Use of Social Networking Tools for Informal Scholarly Communication in Humanities and Social Sciences Disciplines

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Abstract

Social networking tools, reinforced by proliferation and advances in portable computing and wireless technologies, have reshaped how information is produced, communicated, and consumed. This research investigates the extent to which social networking tools had an impact on academics’ patterns of informal scholarly communication in humanities and social sciences disciplines. A quantitative study utilized an online questionnaire sent to academics affiliated with humanities and social sciences disciplines in Sultan Qaboos University, Oman. Descriptive interpretation of data including frequencies, percentages, and means were displayed in tables to enhance the meaning of collected data. Overall findings indicate progressive use of social networking tools for informal scholarly communication. There is perceived usefulness on the impact of social networking tools on patterns of informal scholarly communication. However, nearly one third of the respondents have never used social networking tools for informal scholarly communication. Empirical findings provide broad understanding about the potential of social networking tools on informal scholarly communication in areas of humanities and social sciences disciplines. Multi-disciplinary investigation and qualitative studies may further deepen our understanding of the impact of social networking tools on patterns of scholarly communication.

1. Introduction

This research was empirically designed to investigate the impact of social networking tools on informal scholarly communication in an academic setting of one such peripheral ‘developing’ country (Sultan Qaboos University, Oman). The intention was to identify and assess potential gaps that may exist around adoption of social networking tools for informal scholarly communication. In addition, this research aims to identify patterns of
informal scholarly communication in relation to the use of social networking tools and impact of these tools on
research practices and perceptions among surveyed academics.

It is hoped that this research will contribute to knowledge and help identify the current practices and assesses the
extent to which social networking tools are used in different academic settings for informal scholarly
communication.

More precisely, the guiding research questions were as follows:

• What is the extent to which SQU’s academics in humanities and social sciences disciplines use social
networking tools for informal scholarly communication?

• How does the use of social networking tools impact on academics’ patterns and practices of informal scholarly
communication?

• What barriers, if any, are faced by academics on their assessment or implementation of social networking tools
for informal scholarly communication?

2. Background information

Sultan Qaboos University was established in 1986 and is known as the biggest and the only public university in
Oman. The university currently consists of the following nine colleges: College of Agriculture and Marine
Sciences, College of Medicine, College of Nursing, College of Engineering, College of Science, College of Law,
College of Education, College of Commerce and Political Sciences, and College of Arts and Social Sciences.
Today, the university has 15,496 registered students and offers more than sixty eight Bachelor’s degree courses,
fifty nine courses at Masters Level, and nearly twenty nine doctoral research programs with more under
consideration (SQU, 2011). Education is provided freely for all undergraduate students at SQU, covering tuition
fees, textbooks, food, and accommodation. The university provides various educational support centers to assist
students’ learning, such as the Center for Educational Technology, Language Centre, and the Center for
Information Systems. The Language Centre plays a major role in preparing students to commence their higher
education by providing intensive English language instruction. In addition, the university provides and supports
various research centers and laboratories, such as those dedicated to water, environment, oil, telecommunications,
remote sensing, earthquakes and seismology, and Omani studies. In recent years, the university has also been
expanding substantially in terms of its physical facilities. Notably, a cultural center with a relatively large multi-
purpose hall and a large main library has opened in the last few years.

Since introducing the Internet on campus in late 1997, the use of networked information and related
technologies at SQU has become common and the Internet is now considered an essential asset in enhancing the
university’s teaching and research outcomes. Every academic staff member in the university has either a desktop or
notebook computer with access to the Internet and local networks. Information and communication technologies at
SQU are closely tied with teaching and learning activities. The majority of classrooms and laboratories at SQU are
wired and linked to advanced technologies and Internet services. Academics are encouraged to use Course
Management Systems (Moodle) as part of their teaching practice. Frequent Moodle-related training is provided to
academic staff throughout the year.

