Time Future Teacher Spend on Facebook and Playing Online Video Games

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Abstract - **Social networks are nowadays popular among people of all ages. Although they are often used by children under the age of 13 who create fake profiles without the knowledge of their parents, it is an interesting fact that social networks are also used by future graduates in Masters of Primary Education for checking their status or playing on line games. Considering that teachers, along with the parents and the educators, are role models to children, it would be curios to do a research on what do they use social networks for. This work shows the results of a research done among future Master of Primary Education graduates on the usage of Facebook, the time spent browsing the social networks, playing on line video games, the time of the day they usually play on line games, purchase of expansions of DLCs for games and if they consider themselves addicted to on-line gaming.**

Keywords - **Facebook, on-line video games, Primary education students, social network**

1. Introduction

In the analysis of virtual social networks [1] the structures (knots and relationships) of social relations are being indirectly and analytically observed. In this case, knots are individual elements of a virtual network, and relationships are relations among those elements. There can be different relationships between the knots. Researchers conducted in several

academic and similar areas showed that, in most cases, social networks function on different levels, from family to national, and have an important role in solving problems, organization leading and deciding the level of success of individuals in reaching their goals. Social networks are nodes of individuals, groups, organizations, and related systems that tie in one or more types of interdependencies: these include shared values, visions, and ideas; social contacts; kinship; conflict; financial exchanges; trade; joint membership in organizations; and group participation in events, among numerous other aspects of human relationships [2].

According to data of Interworldstats [3], 822,710,362 Facebook users are registered in Europe, while 6,696,318,608 are registered in the rest of the world. In total, there are 7,519,028,970 Facebook users in the world, which is 10.9% of the population. In Croatia, 4,209,815 users are registered, which is 0.5% of all European users. The state with most Facebook users is Russia, with 17.1% of registered users, followed by Germany with 11.4 % of users and Great Britain with 9.8% of users. There are more than 2.01 billion active users, which, compared to last year (2016) is a 17% increment. More and more users access Facebook through mobile phones - around 1,15 billion of them (data from 2.01.2017), and the network is mostly used by people from the age of 25 to 34. (29.7%) [4]. The mobile phone usage research results [5] are very interesting because they show that: more than a half the world now uses a smartphone, almost two-thirds of the world's population now has a mobile phone, more than a half of the world's web traffic now comes from mobile phones, more than half of all mobile connections around the world are now 'broadband', one in five persons of the world's population shopped online in the past 30 days.

According to Devaney [6] and Seat [7]research on reasons of usage of social networks conducted on a sample of 1000 K-8 educators, social networks are usually not used for communication between students and teachers, but one in five teachers does use them for communicating with students or their parents. The most commonly used platform is Google +,

followed by Facebook and Twitter. For personal needs, most of the teachers usually uses Facebook. Around 71% of teachers uses Facebook, 32% uses Pinterest, 27% uses Instagram and 18% uses Twitter. Pinterest shows most correlation between personal and professional usage, and the Facebook shows almost none. According to age, teachers of the age of 50 or more mostly use Google +, while 29-year-olds and younger teachers usually use Pinterest. Research done by Hootsuite and We Are Social [4] on the phenomenon of the prevalence of social networks identified a record in the second quarter of the ongoing year (2017) when social networks gained 1 million of new users per day. The research also showed that the number of social network users is now bigger than the number of residents of the USA, India and China combined [5].

According to PISA testing [8] conducted on 12,000 Australian 15-year-olds in mathematics, reading, science and data gathering on students' on-line activities, teenagers that play on-line video games on daily bases have better results in math and science - 15 points more than those who don't play, while those students who use Facebook or chat usually get a 20 points lower result.

It is important to understand [1] that the technological characteristics of social networks and web pages are similar, but that the social groups that use them and form around them can be very different from one another. Social network web pages (SNS) attract millions of users since day one and to many of them they have become a daily activity [9].

2. Methodology of research

This research tried to answer the following questions: how much time do future teachers spend using Facebook daily and during the weekend, do they play on-line video games, what do they mostly use Facebook for and do they consider themselves addicted to on-line video gaming? The sample comprised of 55 students of the first, third and fourth year of Teacher education studies at the University Juraj Dobrila in Pula. A questionnaire consisting of 11 variables has been prepared, and the following attitudes have been analyzed for the needs of this study:

1. Sex
2. School year
3. Years of Facebook usage
4. Facebook activities
5. Playing on-line video games on Facebook
6. The most played on-line video game on Facebook

7. Daily play of on-line video games on Facebook
8. Playing of on-line video games on Facebook during the weekend
9. Purchase of game expansions or DLCs
10. Most common time of the day for playing on-line video games
11. Addiction to playing on-line games on Facebook

3. Results of Research

Table 1. Sex

Sex

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	4	7,3	7,3	7,3
	female	51	92,7	92,7	100,0
	Total	55	100,0	100,0	

Four male and 51 female students participated in the research.

