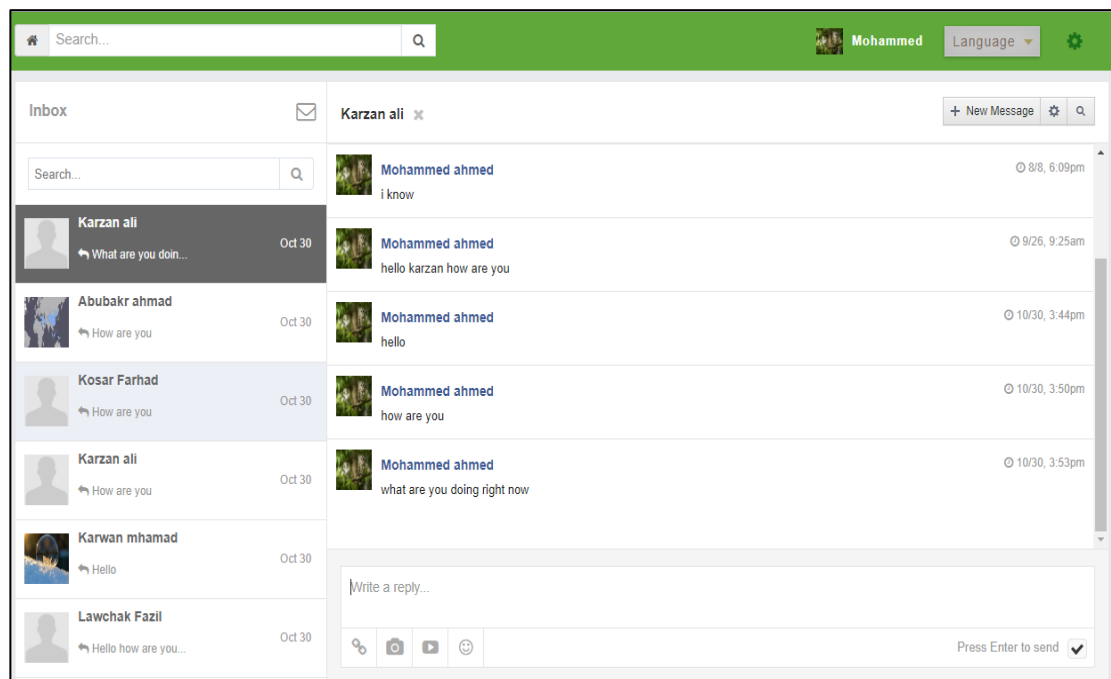


Figure 10: Messaging

#### 4.4.8 Summary

Nowadays, it is needless to say that a site is authoritative to endorse academic process, publish journal, article as well as exchange ideas over distance learning, online course, blog, chatting and so on. In this chapter the researcher clarified the process of developing the UoS\_ASN website and how the study coincided with each phase of design-based research in this site. The screenshot of some pages presented along with them regarding discussions. The researcher presented the key features of each pages. The website availability, usability, accessibility, academicism as well as sociability contemplations were revealed. This proposed website would make the students and instructors in the academic settings, be more enthusiastic and passionate to accept the impression with confidence of the advantages of the features and resources that provided.

## Chapter 5

### FINDINGS AND DISCUSSIONS

This chapter demonstrates the results of collected data, that is analyzed the students' attitudes toward the use of SNSs as well as the students' and instructors' attitudes toward the use of UoS\_ASN site. The results derived from collected data over using quantitative and qualitative methodology together that those data were collected by questionnaires and semi structure interview. The analysis of the data based on the parametric statistical test. As Robson (1994) stated that a parametric statistical test is a test whose model specifies certain conditions about the parameters of the population from which the research sample was drawn. In simple terms the parametric data analysis procedures rely on being fed with data about which the underlying parameters of their distribution is known, typically data that are normally distributed. The parametric data were analyzed by ANOVA. Respectively, the questionnaires were presented in terms of percentages, frequencies, mean, standard deviations as well as semi-structure interview is presented to provide proper answer in order to attain reasonable answers for the research questions. There are two phases in this study. The first phase, students in Computer Science Department were selected for collect quantitative data, 113 students from that Computer Science Department agreed to test the proposed system then answer the questions. In the second phase, 11 instructors, in the same department were selected randomly and interviewed after testing the proposed website. Conclusion is derived from these two phases. The results of this research were presented according to the research questions order.

The analysis process begins with descriptive statistics of questionnaires about present SNS usage by students. The researcher investigates the students' attitudes towards the impact of both SNS and UoS\_ASN system in learning regarding to the students' opinions. After that, the analysis of instructors' attitudes about the UoS\_ASN system were presented which the data collected by semi-structure interviews.

### **5.1 Students' agreeability level toward SNS**

In the Table 4, the students' agreeability level toward SNS was examined. The participants number is 105. Furthermore, the maximum score is 50, the minimum score is 21. The average of the students' agreeability level is 37.04, and it is a 67%. According to these result, it was determined that most of the students were agreed with the usage of SNS in academic life.

Table 4: Students' agreeable attitude level toward SNS

	n	X	%	Std. Deviation
Students' attitudes level	105	37.04	67.34	5.76

### **5.2 What are the attitudes of computer science students on the use of SNS sites for their academic life in university?**

There are several different perspectives to specify the students' attitudes toward SNS in the academic life in university, especially for teaching and learning. By means, it can be seen that most students and instructors use it in university as well as the result demonstrate that students' attitudes toward SNS were almost very high because of all the participants in the questionnaire react to the questions. Also, all the students said that they use SNS daily, as well as, in accordance with this idea, Ravishankar (2013)

stated that most of the students use SNS in university daily. List of the questions in questionnaire is given in (Appendix B).

From the questionnaire, the descriptive statistics were used to measure the importance of SNS in education and academic life as shown in Table 5. There is a list of questions that is answered by the students. In the Q1, 83.8% of the students stated that SNS are very important for student social experience in collages also, Özgen (2012) expressed that the SNS is very important in university. The means of Q1 is 4.37, which it reveals that most students are agreed that SNS are importance for social experience. In the Q2, 61.9% of students alleged that they missed classes because of doing social network. In addition, the result of Q3 showed that 83.8% of the students generally agree with SNS which help them to make a communication and contact with their friends in high school and collages. Furthermore, in question 4, 51.5% of the students said that the social network is important to academic life, On the other hand, Özgen (2012) stated that students were neutral that SNSs was important to their college academic experience. In the Q5, 62.9% of the students strongly agree and agree with SNSs that allow students to express their views to support this idea, Brady et al. (2010) stated that SNSs allow students to share their idea to public. Generally, it depicts that most students use it for pretend their opinions which it encourages them to publish their idea and knowledge to other online. In the Q6, almost most of the students 53.4% agree with the high level of means. It shows that most students use social network to help them to get in touch with their friends.

For Q7, 45.7% of the student chose neutral which said that they posted video as well as write a comment associated with the course. In the Q8, that is about answering comments, most of the students chose neutral by 50.5%. This point expresses that most

of the student have a passion just to answer important comment. In the Q9,10 and 11, the average is in the middle because most of the students chose neutral 42.9%, 57.1%, 41.0% and the means of those questions is between 2.58 – 2.69 because these questions are not comfortable for student in accordance with the results.

The result in the Table 5, shows that most of the students have positive attitudes toward SNSs. Brady et al. (2010) highlighted the educational advantages of SNSs, from increased levels of communication and collaboration to deeper levels of reflection. Instructors also reported observing positive effects on student engagement in the SNS. It reveals that fact the students use social network in their academic life extensively because of it, the agree result is high in the beginning. However, the result goes down to neutral, it means that the students opinions decreased for the questions at the end. The mean of all question almost high for all questions, this affirms that the questions have a high agree average level. The average of mean express that the students get benefit from the usage of SNSs. As compared to the research of Tiryakioglu and Erzurum (2010), it would be clear that SNS has a potential influence on students in university.

Table 5: Descriptive statistics of students' attitudes toward SNS

Question No	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	SD
Q.1	55.2%	28.6%	14.3%	1.9%	0	4.37	.800
Q.2	36.2%	25.7%	17.1%	12.4%	8.6%	3.69	1.311
Q.3	29.5%	54.3%	8.6%	3.8%	3.8%	4.02	.940
Q.4	26.7%	51.4%	15.2%	4.8%	1.9%	3.96	.887
Q.5	20.0%	42.9%	24.8%	2.9%	9.5%	3.61	1.131
Q.6	23.3%	28.1%	29.5%	9.5%	9.5%	3.36	1.128
Q.7	6.7%	25.7%	45.7%	11.4%	10.5%	3.07	1.031
Q.8	11.4%	15.2%	50.5%	15.2%	7.6%	3.08	1.035
Q.9	1.0%	21.0%	42.9%	16.2%	19.0%	2.63	.835

Q.10	1.9%	5.7%	57.1%	23.8%	11.4%	2.58	1.081
Q.11	2.9%	15.2%	41.0%	19.0%	21.9%	2.69	1.041

Note: List of the questions in Table 5

Q1: - Social Networking site is significant to my university social life.

Q2: - I have missed classes because I was doing Social Network site.

Q3: - Social Network Site permits me to keep in touch with university friends.

Q4: - Social Network Site is significant to my university Academic life.

Q5: - Social Network Site allows me to express myself.

Q6: - Social Network Site allows me to stay in touch with my family.

Q7: - I posted video and comments related to the course.

Q8: - I answered other people's post and comments.

Q9: - I used it to gain access to the course content outside sessions.

Q10: - I posted discussion subjects.

Q11: - I will continue to use the course Social Network page regularly now that the course has finished.

### **5.3 Is there any significance difference on the usage of SNSs by students in their academic life in university according to gender?**

In order to expose students' attitudes toward the use of SNS by gender and to get an appropriate answer for the research question, one-way ANOVA test was used. The overall population was 105 that 66 are male and 39 are female. There is a standard to specify significant difference among students that denoted by p and if the p value is less than .05, it means there is a significant difference between students or vice versa. It shows significant difference among female and male participants statistically. As shown in Table 6, the mean value according to gender are more similar to each other as well as the standard deviations value are more reasonable. the results showed that the mean of male 4.50 is a little more than female 4.18. Moreover, this point demonstrate that male students are more satisfied with the SNS in collage social experience than female as well as the result demonstrates that, the female students are use SNS more than male for communication and contacting. The means value in most of the questions are between 3 and 4.

