

USAGE OF SOCIAL NETWORKING WEBSITES: LITHUANIAN UNIVERSITY STUDENTS' POSITION

Vincentas Lamanuskas, Violeta Šlekienė, Loreta Ragulienė

University of Siauliai, Lithuania

E-mail: v.lamanuskas@ef.su.lt, violeta@fm.su.lt, loretar@gmail.com

Abstract

Over the latter decade a rapid development of information communication technologies has been going on in various directions. Technological possibilities have increased very significantly (Lamanuskas, 2011). The development of internet and technologies related with it has been extremely fast. A lot of internet service providers have appeared in the market, their number still continues to grow. The internet connection methods are changing - from the ordinary usage of phone line modems (dial - up) to broadband internet technology (DSL) and cable TV internet nets. It can be asserted, that over the mentioned period Web 1.0 internet (static, used for getting information) has been changed to Web 2.0 internet (social). The internet diaries, social portals, technologies allowing live communication on the internet (Internet Relay Chat, IRC), talk programme Windows Live Messenger (MSN), ICQ forums and other have occurred and are spreading. With the appearance of "Skype", the internet telephony has acquired a qualitatively new characteristic and practically has become a daily routine. Thus, today a consumer can create his profile on the internet, can make friends, communicate in the interest groups and so on. It can be stated, that every human being contributes in his own way to the internet and at the same time to ICT development, in general. It is obvious, that together with technological problems also arise social internet problems. Social networking websites are closely related with economical, psychological, educational, paleological and other aspects. There is a shortage of researches grounding socio-educational social network aspects. It is important to know not only how much time the consumers spend surfing the net, but how much of this time is allotted for communicating in social networking websites, which of them are the most popular and why, how the respondents evaluate social networking website functions, what in general they know about them, what advantages, disadvantages and threats they discern. Finally, it is important to find out whether the usage of social networking websites improves information – communication abilities in some way.

Key words: *social networking websites, survey, university students.*

Introduction

It is obvious, that the usage of social networking websites is constantly growing. In recent years a rapid growth of the usage has been observed in Lithuania, taking into consideration local (national) social networking websites as well. Facebook.com is one among 10 mostly visited networks. Lithuanian consumers are not an exception – not a small part of them use several social networking websites as well. Business takes an active interest in social networking websites both in the world and in Lithuania. An evident tendency is the expansion of SNW possibilities in business environment. If earlier it was thought that the usage of SNW is a waste of time, in the latter years business finds more and more reasons why social networking websites ought to be used. This is marketing, service and product advertisement, new client search, cooperation development and so on. The other thing – the amount and the flow of information will certainly not decrease and therefore information usage and management in general, will remain urgent.

The other tendency is also rather distinct. Social networking websites “move” into educational area as well. However, a great number of problems exist here. Nowadays teachers (speaking especially about Lithuanian situation) are not properly prepared in ICT field. Though ICT usage competences are being improved in general, however considerable gaps remain, the shortage of understanding is felt on how to apply information technologies, what their abilities are to make teaching/learning process easier, more effective and interesting for children. ICT in its own way changes rapidly, it is complicated to adjust to existing technological environment. On the other hand, the children these days have grown up in ICT surroundings, in the environment more or less filled with technologies. This makes them more susceptible to technologies in general. Thus, teachers’ community can’t stay behind from ICT development either. Teachers themselves have to be ready for unpredictable future (or at least hardly predictable) and to convey this attitude to children. A continuous demand to improve becomes the cornerstone for every member of society.

The problem of motivation to learn and improve remains urgent. Despite education science achievements, motivation encouragement problem remains one of the most serious ones. However, watching children and teenagers’ activities using ICT, especially social networking websites, a very high motivation, a demand to use SNW are fixated. Thus, it is important to use up that motivation in educational sense, in other words, to use up social networking websites’ abilities in educational sense. It is already a common and understandable thing in itself to speak about higher technologies in industry, medicine, pharmacy, agriculture and so on. Somehow it is spoken very little or not spoken at all about higher technologies in education (pedagogy of higher technology).

Nowadays a lot of various social networking websites (or technologies devoted to creation of social networks online and their effective usage) are used not only for entertainment, leisure or communication, but for teaching/learning purposes. E.g., in business field enterprises and organizations, there is a well known internal learning and informing system, using which one can operatively convey information, news and so on (Intra Organizational Learning, IOL). Very widely are used the systems, meant for raising professional qualification of teachers and students’ and in some cases for acquiring education as well (Formal Structured Learning, FSL). Speaking about social networking websites, a very significant becomes so-called accidental/spontaneous learning. This occurs when a consumer using social networking websites gets or finds out something new, very often not realizing consciously it himself (Accidental & Serendipitous Learning, ASL). It is without doubt, that modern SNW in a certain sense realize accidental learning. Teacher’s role continues to be problematic. It remains an open question to what extent technologies can overtake the teacher’s roles of being a mediator and a human being; and this is indispensable since such mediation generates students’ cognitive and social processes and is a highly important factor for the whole learning process (Bregant, Aberšek, 2011).