SQU has signed many collaborative agreements with regional and international universities and academic
institutions. The University, with government support, has been attempting to improve its research productivity. In
2005, His Majesty Sultan Qaboos endorsed an annual grant of more than one million US dollars with a goal of
enhancing the University’s research output. This brings the current budget for research at the University to
approximately five million US dollars per annum (SQU, 2012).
3. Literature review

While computing technology is rapidly advancing, the flow of information has exceeded expectations to levels where ordinary people become the major drive of data in the social web. As a result, the concept of “Big Data” has emerged to describe the massive digital content that is communicated and exchanged by millions people round the clock in the social networked environment (The Aspen Institute, 2010).

Although the body of literature examining the use of social networking tools for purposes of education and teaching - at both basic and higher education levels - is abundant (Veletsianos & Kimmons, 2012; Guy, 2012), similar research that investigates their use for scholarly communication is relatively small (Gruzd, Staves, & Wilk, 2012). A comprehensive literature search yielded a few empirical studies that investigated the use of social networking tools for informal scholarly communication (e.g. Gruzd, Staves, & Wilk, 2012; Chen & Bryer, 2012; Tiryakioglu & Erzurum, 2010; Letierce et al., 2010; Collins & Hide, 2010; Kirkup, 2010).

Research which specifically investigated the use of social networking tools for purposes of teaching, learning, and teacher-student communication is well established (examples of recent studies are Chen & Bryer, 2012; Thomas & Thomas, 2012; Tiryakioglu & Erzurum, 2011; Moran, Seaman & Tinti-Kane, 2011; Ebner et al., 2010; Lester & Perini, 2010; Liu, 2010; Roblyer et al., 2010). Course management systems, such as Moodle, WebCT, and Blackboard, are sometimes grouped in this category.

Research studies report varying levels of academic use of social networking tools. A survey of 4,600 academics from American universities, for example, revealed low usage (80% never used) of social networking tools (The Chronicle of Higher Education, 2010). To the contrary, a recent study found that 80% of surveyed academics use and maintain social networking sites of certain type (Procter et al., 2010). Chen and Bryer (2012) conducted telephone interviews with fifty-seven academics from twenty-eight United States’ universities and discovered that all of the participants used social networking tools for personal, academic, professional, or research purposes.

The literature also cites differences in the use of social networking tools according to disciplinary differences. There is an inconsistency in the rate of adopting social networking tools between science disciplines and humanities and social sciences. For example, Maron & Smith (2008) pointed out that academics from science disciplines tend to adopt social networking tools earlier and more often than their counterparts from humanities and social sciences, while another survey indicated that academics from science disciplines use social networking tools less frequently than scholars from humanities and social science disciplines (Moran, Seaman, & Tinti-Kane, 2011; Rowlands, Nicholas, Russell, Canty, & Watkinson 2011).

For purposes of research and scholarly communication, academics use social networking tools for exchanging information, starting new relations, and communicating with others for professional development (Chen & Bryer, 2012; Gruzd, Staves, & Wilk, 2012; Tiryakioglu & Erzurum, 2010). Specific tools, such as Twitter, have proved popular for frequent use by scholars to communicate with their counterparts and promote each other’s work (Letierce et al., 2010). Scholars also use these tools to make direct connections between them to stimulate new research ideas (Collins & Hide, 2010; Kirkup, 2010; Gruzd, Staves, & Wilk, 2012).

Gu and Widen-Wulff (2011) also recently investigated the changes affecting the information behavior of academics in a social networked environment in Finland. Findings of their online survey reported familiarity with social networking tools among academics. The study also revealed a growing trend toward the use of social networking tools in the scholarly environment. Academics with competent Web 2.0 knowledge had greater diversity in information practices, more opportunities for interactive communication, and a wider cache of social networking tools at their disposal. Of the respondents, the majority agreed on the benefits of social networking tools in international and local collaboration with colleagues and other researchers, as well as for communication of research.

