

Towards Applying Social Networking in Higher Education: Case Study of Saudi Universities

Hassan A. Alsurehi & Adel A. Al Youbi

Information Science Department, King Abdulaziz University
Jeddah, Saudi Arabia

Abstract

As the popularity of social media increases exponentially, higher education institutions have started embracing social networking sites with its applications in educational purposes. Many Universities in the Western world today offer a variety of social networking applications to students in order to facilitate enhanced communication, collaboration and research. However, the usage and effectiveness of similar social networking applications in the Arab world remain unexplored. Considering the cultural and academic differences between Western and Middle-Eastern countries, this is a significant gap. Towards this, the main objective of the present research is to study the usage of a variety of social networking applications by higher education institutions in Saudi Arabia. The work has adopted a quantitative research approach with a survey as the data gathering instrument. Our major findings of this work indicate that the use of social networking applications is quite prevalent among major Universities in Saudi Arabia, although the usage and awareness seem to be limited to popular applications like Facebook. Also, the potential of social networking applications as powerful collaboration and educational tools seems to remain under-utilised by Saudi students, hampering the effectiveness. Finally, privacy and security concerns continue to remain the biggest challenges inhibiting the usage of social media applications, particularly by female students. These are gaps that can be addressed by higher education institutions.

Keywords: World Wide Web, Social Networks, Higher Education Institutions, Tag, Cloud and Saudi Arabia

1. Introduction

The proliferation of social networking sites in the mainstream media on the World Wide Web has led to an enormous increase in their popularity. In the last few years, the usage of social media has increased exponentially as social networking sites and applications continue to draw more and more people to the allure of instant social connectivity. At a basic level, social media includes all socialising and network-building activities that are conducted by users over the internet using various resources like images, text and multimedia content (Reuben 2008). Today, many people use social networking sites and applications not just for leisure, but also for their career and academic pursuits (Reuben 2008). Consequently, educational institutions have also jumped on the social networking bandwagon in order to be able to meet students and researchers in their own space (Solis 2008).

The use of social media in the academic context has been explored by several researchers. Krishnamurthy and Ashwath (2010) conducted a study to explore the impact of social media on library services and found that library users are now using social networking sites as professional resources. On similar lines, Reuben (2008) conducted a survey of 148 educational institutions and found that the institutions use social media for recruitment, communication with students and marketing purposes. Other researchers like Balas (2010) have highlighted problems with the use of social media such as privacy and authenticity. Yet, (DOI: [dx.doi.org/14.9831/1444-8939.2014/2-4/MAGNT.29](https://doi.org/10.1444-8939.2014/2-4/MAGNT.29))

despite the problems, the number of educational institutions registering and using social media sites continues to increase (Stuart 2010). According to researchers like Brady, Holcomb and Smith (2010), institutions and students are finding innovative uses for applications such as media sharing, tagging, visual design collaborations, file sharing, chatting, messaging and many others. Dickinson and Holley (2010) attribute this usage to the increased convenience, collaboration and communication facilitated by social media, geographical and physical boundaries notwithstanding.

The studies on the academic usage of social media show that there is an increased usage of social networking applications among students in higher education. However, a problem with these studies is that they focus mostly on Western Universities and students. There is little research regarding the usage of social media in Non-Western countries like Saudi Arabia. This is a pertinent issue because Saudi Arabia is culturally and academically different from Western countries. According to Hofstede (1998), people from Saudi Arabia are highly cautious and regulative of their social behaviour. Consequently, such people tend to have increased privacy and usage concerns regarding social networking applications (Lowry, Cao and Everard 2011). Moreover, even the education system in Saudi Arabia is different from Western countries with strict gender segregation and stricter rules and regulations regarding the use of social media (Heyn 2013; Arab Social Media Report 2014).

Yet, despite these differences, there are very few studies that focus on the usage of social networking applications in higher education institutes in Saudi Arabia. Those that study the usage of social media in the Arab world focus only on select sites and applications like Facebook and Twitter (Shen and Khalifa 2010; Forkosh-Baruch and Hershkovitz 2011). Considering the increasingly important role of other social media applications in education, and the importance of Saudi Arabian universities in the educational landscape, this is a significant gap. Hence, there is a need for research to explore the use of social networking applications among higher education institutions and students in Saudi Arabia.

2. Literature Review

This section provides an overview of literature related to the use of social networking sites in various academic institutions. It begins with an overview of social networking applications and proceeds to the use of social networking applications in the academic field.

