SOCIAL NETWORKS SUPPORTING HIGHER EDUCATION IN IT AND MANAGEMENT

Petra Poulova, Ivana Simonova
University of Hradec Kralove
Czech Republic

Abstract

The paper presents results of survey focused on social networking; particularly on the role social networks play in higher education. The research question is what social networks are preferred and who their users are. Data were collected from the research sample of 203 students of the University of Hradec Kralove. Three social networks were detected as the most frequently accessed (Facebook, Google+ and LinkedIn) by both male and female users. The collected data resulted in several didactic recommendations on how the potential of social networks can be used towards independent learning on the higher education level in selected subjects.

Introduction

Aristotle characterized man as a "zoon politikon," i.e., a "warm being" in English, as discussed by Elenchuskb (2010). Currently, in the time of i-society and e-society, social networks are one of numerous means of socializing. They join and build relations/connections among people of the same interests and activities; they share them and make connections. Social networks are frequently and widely used mainly for entertainment, business purposes, employment, and for various other areas, including professional ones. In the field of education the social networking principle is reflected in theories of collaborative and cooperative learning (“What are Cooperative and Collaborative Learning?” 2004), connectivism – the learning theory for the digital age (Siemens, 2010) and others.

Currently, hardly any sphere of human activity can do without ICT support. This fact is also reflected in the educational process. Most of higher education institution teaching in the Czech Republic is now online (Simonova, 2010), usually in the form of various e-learning courses. The Faculty of Informatics and Management (FIM) of the University of Hradec Kralove, Czech Republic, runs more than 250 e-courses, which enhance face-to-face or distance education as blended courses or serve as an additional support for students after their regular, face-to-face classes. The question is what their contribution to the field of education is. In other words what social networks are preferred by higher education students and to what purposes so that those frequently accessed ones could be used for educational purposes?

Research Design and Methodology

In May 2014 research was conducted at the Faculty of Informatics and Management, University of Hradec Kralove, Czech Republic, to answer the above questions. Data were collected via online questionnaire within e-learning courses for the subjects Database Systems 2, Management 2, and

English for Specific Purposes 2 and 4 in the Learning Management System (LMS) Blackboard. The questionnaire contained 12 items focusing on the use and preferences of (a) mobile devices (items 1 – 8) and (b) social networks (items 9 – 12).

The use of mobile devices, social networks and other sources was detected in fields listed below:

1. Communication with friends/family
2. Communication relating to study/work
3. Devices used for respondent´s entertainment
4. Sources of information for respondent´s university study
5. Devices used for respondent´s university study
6. Sources of information for further education (reflecting both respondent´s interests and profession)
7. Devices used for further education (relating to both your interests and profession)
8. Devices the respondent owns
9. How often the respondent accesses Facebook
10. How often the respondent accesses LinkedIn
11. How often the respondent accesses Google+
12. Whether/how often the respondent accesses any other social network and which one it is

Respondents provided answers of the multiple-choice type; four choices could have been made in items 1 and 2, all choices could be marked in items 3 – 8, one choice was in items 9 – 12. In this paper data of items 9 – 12 were processed by the method of frequency analysis.

The collected data were processed by the NCSS2007 statistic software and analyzed. In this paper data reflecting the state in social networking were analyzed (items 9 – 12).

Research Sample

The research sample included 203 students (male 60 %; female 40 %) matriculated in the 2013/14 academic year at the University of Hradec Kralove, Faculty of informatics and Management (FIM). This institution offers three-year bachelor study programmes to 2,000 students in several study programmes:

- Applied Informatics (AI3), Financial Management (FM), Tourism Management (MCR), Information Management (IM3).
- Follow-up two-year master study programmes: Applied Informatics (AI2) and Information Management (IM2).

- Doctoral study programme in Knowledge Management (KM) and Applied Informatics (AI).

The research sample was structured as follows (see Figure 1):

- Applied Informatics (AI3+AI2; 83 + 1 students)
- Information Management (IM3+IM2; 44 + 2)
- Financial Management (FM, 21)
- Tourism Management (TM 54)

From the total amount 60 % of respondents attended the full-time study programmes, 40 % part-time programmes.