Table 6: Students' statistical information on SNS according to their gender

No	Questions	Gender	n	Mean	SD
Q1	Social networking site is significant to my university social life.	Male	66	4.50	.793
		Female	39	4.18	.791
		Total	105	4.37	.800
Q2	I have missed classes because I was doing Social Network site.	Male	66	3.97	1.199
		Female	39	3.23	1.368
		Total	105	3.69	1.311
Q3	Social network site permits me to keep in touch with university friends.	Male	66	3.94	.998
		Female	39	4.15	.834
		Total	105	4.02	.940
Q4	Social network site is significant to my university Academic life.	Male	66	3.97	.883
		Female	39	3.95	.904
		Total	105	3.96	.887
Q5	Social network site allows me to express myself.	Male	66	3.68	1.017
		Female	39	3.50	1.301
		Total	105	3.61	1.131
Q6	Social network site allows me to stay in touch with my family.	Male	66	3.62	.979
		Female	39	2.95	1.239
		Total	105	3.36	1.128
Q7	I posted video and comments related to the course.	Male	66	3.06	1.088
		Female	39	3.08	.944
		Total	105	3.07	1.031
Q8	I answered other people's post and comments.	Male	66	3.03	1.000
		Female	39	3.15	1.099
		Total	105	3.08	1.035
Q9	I used it to gain access to the course content outside sessions.	Male	66	2.68	1.032
		Female	39	2.70	1.067
		Total	105	2.69	1.041
Q10	I posted discussion subjects.	Male	66	2.71	.723
		Female	39	2.50	.987
		Total	105	2.63	.835
Q11	I will continue to use the course Social Network page regularly now that the course has finished.	Male	66	2.55	1.046
		Female	39	2.63	1.148
		Total	105	2.58	1.081

The significant difference among students shown in Table 7. In Q1, the significant difference is .085, which it is upper than .05, it demonstrates that, there is not a significant difference between male and female. However, in the Q2, the significant difference is .004, it denotes that there is a significant difference between male and female in attending classes in university. In the Q3, the significant differences between male and female is upper than .05, it denotes that there is not a significant difference between male and female. In the Q4 and Q5, the significant difference is not important



between male and female. In the Q6, the significant difference is .003, which it is lower than .05 that means the significant difference is important between male and female that the male and female students are different in communication with their family. the means of all questions approximately are close to each other and the significant differences are not important, on the other hand, Thelwall and Kousha (2014) stated that there is not a significant difference between male and female on the use of SNS.

In Table 7, the students' attitudes toward SNS by gender statistically demonstrated. In Q2 and Q6, there is a significant difference between male and female in addition, the means of all questions are approximately close to each other, However, it demonstrates that both groups have almost similar attitudes. It confirms that the gender did not have an extreme influence on all student toward social network.

Table 7: ANOVA results on students' attitudes toward SNS according to gender

		Sum of Squares	Df	Mean Square	F	Sig.
Q1	Between Groups	1.899	1	1.899	3.027	.085
	Within Groups	64.615	103	.627		
	Total	66.514	104			
Q2	Between Groups	13.715	1	13.715	8.566	.004
	Within Groups	164.913	103	1.601		
	Total	178.629	104			
Q3	Between Groups	1.108	1	1.108	1.256	.265
	Within Groups	90.854	103	.882		
	Total	91.962	104			
Q4	Between Groups	.009	1	.009	.012	.915
	Within Groups	81.838	103	.795		
	Total	81.848	104			
Q5	Between Groups	.775	1	.775	.604	.439
	Within Groups	132.215	103	1.284		
	Total	132.990	104			
Q6	Between Groups	10.963	1	10.963	9.310	.003
	Within Groups	121.285	103	1.178		
	Total	132.248	104			
Q7	Between Groups	.004	1	.004	.004	.949
	Within Groups	110.529	103	1.073		
	Total	110.533	104			
Q8	Between Groups	.352	1	.352	.327	.569
	Within Groups	111.038	103	1.078		

	Total	111.390	104			
Q9	Between Groups	.013	1	.013	.012	.913
	Within Groups	112.615	103	1.093		
	Total	112.629	104			
Q10	Between Groups	1.068	1	1.068	1.540	.217
	Within Groups	71.446	103	.694		
	Total	72.514	104			
Q11	Between Groups	.125	1	.125	.106	.745
	Within Groups	121.437	103	1.179		
	Total	121.562	104			

Note: \* $p < .05$  It means that difference is significant and .05 is a standard level.

#### **5.4 Is there any significance difference on the usage of SNSs by students in their academic life in university according to age?**

The One-way ANOVA test utilized so as to acquire a suitable response for the research question as well as to depict the influence of age on the students' attitudes towards the use of SNS. As shown in the Table 8, the total population of group age is 105 students which the number of students between 18-20 years old are 24 students, between 12-24 years old are 64 students and between 25 and older are 17 students. In the Q1, the means average and standard deviations of the questions are more similar to each other. Approximately, the means value and standard deviations in Q2, Q3, Q4 and Q5 are similar with some small differences correspondingly, this denotes that all different groups had agreeable attitudes toward SNS. In Q6, for the group age of 18-20 years old, there is a lowest value of mean 3.00 to compare with two other groups. the group age of 25- older has a minimum value of mean which it is equal to 2.65. in the Q9, Q10 and 11, the means value generally between 2.47 and 2.76, it denotes that the students are more neural about those questions

Table 8: Students' statistical information on SNS according to their age

No	Questions	Age	n	Mean	SD
Q1	Social Networking site is significant to my university social life.	18-20	24	4.42	.717
		21-24	64	4.41	.830
		25 and older	17	4.18	.809
		Total	105	4.37	.800
Q2	I have missed classes because I was doing Social Network site.	18-20	24	3.29	1.517
		21-24	64	3.77	1.244
		25 and older	17	3.94	1.197
		Total	105	3.69	1.311
Q3	Social Network Site permits me to keep in touch with university friends.	18-20	24	4.21	.833
		21-24	64	3.98	.951
		25 and older	17	3.88	1.054
		Total	105	4.02	.940
Q4	Social Network Site is significant to my university Academic life.	18-20	24	4.17	.637
		21-24	64	3.91	.971
		25 and older	17	3.88	.857
		Total	105	3.96	.887
Q5	Social Network Site allows me to express myself.	18-20	24	3.58	1.100
		21-24	64	3.59	1.191
		25 and older	17	3.71	.985
		Total	105	3.61	1.131
Q6	Social Network Site allows me to stay in touch with my family.	18-20	24	3.00	1.180
		21-24	64	3.41	1.151
		25 and older	17	3.71	.849
		Total	105	3.36	1.128
Q7	I posted video and comments related to the course.	18-20	24	3.25	.944
		21-24	64	3.02	1.076
		25 and older	17	3.00	1.000
		Total	105	3.07	1.031
Q8	I answered other people's post and comments.	18-20	24	3.46	1.021
		21-24	64	3.05	1.045
		25 and older	17	2.65	.862
		Total	105	3.08	1.035
Q9	I used it to gain access to the course content outside sessions.	18-20	24	2.67	1.007
		21-24	64	2.67	1.128
		25 and older	17	2.76	.752
		Total	105	2.69	1.041
Q10	I posted discussion subjects.	18-20	24	2.63	.875
		21-24	64	2.66	.840
		25 and older	17	2.53	.800
		Total	105	2.63	.835

Q11	I will continue to use the course Social Network page regularly now that the course has finished.	18-20	24	2.58	1.139
		21-24	64	2.61	1.107
		25 and older	17	2.47	.943
		Total	105	2.58	1.081

As shown in the Table 9, just in Q8, there is a significant difference between group age which the value is smaller than .05. which it was about students answer toward other posts. In all of the questions there is not a significant difference between students.

According to the result in Table 8,9 except Q8, in all the questions, there is not a significant difference. The means and standard deviation of all questions are more similar with other groups inside question. It exposes that students' attitudes toward SNS are not extremely affected by students' age.

Table 9: ANOVA results on students' attitudes toward SNS according to age

		Sum of Squares	df	Mean Square	F	Sig.
Q1	Between Groups	.773	2	.386	.600	.551
	Within Groups	65.741	102	.645		
	Total	66.514	104			
Q2	Between Groups	5.245	2	2.622	1.543	.219
	Within Groups	173.384	102	1.700		
	Total	178.629	104			
Q3	Between Groups	1.254	2	.627	.705	.496
	Within Groups	90.707	102	.889		
	Total	91.962	104			
Q4	Between Groups	1.312	2	.656	.831	.439
	Within Groups	80.536	102	.790		
	Total	81.848	104			
Q5	Between Groups	.190	2	.095	.073	.930
	Within Groups	132.800	102	1.302		
	Total	132.990	104			
Q6	Between Groups	5.281	2	2.640	2.121	.125
	Within Groups	126.967	102	1.245		
	Total	132.248	104			
Q7	Between Groups	1.049	2	.524	.489	.615
	Within Groups	109.484	102	1.073		
	Total	110.533	104			
Q8	Between Groups	6.690	2	3.345	3.259	.042
	Within Groups	104.700	102	1.026		
	Total	111.390	104			

Q9	Between Groups	.127	2	.064	.058	.944
	Within Groups	112.502	102	1.103		
	Total	112.629	104			
Q10	Between Groups	.216	2	.108	.153	.859
	Within Groups	72.298	102	.709		
	Total	72.514	104			
Q11	Between Groups	.259	2	.129	.109	.897
	Within Groups	121.303	102	1.189		
	Total	121.562	104			

Note: \* $p < .05$  It means that difference is significant and .05 is a standard level.

### **5.5 Is there any significance difference on the usage of SNSs by students in their academic life in university according to grade?**

In the one-way ANOVA, the effect of grade reveals on the students' attitudes towards the use of SNS. According to the Table 10, the total population of group age is 105 students. In the second grade the number of students which participated are 43, in the third grade are 25 and in the fourth grade are 37. In the first question, the means of the three grades are 4.33, 4.44 and 4.38 which they are more high and similar to each other, it implies that the SNS for collage social experience is more important for all grades. In the Q2, Q3, Q4, Q5 and Q6, the means are high and almost close to each other. On the other hand, in the Q8, the total means are gradually decreased and the means of second grade are 2.76. It denotes that the students are more neutral about the comments and posts of other people. In the Q9, the total mean is 2.69, it implies that the students are not more active to open course discussion outside the session. In the Q10 and Q11, the means are 2.63 and 2.58, it donates that the students are more neutral. the means and standard deviation are closer to each other side by side with the questions. It demonstrates that the student grade does not have a major influence on students' attitudes.

