eLearning: A Social Software in Higher Education Learning

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Summary – eLearning, as one of the organised form of learning and teaching, frequently moves centre of attention towards one of its constitutional elements. . Though the central line, teacher – student that practically constitutes learning basically doesn't change the importance of neither, it still creates different relationships in the realisation. Learning contents can also appear in centre of consideration, both on organisational and execution level. Determination of content depends not solely of teacher - student relationship, but also of goals which learning tries to accomplish. Regardless to the use of traditional learning or more modern forms of eLearning and mLearning, the holders of information, like books and similar gradually tend to be replaced by electronic media and virtual bookshops. Communication dimension of eLearning provides a possibility of forming the eClass and creating the adequate groups of students which traditional learning cannot generate. Paper considers the level of changing the learning content's role through verifying and analysing the relationship between students and teachers and social networks and social software. Special attention has been concentrated on confidence towards such forms of learning contents in comparison to their mode of creation and preservation.

Key words: eLearning, Learning Content, ICT, Social Software, Learning, Teaching

I. INTRODUCTION

Traditional education, based on pure memorizing and reproduction of the learned facts, cannot develop competencies required by challenges and tempo of a modern society. Such mode of learning develops submissiveness and passiveness instead of a creative thinking and managing the unfamiliar situations. Modern society seeks for individuals capable of taking risks and making fast and effective decisions. Today's knowledge grows fast so it turns educational process into a lifetime process which requires individuals to derive important facts out of huge quantity of information, choose the important and use it, instead of simple memorizing the numerous facts. Therefore, a need emerged for new educational approaches that motivate lifetime learning. Traditional mode of learning gradually transforms into **interactive learning.** It initiates development of communication and information literacy that is achieved through social contacts which support transfer of knowledge and experiences. It is important to implement a method of attempt and mistake into the learning and teaching since it will help students to develop a capability of independent research work and making their own conclusions. Though the book, as educational medium should never be neglected, its place is largely overtaken by Internet. Besides its enormous informative and communicative importance, it also influences the individual's capability to learn the difference between important and unimportant, respectively relevant (true, accurate) and irrelevant (incorrect) information. Students should become active participants instead of passive consumers of knowledge that transforms learning into participative social process which supports students' personal goals and needs. Higher education institutions should become aware of the increased need for new models of learning and teaching that simultaneously satisfy various needs of new generations of students. They require experiential learning, greater autonomy and mutual connection. Their goal is to overtake the control over individual learning, making the contacts with the colleagues, making the enquiries and creating the new attitudes toward the knowledge thanks to the usage of Web 2.0 tool.

II. WEB 2.0

Interactive learning and eLearning's needs are completely satisfied by **Web 2.0** which represents a new generation of web communities and services that enable a cooperation and contents' exchange between users of web services. It represents a trend in World Wide Web technology that enables users to participate in creation of web contents. It connotes [1] interactive, two-way communication between users and computers and users between themselves, turning them from passive to active participants. McLoughlin and Lee [2] claim that Web 2.0 represents a second generation, respectively more personalized, communicative form of World Wide Web that emphasizes active participation, cooperation, creativity, interaction and sharing the knowledge and ideas between users. This way, students have approach to ideas, resources and learning communities, and they participate primarily in creation of knowledge instead of its passive underwriting.

Thanks to this technology students can with their work contribute to some web contents in a simple manner,

posses a control over them and mutually cooperate and communicate through communities with purpose of sharing, understanding and creating the knowledge, all of it online with a help of a web browser. Web 2.0 technology enables the enrichment of methods used in learning, communication, teaching and creating the knowledge. Most of earlier e-learning attempts have simply repeated traditional modes of learning and teaching in online environment.

Opposite to mentioned, Web 2.0 tools and technologies offer great opportunities for leaving the centralised and completely professor-controlled mode of teaching towards the individual learning directed towards mutual communication and interaction.

Supported by Web 2.0 technology students have an opportunity to learn in two modes [3]. The first one enables learning by browsing existing contents, while the other puts them in a position of active creators which contribute to specific content by placing ideas and sharing knowledge. Social Software provide enlarge mutual interaction on local and global level, as well the broaden possibilities for sharing ideas and information.