Gruzd, Staves, & Wilk (2012) similarly investigated how and why academics use social networking tools for communication and research practices in accordance with the Unified Theory of Acceptance and Use of Technology that aims to explain intentions to use a specific technology. They conducted semi-structured interviews with fifty-one participants who were members of the American Society of Information Science and Technology.
(ASIS&T). Results revealed strong uptake use of social networking tools for creating new connections and maintaining the existing ones, collaborating, keeping well informed about developments, and promoting the dissemination of publications. Privacy was the only noted problem associated with the use of these tools in the academic setting. The results also showed that the adoption rate of social networking tools is growing tremendously among researchers and university academics.

Rowlands, Nicholas, Russell, Canty, & Watkinson (2011) surveyed 2,000 researchers in an attempt to discover how researchers use social networking tools. Researchers grouped the social networking tools into six categories. Results implied that researchers use at least two social networking tools in the research lifecycle, largely for collaborative authoring, conferencing, and scheduling meetings.

Procter et al. (2010) found that Web 2.0 technologies are transforming the pursuit of scholarship. They investigated how researchers from UK adopt Web 2.0 services, including motivations and barriers to use and resulting work environment innovations. Researchers sent an email survey to 12,000 academics and doctoral students. Of the 1,477 replies they received, only 13% were considered as frequent users of Web 2.0 tools for scholarly communication purposes, while the majority were occasional users (45%) or non-users (39%). Findings further asserted that adoption was heavily influenced by collaborative research activities with different institutions. Semi-structured interviews were also conducted with fifty-six researchers to explore their practices and attitudes. Although Web 2.0 tools have evolved rapidly, findings revealed only a modest adoption of these tools for scholarly communication purposes among UK researchers.

In summary, the research presented here may be classified into three categories: social networking tools for educational purposes, personal use of social networking tools, and social networking tools for communication.

4. Methodology

The current study focuses on social networking tools in scholarly communication. To reach as many academics as possible in disciplines affiliated with humanities and social sciences at SQU, a survey design was adopted. A survey has the advantage of canvassing attitudes across wider populations.

The structure of the questionnaire consisted of sections that collected demographic data, frequency of usages, practices and attitudes, training, barriers, and support. The content of the questionnaire follows a survey previously designed by Al-Aufi (2007) and Al-Aufi & Genoni (2010) to investigate academics’ use of networked information for research and scholarly communication at Sultan Qaboos University. The design of the survey drew on recent studies relating to the use of social networking tools for informal scholarly communication.

The survey was also reviewed by three senior academics for content, clarity, and accuracy. Before distribution by email, the survey was further pre-tested and then revised accordingly.

Participants were academics from the College of Arts and Social Sciences and the College of Commerce and Political Sciences at SQU. The total population size was 146 faculty members of academic ranks varying from post-doctoral positions or equivalent to Professors. The entire population was surveyed via an online survey. The online survey offered a cost-effective approach to wide distribution.

Data collection began in October, 2012 and lasted one month. A link to the online survey was first emailed to the target population through grouped mailing lists for each school/department. A week later, follow-up individual emails with customized cover letters were sent to every academic member listed in the target groups. Two weeks later, reminders and follow-up customized emails were again sent. Collected data were exported to SPSS for analyses. Data were analyzed and descriptive statistics were used to describe findings.
5. Findings

5.1 Demographics

Out of the total 146 target academics from departments belonging to humanities and social sciences disciplines at SQU, 78 (53.4%) academics responded to the online survey. The majority of the respondents to the survey were males (77%, n = 60). In terms of academic appointments, junior academics (lecturers and assistant professors) represented the majority of the respondents to the survey (78.2%, n = 61).

The majority of the respondents were relatively young (41%, n = 32) followed by those in their forties (25.6%, n = 20). Such demographic features for the majority of the respondents would typically suggest wider engagement with social networking tools.

5.2 Access and connectivity

Because acceptance and use of social networking tools for general purposes have expanded along with advances in networking and portable computing technologies, discovering the types of portable computing tools academics used in connection with social networking was important.