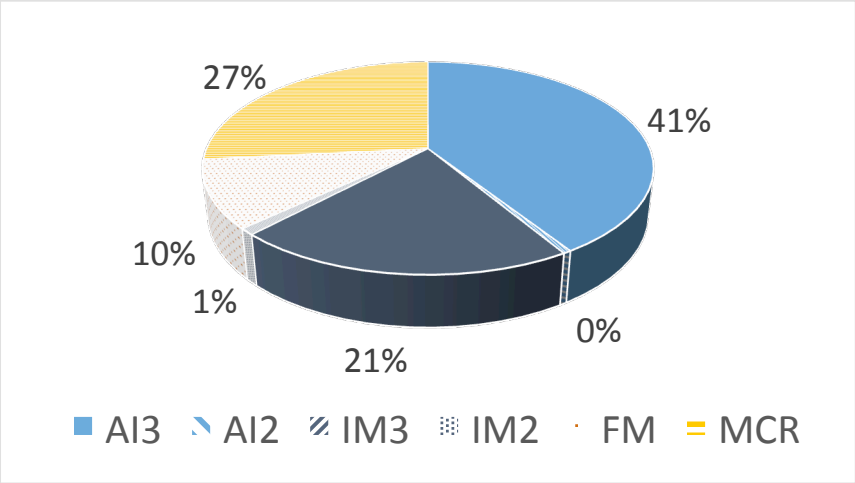

Figure 1. Respondents' fields of study.

Most respondents (70 %) were 20 – 24 years old; one quarter (24 %) of them were older (25 – 29 years old: 13 %; 30 – 39 years old: 11 %). Four respondents were younger than 20 years, 4 % of respondents were above 40 years and 2 % below 20 years.

Research Results

The use of social networks was analyzed on the basis of two criteria:

- Social networks used by respondents
- Visit rate to three most frequently used social networks

The data clearly show that three social networks were most frequently used:

- Facebook, originally Harvard university students' website for communication, data sharing and entertainment, joining common-interest user groups
- Google+, currently the second-largest social networking site in the world after Facebook, serving the same purposes
- LinkedIn, connecting the world's professionals to make them more productive and successful

Table 1

Visit Rate to Selected Social Networks (n)

	Facebook	**Google+**	**Linkedin**
Never	17	84	161
Less frequently	4	50	21
Once per week	2	18	10
2-6 times per week	22	13	9
Every day	86	28	2
All days long	72	9	0

Table 1 clearly shows the Facebook, Google+ and LinkedIn were the most frequently used social networks by the FIM respondents, which reflects results collected by numerous authors around the world. See "Top 15 most popular social networking sites" (2014), Gomes, (2013), and Skyrms and Pemantle, (2004).

Reflecting the Facebook visit rate, more than one third of respondents (36%) stated they were logged into Facebook all day long, and another group of 42% accessed Facebook every day. In total, Facebook was used daily by four fifths of respondents, mainly for communication with friends as respondents stated in comments to this item. This high communication potential of Facebook could be used for education purposes within higher education.

Of the three most frequently used social networks LinkedIn was the least accessed by FIM students. Professionals of all fields and interests, personnel managers, and administrative staff frequently use this social network, but it is fully ignored by IT students within their study (see Figure 3). Nearly four fifths of respondents (79 %) did not use LinkedIn at all; another group of 10% used this social network rarely – they accessed it a maximum of several times per month; 5 % of FIM students stated they seldom visited (once per week as a maximum); and only 6 % of students declared they used LinkedIn more frequently. These data clearly show the position of LinkedIn for education is not strong, i.e., the network will not be implemented into the designed system of instruction until the position of LinkedIn changes – the access frequency (access rate) rises.

A similar situation was detected with Google+. The respondents have not been used to accessing this social network very frequently, which means currently it is not efficient to take advantage of it and explore it for the purpose/support of higher education. More than two fifths of FIM students (42 %) did not use Google+ at all (see Figure 6), one quarter of them (25 %) declared access several times per month, and 9 % used it once per week. Only less than one quarter of respondents (24 %) accessed Google+ more frequently than once per week.

But, despite the fact that the access rate was very low, FIM students have had accounts, both in Google+ and LinkedIn. The reason might be that as IT professionals they are interested in new software, so they created accounts, but in practice the Facebook environment satisfies their social requirements, and they do not feel like accessing other networks frequently and regularly.

These data were also analyzed from the view of gender (Figure 2) and study programmes (Figure 3). While on Facebook and Google+ the structure of users (male/female) is rather similar, LinkedIn differs substantially – nearly 80 % of male "users" had never visited this social network.