Frame used in creating knowledge supported by Web 2.0 technology [2]:

- Content: small units of content that initiate thinking; knowledge created by generating, sharing and reviewing ideas given by students;
- Curriculum: not fixed but dynamic, open to changes and actions by students, made of small interdisciplinary modules aimed at combining formal and informal learning;
- Communication: open, equal, executed by different types of media in order to stay relevant and clear;
- Knowledge resources: informal and formal, abundant with multimedia and available at global level;
- Students' support: provided by other students, professors, experts and virtual communities of people who share same interests;
- Learning assignments: authentically, personalised, created in line with students' needs, experiential and enable different approaches.

III. SOCIAL SOFTWARE IN EDUCATION

Today we witness increasing popularity of social networks among students, in combination with Social Software as a part of Web 2.0 trend. **Social Software** is any online software that supports interaction between people [4]. To students it enables choice of tools that mostly fulfil their goals and needs for connecting and socializing. Social Software allows users to communicate by text, video, audio and photographs. Further on, it enables participation in communities that exceed borders of higher education institution which members they are by using tools and sources which their institution hasn't been able to provide. Most popular Social Software includes Blogs and Wikis.

Blog is an abbreviation of weblog and it represents Internet journal that contains chronologically set articles, and can be both individual and collaborative [5]. In education it can help students to continue their cooperation outside the classrooms by creating theme articles which refer to curriculum or expressing attitudes about subjects brought in courses. Blogs can be observed as collaborative and interactive tools that will enable teachers and students to exchange opinions, develop discussion about revealed subject, and develop writing skills, research skills, critical judgment and assessment.

Wiki (Hawaiian expression for fast) presents a web site that can be created and changed in fast and simple manner by usage of simple syntax [6]. In theory, Wiki is completely opened and everybody who's logged can add, edit, change or delete content of any Wiki site. In education Wikis are ideal for different group projects or as an alternative to class web sites. Wiki systems can be useful in teaching when creating individual teaching handbooks (presentations, seminars, multimedia etc.) or sharing useful sources relevant to the matter. Besides, Wikis are ideal teaching tool for the professors dislocated from the higher education institution which employs them and where they teach. The most popular Wiki site is Wikipedia (wiki + cyclopaedia). It is the multi language online cyclopaedia of free contents, and is created in cooperation of numerous volunteers [7]. When teaching, professor can motivate students to write articles in Wikipedia, naturally with their previous reviews. This does not only contribute to development of Wikipedia, but also to accuracy of published data, while students simultaneously use Wikipedia as source of knowledge and become its active creators and reviewers, influencing positively their reading and writing culture and expressing their critical opinions.

Term Social Software refers to different online tools that daily emerge in the network, and can be used freely for further development without authors' permission [8]. Social Software can be observed as a phenomenon of modern Internet since it has succeeded in developing a community that uses tools, exchange resources and knowledge (publishing articles on the Internet). Thanks to its openness, flexibility and given ease of communication online, Social Software has managed to change the way that students mutually socialize and communicate.

Anne Bartlett-Bragg [9] claims that Social Software' usage helps students to actively connect with learning contents in a way they can individually create them, publish them, browse, read and consequently create own learning techniques. This style indicates an interactive teaching and it enriches social interaction since usage of different online social application helps students not just to browse contents in different ways but also to exchange the same. One should nevertheless mention an urge to develop a critical thinking by students so they could not misinterpret all information found in the Internet.

Social Software tools broaden discussion outside the classrooms providing the students with new ways of communication within their group or with any other student worldwide.

Besides Blogs and Wikis Social Software also refers to IP telephony (Voice over IP technology), Social Bookmarking and Social Networking [10].

VoIP stands for transport of telephone calls by usage of the Internet protocols. One of today's most modern VoIP applications is Skype, a programme which enables voice communication between two or more users. Besides, it enables file exchange, as well as textual messages in form of chats. The above mentioned also explains Skype usage in education (i.e. language classes where students can communicate by voice with their colleagues from foreign countries in order to learn their native language).

Social Bookmark represents online saving of web addresses and their marking with crucial words (tags) so to keep them organised and searchable to other users. This software is used in teaching for its social aspect of marking. Students can mutually share and comment links they found in specific teaching field. This way they can create their own lists (bases) of useful resources of certain subject area that provides them with a possibility of mutual learning.