The finding showed that the majority of the respondents use notebooks (93.4%, n = 71) more than other types of portable computing devices. Smart phone devices also showed popularity among respondents (44.7%, n = 34) more so than tablet personal computers (17.1%, n = 13). There are, however, a few cases (2.6%, n = 2) where desktop personal computers are still chosen for social networking.

In terms of network connectivity, findings indicated that the majority of the respondents (68%, n = 51) connect to the Internet by means of DSL or Cable which requires wiring facilities. The 4G wireless spectrum is yet a new trend in the midst of networking technologies, with a few cases indicating usage of that wireless connectivity (5.3%, n = 4).

5.3 Adoption and use

The majority of the respondents reported that they use social networking tools for informal scholarly communication (71.1%, n = 54). However, almost one third of the respondents (28.9%, n = 22) said they were non-users of these tools for informal scholarly communication.

Findings also demonstrated that the majority of the respondents recognized a positive level of importance. Those who did report using social networking tools valued these tools for informal scholarly communication as either important or extremely important (79.6%, n = 43).

In terms of the length of use, the majority of the respondents (42.6%, n = 23) reported that they have been using these tools for purposes of informal scholarly communication between one and three years. Nearly one third of the respondents (31.5%, n = 17) also stated that they have been using these tools for four to six years.

Social networking tools are constantly emerging. It is challenging to list all of the common types of these tools in one place. Therefore, it was decided that they were grouped in seven categories by purpose and type of use as illustrated in table 1. It is also important to note that the literature does not provide standardized categorization of the social networking tools. Table 1 below indicated the level and extant of use of these tools.

<table>
<thead>
<tr>
<th>Level and extent of use</th>
<th>Never used</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Connections (e.g. Facebook, Twitter, Google+ ...etc.)</td>
<td>5 (9.3%)</td>
<td>6 (11.1%)</td>
<td>18 (33.3%)</td>
<td>14 (25.9%)</td>
<td>11 (20.4%)</td>
</tr>
<tr>
<td>(mean = 3.37)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multimedia sharing (e.g. YouTube, iTunes, Flickr, TED talks, Picasa, Instagram ...etc.)</td>
<td>10 (18.5%)</td>
<td>7 (13%)</td>
<td>18 (33.3%)</td>
<td>15 (27.8%)</td>
<td>4 (7.4%)</td>
</tr>
</tbody>
</table>

Table 1. Level and extent of use.
Findings of the summary data on the extent and level of use of social networking tools denoted that ‘social connections’, such as Facebook, Twitter, and Google+, are the social networking tools used most frequently by the respondents (mean = 3.37), followed by ‘cross-platform mobile applications’, such as Skype and WhatsApp (mean = 3.07). On the other hand, the summary data displayed that the least frequently used social networking tools for informal scholarly communication were social bookmarking tools, such as Pinterest, Digg, Connotea, and CiteULike (mean = 1.70), followed by blogging tools, such as WordPress, BlogSpot, and Blogger (mean = 2.25).

Social networking tools are generally web-based platforms that people learn to use using different methods or techniques. When respondents were asked to indicate what method they most use to learn social networking tools, the majority (66.7%, n = 34) stated that they were ‘self-taught through trial and error’.

5.4 Users’ Activities and Perceptions.

A list of informal scholarly communication activities and practices that made possible through the use of social networking tools were adopted from the literature. A five-point scale was chosen to measure the frequency of use of these activities or practices by the respondents of the survey.
Informal Scholarly Communication Activities

<table>
<thead>
<tr>
<th>Activities</th>
<th>Never used</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>To communicate with publishers.</td>
<td>12 (22.6%)</td>
<td>12</td>
<td>13 (24.5%)</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>(mean = 2.71)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to group mean scores of each activity as presented in Table 2, results showed that the highest mean score was recorded for the respondents’ use of social networking tools ‘to keep current in an area of research’ and ‘to learn about conference announcement’ (mean = 3.11) respectively, followed by their use ‘to communicate with academics or researchers globally (mean = 3.09), and to communicate with academics and researchers at same institutions (mean = 3.01). Using social networking tools to communicating with publishers was recorded as the least frequently practised activity (mean = 2.71).