Thus, can social networks carry out effectively educational function? Can they become a proper professional development instrument? We can formulate a lot of questions. The phenomenon of social networking websites is new and complicated, rapidly changing. The term itself “social networking websites” is rather new (2004). Quite often this term carries in itself a negative meaning. Not in vain, speaking about educational value of social networking websites, another term is used – (Educational networking, <http://www.educationalnetworking.com/>). The fact is that self-management learning becomes a distinct tendency in the field of cooperative teaching and teaching in general in the global world. Social networking websites and their technologies not only form proper conditions for such learning but also directly encourage it. It can be bravely stated, that the first social networking websites’ wave has already come down. Social networking websites’ creation, development and usage strategy is being thought in a new way. Educational social networking websites’ value remains a problematic and open question.

Thus, the discussed field remains problematic. New, exhaustive, empiric researches are necessary. The former researches (Lamanauskas and other, 2010) showed, that students have

unlimited access to the internet, a possibility to use broadband (cable), a phone line (modem) or wireless internet. Therefore, it is not a surprise, that such a big number of the respondents use the internet even a few times a day. The mentioned research also showed, that earlier researches (Lamanauskas and other, 2010) showed, that students use the internet not only for communication (usage index $UI = 0.92$, $SD = 0.21$), but also for general information search ($UI = 0.91$, $SD = 0.19$), for e – mail services ($UI = 0.86$, $SD = 0.26$), for listening to music ($UI = 0.84$, $SD = 0.28$), for studies ($UI = 0.81$, $SD = 0.26$) and other. It is natural, that speaking about social networking websites, almost the biggest attention is paid to Facebook. As the researchers claim, Facebook offers a lot of opportunities for developers and educators too (Awouters, Palmaers, Veltjen, 2011).

The problems lie not only in earlier discussed things. Very important are privacy questions (Acquisti, Gross, 2005; Kolek & Saunders, 2008), and on the whole, social behavior, habits', technology usage (Gemmill, Peterson, 2006) and other questions. Jesse P. Mendez, J. Curry, M. Mwavita, K. Kennedy, K. Weinland, K. Bainbridge (2009) investigated academic interaction problems in social networking websites. They established, that students rather productively are using social networking websites, however mostly for social communication purposes. In other words, a strategy remains to create personal relations and to develop them in virtual internet world, communicating through the internet social networking websites. The usage of the newest technologies is rapidly growing, though such growth is rather different in various countries. For example, in Japan both teachers and lecturers are trying to use technologies in their direct work as much as possible (Taynton, 2012), however, it remains unclear how students perceive themselves as users of technology, the types of use of that technology and their perceptions. Academic achievement question is urgent. Rouis, S., Limayem, M., Salehi-Sangari, E. (2011) ascertained, that the usage of social networking websites makes the academic students' achievements worse. He states, that personality traits and self-regulation significantly determine the use of Facebook. However, Facebook use negatively affects students' academic performance. The research, carried out in Czechia also showed, that SNW users admire social usage parameters of such networking websites' more (e.g. making friends, establishing new relationships and other) than academic question or problem solution (e.g., obtaining missing information, advice, recommendation and other) (Karliček, Tomek, Hasprova, Zamazalova, 2012). Regardless doubts, social networking websites have plenty of unrevealed educational opportunities.

Thus, **research object** is the usage of social networking websites. **Research purpose** is to ascertain how Lithuanian university students use social networking websites, how they value them, what opinion they have about various social networking websites, what they know about them. The main research questions are:

- What social networking websites do students know and use most frequently?
- What social networking website functions do students use and why?
- Do students like social networking websites and why?
- What do students know about how social networking websites use published personal and other type of information?
- What is students' attitude to opportunities provided by social networking websites?

Methodology of Research

General Research Characteristics, Respondents

Seeking to find out Lithuanian students' opinion about social networks and their usage possibilities, in 2012 research participated 918 university studies 1st- 4thcourse students. From them: 831 - Siauliai University and 87 Lithuanian Educology university students. According to sex, 579/63.1% of girls and 339/36.9% of boys participated in the research. According to the course, 212/23.1% of the 1st course students, 239/26.0% of the 2nd course students, 368/40.1% of the 3rd course students, 99/10.8% of the 4th course students participated in the research (Table 1).

Table 1. Characteristics of the respondents (N/%).