A. Social Networks

Social networks, as another Social Software mode, represent wide online community aimed at developing virtual social connections between users which could share common interest or execute common activities. More and more students communicate between themselves and are included in social networks such as Facebook or Twitter, so it could be used in educational purposes by creating virtual communities, groups of students with common interests or needs. Professors should use social networks to engage students in teaching, in order to provide them more work satisfaction and mutual communication, motivation and creativity. Social networks represent places where students could gain social and communication skills, and simultaneously become a part of Web 2.0 culture. By that, they participate in informal learning, development of creativity and digital literacy. [11]

1) Facebook in teaching

Today the most popular and most used social network Facebook can serve professors as place for publishing educational materials (i.e. PPT presentations, scripts, assignments, various multimedia contents etc.) Besides, Facebook can be used in creating quizzes for knowledge tests and discussions referring teaching subjects. Hence, from the educational aspect, Facebook can be observed as a social network aimed at connection and cooperation between students and professors that helps to solve communication problems, as well the fact that lesson needs not to endure 45 minutes, but instead as long as student has an interest in the subject in question.

2) Youtube in teaching

The biggest social web site intended to video sharing, Youtube, can be qualitatively used in teaching. Typical way of its usage is when professors record video sections with classes relevant to the educational content which is then uploaded. These way students can search the content whenever they want it, repeatedly until they are familiar with the content.

IV. RESEARCH AND ANALYSIS

Research aims at discovering a level of students' acquaintance with terms Web 2.0 technology and what Social Software tools do students use in educational purposes. Further on, paper tried to analyse how much do students believe contents found in the Internet and whether they in general support Social Software usage for educational purposes. In January 2011 questionnaire containing 20 questions has been uploaded on Polytechnic of Rijeka' websites for a two weeks' period.

Potential student-respondents were invited by e-mails to participate. Questionnaire was easy accessible and participants were anonymous. When analysing collected data researchers used descriptive statistical analysis of data.

The purpose of research was to determine in what measure and manner do target group approach Social Software and social networks. Questionnaire did not insist on strict definition of none of the mentioned phenomena so to detect eventual mistakes in their interpretation. Namely, it is clear that social network does not have to include concretely articulated software so as term it can be observed more widely, but it does refer to software that will back it up and perform it.

Research tried to verify how much is target group sensible to fact that Social Software necessarily includes elements of educational materials and as such it requires a relationship derived from the relationships in traditional classes. Though respondents weren't expected to indicate a sensibility towards didactical-methodical aspects of Social Software and it's placing in virtual environment, some questions have been posed with that same purpose.

Research has mostly been directed towards students and teachers at Polytechnic of Rijeka regardless to year of study or course held by a certain teacher, and towards much wider environment so that respondents can animate their colleagues and friends at peer-to-peer level. It should be mentioned that Polytechnic of Rijeka performs professional undergraduate study of Information Science that adds another dimension to the research, though it didn't include solely the Information Science students.

Descriptive statistical analysis has been used in description of summarised data, given by example of 247 respondents. There have been 238 completely finished questionnaires that represent an example used in analysis. Considering the complete number of Polytechnic of Rijeka students, interest shown in this research hasn't been huge.

Analysis results indicate that gender share has been higher with males – 57%, in comparison to 43% females. A level of completed studies respectively years of studying indicate that the first and the third year has shown the largest interest in questionnaire (70% and 83%) while higher years of study have shown less interest in questionnaire but still satisfactory in comparison with the total number of students. It is worth mentioning that the

second year, the middle of professional study, has shown the least interest. Almost all respondents own computers or have a daily approach to the Internet.

Usage of computers and Internet in study assignments and learning is important for the whole population of respondents. For example, only one respondent declared he/she does not have a daily approach to the computer. Since it concerns students' population it is possible that this student lives outside the town of studying. Great majority (70.85%) uses computer and Internet regularly in performing faculty assignments while 41.70% of students use computers daily in acquiring the syllabus and knowledge, or 48.18% on the frequent basis. Only 9.72% of students use the Internet rarely for learning purposes.