2.1. Social Networking Applications

The term “Social Media” essentially describes any medium that facilitates and regulates real time social communication among users (Solomon 2010). According to Mayfield (2008), to be classified as “social media”, a medium has to fulfil five major criteria: it should encourage user participation, it should harbour openness, it should facilitate interactions among users, it should allow communities to be formed and it should provide connectivity. In today’s digital era, social media is typically used to describe any web or mobile-based site or application that fulfils these criteria. Interactions on social media basically include activities that revolve around online socialising and networking through words, pictures and videos. According to Solis (2008), social media today is all about shared dialogue between people to uncover and share information.

Social media may include various components like social networking sites, blogs, wikis, microblogs and virtual worlds (Mayfield 2008). Social networking is an important part of social media. Social networking is essentially a process where individuals form online communities to share information and ideas, and meet other like-minded people (Reuben 2008). Any website or application that facilitates this process is known as a social

networking site or social networking application. A classification of some popular social networking sites and applications along with examples is provided in table 1.

Type	Example
Social Networking Websites	Facebook, MySpace
Social Networking Forums	Academia.edu
Social Bookmarking Sites	Tag Cloud, Delicious
File sharing Sites	Flickr, Photobucket, Instagram, Pinterest
Social Messaging Applications	Google Hangout, WhatsApp

Table 1 Some Examples of Social Networking Sites

The last few years have seen tremendous growth in the number of users of social networking sites and applications with Facebook alone recording over 800 million active users in 2011 (Facebook 2014). Other sites like Flickr, Instagram, Pinterest and more recently WhatsApp have also increased in popularity. Today the various social media websites not only serve as tools for social networking and interaction, but also act as means of sharing information and knowledge, marketing and maintaining public relations on the internet (Mayfield 2008). Consequently, it has become imperative for academic institutions to join the social media bandwagon.

2.2. Social Networking Applications in Higher Education

According to Cohen (2007), most major academic institutions today have a presence on social networking sites. Students and researchers use this presence to discuss their research findings, share academic information, conduct educational surveys and reviews, post queries and reach out to peers. Some of the common ways in which universities use social networking applications today include:-

- ✚ **Communication Tools** – Most major Universities and libraries today use social networking tools like instant messengers and hangouts to broadcast articles, queries, messages, and community information to users (Breeding 2010). Dickinson and Holley (2010) who contend that the use of social networking sites and applications help in bringing students from different locations together, aid academic discussions, and facilitate collaborative academic work. Staff members have also started to reach out to students using these applications.
- ✚ **Real-time Updates** – Several Universities use social networking tools to keep users updated about events, alerts and other important information in real time. The convenience and popularity of social networking applications make them a far better choice to reach students instantly compared to traditional methods like emails and student bulletins (Farkas 2008).

- ✚ **File Sharing** – This is arguably the most beneficial academic use of social networking applications. Applications like Flickr, Pinterest, Instagram and Ning make it easy for Universities to upload huge files and multimedia content that can be used by a large number of users instantly (Brady Holcomb and Smith 2010).
- ✚ **Creating Student Networks** – Several Universities provide in-house research forums and social forums to bring past and present students with like-minded interests together and facilitate collaboration among them (Cohen 2007).
- ✚ **Indexing** – University libraries today use the power of social tagging and bookmarking to enhance the description and usefulness of documents (Kakali and Papatheodorou 2010). By leveraging the power of social networking applications like tag cloud and folksonomy, subject-wise indexing can be improved further.
- ✚ **Marketing** – Social networking applications provide Universities with the ability to reach a large number of students. Many Universities are utilising this to market their services and reach out to potential students. Social networking sites and applications like Facebook, Instagram and Youtube allow Universities to effectively market their services through ads and tutorials (Solomon 2010).

Based on the above, it is evident that leveraging the power of social media allows Universities to reach out to a large number of students in real time in their own space. However, the power is not without challenges and concerns.

2.3. Social Networking Usage Concerns

While the academic usage of social networking sites and applications has been increasing, it is not without concerns. This holds particularly true for academic institutions as they have a more concentrated focus on preventing inappropriate usage of resources, ensuring integrity and maintaining privacy of users. Studies show that academic use of social networking sites may give raise to issues such as plagiarism, copyright issues, privacy breaches, offensive propagation of data and lack of control (Beach, Gartrell and Han 2009; Mun, Li and Fernandez 2011). Data and information exchange on social networking sites and applications are often self-regulated and unmonitored. Due to this open nature, it is difficult for educational institutions to control the amount or quality of data. This can lead to propagation of inaccurate information, conflicts and rumours (Solomon 2010).