According to sex	Student (Female)		Student (Male)		Total
	579/63.1		339/36.9		
According to university	Siauliai university		Lithuanian Educology University		
	831/90.5		87/9.5		
According to the course	Ist course	IInd course	IIIrd course	IVth course	
	212/23.1	239/26.0	368/40.1	99/10.8	

Instrument

The authors' prepared questionnaire was used for the research. A questionnaire *Social networks* comprises 16 questions. 3 questions in the questionnaire are allotted to establish the characteristics of the respondents, 5 open type questions. The 6th question was assigned to evaluate the frequency of social networking website usage. 23 main networking websites are presented in the list. The 8th question was allotted to evaluate the functions of social networking websites (e.g., communication, advertisement, friend search, information exchange and so on). Also, 26 various type statements about social networking websites were presented and the respondents were asked to evaluate them applying the interval Likert scale (from "Completely agree" to "Completely disagree").

Statistical Data Analysis

In order to analyze research data, measures of descriptive statistics are applied (absolute and relative frequencies, popularity indexes, standard deviations). Every statement was given the calculated popularity index ($0 \leq PI \leq 1$). The closer is PI value to 1, the more important, more significant is the statement to the respondent, or respondent better approves of it. To establish deviations between the variables, parametric t-test is used. The SSPS statistics batch is used as an instrument for data processing.

Research Results

The question *How often do you use the internet?* analysis showed, that even 795/86.6 % of the students use the internet a few times a day, 81/8.8 % - once a day, and only 4/0.5 % of the students a few times a week or less (Table 2).

Table 2. The frequency of using the internet (N/%).

Using frequency	N	%
A few times a day	795	86.6
Once a day	81	8.8
3-5 times a week	26	2.8
1-2 times a week	12	1.3
Every two weeks	3	0.4
Less	1	0.1
Total	918	100.0

It was interesting to know, how much time on average students spend on the internet during one visit (table 3). It appears that 242/26.4% of the respondents spend from one to two hours on the internet during one visit, 237/25.8% - from half an hour to 1 hour and 202/22.0% - from ten to thirty minutes. 101/11.0% of the respondents spend more than three hours on the internet. As the majority of students (Table 2) use the internet a few times a day, it means, that the youth spend quite a lot of their time on the internet networking sites.

Table 3. Students about the time spent on the internet (N/%).

Time	N	%
Less than 10 min.	18	1.9
From 10 to 30 min.	202	22.0
From 30 min. to 1h.	237	25.8
From 1 to 2h.	242	26.4
From 2 to 3 h.	118	12.9
More than 3 h.	101	11.0
Total	918	100.0

The group of researchers was interested, how often and how much time students being on the internet visit social networking websites. The analysis of the question *How often do you visit internet social networking websites?* showed, that 500/54.9% of the respondents at least a few times a day visit internet social networking websites, 247/27.2% - at least once a day. Only a small part visit the internet a few times a week or less (Table 4).

Table 4. The frequency of visiting social networking websites (N/%).

Visiting frequency	N	%
A few times a day	500	54.9
Once a day	247	27.2
3-5 times per week	34	3.7
1-2 times per week	53	5.8
Every two weeks	17	1.9
Less	59	6.5
Total	910	100.0

Comparing the respondents' using the internet and participating in social networks, it was obtained, that the respondents, who use the internet a few times a day, participate in social networks as follows: 61.0% a few times a day, 23.9% once a day, 4.5% - 1-2 times per week, 6,0% less than every two weeks and 0.9% do not participate in social networking websites. Those, who less use the internet, less participate in social networking websites. 11.3% of the respondents haven't created a personal profile in the social networking websites.

To the question *How much time on average do you spend on the internet social networking websites during one visit?* 377/41.7% of the respondents asserted, that from ten minutes to half an hour, and 191/21.2% - less than ten minutes (Table 5). Comparing with the time spent on the internet in general (Table 3), it can be thought, that students use the internet not only because of social networking websites.

Table 5. Students about the time spent on the social networking websites (N/%).

Average time spent during one visit	N	%
Less than 10 min.	191	21.2
From 10 to 30 min.	377	41.7
From 30 min. to 1h.	151	16.7
From 1 to 2 h.	113	12.5
From 2 to 3h.	43	4.8
More than 3h.	28	3.1
Total	903	100.0

The students were asked, whether they like social networking websites. Data analysis showed, that the biggest part of the respondents (502/54.9%) partly like social networking websites and only 63/6.9% - don't like (Figure 1). Whilst 350/38.2% like social networking websites very much and willingly use them.