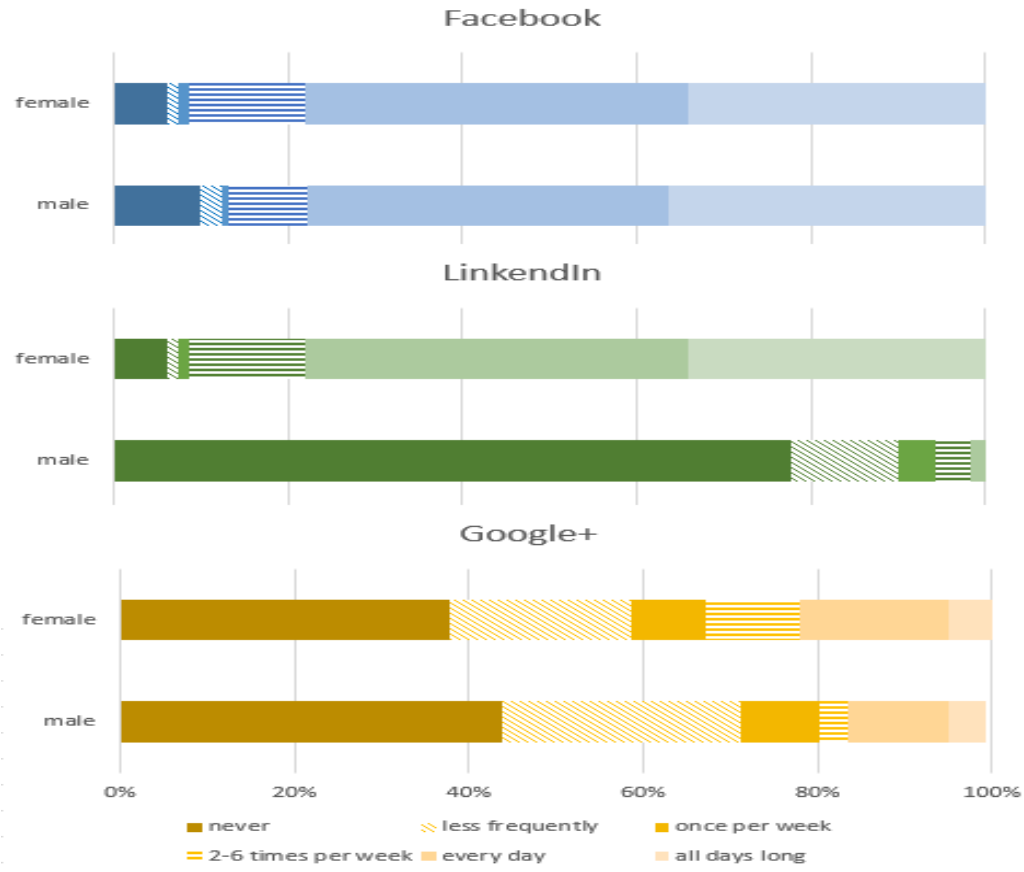

Figure 2. Structure of male/female users of selected social networks.

Taking the criterion of main study programmes taught at FIM into consideration, Facebook is the leader with students in all three study programmes; the visit rate of Google+ is of medium extent; and, as expected, LinkedIn is rarely visited, as displayed in Figure 3.

Respondents also declared the use of other social networks (Figure 4). The access rate is very low, except that Twitter (free microblogging service) reached approximately 9 % (19 respondents).