Social networking sites are also prone to hacking and identity thefts, which can create serious challenges for educational institutions considering the importance of data confidentiality and copyright in the academic world (Dinerman 2010). Moreover, students who use social networking sites inappropriately may expose the University networks to the threat of viruses and malwares. According to Chua (2009), an increasing large number of cyber criminals today target social networking applications for their attacks. Often, educational institutions may not have the technological expertise to prevent or deal with such issues.

Apart from inappropriate usage of data and hacking concerns, educational institutions also have to deal with privacy and security concerns related to students when it comes to social networking applications. Most social media sites require users to share personal information such as location and contact details for registration. In fact, even social

networking giants like Facebook and Gtalk have faced flak for failing to protect the confidentiality of users (Help Net Security 2010; Slattery 2010). In an academic context, this may make the educational institutions liable for any privacy or security breaches. With technological advances such as the advent of smartphones, the concerns can only get bigger.

Finally, educational institutions and users also have to be concerned about the time and resource wastage that inappropriate use of social networking applications might lead to. One student going off-track in a discussion can sabotage the efforts of the entire group, considering the limited amount of regulation on such forums. Students browsing Facebook or other social networking sites for non-academic purposes may lead to decline in their performance. To this end, institutions have to tread a thin line when it comes to allowing students to use social networking applications in an academic context.

The concerns related to the use of social networking applications are particularly relevant for users in Arab countries such as Saudi Arabia due to the differences in cultural norms. Saudi Arabia is a restrained society, which essentially means that Saudi Arabians tend to curb their needs in favour of social norms (Hofstede 1998). As a result, their usage of technology is cautious and restrained. Al-Gahtani, Hubona and Wang (2007) confirm that cultural norms affect intention to use and acceptance of technology. This is evident in the fact that the penetration of social networking sites like Facebook is less than 20% for Saudi Arabia (Arab Social Media Report 2014). Also, due to stricter government regulations and rules, students in Saudi Arabia may not be aware of the academic power of social networking applications completely. Moreover, due to the restrained nature of society, Saudi Arabians are likely to be more cautious about using online sites that require identity information. This is evident in a report by Saudi Gazette (2010) which indicated that over 68% of female users and 40% of male users from Saudi Arabia withhold their identity on social networking sites. Based on this premise, it is evident that the behaviours, norms and concerns related to usage of social media by University students in middle-eastern countries are likely to be more guarded than those of their Western counterparts. Hence, there is a need to explore the usage of social networking applications in the context of higher education institutes in Saudi Arabia explicitly.

3. Problem Statement and Formulation

There is limited research regarding the usage of social networking applications among higher education institutions in Saudi Arabia. The studies that focus on the usage of social media in an academic context mostly do so with a focus on Western Universities and students. Since Saudi Arabia is culturally and academically different from Western countries, the results obtained from study of Western Universities cannot be generalised for Saudi Arabian universities. Even studies that focus on the usage of social media in the Arab world focus only on select applications like Facebook and Twitter (Shen and Khalifa 2010; Forkosh-Baruch and Hershkovitz 2011). There is hardly any research regarding the usage of other social media sites and applications such as Flickr, Photobucket, Instagram, Pinterest, and messaging applications by higher education institutions in Saudi Arabia. Considering the increasing prominence of these social media applications in education globally, this is a pertinent gap.

Hence, the main objective of the present work is to investigate the usage of a variety of social networking applications like Facebook, Flickr, Photobucket, Instagram, Pinterest, Google Hangout and WhatsApp in higher education institutions in Saudi Arabia. The study focusses on the usage of these applications by the students belonging to select Universities in Saudi Arabia, the effectiveness of usage and concerns if any, from the student perspective. To fulfil the objectives, this article tries to reply the following questions:-

(DOI: [dx.doi.org/14.9831/1444-8939.2014/2-4/MAGNT.29](https://doi.org/14.9831/1444-8939.2014/2-4/MAGNT.29))

- To what extent are social networking applications like Facebook, Flickr, Photobucket, Instagram, Pinterest, and messaging applications used in Saudi Arabian Universities?
- What are the main purposes for which students in Saudi Arabian Universities use these social media applications?
- To what extent are the social media applications effective, from the student perspective?
- What are the concerns of higher education students in Saudi Arabia in using social media applications in an academic context?

4. Suggested Methodology of Solution

The study has utilised a quantitative research approach with a survey as the data gathering instrument. Quantitative research is suitable for systematic gathering of data that is measurable (Chisnall 2011). Since the study intends to mainly measure the statistics regarding usage of social media among higher education institutions in Saudi Arabia, a quantitative approach was considered suitable. The survey was administered to graduate and post-graduate students belonging to prominent higher education institutions such as King Saud University, King Abdullah University of Science and Technology and King Abdulaziz University in Saudi Arabia through a snowball sampling technique. Apart from primary data, secondary data gathered through published literature was also used to fulfil the research objectives.