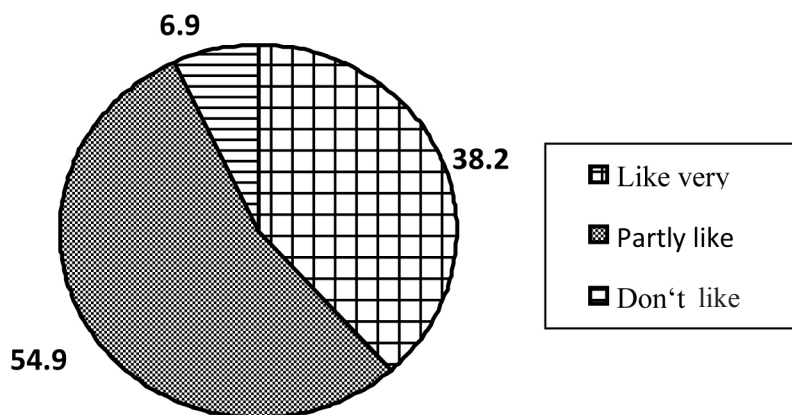


Figure 1: Attitude to social networking websites.

Though 63/6.9% of the respondents don't like SNW, however, even 28.6% from them visit SNW once a day, 38.1% - less than every two weeks, and only 7.9% don't visit SNW. Those who partly like SNW, 44.2% participate in them a few times a day, 32.5% - once a day, and only 0.6% do not participate in SNW. Perhaps, the wish not to be behind friends, the environment surrounding them, and technological novelties, make them participate in even not very likable activities.

Analysis in terms of sex showed, that boys like social networking websites more than girls: boys - $PI = 0.71$ ($SD = 0.27$), girls - $PI = 0.57$ ($SD = 0.32$) ($t = 6.76$; $df = 913$; $p < 0.0001$).

23 social networking websites known for researchers were presented in the questionnaire, and the respondents were asked how often they participate in them. 10 social networking websites, which Lithuanian students visit, are presented in table 6. The most visited internet networking websites are: You Tube ($UI = 0.87$, $SD = 0.21$), Facebook ($UI = 0.87$, $SD = 0.31$), Google+ ($UI = 0.58$, $SD = 0.45$) (Table 6). All other social networking websites are visited rarely and not all respondents participate, however, there isn't a SNW not known and not participated by at least a few respondents. In these internet portals every consumer can create his profile, make friends, communicate in interest groups and so on.

Table 6. Students about participation in social networking websites: usage frequency (N/%) (UI – usage index, $0 \leq UI \leq 1$).

Social networking websites	Daily	Once a week	Once a month	Less than once a month	Don't use	UI
1. You Tube	580/63.2	251/27.3	50/5.4	22/2.4	15/1.6	0.87
2. Facebook	739/80.4	66/7.2	6/0.7	17/1.9	90/9.8	0.87
3. Google+	413/45.2	113/12.4	44/4.8	39/4.3	305/33.4	0.58
4. Vimeo	9/1.0	31/3.4	16/1.8	16/1.8	841/92.1	0.05
5. Windows Live Profile	11/1.2	13/1.4	7/0.8	13/1.4	869/95.2	0.03
6. Twitter	10/1.1	12/1.3	11/1.2	11/1.2	870/95.2	0.03
7. Flickr	8/0.9	13/1.4	8/0.9	10/1.1	875/95.7	0.03
8. Dailymotion	6/0.7	9/1.0	13/1.4	19/2.1	867/94.9	0.03
9. MySpace	4/0.4	5/0.5	11/1.2	24/2.6	869/95.2	0.02
10. Reddit	6/0.7	10/1.1	3/0.3	1/0.1	894/97.8	0.02

Respondents were asked to evaluate social networking website functions according to their importance to them. 14 functions were presented and were asked to evaluate using 5 point ranking scale from 1 – completely unimportant to 5 – very important. According to the importance, functions are presented in Table 7.

Table 7. Social networking website function importance (N = 918). (PI – popularity index, 0 ≤ PI ≤ 1).

	Functions	PI	SD
1.	Communication (including communication in interest groups)	0.76	0.29
2.	Learning and information exchange	0.74	0.32
3.	Texting	0.62	0.33
4.	Exchanging photos, videos and so on	0.57	0.33
5.	Spending leisure time	0.53	0.32
6.	Friend search	0.51	0.34
7.	Link posting from the internet	0.40	0.34
8.	Video conversations in groups	0.30	0.34
9.	Flirting	0.28	0.33
10.	“Spying”	0.26	0.33
11.	Advertisement	0.24	0.31
12.	Link posting from the mobile phone	0.23	0.30
13.	Games (on-line)	0.22	0.30
14.	Evaluation or “Read.Watch.Listen” technology	0.21	0.30

The most important functions are: communication (PI = 0.76, SD = 0.29), learning and information exchange (PI = 0.74, SD = 0.32), texting (PI = 0.62, SD = 0.33). Among students exchanging photos, videos and so on, is also popular (PI = 0.57, SD = 0.33), spending leisure time on the internet (PI = 0.53, SD = 0.31), searching friends (PI = 0.51, SD = 0.34). Not a big part of the respondents admire advertisement (PI = 0.24, SD = 0.31), flirt on the social networking websites (PI = 0.28, SD = 0.33), “are spying“ each other (PI = 0.26, SD = 0.33). “Read.Watch.Listen” technology (PI = 0.21, SD = 0.30) and games (on-line) (PI = 0.22, SD = 0.30) get the lowest evaluation.