5.5 Impact of use (perceived usefulness).

A Likert scale was used to measure the level of perceived usefulness of social networking tools for informal scholarly communication.

Table 3. Perceived Usefulness

<table>
<thead>
<tr>
<th>Level of agreement to the following statements</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I enjoy using social networking tools. (mean = 4.05)</td>
<td>0</td>
<td>1</td>
<td>9</td>
<td>29</td>
<td>14</td>
</tr>
<tr>
<td>Social networking tools make it easier for me to research collaboratively.</td>
<td>0</td>
<td>5</td>
<td>13</td>
<td>28</td>
<td>7</td>
</tr>
<tr>
<td>(mean = 3.69)</td>
<td>(0%)</td>
<td>(9.4%)</td>
<td>(24.5%)</td>
<td>(52.8%)</td>
<td>(13.2%)</td>
</tr>
<tr>
<td>Social networking tools help me access new tools for my research. (mean = 3.69)</td>
<td>0</td>
<td>4</td>
<td>17</td>
<td>23</td>
<td>9</td>
</tr>
<tr>
<td>(mean = 3.69)</td>
<td>(0%)</td>
<td>(7.5%)</td>
<td>(32.1%)</td>
<td>(43.4%)</td>
<td>(17%)</td>
</tr>
<tr>
<td>Social networking tools provide me with the capabilities to easily work beyond geographical boundaries. (mean = 3.92)</td>
<td>0</td>
<td>2</td>
<td>14</td>
<td>22</td>
<td>14</td>
</tr>
<tr>
<td>(mean = 3.92)</td>
<td>(0%)</td>
<td>(3.8%)</td>
<td>(26.9%)</td>
<td>(42.3%)</td>
<td>(26.9%)</td>
</tr>
<tr>
<td>Social networking tools help me establish new relations with other researchers. (mean = 3.92)</td>
<td>0</td>
<td>2</td>
<td>11</td>
<td>29</td>
<td>11</td>
</tr>
<tr>
<td>The use of social networking tools improves the quality of my research. (mean = 3.52)</td>
<td>1</td>
<td>7</td>
<td>15</td>
<td>23</td>
<td>7</td>
</tr>
<tr>
<td>(mean = 3.52)</td>
<td>(1.9%)</td>
<td>(13.2%)</td>
<td>(28.3%)</td>
<td>(43.4%)</td>
<td>(13.2%)</td>
</tr>
<tr>
<td>Social networking tools widen the scholarly community with which I am in contact. (mean = 3.78)</td>
<td>0</td>
<td>2</td>
<td>17</td>
<td>21</td>
<td>10</td>
</tr>
<tr>
<td>(mean = 3.78)</td>
<td>(0%)</td>
<td>(4%)</td>
<td>(34%)</td>
<td>(42%)</td>
<td>(20%)</td>
</tr>
<tr>
<td>I have been increasingly dependent on social networking tools for purposes of informal scholarly communication. (mean = 3.16)</td>
<td>3</td>
<td>11</td>
<td>17</td>
<td>18</td>
<td>4</td>
</tr>
<tr>
<td>(mean = 3.16)</td>
<td>(5.7%)</td>
<td>(20.8%)</td>
<td>(32.1%)</td>
<td>(34%)</td>
<td>(7.5%)</td>
</tr>
</tbody>
</table>

Descriptive findings in Table 3 indicated that there was an overall positive level of agreement on the impact of social networking tools on informal scholarly communication. The highest mean score was recorded for the enjoyment associated with using social networking tools (mean = 4.05), followed by the advantages that social networking tools offer to the respondents to work beyond geographical boundaries and establishing new relations with other researchers (mean = 3.92) respectively, and the impact that these tools deliver for widening scholarly communities of the respondents (mean = 3.78). The lowest mean score in Table 3 was recorded for the level of dependence on social networking tools for purposes of scholarly communication (mean = 3.16), followed by impact of social networking tools on improving the quality of respondents’ research (mean 3.52).
5.6 Barriers to Adoption