The word research implies to study and investigate a specific field of choice (Chisnall 2011). Hence, research can be defined as the systematic and scientific search for information on a particular subject. Research methodology is the overall process of collecting information and data with the intent of fulfilling research objectives (Chisnall 2011). This gives a clear idea of what the researcher is doing and to map his findings to make plans. It is the sequence of steps that a researcher normally follows while studying a specific topic, the questions that he asks and the possible answers to those questions. It is for the researchers to decide what type of methodology they would adapt to gather information.

There are several types of research methodologies of which, the most common types include the qualitative approach and the quantitative approach (Chisnall 2011). Quantitative research is suitable when the research needs to be structured and the data is measurable (Chisnall 2011). Qualitative Research is suitable where the data is non-measurable and quality rather than quantity is the prime criterion for research (Chisnall 2011). Quantitative research is based on the epistemological position of objectivism according to which social aspects are not dependent on the participants or actors where qualitative research is based on the position of constructivism in which actors define the reality (Gray 2004).

In general, it is accepted that qualitative methods are suitable when the need is to measure the experiences, attitudes and feelings of participants in a subjective manner whereas quantitative research is suitable when the need is to gather accurate, measurable data that can be analysed statistically. Hence, considering the need of the present research to gather the statistics regarding usage of social media among higher education institutions in Saudi Arabia, a quantitative approach is suitable. While the measurement of feelings and experiences may add value to the research, the primary focus of the research is to gather accurate data that can be numerically analysed. In such cases, a quantitative approach yields more meaningful data. Quantitative data is also easier to gather when there are rigid resource constraints and time limits, as it can be gathered using mass data-gathering methods such as surveys. Hence, a quantitative approach was chosen for the present research.

4.1. Data Collection

(DOI: dx.doi.org/14.9831/1444-8939.2014/2-4/MAGNT.29)

In order to gather quantitative data, the present research has used a quantitative survey as the primary data collection method. The research has used primary as well as secondary data. Since the main objective of the research was to explore the usage of social networking applications within the relatively unexplored context of Saudi Arabian higher education universities, it was deemed necessary to gather primary data. According to Best et al. (2001), surveys are excellent means of collecting first-hand primary data since they can be administered to a large number of people at the same time. Survey data is also easy to collate, code and analyse. Best et al. (2001) confirm that online surveys can be as effective as physical surveys, administered correctly.

The survey was administered with the help of a survey questionnaire which acted as the data gathering instrument. The questionnaire is divided into three parts. The first part deals with the profile information of participants and asks about their gender, age and the University to which they belong. The second part deals with the usage of social networking applications in their Universities, the effectiveness of usage and concerns related to usage. All the questions in this part include multiple-choice responses in order to ease the process of coding and data collation. One question included responses on a 5-point Likert scale with 5 representing "Very effective" and 1 representing "Very ineffective". In the third part, participants are given an option to enter additional information using a free choice response.

The survey was designed using Microsoft word and deployed on the free online survey site "Survey Monkey". The survey was administered online to the participants and the responses were collated manually. The survey questionnaire and the collated responses are available in Appendix A and B respectively. Apart from the primary survey data, secondary data gathered through the review of literature also played a role in fulfilling the objectives of the research.

4.2. Participant Selection

The participants for the survey were chosen from the major Universities in Saudi Arabia using a snowball sampling technique. According to Babbie (2013), snowball sampling technique is one in which the researcher approaches a few suitable participants for data gathering and then requests those to provide the contact details of other suitable participants who may be willing to participate in the process. Accordingly, the initial participants were selected from the personal contacts of the researcher, who were then forwarded a link to the survey with a request to forward it to others in their contact list. Through this process, participants from different major Universities in Saudi Arabia were recruited for the survey.

4.3. Ethical Considerations

Since the present work does not include any medical, security, financial or physical concerns for the participants, no ethical issues were anticipated. Nevertheless, attempts were made to ensure that ethical research practices are followed to the extent possible. The participants were made aware of the objectives and purpose of the research through detailed emails as well as explanations at the beginning of the survey questionnaire. Participants were made aware of their right to withdraw from the survey at any point. No personal or financial information of the participants was asked for, and data confidentiality was maintained throughout the process.