Analysis regarding sex showed, that games (on-line) are more popular among boys (PI = 0.30, SD = 0.34), than among girls (PI = 0.18, SD = 0.26), ($t = -5.94$; $df = 91$; $p < 0.0001$), and girls (PI = 0.79, SD = 0.26), more than boys (PI = 0.71, SD = 0.32), ($t = 3.73$; $df = 91$; $p < 0.001$) communicate on social networking websites. On SNW girls more attention pay to learning and information exchange: - girls PI = 0.82, SD = 0.26; boys PI = 0.62, SD = 0.34 ($t = 9.58$; $df = 91$; $p < 0.0001$) and to advertisement reviewing: - girls – PI = 0.25, SD = 0.29; boys PI = 0.23, SD = 0.32 ($t = 0.81$; $df = 91$; $p < 0.021$). However, such function as flirting is more important for boys (PI = 0.34, SD = 0.35), than for girls (PI = 0.22, SD = 0.30), ($t = -6.93$; $df = 90$; $p < 0.0001$). Boys use link posting using mobile phone a little bit more: - boys PI = 0.26, SD = 0.31; girls – PI = 0.21, SD = 0.29 ($t = -2.09$; $df = 91$; $p < 0.064$). The importance of other SNW functions is the same both for boys and girls, statistically significant difference hasn’t been noticed.

Consumers’ actions on social network websites are public, unless the consumer states privacy levels (to show everybody, friends or only himself). Therefore, respondents were asked if they know, how social networking websites use published personal or other type of information. The answers showed, that only 216/23.7% of the respondents know, the rest 498/54.5% - partly know and even 199/21.8% don’t know, where their information is used

(Figure 2). Analysis regarding sex showed, that boys more than girls have a sense, where SNW use their presented information: - boys PI = 0.57, SD = 0.35; girls – PI = 0.47, SD = 0.32 ($t = -3.97$; $df = 91$; $p < 0.0001$).

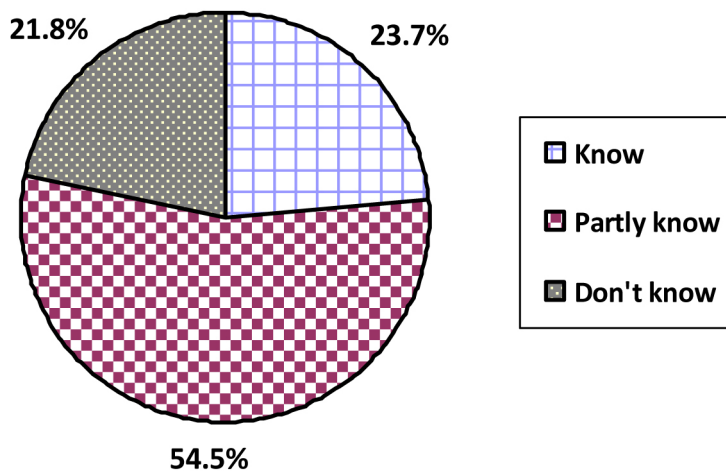


Figure 2: The level of knowledge about how SNW use published personal or other type of information.

It was interesting to know the respondents' opinion about people, who use social networking websites (Figure 3).

In respondents' opinion, these are people *enjoying communication* - PI = 0.78, SD = 0.19, *searching for novelties* - PI = 0.71, SD = 0.21, *enjoying new technologies* PI = 0.71, SD = 0.21. The attitude in respect of the statement, that *these are people, having communication difficulties in real life* has a little bit lower, but positive expression (PI = 0.63, SD = 0.30).