Table 10: Students' statistical information on SNS according to their grade

No	Questions	Grade	n	Mean	SD
Q1	Social networking site is significant to my university social life.	2nd grade	43	4.33	.778
		3rd grade	25	4.44	.768
		4th grade	37	4.38	.861
		Total	105	4.37	.800
Q2	I have missed classes because I was doing Social Network site.	2nd grade	43	3.51	1.316
		3rd grade	25	3.80	1.190
		4th grade	37	3.81	1.391
		Total	105	3.69	1.311
Q3	Social network site permits me to keep in touch with university friends.	2nd grade	43	4.07	.768
		3rd grade	25	3.88	1.130
		4th grade	37	4.05	.998
		Total	105	4.02	.940
Q4	Social network site is significant to my university Academic life.	2nd grade	43	4.00	.873
		3rd grade	25	3.84	.987
		4th grade	37	4.00	.850
		Total	105	3.96	.887
Q5	Social network site allows me to express myself.	2nd grade	43	3.51	1.261
		3rd grade	25	3.64	1.221
		4th grade	37	3.70	.909
		Total	105	3.61	1.131
Q6	Social network site allows me to stay in touch with my family.	2nd grade	43	3.05	1.253
		3rd grade	25	3.52	.872
		4th grade	37	3.62	1.063
		Total	105	3.36	1.128
Q7	I posted video and comments related to the course.	2nd grade	43	3.19	.932
		3rd grade	25	2.72	1.100
		4th grade	37	3.16	1.068
		Total	105	3.07	1.031
Q8	I answered other people's post and comments.	2nd grade	43	3.16	1.111
		3rd grade	25	2.76	1.012
		4th grade	37	3.19	.938
		Total	105	3.08	1.035
Q9	I used it to gain access to the course content outside sessions.	2nd grade	43	2.60	1.094
		3rd grade	25	2.68	1.215
		4th grade	37	2.78	.854
		Total	105	2.69	1.041
Q10	I posted discussion subjects.	2nd grade	43	2.65	.870
		3rd grade	25	2.68	.900
		4th grade	37	2.57	.765
		Total	105	2.63	.835
Q11	I will continue to use the course Social Network page regularly now that the course has finished.	2nd grade	43	2.53	1.222
		3rd grade	25	2.68	1.069
		4th grade	37	2.57	.929
		Total	105	2.58	1.081

As shown in Table 11, the significant differences of all questions are not important because of the value of each question are upper than .05. As well as Wang et al. (2011)

stated that there is not a significant difference between student grades on the use on SNS. It shows that the students' grade was not influence their academic performance and attitudes.

Table 11: ANOVA results on students' attitudes toward SNS according to grade

		<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Q1	Between Groups	.210	2	.105	.161	.851
	Within Groups	66.305	102	.650		
	Total	66.514	104			
Q2	Between Groups	2.209	2	1.104	.639	.530
	Within Groups	176.420	102	1.730		
	Total	178.629	104			
Q3	Between Groups	.639	2	.320	.357	.701
	Within Groups	91.323	102	.895		
	Total	91.962	104			
Q4	Between Groups	.488	2	.244	.306	.737
	Within Groups	81.360	102	.798		
	Total	81.848	104			
Q5	Between Groups	.757	2	.378	.292	.748
	Within Groups	132.234	102	1.296		
	Total	132.990	104			
Q6	Between Groups	7.398	2	3.699	3.022	.053
	Within Groups	124.850	102	1.224		
	Total	132.248	104			
Q7	Between Groups	3.955	2	1.977	1.892	.156
	Within Groups	106.579	102	1.045		
	Total	110.533	104			
Q8	Between Groups	3.294	2	1.647	1.554	.216
	Within Groups	108.096	102	1.060		
	Total	111.390	104			
Q9	Between Groups	.639	2	.320	.291	.748
	Within Groups	111.989	102	1.098		
	Total	112.629	104			
Q10	Between Groups	.226	2	.113	.159	.853
	Within Groups	72.289	102	.709		
	Total	72.514	104			
Q11	Between Groups	.343	2	.172	.144	.866
	Within Groups	121.219	102	1.188		
	Total	121.562	104			

Note: \* $p < .05$  It means that difference is significant and .05 is a standard level.

## **5.6 Students' agreeability level toward UoS\_ASN**

In the Table 12, the students' agreeability level toward UoS\_ASN was examined. The participants number is 105. Furthermore, the maximum score is 63, the minimum score is 26. The average of the students' agreeability level is 47.68, and it is a 68%. According to these result, it was determined that most of the students were agreed with the usage of UoS\_ASN in academic life.

Table 12: Students' agreeable attitude level toward UoS\_ASN

	n	X	%	Std. Deviation
Students' attitudes level	105	47.68	68.11	7.05

## **5.7 What are the attitudes of computer science students and instructors on the use of the UoS\_ASN site for their academic life in university?**

The UoS\_ASN site as mentioned before, has been proposed to act as an ASN site for Computer Science Department in Sulaimani university. After the students and instructors tested it, the researcher conducted a questionnaire with students and interview with instructors on this site. To answer the research questions, the researcher tried to analyze the collected data. The students' attitudes and opinions toward UoS\_ASN site examined and discussed, then the instructors' attitudes and opinions toward relative question with the students' opinions is discussed.

Students' attitudes and opinions were measured over questionnaire five-point Likert Scale type. The one-way ANOVA test was used to analyze the collected quantitative data. On the other hand, the instructors were individually interviewed. The researcher



interviewed 11 instructors and asked their opinion toward proposed platform. In order to obtain the instructors' opinion, the researcher asked 7 questions about the proposed UoS\_ASN site (Appendix C). Also, the instructors' name was labeled to specific code in order to hide their identity.

As shown in Table 13, In the Q1, 81.0% of the students are agree to make collaboration on UoS\_ASN site with peers and said that it is better than traditional face to face. Also, In the Q2, 76.1% of the students are agree that UoS\_ASN allows students to make communications with peers and colleagues outside classroom. In the Q3 and Q4, most of the students said that this system provides a communication's techniques for those who could not meet face-to-face in effective ways. From the instructors' perspectives, they demonstrate that this system is important to make a communication between students and instructors. For instance, T4 said:

In my opinions, all the sites like this site, is very important for university, commit the communication between students and instructors, so they are made the communication in a better way, whenever the students have a question they can ask the instructors and get the response in a quick way also they can make a group or a team work with the other students so in my opinions this website it will be important for Sulaimani university.

Another point was highlighted by an instructor, that it provides communication at weekend and holiday which denoted this system assists students to get in touch with instructors and other students at weekends and holidays. For instance, T6 said:

Now there is a lack of communication between students and teachers sometimes they can't make a communication at weekend and other holiday, but this website will help them to make a communication.

The communication process occupied important place in this website because of most of the instructors concentrate on communication process as well as it is very helpful to

make communications with other people inside this system who work in academic field. For instance, T8 said:

As I see the website and the project I see it has many benefits for education like sharing information, make communications between teaching stuff with students and other people who working in academic field.

Instructors also supported the communication process which helps some student who cannot participate in classes and this website open a new window for them to get in touch with their instructors as T9 said:

I think its good site for teaching and learning specially it make a communication with students and teachers and academic stuff. I think it have many benefits when you have some shyness student they can't take part in the classes they can use it to make a communication with their teachers. through this type of website, they can communicate much better other site I think it make student to use technology better than before when you communicate with the academic stuff.

The T4 has a different opinion about the social network generally as said:

Sometimes the social network will be bad or will have the bad effect on the students so you know when any people on the internet maybe spend a lot of times on other social networks like Facebook Tweeter or the other Instagram so technology will be spent a lot of times you know students need specific time to read and write to take the advantages from the internet.

As enlightened before, the communication is very crucial from both students' and instructors' perspectives but it should be limited. In additions, in the Q5, 81.9% of the students stated that this site allows them to have deep conversation with their peers as well as in the Q6, 52.4% of students agree that this type of communication is not effective. In the Q7, 54.2% of student agree that this website allows them to express their thoughts and ideas more frankly. As well as in the Q8, 41.9% of the students are neutral about the comparison between this website and traditional face to face

discussion. On the other hand, about exchange information and ideas the instructors also focused on it. For instance, T3 said:

In this website, student can change ideas and information and they can publish lectures and benefit from it. it has advantage for students because student and instructors can exchange ideas and information also exchange different idea about new technology and innovation nowadays.

As well as the T3 concentrate on group to exchange thoughts and ideas as T3 said:

In this website the student can create a group through the group they can exchange academic subjects and ideas about their study and get more information about new things.

At the glance to the previous answers, there are several common points between students and instructors about sharing ideas and opinions. In Q9, 43.8% of the students are neutral toward get classes materials and syllabus. Also, in the Q10, 39.0% of the students are neutral that they feel comfortable in sharing, publishing topics and ideas about UoS\_ASN site. However, the instructors express that this website is a good place to make classes material available and put all materials and syllabus online. For instance, T2 said:

in my opinions, this idea is useful for education process because easy for student and instructors, the student can get some things related to this subject and the teacher can publish also some topics that is useful for both.

In additions, T3 said:

The materials student required in exams can be published also the student marks. the teacher can publish some hints and information about the question in the exams to their students.

The instructors noticed the necessity of this website to put class's materials and publish everything that related to their subject also some instructors believe that this website

could be a place to publish student's mark and information about exams. Also, T7 focus on this point and said:

This social network is an academic website to communicate with student and publish lectures and spread the knowledge and the student can reach all of the most updated references and materials regarded to university schedules and the lecturer provide more information about their lectures.

As well as T8 express that:

It solves some problem it makes the educational process easier because sometime the teachers have some document and lectures will post it or share it to students and they can use this website and webpage for and student can post or have notes about the uploaded or sent document from the teachers.

To support the idea of publishing T5 said:

I think it will help all to publish lectures and make a connection between students and could help student to be aware of every announcement in the department.

The sharing and publishing takes an important role in UoS\_ASN site which allows the members to publish academic topics and materials that have benefits for students also for instructors. Because of this point most of the instructors concentrate on the techniques of publishing and sharing knowledge and information in the website. In the Q11, 51.3% of students feel more neutral about obtain announcement and exam times. In the Q12, 37.1% of students are neutral about comfortability and convenience of the site. Also, T5 said:

The main issues we faced now in our department there is one student who represent all the student and in exam time that student should tell all the students and about any holiday and anything about the lectures we have to tell that representative and then he /she tell all the students but if we have such a system we can publish everything through it to students and all the student will see it, currently the representors will not be able to tell all the students about any notifications in university and what happen in the departments or the days of the exams.

As well as T7 said:

As you know, the student doesn't like to come and attend the classes and they use social network so much if it is academic it can be better for them because are spending so much time on social network so if they spend that time on academic social network indirectly they get much more information.

From these two opinions, the time of exam is a problem for most of the students because the representor should tell all students about the exam time but through this website all students able to know the time and the students that use this academic social network will indirectly get benefits because of all posts in this website are about academic and informational issues. On the other hand, in the Q13, 32.4% of students disagree about the website features as well as in the final question, 36.2% of students also disagree about the facilitation of comprehensive understanding about topics covered as well as addressed in the classes.

In additions, the instructors specified several drawbacks about this website but generally, they support the student's opinions. In the following, the opinions of three instructors obtained that offer some drawbacks about this website as T3 said:

I think the main drawback of this website is a video conferencing and video chatting because through it student can directly touch with the lectures it would be available it this site would help student more.

As well as T9 said:

I think the security I wonder if I go into this website and make account what about the security of this website who was the security its well defined and did all the post when published is protected securely but generally for teaching and learning it is a good work. because there is a gap between teaching stuff with student, I think this website can reduce this gap.