Table 2. School year

Years_of_study

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	first year	31	56,4	56,4	56,4
	third year	6	10,9	10,9	67,3
	fourth year	18	32,7	32,7	100,0
	Total	55	100,0	100,0	

Thirty one first year students, six third year students and eighteen fourth year students participated in the research.

Table 3. Years of Facebook usage

Years_of_study * Year_Fb Crosstabulation

			Year_Fb			Total
			1-3 year	4-6 year	7-8 year	
Years_of_study	first year	Count	0	17	14	31
		% within Years_of_study	,0%	54,8%	45,2%	100,0%
	third year	Count	1	0	5	6
		% within Years_of_study	16,7%	,0%	83,3%	100,0%
	fourth year	Count	1	5	12	18
		% within Years_of_study	5,6%	27,8%	66,7%	100,0%
Total		Count	2	22	31	55
		% within Years_of_study	3,6%	40,0%	56,4%	100,0%

Table 3. shows for how many years have the students been using Facebook. A total of 54.8% of the first year students have been using it for 4 to 6 years, 83.3% of the third year students have been using it for 7 to 8 years, as have been 66.7% of the fourth year students. Chi-squared test is 10,693, df=4, p=0,030. The results can be considered statistically significant.

Table 4. Facebook activities

Crosstab

| | | | Activitf_Fb | | | |
			Status viewing	Publishing photos	Messenger	Total
Years_of_study	first year	Count	3	0	28	31
		% within Years_of_study	9,7%	,0%	90,3%	100,0%
	third year	Count	0	0	6	6
		% within Years_of_study	,0%	,0%	100,0%	100,0%
	fourth year	Count	1	1	16	18
		% within Years_of_study	5,6%	5,6%	88,9%	100,0%
Total		Count	4	1	50	55
		% within Years_of_study	7,3%	1,8%	90,9%	100,0%

Table 4. shows most frequent Facebook activities. The subjects mostly use Messenger, check statuses and post photos. The results show that communication is mostly done via Messenger while the network itself is less and less used for communicating with friends. Chi-squared test is 2,875, df=4, p=0,579.

Table 5. Playing on-line video games on Facebook

Crosstab

| | | | Fb_games | | |
			Yes	No	Total
Years_of_study	first year	Count	26	5	31
		% within Years_of_study	83,9%	16,1%	100,0%
	third year	Count	4	2	6
		% within Years_of_study	66,7%	33,3%	100,0%
	fourth year	Count	15	3	18
		% within Years_of_study	83,3%	16,7%	100,0%
Total		Count	45	10	55
		% within Years_of_study	81,8%	18,2%	100,0%

Table 5. shows results on on-line gaming. A total of 83.9% of the first year students plays on-line video games and so does 66.7% of the third year students and 81.8% of the fourth year students. Chi-squared test is 1,042, df=2, p=0,594.

Table 6. The most played on-line video game on Facebook

Crosstab

| | | | Most_played_games | | | | | | |
			Candy Crush Saga	Texas HoldEm Poker	Ball Pool	Pet Rescue Saga	FarmVille	Other	Total
Years_of_study	first year	Count	15	2	2	0	2	5	26
		% within Years_of_study	57,7%	7,7%	7,7%	,0%	7,7%	19,2%	100,0%
	third year	Count	3	0	0	0	1	0	4
		% within Years_of_study	75,0%	,0%	,0%	,0%	25,0%	,0%	100,0%
	fourth year	Count	10	2	0	1	1	1	15
		% within Years_of_study	66,7%	13,3%	,0%	6,7%	6,7%	6,7%	100,0%
Total		Count	28	4	2	1	4	6	45
		% within Years_of_study	62,2%	8,9%	4,4%	2,2%	8,9%	13,3%	100,0%

Table 6. shows the on-line video game that was played the most by subjects. The game is Candy Crash Saga. A total of 57.7% of the first year students, 75% of the third year students and 66.7% of the fourth year students have played that game. Chi-squared test is 7, 435 df=2, p=0,684.

Table 7. Daily play of on-line video games on Facebook

Crosstab

| | | | Daily_playing | | | | |
			1 hour	2 hours	3 hours	more than 5 hours	Total
Years_of_study	first year	Count	4	10	8	4	26
		% within Years_of_study	15,4%	38,5%	30,8%	15,4%	100,0%
	third year	Count	1	1	0	2	4
		% within Years_of_study	25,0%	25,0%	,0%	50,0%	100,0%
	fourth year	Count	3	5	7	0	15
		% within Years_of_study	20,0%	33,3%	46,7%	,0%	100,0%
Total		Count	8	16	15	6	45
		% within Years_of_study	17,8%	35,6%	33,3%	13,3%	100,0%

Table 7. shows time spent on playing on-line video games per day. A total of 38.5.% of the first year students plays for 2 hours a day, 50% of the third year students plays more than 5 hours a day and 35.6% of the fourth year students plays 2 hours a day. A total of 15.4% of the first year students and 50% of the third year students play more than five hours a day. Chi-squared test is 8,75,1 df=1, p=0,188.