5. Main Findings, Results and Analysis

A total of 42 valid responses were obtained, recorded and analysed from the survey data. The findings from the analysis indicate that the use of social networking applications is quite

prevalent among major Universities in Saudi Arabia. However, the usage and awareness seem to be limited to major and popular applications like Facebook. There seems to be a lack of awareness when it comes to less popular applications like Instagram, hangouts and WhatsApp. Moreover, most of the students seem to use the applications for communication and file sharing purposes. The potential of social networking applications as powerful collaboration and educational tools seems to remain under-utilised by Saudi students. In terms of effectiveness, while a large number of students feel that the usage is effective, there are many who remain neutral or feel it is ineffective. Finally, the findings reveal that privacy and security concerns continue to remain biggest challenges inhibiting the usage of social media applications, particularly by female students. The gaps in terms of perceptions of effectiveness and privacy and security concerns need to be addressed by higher education institutions. This section provides the details of data gathered using the survey, and show the analysis of data using simple graphs and charts. Also, the limitations of the research will be highlighted in this article.

5.1. Data Analysis

The process of snowball sampling used for administering the survey yielded a total of 51 responses. Of these, 9 were discarded as they were incomplete or not meaningful. The remaining responses were collated into excel sheets. This yielded a total of 42 valid and complete responses. The analysis was conducted using simple excel tools and the results are presented in the form of charts and graphs for ease of understanding.

5.1.1. Profile Analysis

The analysis of profile responses shows that the participants of the survey belong to three major Universities in Saudi Arabia: King Saud University, King Abdullah University of Science and Technology and King Abdulaziz University. Out of 42 participants, 15 belong to King Saud University, 12 belong to King Abdullah University of Science and Technology and 8 belong to King Abdulaziz University. The remaining participants chose not to respond to the question. Around 60% (25) of the participants are male and 40% (17) are female as shown below (Fig.1):-

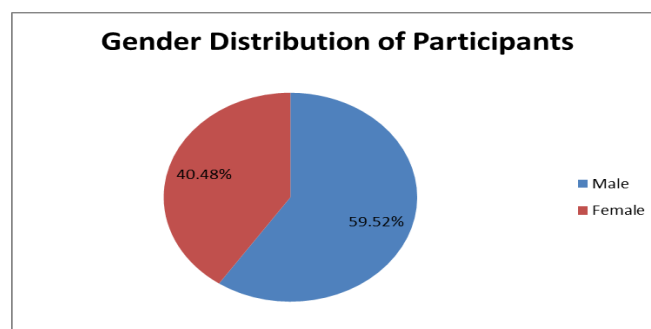


Fig.1 Gender Distribution of Participants

A majority of the participants belong to the 18-24 age range as shown in Fig.2:-

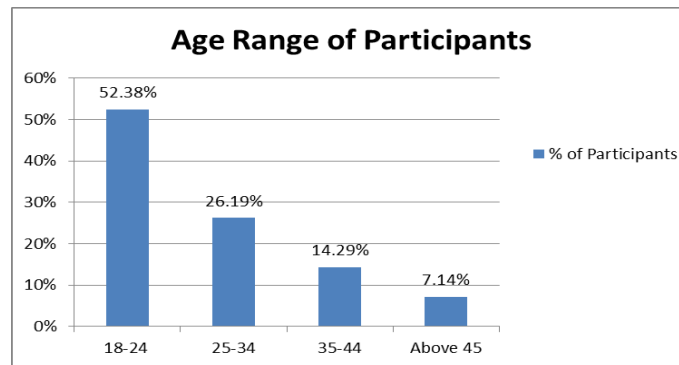


Fig.2 Age Range of Participants

5.1.2. Usage, Effectiveness and Concerns

When participants were asked if their University makes use of social networking applications, 100% responded with “Yes”. This shows that the usage of social networking applications is quite prominent in Saudi Arabian Universities, and students are aware of it. However, when participants were asked about the social networking applications that their University uses, they responded with different choices. Even participants belonging to same University had different answers. This shows that some of the participants may not be aware of the full extent of social networking applications that their University provides. Indeed, a quick search of the internet reveals that all the three Universities make use of applications like Flickr and Photobucket, while many participants did not choose these options, confirming their lack of awareness. Overall, the social networking applications that the participants are aware of are shown below in Fig.3:-