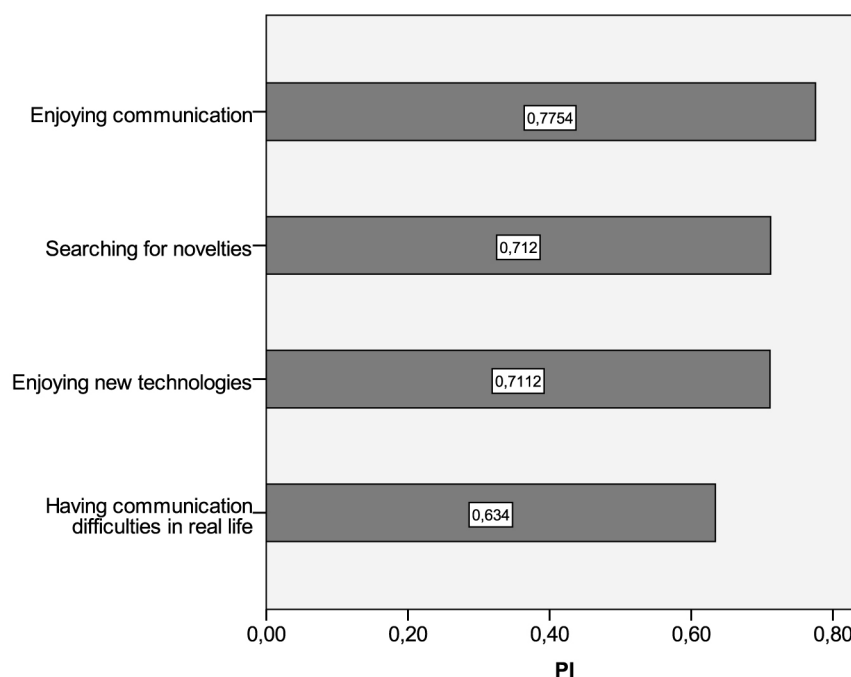


Figure 3: Students about people tending to use social networking websites.

Social network reveals the activity of the participants, their sociality, because the main information in them is, what the consumer wrote, what his mood was, who he started dating, what photos he installed, what commentaries he wrote, who he joined and so on. 26 statements were presented in the questionnaire about social networks and respondents were asked to evaluate them (Figure 4).

The respondents are firmly convinced, that communication in virtual space will never substitute direct people's relations (PI = 0.89, SD = 0.18). In their opinion, SNW is a very good means of communication (PI = 0.76, SD = 0.19), a perfect possibility to find out various news (PI = 0.75, SD = 0.20), a perfect means for self – advertisement (PI = 0.74, SD = 0.21), helps to make friends (PI = 0.71, SD = 0.20). Negative social networking websites' traits are accentuated as well: SNW make a negative influence on learning marks and on the ability to concentrate (PI = 0.73, SD = 0.21), the majority of people belonging to SNW don't know, who with they share information about themselves, their hobbies and their life (PI = 0.73, SD = 0.22) and so on. However, students don't agree, that mostly lower education people use SNW (PI = 0.38, SD = 0.23) and doubt whether SNW is a reliable computer device (PI = 0.45, SD = 0.22).