From the opinions of those instructors, it would be clear that this website has several drawbacks that delivered by instructors because some of them said that the existence

of video conferencing and video chatting is important. Also, the users need to be sure about the security of the website because nowadays hacking is popular and everyone worried about it.

Generally, the students of Sulaimani University have a great passion towards the use of UoS\_ASN site. According to the result in the Table 13 the majority of the students accept UoS\_ASN as an academic social network site that assists and facilitates academic process in university. The students stated that this site helps and supports student to communicate and collaborate with other easily and help them to express their ideas and opinions. As well as this site provide data availability for users without time and geographic area. This site could be a platform for student to publish their four years project in order to other students see and use it as a resource. Also, most of the instructors accept the idea of this website and gave their opinions about it. Eventually, the instructors acknowledged that this website can enhance students' ability to learn and it provide a new approach for teaching and learning process in university. Also, it could make a good bridge between students and instructors to exchange their ideas and opinions.

Table 13: Descriptive statistics of students' attitudes toward UoS\_ASN

<b>Question No</b>	<b>Strongly agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<b>Mean</b>	<b>SD</b>
Q.1	61.0%	20.0%	16.2%	2.9%	0%	4.39	.860
Q.2	37.1%	39.0%	19.0%	3.8%	1%	4.08	.895
Q.3	37.1%	34.3%	18.1%	4.8%	5.7%	3.92	1.124
Q.4	35.2%	35.2%	19.0%	3.8%	6.7%	3.89	1.138
Q.5	45.7%	36.2%	9.5%	3.8%	4.8%	4.14	1.060
Q.6	13.3%	52.4%	23.8%	4.8%	5.7%	3.63	.973
Q.7	15.2%	39.0%	35.2%	5.7%	4.8%	3.54	.981
Q.8	13.3%	32.4%	41.9%	4.8%	7.6%	3.39	1.033
Q.9	5.7%	37.1%	43.8%	4.8%	8.6%	3.27	.963
Q.10	7.6%	28.6%	39.0%	7.6%	17.1%	3.02	1.168
Q.11	6.7%	24.8%	51.3%	7.6%	9.5%	3.11	.984

Q.12	4.8%	14.3%	37.1%	19.0%	24.8%	2.55	1.152
Q13	1.9%	14.3%	30.5%	32.4%	21.0%	2.44	1.037
Q.14	1.4%	11.4%	26.7%	36.2%	23.8%	2.31	1.022

Note: List of the questions in Table 13

- Q1: UoS\_ASN site allows for me to collaborate with my peers and colleagues in my course more frequently as compared to traditional face-to-face classes.
- Q2: UoS\_ASN site allows for me to communicate with peers and colleagues in my course outside of the traditional classroom setting.
- Q3: UoS\_ASN site allows for me to communicate with peers and colleagues who I would not otherwise be able communicate with.
- Q4: UoS\_ASN site allows for me to communicate more effectively as compared to traditional face-to-face meetings.
- Q5: UoS\_ASN site allows for me to have a more detailed, in depth conversation with my peers and colleagues in the course.
- Q6: UoS\_ASN site does not allow for me to effectively communicate with peers and colleagues.
- Q7: UoS\_ASN allows for me to express my thoughts more clearly and openly.
- Q8: UoS\_ASN allows for me to comment and discuss ideas with my peers and colleagues more efficiently as compared to traditional face-to-face classes.
- Q9: UoS\_ASN allows me to get classes material online.
- Q10: I feel more comfortable sharing, publishing topics and my idea on UoS\_ASN.
- Q11: UoS\_ASN allows me more time to get announcements and exam times.
- Q12: I am more comfortable and convenient using UoS\_ASN.
- Q13: I prefer using UoS\_ASN because it has many useful features.
- Q14: My use of UoS\_ASN facilitates a more comprehensive understanding of the topics covered and/or addressed in the class.

### **5.8 Is there any significance difference on the use of the UoS\_ASN by students in their academic life in university according to gender?**

The male students' population are 66 and females are 39. Initially, in the first two questions, the means and standard deviation are very similar and the mean value are high. It denotes that the male students are more comfortable with the site than female. In general, most of the students have a good perception toward UoS\_ASN. According to the result in the Table 14, the students are comfortable with the site. The mean of all questions is more reasonable.

Table 14: Students' statistical information on SNS according to their gender

No	Questions	Gender	n	Mean	SD
Q1	UoS_ASN site allows for me to collaborate with my peers and colleagues in my course more frequently as compared to traditional face-to-face classes.	Male	66	4.57	.728
		Female	39	4.10	.982
		Total	105	4.39	.860
Q2	UoS_ASN site allows for me to communicate with peers and colleagues in my course outside of the traditional classroom setting.	Male	66	4.25	.867
		Female	39	3.80	.883
		Total	105	4.08	.895
Q3	UoS_ASN site allows for me to communicate with peers and colleagues who I would not otherwise be able communicate with.	Male	66	4.06	1.074
		Female	39	3.70	1.181
		Total	105	3.92	1.124
Q4	UoS_ASN site allows for me to communicate more effectively as compared to traditional face-to-face meetings.	Male	66	4.03	1.131
		Female	39	3.65	1.122
		Total	105	3.89	1.138
Q5	UoS_ASN site allows for me to have a more detailed, in depth conversation with my peers and colleagues in the course.	Male	66	4.25	.902
		Female	39	3.98	1.271
		Total	105	4.14	1.060
Q6	UoS_ASN site does not allow for me to effectively communicate with peers and colleagues.	Male	66	3.60	1.012
		Female	39	3.68	.917
		Total	105	3.63	.973
Q7	UoS_ASN allows for me to express my thoughts more clearly and openly.	Male	66	3.49	.986
		Female	39	3.63	.979
		Total	105	3.54	.981
Q8	UoS_ASN allows for me to comment and discuss ideas with my peers and colleagues more efficiently as compared to traditional face-to-face classes.	Male	66	3.42	1.102
		Female	39	3.35	.921
		Total	105	3.39	1.033
Q9	UoS_ASN allows me to get classes material online.	Male	66	3.32	.954
		Female	39	3.18	.984
		Total	105	3.27	.963
Q10	I feel more comfortable sharing, publishing topics and my idea on UoS_ASN.	Male	66	2.82	1.236
		Female	39	3.35	.975
		Total	105	3.02	1.168
Q11	UoS_ASN allows me more time to get announcements and exam times.	Male	66	3.02	1.038
		Female	39	3.28	.877
		Total	105	3.11	.984
Q12	I am more comfortable and convenient using UoS_ASN.	Male	66	2.57	1.089
		Female	39	2.53	1.261
		Total	105	2.55	1.152
Q13	I prefer using UoS_ASN because it has many useful features.	Male	66	2.28	.992
		Female	39	2.70	1.067
		Total	105	2.44	1.037
Q14	My use of UoS_ASN facilitates a more comprehensive understanding of the topics covered and/or addressed in the class.	Male	66	2.23	.965
		Female	39	2.45	1.108
		Total	105	2.31	1.022



On the other hand, In the Table 15, there is a significant difference between male and female in Q1 about the usage of this website in comparison with the old face-to-face communication which the male students prefer this site more than female. Q2, Q10, also, there is a significant difference which the students' attitudes are different toward publishing and sharing topics online. In Q13 about the features of the website there is a significant difference because of the significant difference is lower than .05 level. However, these differences were not so crucial to affect all questions. Ultimately, in most questions, there is not a significant difference between male and female.

Table 15: ANOVA results on students' attitudes toward UoS\_ASN according to gender

		Sum of Squares	Df	Mean Square	F	Sig.
Q1	Between Groups	5.452	1	5.452	7.850	.006
	Within Groups	71.538	103	.695		
	Total	76.990	104			
Q2	Between Groups	4.929	1	4.929	6.470	.012
	Within Groups	78.462	103	.762		
	Total	83.390	104			
Q3	Between Groups	3.237	1	3.237	2.601	.110
	Within Groups	128.154	103	1.244		
	Total	131.390	104			
Q4	Between Groups	3.590	1	3.590	2.822	.096
	Within Groups	131.038	103	1.272		
	Total	134.629	104			
Q5	Between Groups	1.821	1	1.821	1.630	.205
	Within Groups	115.037	103	1.117		
	Total	116.857	104			
Q6	Between Groups	.139	1	.139	.146	.703
	Within Groups	98.375	103	.955		
	Total	98.514	104			
Q7	Between Groups	.436	1	.436	.451	.503
	Within Groups	99.621	103	.967		
	Total	100.057	104			
Q8	Between Groups	.106	1	.106	.098	.754
	Within Groups	110.885	103	1.077		
	Total	110.990	104			
Q9	Between Groups	.543	1	.543	.583	.447
	Within Groups	95.990	103	.932		
	Total	96.533	104			
Q10	Between Groups	7.077	1	7.077	5.404	.022
	Within Groups	134.885	103	1.310		
	Total	141.962	104			
Q11	Between Groups	1.669	1	1.669	1.737	.190

	Within Groups	98.960	103	.961		
	Total	100.629	104			
Q12	Between Groups	.048	1	.048	.036	.850
	Within Groups	137.913	103	1.339		
	Total	137.962	104			
Q13	Between Groups	4.432	1	4.432	4.250	.042
	Within Groups	107.415	103	1.043		
	Total	111.848	104			
Q14	Between Groups	1.190	1	1.190	1.141	.288
	Within Groups	107.438	103	1.043		
	Total	108.629	104			

Note: \* $p < .05$  It means that difference is significant and .05 is a standard level.

### **5.9 Is there any significance difference on the use of the UoS\_ASN by students in their academic life in university according to age?**

As shown in Table 16, the number of students in 18-20 years old are 24, in 21-24 years old are 64 and in 25 and older are 17. In the first question, the mean of a group of students who ages 25 years and older have a highest mean value, it denoted that this group are more comfortable with the UoS\_ASN site. The means of all questions are over than 2. The means and standard deviations are more reasonable toward UoS\_ASN site. However, in the beginning of the questions, the means are high but it gradually decreased. In the four last questions the mean generally around 2.5. About intensive activity on UoS\_ASN site the mean decreased to around 2.5, it implies that most students are neutral about it.