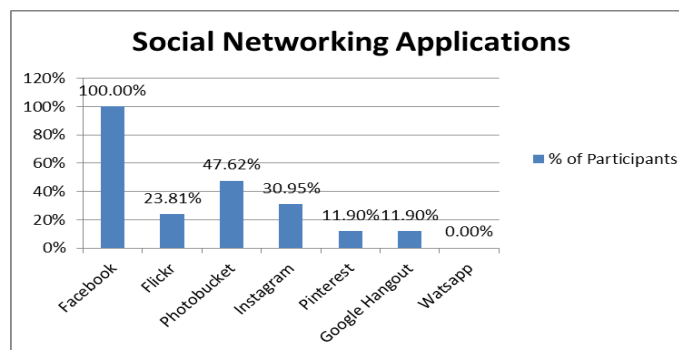


Fig.3 Social Networking Applications

From the achieved results, it is evident that Facebook remains the dominant social networking application used by Universities and all the participants are aware of it. On the other hand, none of the participants chose “WhatsApp” indicating that despite its popularity, it is not commonly used in Saudi Arabian Universities yet. There were no major variances observed in terms of gender or age. When participants were asked if they use the social networking applications provided by their University, 100% answered with “Yes”, indicating that the use of such applications is quite popular among higher education students in Saudi Arabia. Communicating with other students and file sharing seemed to be the most popular reasons for usage as shown in Fig.4:-

(DOI: dx.doi.org/14.9831/1444-8939.2014/2-4/MAGNT.29)

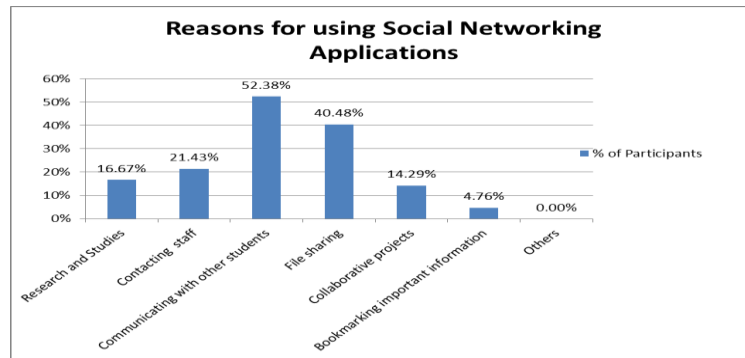


Fig.4 Reasons behind using Social Networking Applications

Further, when participants were asked about the effectiveness of social networking applications, more than half felt it was very effective or effective as shown in Fig.5:-

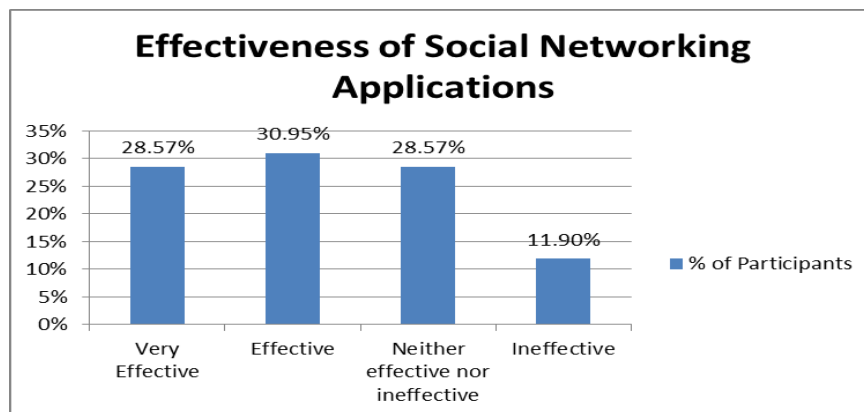


Fig. 5 Effectiveness of Social Networking Applications

Finally, when participants were asked about the concerns related to the academic use of social networking applications, privacy and security concerns emerged as frontrunners as shown in Fig.6:-

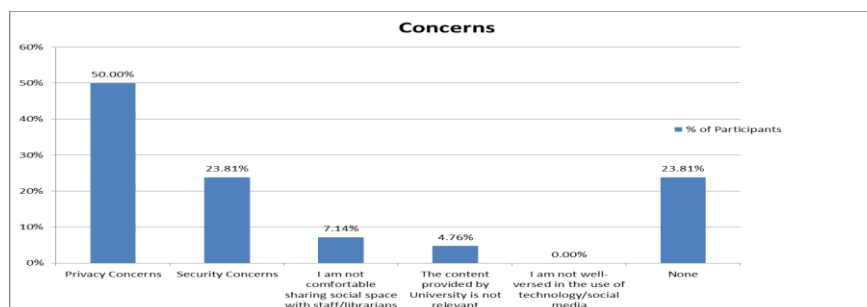


Fig.6 Concerns of Academic Use of Social Networking

More female participants (88%) stated privacy and security as concerns compared to male users (56%), indicating that these remain bigger concerns for female users. Not a single user (DOI: [dx.doi.org/14.9831/1444-8939.2014/2-4/MAGNT.29](https://doi.org/14.9831/1444-8939.2014/2-4/MAGNT.29))

indicated discomfort with the use of technology or social media. This indicates that the Arab users' acceptance and use of technology is changing, and they are getting more comfortable with the use of social media. This is in contrast to reports of Arab users lagging behind in using social networking sites. On the other hand, this could also be a result of "social desirability bias" in which participants wish to show themselves in a positive light to others (Babbie 2013). This is an inherent drawback of surveys and further probing is necessary to ensure that there are no biases.