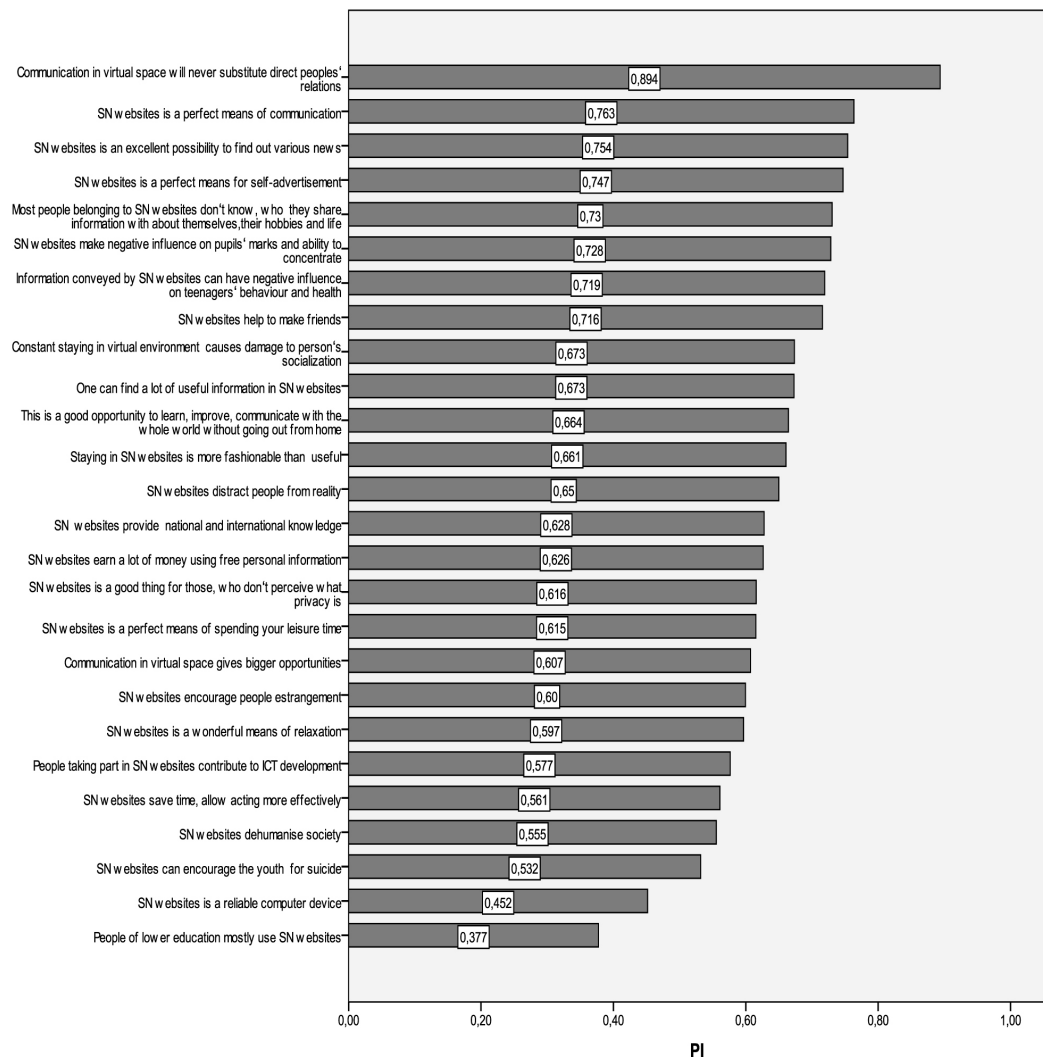


Figure 4: Students' opinion about social networking websites.

Discussion

It is without doubt, that practically all students rather intensively use the internet. The majority of them spend from one hour to two daily surfing the net. Speaking about SNW one can notice, that the usage of such networking websites is directly related with the usage of computers and internet. Lately, it has become trendy in some way to have a personal profile in some social networking website, and sometimes in a few different ones. Though a rapid development of SNW takes place, their usage question in academic area, remains controversial. The newest researches show that regardless that a major part of university students have personal profiles in networking websites, a rather significant gap remains between students and teachers' attitude to the usage of such networking websites (Malesky, Peters, 2012). Teachers obviously remain more conservative in this respect.

The other important aspect is that SNW have still not fully used educational possibilities. As researchers (Charlton, Devlin, Drummond, 2009; Davis, 2010; Judd, 2010; Demski, 2010) notice, SNW strengthen communality, increase communication with others, create certain platforms for information exchange and so on. Several years in turn researches intensively carried out in this sphere confirm that SNW help the consumers to develop their technological, information abilities. Using social networks one is taught to communicate, to exchange information, to cooperate and so on. An important moment is, that teachers should show more initiative using off educational possibilities provided by SNW (University of Minnesota, 2008).

The research carried out by the authors showed, that consumers have little knowledge about how personal information is used, which is stored in social networking websites. This is obviously connected with the person's rights and ethical things. Even 55% of the respondents don't know how SN use published personal and other type of information. This shows, that the problem earlier raised by the researchers, remains urgent. Brydolf (2007) states, that it is very important to find a certain balance between the use and possible risks using SNW.

It is totally understandable, that rapid development of technologies can't to not influence educational practice. However, the question of effective usage of new technologies for educational purposes remains open. Undoubtedly, we have to prepare young generation to be sufficiently literate in digital, networking-based society (Fernandez-Villavicencio, 2010; Pollara, Zhu, 2011).

Conclusion

It has been stated, that the majority of the respondents use the internet a few times a day, besides, more than a half of them visit social networking websites a few times a day as well. Only a small part of the respondents haven't created their personal profile in social networking websites. It is obvious, that the usage of the internet and visiting social networking websites are closely and directly related things. More than a third of the respondents very favourably value social networking websites, they like them. Even those who don't like social networking websites, all the same, periodically visit them.

It has been asserted, that though the respondents know a lot of social networking websites, the most frequently visited and most popular are three: You Tube, Facebook, Google+. The most important functions are: communication, learning and exchanging information, texting. Certain sex differences have been noticed valuing social networking websites. More girls than boys communicate in social networking websites, the latter more attention pay to advertisement, information exchange, whilst for boys more important is flirting.

It is worrying, that only a small part of the respondents know, how social networking

websites use published and other type of information. Besides, boys more than girls have a sense where SNW use their presented information.

Though SNW is an excellent means of communication, a perfect opportunity for finding out various news, for making friends and so on, students are firmly convinced, that communication in virtual space will never substitute direct people's relations. Such their position is valued as positive. On the other hand, it is obvious, that educational social networking potential has rather poor expression in students' evaluation and it raises a grounded concern.

Acknowledgments

The authors would like to extend their sincere appreciation to students who participated in this research. Special thanks go to Ilona Ratkevičienė for the language revision.