Table 16: Students' statistical information on UoS ASN according to their age

No	Questions	Age	n	Mean	SD
Q1	UoS_ASN site allows for me to collaborate with my peers and colleagues in my course more frequently as compared to traditional face-to-face classes.	18-20	24	4.29	.751
		21-24	64	4.41	.938
		25 and older	17	4.47	.717
		Total	105	4.39	.860
Q2	UoS_ASN site allows for me to communicate with peers and colleagues in my course outside of the traditional classroom setting.	18-20	24	3.79	1.021
		21-24	64	4.17	.865
		25 and older	17	4.12	.781

		Total	105	4.08	.895
Q3	UoS_ASN site allows for me to communicate with peers and colleagues who I would not otherwise be able communicate with.	18-20	24	3.67	1.341
		21-24	64	4.05	.999
		25 and older	17	3.82	1.237
		Total	105	3.92	1.124
Q4	UoS_ASN site allows for me to communicate more effectively as compared to traditional face-to-face meetings.	18-20	24	3.88	1.035
		21-24	64	3.80	1.184
		25 and older	17	4.24	1.091
		Total	105	3.89	1.138
Q5	UoS_ASN site allows for me to have a more detailed, in depth conversation with my peers and colleagues in the course.	18-20	24	4.33	1.204
		21-24	64	4.11	1.071
		25 and older	17	4.00	.791
		Total	105	4.14	1.060
Q6	UoS_ASN site does not allow for me to effectively communicate with peers and colleagues.	18-20	24	3.54	1.141
		21-24	64	3.64	.915
		25 and older	17	3.71	.985
		Total	105	3.63	.973
Q7	UoS_ASN site allows for me to express my thoughts more clearly and openly.	18-20	24	3.50	1.142
		21-24	64	3.63	.934
		25 and older	17	3.29	.920
		Total	105	3.54	.981
Q8	UoS_ASN site allows for me to comment and discuss ideas with my peers and colleagues more efficiently as compared to traditional face-to-face classes.	18-20	24	3.25	1.225
		21-24	64	3.47	1.038
		25 and older	17	3.29	.686
		Total	105	3.39	1.033
Q9	UoS_ASN allows me to get classes material online.	18-20	24	3.17	1.049
		21-24	64	3.33	.960
		25 and older	17	3.18	.883
		Total	105	3.27	.963
Q10	I feel more comfortable sharing, publishing topics and my idea on UoS_ASN.	18-20	24	3.29	1.367
		21-24	64	2.97	1.069
		25 and older	17	2.82	1.237
		Total	105	3.02	1.168
Q11	UoS_ASN allows me more time to get announcements and exam times.	18-20	24	3.00	.978
		21-24	64	3.23	.972
		25 and older	17	2.82	1.015
		Total	105	3.11	.984
Q12	I am more comfortable and convenient using UoS_ASN.	18-20	24	2.38	1.245
		21-24	64	2.69	1.097

		25 and older	17	2.29	1.213
		Total	105	2.55	1.152
Q13	I prefer using UoS_ASN because it has many useful features.	18-20	24	2.38	1.135
		21-24	64	2.42	.989
		25 and older	17	2.59	1.121
		Total	105	2.44	1.037
Q14	My use of UoS_ASN facilitates a more comprehensive understanding of the topics covered and/or addressed in the class.	18-20	24	2.29	1.268
		21-24	64	2.30	.903
		25 and older	17	2.41	1.121
		Total	105	2.31	1.022

As shown in Table 17, There is not a significant difference between these groups of age in all questions. Furthermore, it denotes there is not a big difference between students' opinions toward UoS\_ASN according to those group of ages. From general perspective, the age does not have a comprehensive influence on students' attitudes toward UoS\_ASN site.

Table 17: ANOVA results on students' attitudes toward UoS\_ASN according to age

		Sum of Squares	Df	Mean Square	F	Sig.
Q1	Between Groups	.359	2	.180	.239	.788
	Within Groups	76.631	102	.751		
	Total	76.990	104			
Q2	Between Groups	2.558	2	1.279	1.614	.204
	Within Groups	80.832	102	.792		
	Total	83.390	104			
Q3	Between Groups	2.727	2	1.364	1.081	.343
	Within Groups	128.663	102	1.261		
	Total	131.390	104			
Q4	Between Groups	2.585	2	1.293	.999	.372
	Within Groups	132.043	102	1.295		
	Total	134.629	104			
Q5	Between Groups	1.289	2	.645	.569	.568
	Within Groups	115.568	102	1.133		
	Total	116.857	104			
Q6	Between Groups	.292	2	.146	.152	.859
	Within Groups	98.222	102	.963		
	Total	98.514	104			
Q7	Between Groups	1.528	2	.764	.791	.456
	Within Groups	98.529	102	.966		
	Total	100.057	104			

Q8	Between Groups	1.024	2	.512	.475	.623
	Within Groups	109.967	102	1.078		
	Total	110.990	104			
Q9	Between Groups	.620	2	.310	.330	.720
	Within Groups	95.913	102	.940		
	Total	96.533	104			
Q10	Between Groups	2.595	2	1.298	.950	.390
	Within Groups	139.366	102	1.366		
	Total	141.962	104			
Q11	Between Groups	2.674	2	1.337	1.392	.253
	Within Groups	97.955	102	.960		
	Total	100.629	104			
Q12	Between Groups	3.057	2	1.529	1.156	.319
	Within Groups	134.904	102	1.323		
	Total	137.962	104			
Q13	Between Groups	.496	2	.248	.227	.797
	Within Groups	111.352	102	1.092		
	Total	111.848	104			
Q14	Between Groups	.193	2	.097	.091	.913
	Within Groups	108.435	102	1.063		
	Total	108.629	104			

Note: \* $p < .05$  It means that difference is significant and .05 is a standard level.

### 5.10 Is there any significance difference on the use of the UoS\_ASN by students in their academic life in university according to grade?

As shown in Table 18, the students' attitudes toward UoS\_ASN site was explained in accordance with their grades. The means of all grades are closer to each other which it denotes that almost the three grades are preferring to use this site in their academic life. However, the means of all questions gradually decreased. Generally, the students of these three grades have good attitudes toward UoS\_ASN but the fourth grade are more interesting in this site more than other.

Table 18: Students' statistical information on UoS\_ASN according to their grade

No	Questions	Grade	n	Mean	SD
Q1	UoS_ASN site allows for me to collaborate with my peers and colleagues in my course more frequently as compared to traditional face-to-face classes.	2nd grade	24	4.29	.751
		3rd grade	64	4.41	.938
		4th grade	17	4.47	.717
		Total	105	4.39	.860
Q2	UoS_ASN site allows for me to communicate with peers and colleagues	2nd grade	24	3.79	1.021
		3rd grade	64	4.17	.865

	in my course outside of the traditional classroom setting.	4th grade	17	4.12	.781
		Total	105	4.08	.895
Q3	UoS_ASN site allows for me to communicate with peers and colleagues who I would not otherwise be able communicate with.	2nd grade	24	3.67	1.341
		3rd grade	64	4.05	.999
		4th grade	17	3.82	1.237
		Total	105	3.92	1.124
Q4	UoS_ASN site allows for me to communicate more effectively as compared to traditional face-to-face meetings.	2nd grade	24	3.88	1.035
		3rd grade	64	3.80	1.184
		4th grade	17	4.24	1.091
		Total	105	3.89	1.138
Q5	UoS_ASN site allows for me to have a more detailed, in depth conversation with my peers and colleagues in the course.	2nd grade	24	4.33	1.204
		3rd grade	64	4.11	1.071
		4th grade	17	4.00	.791
		Total	105	4.14	1.060
Q6	UoS_ASN site does not allow for me to effectively communicate with peers and colleagues.	2nd grade	24	3.54	1.141
		3rd grade	64	3.64	.915
		4th grade	17	3.71	.985
		Total	105	3.63	.973
Q7	UoS_ASN site allows for me to express my thoughts more clearly and openly.	2nd grade	24	3.50	1.142
		3rd grade	64	3.63	.934
		4th grade	17	3.29	.920
		Total	105	3.54	.981
Q8	UoS_ASN site allows for me to comment and discuss ideas with my peers and colleagues more efficiently as compared to traditional face-to-face classes.	2nd grade	24	3.25	1.225
		3rd grade	64	3.47	1.038
		4th grade	17	3.29	.686
		Total	105	3.39	1.033
Q9	UoS_ASN allows me to get classes material online.	2nd grade	24	3.17	1.049
		3rd grade	64	3.33	.960
		4th grade	17	3.18	.883
		Total	105	3.27	.963
Q10	I feel more comfortable sharing, publishing topics and my idea on UoS_ASN.	2nd grade	24	3.29	1.367
		3rd grade	64	2.97	1.069
		4th grade	17	2.82	1.237
		Total	105	3.02	1.168
Q11	UoS_ASN allows me more time to get announcements and exam times.	2nd grade	24	3.00	.978
		3rd grade	64	3.23	.972
		4th grade	17	2.82	1.015
		Total	105	3.11	.984
Q12	I am more comfortable and convenient using UoS_ASN.	2nd grade	24	2.38	1.245
		3rd grade	64	2.69	1.097
		4th grade	17	2.29	1.213
		Total	105	2.55	1.152
Q13	I prefer using UoS_ASN because it has many useful features.	2nd grade	24	2.38	1.135
		3rd grade	64	2.42	.989
		4th grade	17	2.59	1.121
		Total	105	2.44	1.037
Q14	My use of UoS_ASN facilitates a more comprehensive understanding of the topics covered and/or addressed in the class.	2nd grade	24	2.29	1.268
		3rd grade	64	2.30	.903
		4th grade	17	2.41	1.121
		Total	105	2.31	1.022

According to the Table 19, there is a significant difference just in question 13 because of the significant value is lower than .05 which it denotes that the features of the site were not inadequate to all the grades. The difference is in the students' opinions toward UoS\_ASN which the third group prefers this website more than other grades. Furthermore, the third group is more convenient with the site than other.

Table 19: ANOVA results on students' attitudes toward UoS\_ASN according to grade

		<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Q1	Between Groups	2.391	2	1.195	1.635	.200
	Within Groups	74.600	102	.731		
	Total	76.990	104			
Q2	Between Groups	4.660	2	2.330	3.019	.053
	Within Groups	78.730	102	.772		
	Total	83.390	104			
Q3	Between Groups	8.381	2	4.191	3.475	.035
	Within Groups	123.009	102	1.206		
	Total	131.390	104			
Q4	Between Groups	4.865	2	2.433	1.912	.153
	Within Groups	129.763	102	1.272		
	Total	134.629	104			
Q5	Between Groups	3.105	2	1.552	1.392	.253
	Within Groups	113.752	102	1.115		
	Total	116.857	104			
Q6	Between Groups	.502	2	.251	.261	.771
	Within Groups	98.012	102	.961		
	Total	98.514	104			
Q7	Between Groups	1.548	2	.774	.801	.452
	Within Groups	98.509	102	.966		
	Total	100.057	104			
Q8	Between Groups	3.599	2	1.799	1.709	.186
	Within Groups	107.392	102	1.053		
	Total	110.990	104			
Q9	Between Groups	2.075	2	1.037	1.120	.330
	Within Groups	94.459	102	.926		
	Total	96.533	104			
Q10	Between Groups	4.109	2	2.054	1.520	.224
	Within Groups	137.853	102	1.352		
	Total	141.962	104			
Q11	Between Groups	1.264	2	.632	.649	.525
	Within Groups	99.364	102	.974		
	Total	100.629	104			
Q12	Between Groups	.355	2	.178	.132	.877
	Within Groups	137.607	102	1.349		
	Total	137.962	104			
Q13	Between Groups	7.148	2	3.574	3.482	.034
	Within Groups	104.700	102	1.026		

	Total	111.848	104			
Q14	Between Groups	.498	2	.249	.235	.791
	Within Groups	108.130	102	1.060		
	Total	108.629	104			

Note: \* $p < .05$  It means that difference is significant and .05 is a standard level.