Table 8. Playing of on-line video games on Facebook during the weekend

Crosstab

| | | | Weekend_playing | | | | |
			1 hour	2 hours	3 hours	Viĺe od 5 sati	Total
Years_of_study	first year	Count	12	7	5	1	25
		% within Years_of_study	48,0%	28,0%	20,0%	4,0%	100,0%
	third year	Count	2	1	0	1	4
		% within Years_of_study	50,0%	25,0%	,0%	25,0%	100,0%
	fourth year	Count	4	4	7	0	15
		% within Years_of_study	26,7%	26,7%	46,7%	,0%	100,0%
Total		Count	18	12	12	2	44
		% within Years_of_study	40,9%	27,3%	27,3%	4,5%	100,0%

Table 8. shows the time spent playing on-line video games on Facebook during the weekend. First year students play for an hour a day during the weekend (48%), and so do third year students (50%), while fourth year students play for 3 hours a day. (46.7%). Chi-squared test is 9,171, df=6, p=0,164.

Table 9. Purchase of game expansions or DLCs

Crosstab

| | | | Addons | | |
			Yes	No	Total
Years_of_study	first year	Count	1	25	26
		% within Years_of_study	3,8%	96,2%	100,0%
	third year	Count	1	3	4
		% within Years_of_study	25,0%	75,0%	100,0%
	fourth year	Count	1	14	15
		% within Years_of_study	6,7%	93,3%	100,0%
Total		Count	3	42	45
		% within Years_of_study	6,7%	93,3%	100,0%

Game expansions are mostly bought by third year students, (25%), followed by fourth year students (6.7%) and first year students (3.8%). Chi-squared test is 2,493, df=2, p=0,287.

Table 10. Most common time of day for playing on-line video games

Crosstab

| | | | Part_of_The_day | | | |
			morning	afternoon	night	Total
Years_of_study	first year	Count	0	17	9	26
		% within Years_of_study	,0%	65,4%	34,6%	100,0%
	third year	Count	0	3	1	4
		% within Years_of_study	,0%	75,0%	25,0%	100,0%
	fourth year	Count	1	3	11	15
		% within Years_of_study	6,7%	20,0%	73,3%	100,0%
Total		Count	1	23	21	45
		% within Years_of_study	2,2%	51,1%	46,7%	100,0%

Table 10. shows the most common time of day the students play on-line video games. The first year students usually play during the afternoon (65.4%), and so do the third year students, (75%) while the fourth year students mostly play during the night (73,3%). Chi-squared test is 9, 821, df=4, p=0,044. The results can be considered statistically significant.

Table 11. Addiction to playing on-line games on Facebook

Crosstab

| | | | Addiction | | |
			yes	No	Total
Years_of_study	first year	Count	0	26	26
		% within Years_of_study	,0%	100,0%	100,0%
	third year	Count	0	4	4
		% within Years_of_study	,0%	100,0%	100,0%
	fourth year	Count	3	12	15
		% within Years_of_study	20,0%	80,0%	100,0%
Total		Count	3	42	45
		% within Years_of_study	6,7%	93,3%	100,0%

When asked if they considered themselves addicted to on-line video games on Facebook, most students replied negatively. Special attention should be paid on results that show that 20% of the fourth year students replied that they do consider themselves addicted to on-line gaming. Chi-squared test is 6,429 df=2, p=0,040. The results can be considered statistically significant.

4. Conclusion

A total of 55 students of Teacher Education Studies participated in the pilot research on Facebook usage and playing of on-line video games. Considering that they are all future master graduates, it is clear that all of them use Facebook for private purposes, mostly for chatting on Messenger and playing on-line video games only 20% of fourth year students answered that they do consider themselves addicted to playing on-line video games, the results shouldn't be ignored and must be attended to, which was done. It is to be expected that the number of on-

line gaming addicts will grow form one year to another. Early prevention and constant education is important from early age (although Facebook access is permitted to children that are 13 or older, there are a lot fake profiles made by younger children). During the weekend most of the subject play games for two hours while some do it for more than five hours (25% of third year students) and it is noticeable that they are not aware they could become addicted. Most played games are Candy Crush Saga, Texas HoldEm Poker, Farm Vill and others. Most subjects have been using the social networks for 7 to 8 years. The motives for using social network like seeking friends, social support, entertainment, information, and convenience are similar between American and Korean college students [10]. In a research [11] conducted on an example of 667 students at the University of Malaya in Malaysia the results have shown that students are using mostly Facebook for entertainment, free time but not for socialization and social information.

Considering that the subject are future teachers and that here mentioned researches show that they mostly use Facebook for private purposes and not for school needs, although they are educated on using social networks for communicating with parents, colleagues and coworkers.

It is important that parents become aware of the nature of the social media sites, given that not all of them are healthy environments for children and adolescents [12]. In a research conducted on 286 students in Slovakia, Izraeli [13] states that social networks are popular among children but are used by children under the age of thirteen. In a research [14] conducted on 252 American students, 63% answered that they have their parents on the friend list on Facebook while 27% of them answered they had blocked their parents in order that they are not able to see their contents. It would be interesting to do a research on which social network, and how, could be used for working with parents or on projects and not merely for private purposes.

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