Out of the total 78 academics who responded to the survey, almost one third (28.9%, n = 22) indicated an absolute non-use of social networking tools for informal scholarly communication. A list of barriers was suggested for the respondents to choose from. The last question in the survey offered respondents an opportunity to identify barriers and challenges to informal scholarly communication.

Findings pointed out that every listed suggestion represents a potential challenge or a barrier for respondents. Nevertheless, lack of university encouragement or incentives recorded the most challenging issue (39.4%, n = 28), followed by restrictions and limitations on the policy use of the Internet (36.6%, n = 26).

Moreover, concerns about lack of adequate security on the Internet (29.6%, n = 21), lack of adequate training (29.6%, n = 21) and lack of digital literacy (28.2%, n = 20) were also amongst the potential challenges for respondents.

On the other hand, complexity of using technology and lack of essential software or hardware was seen as the least challenging issues respectively (16.9%, n = 12).

6. Discussion and conclusion

From a methodological perspective, interviewing academics in future research may help provide additional evidence and extend understanding to determine the potential of social networking tools for scholarly communication from a practical point of view.

The major findings of the current study suggest that the use of social networking tools is gaining acceptance and popularity among academics in humanities and social sciences disciplines with almost two thirds of the respondents indicating some sort of use of these tools for informal scholarly communication. Respondents realized the potential and perceived advantages of using social networking tools for informal scholarly communication. Almost 79.6% considered these tools as important or extremely important for informal scholarly communication. Almost 42.6% of respondents have been using these tools for the past three years. In terms of frequency of use of these tools for informal scholarly communication, social connection tools, such as Facebook, Twitter, and Google+, were found to be the most frequently used (mean = 3.37), while social bookmarking tools were the least regularly used for informal scholarly communication (mean = 1.70). The majority of the respondents (66.7%) used their own techniques for learning about using social networking tools.

Respondents reported using social networking tools for communication and collaboration with peers and other academics or researchers internationally (mean = 3.09) more often than in a local or regional basis (mean = 2.83). There is a relatively positive level of agreement among respondents on the perceived usefulness and advantages of social networking tools for informal scholarly communication. The majority of the respondents agreed or strongly agreed that these tools were enjoyable to use (mean = 4.05), eliminated geographical barriers (mean = 3.92), help establish new relations (mean = 3.92), widened the scholarly community (mean = 3.78), and eased research collaboration (mean = 3.69).

Among the challenges perceived and difficulties associated with the use of social networking tools for informal scholarly communication were concerns about the lack of encouragement, security, digital literacy, and training. Non-adopters generally considered these tools irrelevant to scholarly communication.

Although the body of research around the use of social networking tools for scholarly communication is emerging, some important studies have supported the findings in the current study. Gu and Widen-Wulff (2011) similarly reported that academics are becoming familiar with social networking tools and adoption is increasing. Also similar to the current study, Gu and Widen-Wulff (2011), Gruzd, Staves, & Wilk (2012); and Rowlands, Nicholas, Russell, Canty, & Watkinson (2011) have all indicted that respondents perceived advantages of the potential of social networking tools on local and global research collaboration. However, findings of Tiryakiooglu & Erzurum (2010), and Procter et al. (2010) which indicated that adoption of these tools was slightly low, contradict the findings of the current study.
Social networking tools will certainly keep drawing attention of academics in the near future as portable computing and networking technology continue advancing rapidly. Future research may explore levels of adoption and the diversity of benefits that these tools hold for scholarly communication. Using other research techniques, such as interviews or focus groups may increase understanding of academics’ perceptions, experiences, and use of social networking tools for scholarly communication.

References