## **Chapter 6**

### **CONCLUSION**

The conclusion that derived from the analyses and findings of this research was demonstrated in order to find out an appropriate answer for the research questions and fulfil the main purpose of the study. The academic society has been perceptibly slow in endorsing and fostering social network into their academic programs and curriculums. There is an extensive usage of Social Network Sites (SNS) and Academic Social Network (ASN) sites by instructors and academicians, on the other hand, most of the students use SNS in their academic life. This research has attempted to combine these two field together, though, it is not effortless to determine and construct an academic bridge between students and instructors in order to get benefit in their life in university. In additions, this research has endeavored to determine and discover the phenomenon of SNS and their influence on academic life as well as utilizing specific ASN website into academic life in university to create that bridge. UoS\_ASN site can be a complement instrument to help students in teaching and learning as well as encourage instructors to implement it to decrease geographical dispersion and access data every time.

The main purpose of this research is to get a proper understanding and comprehension on the usage of SNSs by students in their academic life then to find out its influence on students' academic performance. Also, identify the benefits and how the proposed UoS\_ASN site can be utilized as a platform to assemble and assist instructors and

students in their academic life in university. Through this study, the students and instructors perceived and acknowledged the potential benefits of the use of SNSs and UoS\_ASN site in their academic life. In additions, the results exposed that the new generation of instructors and students are interested in integrating new technology into their syllabus in university although the previous generation are still less interested in adapting to the new technologies.

In general, most of the students in Computer Science Department stated positive and agreeable opinions and attitudes towards the use of SNSs and UoS\_ASN site for their academic life in university. In additions, the students have offered their keenness and enthusiasm for using both sites for teaching and learning. It was evidently figured out that most of the students are engaged in the use SNSs in their academic life. By the use of SNS, the students can make communication in any place and any time. Through this opportunity, the users can create virtual groups and classes that help students and instructors to participate and collaborate in any topics.

The UoS\_ASN site can acts as an ASN site, that combine social and academic activity on its environment because most of the student are more familiar with the SNSs. This combination helps them not to be upsets whenever they use it. the instructors and students have positive attitudes toward it. This site helps students to get knowledge directly and indirectly when surfing on it. The UoS\_ASN site enables students and instructors to develop collaborative and cooperative learning in a cheaper and faster way. This site fulfills students' needs to find their friends to discuss, cooperate asynchronously or synchronously over messages, comments, chatting. As well as, they can send files or share data in a quicker way with lower price. On the other hand, it is further effectual through allowing students to talk in different geographical places.

In classes, there is not an equal opportunity for students to express their views and ideas, however, this site provides this opportunity equally for all of them. On the other hand, instructors have the ability to put announcement and course materials online also publish anything that is related to their subjects which it provides a great availability of data and required materials anywhere and anytime.

To know the students' attitudes towards SNSs according to their gender, in most of the questions, there is not a significant difference between male and female. Moreover, the findings specified that male and female students have almost the same motivations to use SNS and UoS\_ASN site in academic life. For the students' age, there is not a significant difference between those three-group age. It means that students' attitudes were not affected by students' age. In additions, in the students' grade, also, there is not a significant difference. It denotes that the student's grade does not have a key influence on students' attitudes toward the usage of SNSs and UoS\_ASN site.

With regard to the result, most of the students are more interested in the use of UoS\_ASN site and they want to have such systems in their universities. This point would be a crucial opportunity to enhance educational system in university. This research just efforts to demonstrate that SNSs nowadays is very crucial in academic life that could be an effective instrument to progress students' capability in teaching and learning.

## REFERENCES

- Ajjan, H., & Hartshorne, R. (2008). Investigating faculty decisions to adopt Web 2.0 technologies: Theory and empirical tests. *The internet and higher education*, 11(2), 71-80.
- Albayrak, D. (2012). Social networking sites utilization for teaching and learning  
Unpublished PhD Dissertation. (doctoral dissertation, middle east technical university).
- Amutha, S., & Ramganes, E. (2013). Empowerment of science teaching competence of b. ed. Trainees in the rural areas through e-content with a metacognitive instructional design.
- Anderson, T., & Shattuck, J. (2012). Design-Based Research: A Decade of Progress in Education Research? *Educational Researcher*. Retrieved from <http://edr.sagepub.com/content/41/1/7.full.pdf+html>.
- Baltacı-Gökatalay & Ozdilek (2010) Pre-service teachers' perceptions about web 2.0 technologies *Procedia Social and Behavioral Sciences* Volume: 2, Issue: 2, pp: 4737-4741.
- Bereiter, C. (1990). Aspects of an educational learning theory. *Review of educational research*, 60(4), 603-624.

- Blumberg, B., Cooper, D. R., Schindler, P. S. (2005). *Business research methods*. Berkshire: *McGrawHill Education*.
- Bonaiuti, G. (2015). Academic Social Networks: How the web is changing our way to make and communicate researches. *Research on Education and Media*, 7(2), 3-14.
- Brady, K. P., Holcomb, L. B., & Smith, B. V. (2010). The use of alternative social networking sites in higher educational settings: A case study of the e-learning benefits of Ning in education. *Journal of Interactive Online Learning*, 9(2), 151-170.
- Brown, A. L. (1992). Design experiments: Theoretical and methodological challenges in creating complex interventions in classroom settings. *The journal of the learning sciences*, 2(2), 141-178.
- Bullinger, A. C., Hallerstede, S., Renken, U., Soeldner, J. H., & Moeslein, K. M. (2010, August). Towards Research Collaboration-a Taxonomy of *Social Research Network Sites*. In AMCIS (p. 92).
- Burns, K., & Polman, J. (2006). The impact of ubiquitous computing in the Internet age: How middle school teachers integrated wireless laptops in the initial stages of implementation. *Journal of Technology and Teacher Education*, 14(2), 363.

- Butler, B., Sproull, L., Kiesler, S., & Kraut, R. (2002). Community effort in online groups: Who does the work and why. Leadership at a distance: *Research in technologically supported work*, 171-194.
- Carosu B. J. & Salaway G. (2009) The ECAR Study of Undergraduate Students and Information Technology, 2008, ECAR Key Findings, Retrieved January 15,2010 from <http://net.educause.edu/ir/library/pdf/EKF/ekf0808.pdf>.
- Chou, A. & Chou, D. (2009). Information system characteristics and social network software adoption. *Proceedings of the SWDSI conference*, (pp. 335-343).
- Cronbach, L. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*.
- De la Torre, A. (2009). Nuevos perfiles en el alumnado: la creatividad en nativos digitales competentes y expertos rutinarios. *Revista Universidad y Sociedad del Conocimiento*.
- DeAndrea, D. C., Ellison, N. B., LaRose, R., Steinfield, C., & Fiore, A. (2012). Serious social media: On the use of social media for improving students' adjustment to college. *The Internet and higher education*, 15(1), 15-23.
- Dunlap, J. C. & Lowenthal, P. R. (2009). Tweeting the night away: Using Twitter to enhance social presence. *Journal of Information Systems Education*, 20(2).

- Eke, H. N., & Odoh, N. J. (2014). The use of social networking sites among the undergraduate students of University of Nigeria, Nsukka. *Library Philosophy and Practice*, 0\_1.
- El-Berry, D. K. (2015). Awareness and use of academic social networking sites by the academic staff at the South Valley University in Egypt. *Journal of Library and Information Sciences*, 3(2), 115-132.
- Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, 13(1), 210-230.
- Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook “friends:” Social capital and college students’ use of online social network sites. *Journal of Computer-Mediated Communication*, 12(4), 1143-1168.
- Espinoza Vasquez, F. K., & Caicedo Bastidas, C. E. (2015). Academic social networking sites: A comparative analysis of their services and tools. *iConference 2015 Proceedings*.
- Flynn, D. (2003). Student Guide to SPSS. Obtido em 10 de Novembro de 2013, de *Barnard college*: Retrieved from [https://barnard.edu/sites/default/files/inline/student\\_user\\_guide\\_for\\_spss.pdf](https://barnard.edu/sites/default/files/inline/student_user_guide_for_spss.pdf)
- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2011). How to design and evaluate research in education (8th ed. Vol. 7): McGraw-Hill New York.

Frankfort-Nachmias, C., & Nachmias, D. (2007). Study guide for research methods in the social sciences. Macmillan.

Garth, A. (2008). Analysis Data Using SPSS (A practical guide for those unfortunate enough to have to actually do it).

Gómez, M., Roses, S., & Farias, P. (2012). El uso académico de las redes sociales en universitarios. *Comunicar*, 19(38).

Gray, D.E. (2009) *Doing Research in the Real World*, California: *Sage Publications Ltd.*

Gruzd, A. (2012). Non-academic and academic social networking sites for online scholarly communities. *Social media for academics: A practical guide*, 21-37.

Harrell, M. C., & Bradley, M. A. (2009). Data collection methods. Semi-structured interviews and focus groups.

Harwell, M. R. (2011). ReseaRch Design in Qualitative/Quantitative. The Sage handbook for research in education: *Pursuing ideas as the keystone of exemplary inquiry*, 147.

Herrington, J., & Reeves, T. C. (2011). Using design principles to improve pedagogical practice and promote student engagement.



- Herrington, J., Reeves, T.C., & Oliver, R. (2010). A guide to authentic e-learning. Routledge: London and New York.
- Herrington, J., & Parker, J. (2013). Emerging technology as cognitive tools for authentic learning. *British Journal of Educational Technology*, 44(4), 607---615. doi:10.1111/bjet.12048.
- Hiatt, J. F. (1986). Spirituality, medicine, and healing. *Southern Medical Journal*, 79, 736–743.
- Home. (n.d.). Retrieved February 12, 2017, from <https://www.affilorama.com/internet101/social-networks>
- Jeng, W., He, D., & Jiang, J. (2015). User participation in an academic social networking service: A survey of open group users on Mendeley. *Journal of the Association for Information Science and Technology*, 66(5), 890-904.
- Junco, R. (2012). The relationship between frequency of Facebook use, participation in Facebook activities, and student engagement. *Computers & Education*, 58(1), 162-171.
- Karpinski, A. C., Kirschner, P. A., Ozer, I., Mellott, J. A., & Ochwo, P. (2013). An exploration of social networking site use, multitasking, and academic performance among United States and European university students. *Computers in Human Behavior*, 29(3), 1182-1192.