6. Conclusions, Recommendations and Future Works

The main objective of the present research was to study the usage of a variety of social networking applications by higher education institutions in Saudi Arabia. To this end, the study intended to explore four research questions regarding the usage, effectiveness and concerns related to social networking applications in Saudi Universities. The study adopted a quantitative research approach with a survey as the data gathering instrument to fulfil the research objectives. The findings of this research indicate that the use of social networking applications is quite prevalent among major Universities in Saudi Arabia, although the usage and awareness seem to be limited to major and popular applications like Facebook. Also, the potential of social networking applications as powerful collaboration and educational tools seems to remain under-utilised by Saudi students. In terms of effectiveness, while a large number of students feel that the usage is effective, there are many who remain neutral or feel it is ineffective. Finally, the findings reveal that privacy and security concerns continue to remain the biggest challenges inhibiting the usage of social media applications, particularly by female students. These are gaps that can be addressed by higher education institutions. The findings have managed to address all the four research questions. Hence, the objective of the research has been fulfilled. Although the validity of results can be enhanced further in some ways, the research can be deemed successful. It is evident from the research that the power of social media has just scratched the surface in higher education in Saudi Arabia. The potential of social media applications remains under-utilised among students. To this end, the following are the recommendations of the study:

- The findings have indicated that awareness among students regarding academic usage of social media applications remains a concern. Higher education institutes in Saudi Arabia need to adopt more elaborate and pro-active measures to ensure that students are aware of the various social networking applications provided by the Universities.
- Most students seem to utilise social networking applications for rudimentary purposes. They need to be made aware of, and trained on the collaborative aspects of social networking applications to aid in collective intelligence seeking.
- While many students feel that the use of social networking applications is effective, there are others who feel it is ineffective. The reasons behind this need to be probed further in order to overcome the limitations, if any.
- Privacy and security concerns remain problematic for students, particularly for female students. With newer applications making their way into the market, the concern will only increase further. Higher education institutions need to adopt preventive measures to address these concerns and encourage usage among students.

The validity of the results of the study can be enhanced further by utilising a bigger dataset. By recruiting participants from more Universities, particularly from smaller Universities where students may not have much exposure to academic usage of social media applications, the generalisability of the results can be improved. Additionally, some of the responses need further clarifications. To this end, a qualitative probing of results using a mixed mode methodology can be useful. Finally, the findings are cross-sectional in nature and a

longitudinal study exploring changes over time might prove beneficial in enhancing the validity of results further.