References

- Acquisti, A., & Gross, R. (2005). Imagined communities: Awareness, information sharing, and privacy on the Facebook. In *Proceedings of the 6th Workshop on Privacy Enhancing Technologies*, (Ed.) P. Golle & G. Danezis, 36-58. Cambridge: Robinson College.
- Awouters, V., Palmaers, D., Veltjen, A. (2011). 2Facebook or not 2Facebook in Education: that's the question? Teaching and Learning on Facebook. In: *Splet izobraževanja in raziskovanja z IKT / Enabling education and research with ICT* (Mednarodna konferenca Splet izobraževanja in raziskovanja z IKT - SIRikt 2011, Kranjska Gora, 13. - 16. april 2011 / The 5th International Conference SIRikt, 13th - 16th April 2011). Ljubljana: Miška, p. 148-151.
- Bregant, J., Aberšek, B. (2011). Artificial Intelligence versus Human Talents in Learning Process. *Problems of Education in the 21st Century (Information & Communication Technology in Natural Science Education – 2011)*, 37, 38-47.
- Brydolf, C. (2007). Minding MySpace: Balancing the benefits and risks of students' online social networks. *Education Digest*, 73 (2), 4-8.
- Charlton, T., Devlin, M., & Drummond, S. (2009). Using facebook to improve communication in undergraduate software development teams. *Computer Science Education*, 19 (4), 273-292.
- Davis, M. R. (2010). Social Networking Goes to School. *Education Digest*, 76 (3), 14-19.
- Demski, J. (2010). Tweets for Teachers. *THE Journal*, 37 (2), 16-18.
- Gemmill, E., & Peterson, M. (2006). Technology use among college students: Implications for Student Affairs Professionals. *NASPA Journal*, 43 (2), 280-300.
- Fernandez-Villavicencio, N. (2010). Helping students become literate in a digital, networking-based society: A literature review and discussion. *International Information & Library Review*, 42 (2), 124-136.
- Judd, T. (2010). Facebook versus email. *British Journal of Educational Technology*, 41 (5), 101-103.
- Karliček, M., Tomek, I., Hasprova, M., Zamazalova, M. (2012). Social Networking Sites in the Czech Republic: an Empirical Study. *Management & Marketing Challenges for the Knowledge Society*, 7 (1), 15-28.
- Kolek, E.A. & Saunders, D. (2008). Online disclosure: An empirical examination of undergraduate Facebook profiles. *NASPA Journal*, 45 (1).
- Lamanauskas, V., Šlekienė, V., Ragulienė, L. (2010). Lietuvos universitetų studentų patirtis naudoti informacinės komunikacinės technologijas. *Gamtamokslinis ugdymas / Natural Science Education*, 3 (29), 14-27.
- Lamanauskas, V. (2011). Digital Education: Some Implications. *Journal of Baltic Science Education*, 10 (4), 216-218.
- Malesky, L., Peters, Ch. (2012). Defining appropriate professional behavior for faculty and university students on social networking websites. *Higher Education*, 63 (1), 135-151.

- Mendez, Jesse P., Curry, J., Mwavita, M., Kennedy, K., Weinland, K., Bainbridge, K. (2009). To Friend or Not to Friend: Academic Interaction on Facebook. *International Journal of Instructional Technology & Distance Learning*, 6 (9). Retrieved on 20 April 2012 from, http://www.itdl.org/Journal/Sep_09/article03.htm
- Pollara, P., & Zhu, J. (2011). Social Networking and Education: Using Facebook as an Edusocial Space. In *Proceedings of Society for Information Technology & Teacher Education International Conference 2011* (pp. 3330-3338). Chesapeake, VA: AACE.
- Rouis, S., Limayem, M., Salehi-Sangari, E. (2011). Impact of Facebook Usage on Students' Academic Achievement: Role of Self-regulation and Trust. *Electronic Journal of Research in Educational Psychology*, 9 (3), 961-994.
- Taynton, K. (2012). The Net Generation in Japan: a Survey of Internet Behaviours of Students Aged 13-21. *Teaching English with Technology*, 12 (1), 3-19.
- University of Minnesota (2008, June 20). Educational Benefits of Social Networking Sites Uncovered. Retrieved June 14, 2012, from <http://www.sciencedaily.com/releases/2008/06/080620133907.htm>

Advised by Boris Aberšek, University of Maribor, Slovenia

Received: April 28, 2012

Accepted: July 10, 2012

Vincentas Lamanauskas	Professor, Natural Science Education Research Centre, University of Siauliai, 25-119 P. Višinskio Street, LT- 76351, Siauliai, Lithuania. Phone: +370 41 595736. E-mail: lamanauskas@projektas.lt Website: http://www.lamanauskas.projektas.lt
Violeta Šlekienė	Associate Professor, Department of Physics, Faculty of Natural Sciences, University of Siauliai, 19 P. Visinskio Street, LT-77156 Siauliai, Lithuania. Phone: +370 41 595721. E-mail: fk@fm.su.lt Website: http://www.su.lt/ This e-mail address is being protected from spambots. You need JavaScript enabled to view it
Loreta Ragulienė	Associate Professor, Lecturer of Department of Physics, Faculty of Natural Sciences, University of Siauliai, 19 P. Visinskio Street, LT-77156 Siauliai, Lithuania. Phone: +370 41 595721. E-mail: fk@fm.su.lt Website: http://www.su.lt/