- Keller, C., & Cernerud, L. (2002). Students' perceptions of e-learning in university education. *Journal of Educational Media*, 27(1-2), 55-67.
- Kim, Y., Sohn, D., & Choi, S. M. (2011). Cultural difference in motivations for using social network sites: A comparative study of American and Korean college students. *Computers in human behavior*, 27(1), 365-372.
- Kirschner, P. A., & Karpinski, A. C. (2010). Facebook® and academic performance. *Computers in human behavior*, 26(6), 1237-1245.
- Kord, J. I. (2008). Understanding the Facebook generation: A study of the relationship between online social networking and academic and social integration and intentions to re-enroll. University of Kansas.
- Krause, J. (2012). Tracking reference with social media tools: Organizing what you've read or want to read. In D. R. Neal(Ed.), *Social media for academics : a practical guide*. Oxford : Chandos Pub.
- Kumar, R. (2005) *Research Methodology: A Step-By-Step Guide for Beginners*, Thousand Oaks, CA: *Sage Publications Ltd*.
- Leedy, P. D. (1993). *Practical research: planning and design*. New Jersey: Prentice-Hall.
- Li, X., Thelwall, M., & Giustini, D. (2011). Validating online reference managers for scholarly impact measurement. *Scientometrics*, 91(2), 461-471.

- Liccardi, I., Ounnas, A., Pau, R., Massey, E., Kinnunen, P., Lewthwaite, S., ... & Sarkar, C. (2007, December). The role of social networks in students' learning experiences. *In ACM Sigcse Bulletin* (Vol. 39, No. 4, pp. 224-237). ACM.
- Mack, N., Woodsong, C., MacQueen, K. M., Guest, G., & Namey, E. (2005). *Qualitative research methods: a data collectors field guide*.
- Mehmood, S., & Taswir, T. (2013). The effects of social networking sites on the academic performance of students in college of applied sciences, Nizwa, Oman. *International Journal of Arts and Commerce*, 2(1), 111-125.
- Menendez, M., De Angeli, A., & Menestrina, Z. (2012). Exploring the virtual space of academia. In *From Research to Practice in the Design of Cooperative Systems: Results and Open Challenges. Proceedings of the 10th International Conference on the Design of Cooperative Systems, COOP 2012* (pp. 49–63). Marseille, France. doi:10.1007/978-1-4471-4093-1\_4
- Newman, D. (1990). Opportunities for research on the organizational impact of school computers. *Educational Researcher*, 19(3), 8-13.
- Oh, J. & Jeng, W. (2011). Groups in academic social networking services - An exploration of their potential as a platform for multi-disciplinary collaboration. In *IEEE SocialCom 2011*. Boston, MA.
- Oracle MySQL. (n.d.). Retrieved October 29, 2017, from <https://www.oracle.com/mysql/index.html>

- Özgen, C. (2012). Social networking sites utilization for teaching and learning (doctoral dissertation, middle east technical university).
- Panta, P. (2009). Web Design, Development and Security (Doctoral dissertation, Youngstown State University).
- Paul, J. A., Baker, H. M., & Cochran, J. D. (2012). Effect of online social networking on student academic performance. *Computers in Human Behavior*, 28(6), 2117-2127.
- Point, T. (2017, August 15). Bootstrap Overview. Retrieved October 29, 2017, from [https://www.tutorialspoint.com/bootstrap/bootstrap\\_overview.htm](https://www.tutorialspoint.com/bootstrap/bootstrap_overview.htm)
- Polit, D. F. & Hungler, B. P. (1999). Nursing research: *Principles and methods*; 6th edition. Philadelphia: J. B. Lippincott.
- Priem, J., & Costello, K. L. (2010). How and why scholars cite on Twitter. *Proceedings of the Association for Information Science and Technology*, 47(1), 1-4.
- Ravishankar, A. (2013). Creators@ SIU-A Socio-Academic Networking Tool (Master's thesis, Southern Illinois University Carbondale).
- Reeves, T.C. (2006). Design research from a technology perspective. In J. van den Akker, K. Gravemeijer, S. McKenney & N. Nieveen (Eds.), *Educational design research* (pp. 52-66). London: Routledge.

- Roblyer, M. D., McDaniel, M., Webb, M., Herman, J., & Witty, J. V. (2010). Findings on Facebook in higher education: A comparison of college faculty and student uses and perceptions of social networking sites. *The Internet and higher education*, 13(3), 134-140.
- Robson, C., 1994. Experiment, Design and Statistics in Psychology, Chapter 7: Parametric and Nonparametric.
- Rodriquez, M. A., & Pepe, A. (2008). On the relationship between the structural and socioacademic communities of a coauthorship network. *Journal of Informetrics*, 2(3), 195-201.
- Sánchez, R. A., Cortijo, V., & Javed, U. (2014). Students' perceptions of Facebook for academic purposes. *Computers & Education*, 70, 138-149.
- Schleyer, T., Spallek, H., Butler, B. S., Subramanian, S., Weiss, D., Poythress, M. L., ... & Mueller, G. (2008). Facebook for scientists: requirements and services for optimizing how scientific collaborations are established. *Journal of medical Internet research*, 10(3).
- Subramani, R. (2015). The academic usage of social networking sites by the university students of Tamil Nadu. *Online Journal of Communication and Media Technologies*, 5(3), 162.

- Thelwall, M., & Kousha, K. (2014). Academia. edu: social network or academic network?. *Journal of the Association for Information Science and Technology*, 65(4), 721-731.
- Tiryakioglu, F., & Erzurum, F. (2011). Use of social networks as an education tool. *Contemporary Educational Technology*, 2(2).
- Tuckman, H. P. (1975). Teacher effectiveness and student performance. *The Journal of Economic Education*, 7(1), 34-39.
- Vainionpää, F. (2014). Web Design for iMind.
- Van den Akker, J., Gravemeijer, K., McKenney, S., & Nieveen, N. (Eds.). (2006). *Educational design research*. Routledge.
- Veletsianos, G., & Kimmons, R. (2012). Networked participatory scholarship: Emergent techno-cultural pressures toward open and digital scholarship in online networks. *Computers & Education*, 58(2), 766-774.
- Wall Script, V. T. (n.d.). The Wall Script PHP Social Networking Script. Retrieved November 29, 2017, from <http://www.vasplus.info/wall-script/>
- Wang, F., & Hannafin, M. J. (2005). Design-based research and technology-enhanced learning environments. *Educational Technology Research and Development*, 53(4), 5-23.

- Wang, J. L., Jackson, L. A., Gaskin, J., & Wang, H. Z. (2014). The effects of Social Networking Site (SNS) use on college students' friendship and well-being. *Computers in Human Behavior*, 37, 229-236.
- Wang, Q., Chen, W., & Liang, Y. (2011). The effects of social media on college students. *MBA Student Scholarship*, 5, 1-12.
- Weinberger, A., & Fischer, F. (2006). A framework to analyze argumentative knowledge construction in computer-supported collaborative learning. *Computers & education*, 46(1), 71-95.
- Yin, R. K. (2003). *Case Study Research Design and Methods (Third Edition)*. Applied *Social Research Methods Series* Volume 5. Sage Publications: London.
- Yu, A. Y., Tian, S. W., Vogel, D., & Kwok, R. C. W. (2010). Can learning be virtually boosted? An investigation of online social networking impacts. *Computers & Education*, 55(4), 1494-1503.
- Zeldman, J. (2007). *Designing With Web Standards*. Berkeley, California, USA: AIGA.
- Zhang, J. (2010). *Development of e-commerce web application using WAMP* (Doctoral dissertation, San Diego State University).

## **APPENDICES**



## **Appendix A: Key Definition**

**UoS\_ASN:** This is a specific website that was used by the researcher as an Academic Social Network (ASN) site in Computer Science Department - University of Sulaimani in Iraq. This site was adopted online and amended to be Academic Social Network. It is an attempt to provide an online environment to assemble students and instructors for academic purpose. The link of the website is (<http://academicsns.online>).

## Appendix B: Questionnaire

### Consent Form

Dear Student,

I am a Master's degree student in Department of Information Communication Technology in Education at Faculty of Education - Eastern Mediterranean University (EMU). I invite you to participate in this research study entitled "**The opinions of Computer Science Students and Instructors on Academic Social Network(ASN) sites: case of University of Sulaimani**". The purpose of this questionnaire is to investigate and evaluate the opinions of Students in Computer Science Department in university of Sulaimani on Academic Social Network(ASN) sites.

The Objectives of this research are as follow:

- The Opinion of student about Academic Social Network.
- The Opinion of student about developed Academic Social Network.
- The Impact of developed Academic Social Network (ASN) on students in academic life.

As a researcher, I would appreciate if you could take some time to fill out this questionnaire. Your participation in this research project is completely voluntary. We assure you that all the information is provided will be confidential and will not be used for any further research.

Mohammed Abubakr Ahmed  
M.Sc. Department of Computer Education  
and Instructional Technologies  
0533-8522454  
[mohamadd.abubakir@gmail.com](mailto:mohamadd.abubakir@gmail.com)

Dr. Fatma Tansu Hocanın  
Department of Computer Education  
and Instructional Technologies  
0392-630-3122  
[fatma.tansu@emu.edu.tr](mailto:fatma.tansu@emu.edu.tr)

### Consent Form

I have read the information above. By signing below and returning this form, I am consenting to participate in this questionnaire project.

Student name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## Questionnaire

Dear Student,

My name is Mohammed Abubakr Ahmed, I am a master student in the Information and Communication Technologies in Faculty of Education at Eastern Mediterranean University (EMU) in North Cyprus. The thesis is entitled as “**The opinions of Computer Science Students and Instructors on Academic Social Network(ASN) sites: case of University of Sulaimani**”. Within the scope of my Thesis, the aim is to evaluate the opinions of Students in Computer Science department on Academic Social Network(ASN) sites. The information obtained from the questionnaire will construct the basis of the scientific work and will not be used for any other purpose.

Yours sincerely

Mohammed Abubakr Ahmed

### Section 1: Demographics

Please tick (√) the suitable choices.

1. Gender:  Male  Female
2. Age:  18-20  21-24  25 and older
3. Grade: 1<sup>st</sup> grade  2<sup>nd</sup> grade  3<sup>rd</sup> grade  4<sup>th</sup> grade
4. Do you use Social Network Sites?
  - a) Yes
  - b) No
5. Per a day, how much time do you spend on Social Network sites?
  - a)  30 min
  - b)  1 hour
  - c)  2 hours
  - d)  3 hours
  - e)  More than 3 hours
  - f)  0 hour
6. What kind of communities do you subscribe to on social networking sites?
  - a)  Informational
  - b)  Entertainment
  - c)  Educational
  - d)  Others

7. You use Social Network Sites mainly for? (you can check more than one)

- a)  Chatting
- b)  Blogging
- c)  Posting photos
- d)  Uploading music/video
- e)  Creating polls/quizzes or surveys
- f)  Downloading music/video
- g)  Communication with teachers/class fellows
- h)  Submitting articles to website
- i)  Any other: \_\_\_\_\_

8. How do you feel collaborating on group projects on Social Networks Sites?

- a)  Problematic
- b)  Somewhat useful
- c)  Very useful and interesting
- d)  Other

9. what do you think the barriers are in using Social Network Sites in class? (you can check more than one)

- a)  Time consuming
- b)  Privacy concerns
- c)  Lack of knowledge to use the platforms
- d)  Lack of training to use online mechanisms
- e)  Lack of all required features in one single networking platform
- f)  Lack of integrity
- g)  Others

**Section 2:**

Please answer the following questions by selecting the suitable level of agreement on the following statements.