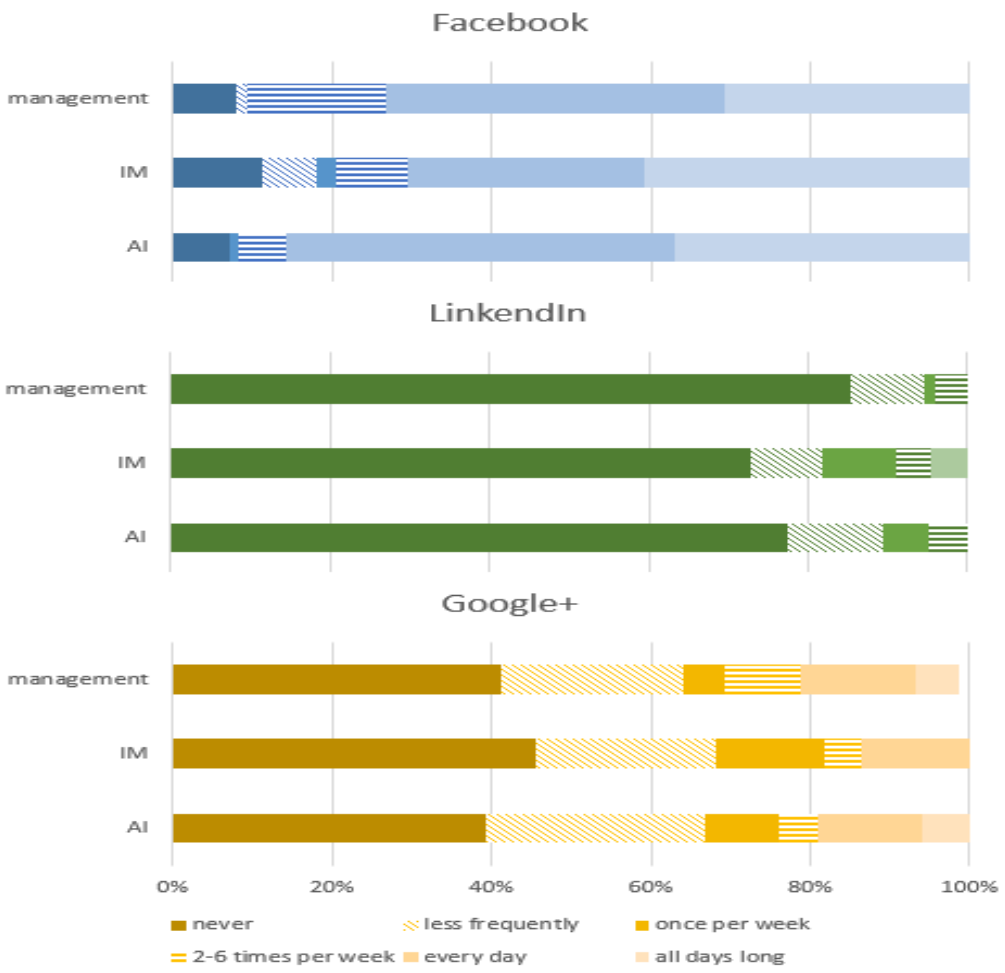

Figure 3. Structure of various study programmes of users on selected social networks.

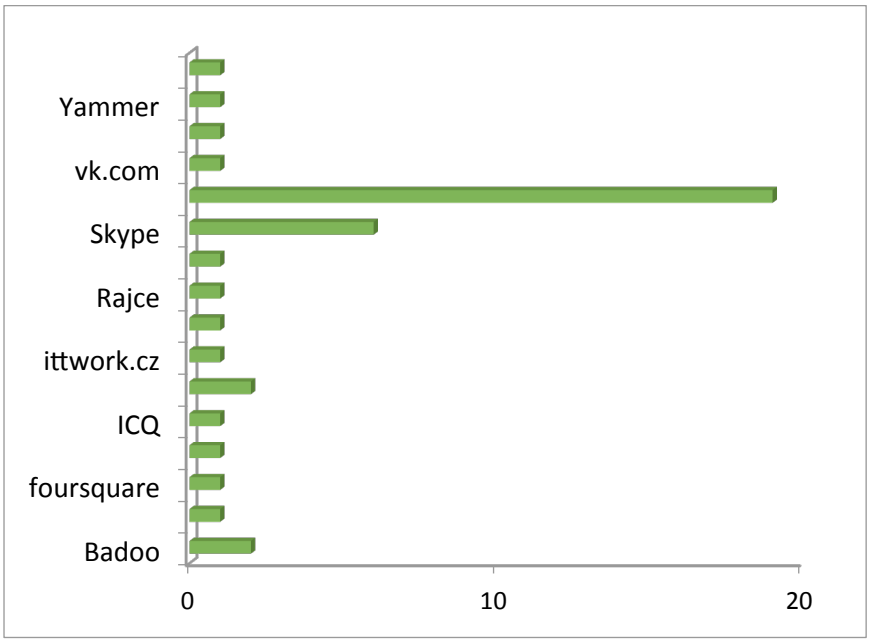

Figure 4. The exploitation of other social networks by FIM students (n).

The social network services are run on the latest mobile devices (tablets, smartphones, PDAs, etc.), which most respondents own and widely use for private purposes, i.e., communication with friends/family and entertainment (see above – criteria 1, 3) and slightly for university study and relating communication (see above – criteria 4, 2).

Discussion and Conclusions

It is widely accepted that the access rate to social networks for private purposes (communication with friends, family members, interest-related topics) is rather high. To take advantage of this fact for education, strong didactic efforts targeting learners´ motivation and support should be applied to increase the real use of social networks for education purposes. Moreover, in practice access is made through mobile devices, which provide different advantages (low weight, small size) and disadvantages (small screen) to present the educational content. This fact means study materials, tests, communication and other tools enhancing the process of instruction must be provided to the social networks' users in such formats that are clearly displayed on these small devices, e.g., long full-text materials to be shortened, animations and video-sequences to be considered from the point of technical, technological and size features, and simple presentations with bulleted texts preferred, as well as tests in multiple-choice, true/false, yes/no formats, etc. The social networking phenomenon thus reflects *m-learning* didactic principles, being considered an inseparable part of it.

The technical and technological development being very fast in recent years, the field of education should benefit from the learners' interest in the latest mobile devices, and incorporate this phenomenon into the process of instruction. As with e-learning a decade ago, when *e-learning didactics* was strongly required for efficient use of PC and the Internet in education, *m-learning didactics* is necessary in this phase of the social networks/mobile devices implementation process.

Acknowledgement

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Author Details

Petra Poulova,
petra.poulova@uhk.cz

Ivana Simonova
ivana.simonova@uhk.cz