References

- Al-Gahtani, Said., Hubona, Geoffrey. and Wang, Jijie. 2007. "Information technology (IT) in Saudi Arabia: Culture and the acceptance and use of IT". *Information & Management* 44(8):681-691.
- Arab Social Media Report. 2014. "Facebook in the Arab Region". ASMR. Accessed 25 July 2014.
<http://www.arabsocialmediareport.com/Facebook/LineChart.aspx?&PriMenuID=18&CatID=24&mnu=Cat>
- Babbie, Earl. 2013. *The Basics of Social Research*. Ohio: Cengage Learning.
- Balas, Janet. 2010. "Social Networking in the Library - What is it good for?". *Computers in Libraries* 30(7): 34-35.
- Beach, Aaron., Gartrell, Mike. and Han, Richard. 2009. Solutions to Security and Privacy Issues in Mobile Social Networking. Paper presented at the Computational Science and Engineering, International Conference, Colorado.
- Best, Samuel., Krueger, Brian., Hubbard, Clark. and Smith, Andrew. 2001. "An Assessment of the Generalizability of Internet Surveys". *Social Science Computer Review* 19(2): 131-145.
- Brady, Kevin., Holcomb, Lori. and Smith, Bethany. 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): 152-170.
- Breeding, Marshall. 2010. "Taking the Social Web to the next level". *Computers in Libraries* 30(7): 34-37.
- Chisnall, Peter. 2011. *Marketing Research*. New York: McGraw-Hill.
- Chua, Melissa. 2009. "Social Networking Sites a hotbed for cybercrime". *Network World*, January 23. Accessed 25 July 2014.
<http://www.networkworld.com/article/2273096/lan-wan/social-networking-sites-a-hotbed-for-cyber-crime.html>
- Cohen, Laura. 2007. *Library 2.0 initiatives in academic libraries*. USA: Association of College & Research Libraries
- Dickinson, Andrea. and Holley, Robert. 2010. "Social networking in academic libraries: the possibilities and the concerns". *New Library World* 111(11/12):468-479.
- Dinerman, Brad. 2010. *Social networking and security risks*. GFI White Paper
- Facebook. 2014. "Facebook Reports Second Quarter 2014 Results". *Facebook*, July 23. Accessed 26 July 2014. <http://investor.fb.com/releasedetail.cfm?ReleaseID=861599>
- Farkas, Meredith. 2008. "The essence of Library 2.0". Accessed 26 July 2014.
<http://meredith.wolfwater.com/wordpress/2008/01/24/the-essence-of-library-20/>
- Forkosh-Baruch, Alona. and Hershkovitz, Arnon. 2011. "The use of Social Networks by Higher-Education Institutes in Israel". Proceedings of the Chais conference on instructional technologies research 2011: Learning in the technological era, Israel.
- Gray, David. 2004. *Doing Research in the Real World*. UK: Sage.
- Help Net Security. 2010. "100 million Facebook pages published on torrent site". Accessed 25 July 2014. <http://www.net-ecurity.org/secworld.php?id=9652>
- Heyn, Molly Elizabeth. 2013. "Experiences of Male Saudi Arabian International Students in the United States". *University of Michigan*. Accessed 25 July 2014.
<http://scholarworks.wmich.edu/cgi/viewcontent.cgi?article=1169&context=dissertations>

(DOI: dx.doi.org/14.9831/1444-8939.2014/2-4/MAGNT.29)

- Hofstede, Geert. 1998. *Masculinity and femininity: the taboo dimension of national cultures*. Thousand Oaks: Sage.
- Kakali, Constantia. and Papatheodorou, Christos. 2010. "Could social tags enrich the library subject index?". *Libraries in the Digital Age* 24-48.
- Krishnamurthy, M. and Ashwath, Lalitha. 2010. "Social Networking Technology and its Implications for Libraries: Transforming the Library Services through the Web". *SRELS Journal of Information Management* 47(3):283:288.
- Lowry, Paul Benjamin., Cao, Jinwei. and Everard, Andrea. 2011. "Privacy Concerns Versus Desire for Interpersonal Awareness in Driving the Use of Self-Disclosure Technologies: The Case of Instant Messaging in Two Cultures". *Journal of Management Information Systems* 27(4): 163-200.
- Mayfield, Anthony. 2008. "What is Social Media". *iCrossing*, August 1. Accessed July 26 2014. <http://www.repromax.com/docs/113/854427515.pdf>
- Mun, Wong Fei., Li, Lean Mei. and Fernandez, Prasana Rosaline. 2011. "Social Life Connects the World: Malaysian Youth's usage Behaviour of Social Network Sites". *International Journal of Arts & Sciences* 4(3):157:178.
- Reuben, Rachel. 2008. "The Use of Social Media in Higher Education for Marketing and Communications: A Guide for Professionals in Higher Education". *Fullerton*. Accessed 25 July 2014. <http://www.fullerton.edu/technologyservices/resources/pdfs/social-media-in-higher-education.pdf>
- Saudi Gazette. 2010. "68% of Saudi girls drop last name on Facebook". Accessed 26 July 2014. <http://www.saudigazette.com.sa/index.cfm?method=home.regcon&contentID=2010012461193>
- Shen, Kathy Ning. And Khalifa, Mohamed. 2010. "Facebook usage among Arabic college students: preliminary findings on gender differences". *International Journal of e-Business Management* 4(1):53-65.
- Slattery, Brennon. 2010. "Google Hit with Lawsuit Over Google Buzz". *PC World*, February 18. Accessed 25 July 2014. http://www.pcworld.com/article/189712/Google_Hit_with_Class_Action_Lawsuit_Over_Google_Buzz.html
- Solis, Brian. 2008. *Customer Service: The Art of Listening and Engagement Through Social Media*. Pamorama.net.
- Solomon, Laura. 2010. *Doing Social Media So It Matters: A Librarian's Guide*. USA: ASA Editions.
- Stuart, David. 2010. "Technology threats to privacy and information access". *Exploring Technology Resources for Information Professionals* 36(5): 35-37.