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

s/n	Statements	Strongly agree	Agree	Neutral	Strongly Disagree	Disagree
1	Social Networking site is significant to my university social life.					
2	I have missed classes because I was doing Social Network site.					
3	Social Network Site permits me to keep in touch with university friends.					
4	Social Network Site is significant to my university Academic life.					
5	Social Network Site allows me to express myself.					

<b>6</b>	Social Network Site allows me to stay in touch with my family.					
<b>7</b>	I posted video and comments related to the course.					
<b>8</b>	I answered other people's post and comments.					
<b>9</b>	I used it to gain access to the course content outside sessions.					
<b>10</b>	I posted discussion subjects.					
<b>11</b>	I will continue to use the course Social Network page regularly now that the course has finished.					

**Section 2:**

Please answer each of the following questions based on your recent use of (UoS\_ASN).

<b>s/n</b>	<b>Statements</b>	<b>Strongly agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Strongly Disagree</b>	<b>Disagree</b>
<b>1</b>	Proposed Academic Social Network allows for me to collaborate with my peers and colleagues in my course more frequently as compared to traditional face-to-face.					
<b>2</b>	Proposed Academic Social Network allows for me to communicate with peers and colleagues in my course outside of the traditional classroom setting.					
<b>3</b>	Proposed Academic Social Network allows for me to communicate with peers and colleagues who I would not otherwise be able communicate with.					
<b>4</b>	Proposed Academic Social Network allows for me to communicate more effectively as compared to traditional face-to-face meetings.					
<b>5</b>	Proposed Academic Social Network allows for me to have a more detailed, in depth conversation with my peers and colleagues in the course.					
<b>6</b>	Proposed Academic Social Network does not allow for me to effectively communicate with peers and colleagues.					

<b>7</b>	Proposed Academic Social Network allows for me to express my thoughts more clearly and openly.					
<b>8</b>	Proposed Academic Social Network allows for me to comment and discuss ideas with my peers and colleagues more efficiently as compared to traditional face-to-face classes.					
<b>9</b>	Proposed Academic Social Network allows me to get classes material online.					
<b>10</b>	I feel more comfortable sharing, publishing topics and my idea on Proposed Academic Social Network.					
<b>11</b>	Proposed Academic Social Network allows me more time to get announcements and exam times.					
<b>12</b>	I am more comfortable and convenient using Proposed Academic Social Network.					
<b>13</b>	I prefer using Proposed Academic Social Network because it has many useful features.					
<b>14</b>	My use of Proposed Academic Social Network facilitates a more comprehensive understanding of the topics covered and/or addressed in the class.					

## Appendix C: Interview

### Consent Form

Dear Instructor,

I am a Master's degree student in Department of Information Communication Technology in Education at Faculty of Education - Eastern Mediterranean University (EMU). I invite you to participate in this research study entitled "**The opinions of Computer Science Students and Instructors on Academic Social Network(ASN) sites: case of University of Sulaimani**". The purpose of this interview is to investigate and evaluate the opinions of instructors in Computer Science department in university of Sulaimani on Academic Social Network(ASN) sites.

The Objectives of this research are as follow:

- The Opinion of instructors about Academic Social Network.
- The Opinion of instructors about developed Academic Social Network.
- The Impact of developed Academic Social Network (ASN) on instructors in academic life.

As a researcher, I would appreciate if you participate semi-structure interview with me. It may take about half or one hours, and the process will be recorded if you agree. Your participation in this research project is completely voluntary. We assure you that all the information is provided will be confidential and will not be used for any further research.

Mohammed Abubakr Ahmed  
M.Sc. Department of Computer Education  
and Instructional Technologies  
0533-8522454  
[mohamadd.abubakir@gmail.com](mailto:mohamadd.abubakir@gmail.com)

Dr. Fatma Tansu Hocanın  
Department of Computer Education  
and Instructional Technologies  
0392-630-3122  
[fatma.tansu@emu.edu.tr](mailto:fatma.tansu@emu.edu.tr)

### Consent Form

I have read the information above. By signing below and returning this form, I am consenting to participate in this semi-structure interview project.

Instructor name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## **Interview Question**

### **Introduction**

Thank you for agreeing to meet me. My name is Mohammed Abubakr Ahmed. I am a Master's degree student in Department of Information Communication Technology in Education at Faculty of Education - Eastern Mediterranean University (EMU). My study tries to understand the instructor's opinions toward proposed Academic Social Network site(ASN) for university of Sulaimani. This is a semi-structured interview about your use of proposed Academic Social Network site(ASN) and your understanding of your usage. It may take about half or one hours, and the process will be recorded if you agree. I hope that we could go into details of your (ASN) use and what you really think about your usage. It is up to you to decide whether or not you will participate in the research. Please ask me to stop as we go through the information and I will take the time to explain. If you have questions later, you can ask me. To protect your privacy, the record will be stored anonymously with a code for the research. Any information about your identity will not be released in any of my publications. Thank you again.

### **Questions:**




- 1) Could you please introduce yourself? (Gender, Age, position in university and teaching experience)?
- 2) In your opinion, what are the educational benefits of using proposed Academic Social Network site(ASN) for teaching and learning?
- 3) In your opinion, how does the use of proposed Academic Social Network site (ASN) solve the academic issues you are currently in?
- 4) In your opinion, what are the drawbacks of using proposed Academic Social Network site(ASN) for teaching and learning?
- 5) In your opinion, what limitations does this proposed Academic Social Network site(ASN) have as it relates to your ability to sharing ideas/documents on your academic issues?
- 6) In your opinion, what would you change about proposed Academic Social Network site(ASN)?
- 7) In your opinion, what are the technological restrictions that proposed Academic Social Network site(ASN) has?



## Appendix D: Request letter for the application of the research

	<b>EASTERN MEDITERRANEAN UNIVERSITY</b> <a href="http://www.emu.edu.tr">www.emu.edu.tr</a>
<p>Computer &amp; Instructional Technology Teacher Education Faculty of Education Famagusta, T.R. North Cyprus via Mersin 10, Turkey Tel: +90 (392) 630 3122 Fax: +90 (392) 630 4038 Email: cite@emu.edu.tr Web Address: <a href="http://fedu.emu.edu.tr/cite">http://fedu.emu.edu.tr/cite</a></p>	
<p><b>To: University of Sulaimani / Faculty of Science and Science Education / School of Science</b></p>	
<p>May 25, 2017</p>	
<p>To Whom It May Concern:</p>	
<p>The student whose name and surname appears below is a master student in the Faculty of Education, Department of Computer Education and Instructional Technologies at the Eastern Mediterranean University (EMU) in North Cyprus. As part of his research, he requests to administer questionnaire with students and interview with instructors in computer science department. His thesis entitled as "The Opinions of Computer Science Students and Instructors on Academic Social Network (ASN) Sites: Case of University of Sulaimani". He request you kindly permit him to collect the required data from instructors and students in computer science department. The identity and information gathered from students and instructors will be strictly kept confidential and will be used for the research study purpose only.</p>	
<p>Your permission to this request will be highly appreciated. Please do not hesitate to contact me for any further information.</p>	
<p>Student Name: Mohammed Abubakr Ahmed Surname: Ahmed Student No: 16500347 Email: mohamadd.abubakir@gmail.com</p>	
	<p>Cordially,  Assoc. Prof. Dr. Ersun Iscioglu</p>

## Appendix E: Confirmation letter

<p>KURDISTAN REGIONAL GOVERNMENT-IRAQ Council Of Ministers Ministry of Higher Education &amp; Scientific Research University of Sulaimani Presidency Directorate of International Academic Relations &amp; Media</p>		<p>حکومتی هەرێمی کوردستان – هه‌ڕێگه سه‌رۆکایه‌تی نه‌جوهه‌تی وه‌زیران وه‌زاره‌تی خوێندنی باڵا و توێژینه‌وه‌ی زانستی</p>
<p>No: 3081 Date: 04/06/2017</p>	<p>به‌رێوه‌به‌رایه‌تی په‌یوه‌ندییه‌ نه‌کادیمییه‌ نیۆده‌وله‌تییه‌کان و پاڤه‌یاندن</p>	<p>ژماره : پنکته‌وت : زاینی / / کوردی / /</p>
<p><b>To: Eastern Mediterranean University, Cyprus</b></p>		
<p><b>Subject: Confirmation Letter</b></p>		
<p>This is to confirm that <b>Mr. Mohammed Abubakr Ahmed</b>, who is currently a Master student at your University, has obtained permission from College of Science at University of Sulaimani to carry out his questionnaire and interview with lecturers and students of Computer Science.</p>		
<p>He was provided with this letter upon his request</p>		
<p>Best regards,</p>		
		
<p><b>Dr. Karzan Ghafur Khidhir</b> Director of International Academic Relations and Media University of Sulaimani</p>		
<p>Copy to: Record of outbound letters</p>		
<p>University New Campus   Raparin Way   Sulaimani   Kurdistan   Iraq <a href="http://www.univsul.edu.iq">www.univsul.edu.iq</a>   Email: <a href="mailto:relations@univsul.edu.iq">relations@univsul.edu.iq</a></p>		

## Appendix F: Ethics committee confirmation letter

	<b>Doğu Akdeniz Üniversitesi</b> "Uluslararası Kariyer İçin"	<b>Eastern Mediterranean University</b> "For Your International Career"	P.K.: 99628 Gazimağusa, KUZEY KIBRIS / Famagusta, North Cyprus, via Mersin-10 TURKEY Tel: (+90) 392 630 1995 Faks/Fax: (+90) 392 630 2919 bayek@emu.edu.tr
Etik Kurulu / Ethics Committee			
<b>Reference No:</b> ETK00-2017-0231 <b>Subject:</b> Application for Ethics.		17.08.2017	
RE: Mohammed Abubakr Ahmed (16500347) Department of Computer Education and Instructional Technology			
To Whom It May Concern,			
As part of the 2016-2017 Spring Semester, pertaining to Master Thesis questionnaires EMU's Scientific Research and Publication Ethics Committee has granted Mr. Mohammed Abubakr Ahmed (16500347), from the Department of Computer Education and Instructional Technology, to pursue with his survey entitled <b><i>The Opinions of Computer Science Students and Instructors on Academic Social Network (ASN) Sites: Case of University of Sulaimani</i></b> . This decision has been taken by the majority of votes. (Meeting number 2017/48-10)			
Regards,			
			
<b>Assoc. Prof. Dr. Şükrü Tüzmen</b> Director of Ethics Committee			
ŞT/sky.			
www.emu.edu.tr			