In more precise questions about social networks and Social Software in general, three quarters of population (75.71%) gave affirmative answer. Even greater number, 80.97% respondents mention Wiki web sites as known facts that indirectly confirms usage of Internet in learning and acquiring the contents. This factor is also confirmed by Wikipedia usage as tool in finding required information since 18.22% uses Wikipedia as tool on regular basis and 52.63% respondents on a regular basis. It should also be mentioned that 26.32% uses Wikipedia rarely.

When analysing usage of communication tools with characteristics of social phenomena such as Skype and Social Bookmarking, one should mention lack of their knowledge and usage in educational purposes. For example, 65.18% respondents do not use Skype, while 65.99% do not recognize term Social Bookmarking. When mentioning some other forms of software (GoogleDocs, Youtube and similar), answers are divided differently, but most of respondents (42.11%) use them regularly.

Indicative is number of respondents who believe the information found within certain Social Software (64.78%), while the similar percentage (65.18%) claims that collected information help them in learning and work. However, when questioned about social networks as information resources opinions are divided and equal number of examinees believe that i.e. Facebook or Twitter (42.51%) can, respectively cannot (40.49%) be used as usable source of information.

Passive attitude in Social Software usage is obvious from response on question number 12, since high 85.43% respondents indicate they have never actively participated in creation of contents on Wiki web site, as well as poor knowledge of software Web 2.0.

Apart from browsing the information (79.35%) significant number of respondents (65.18%) use Social Software for making and maintaining connections, while smaller number uses a possibility of publishing own information or organising social events. Blogs and Forums are used less for the same purpose.

When expressing personal attitude toward the phenomena of online communication as way of realising the social network and articulation of contents, equal number of respondents (33.20% and 31.98%) considers online communication useful but time consuming activity while peer-to-peer communications are equally accepted in their volume.

Indicative is attitude towards a need for defining the communication rules, where high 42.11% agrees that they are not always qualitatively defined. Opinions about the fact that online communication can regularly be tiring and unserious are divided, 32.79% accepts this attitude, 27.53% don't and 23.89% cannot decide.

However, more then half of respondents (57.49%) believe Social Software should be used as working tool or assistance in teaching, while 44.94% agrees that Social Software can be used as a supplement to other working methods in classes, as a replacement for some out-of-date forms of lecturing (38.46%), in specific educational contents (44.94%) or in specific organisational circumstances (44.13%) while only 10.53% respondents would agree to learn solely by usage of Social Software. Indicative is division in authenticity and reliability of Social Software as information resource since 36.03% considers information authentic and 44.94% has doubts about their authenticity. Scale of accepting the Social Software as a replacement for traditional sources of information has uniformly divided opinions and 30.36% examinees believe Social Software can replace libraries only occasionally.

Not even individual opinions do deviate from described profile. Twenty seven respondents have described more precisely their opinions through acceptance of innovations and changes but not the speed of the same. Still, indicative is an attitude about lack of objectively graded matter and neglecting the need for methodical and didactical shaping and valorisation of contents within Social Software.

TABLE I. QUESTIONNAIRE

Question	Answers	Respondents (%)
1. What is your gender?	Female	42.51
	Male	57.09
2. What year of study have you enrolled (if you are not student choose Other)	1	29.05
	2	17.43
	3	34.44
	4	10.37
	5	7.47
	6	0
	Other	1,24
3. Do you have a daily access to the computer and Internet?	Yes	98.79
	No	1,21
4. Do you use computer and Internet in completing study assignments (home works, seminars)?	Always	70.85
	Often	27.53
	Rarely	1.21
	No	0,40
5. Do you use computer and Internet in learning (adopting the syllabus)?	Regularly	41.70
	Often	48.18
	Rarely	9.72
	No	0.40
6. Are you familiar with term Social Software?	Yes	75.71
	No	23.89
7. Have you heard of Wiki web sites?	Yes	80.97
	No	18.62
8. Do you use Skype as	Yes	34.01

help in class related assignments?	No		65.18
9. Have you heard of Social Bookmarking?	Yes		33.60
	No		65.99
10. Do you use Wikipedia as help in browsing information during your study period?	Always		18.22
	Often		52.63
	Rarely		26.32
	No		2.83
11. Do you use some other social Software as help in learning and fulfilling study assignments (i.e. Youtube, GoogleDocs and alike)?	Always		17.41
	Often		42.11
	Rarely		34.01
	No		6.47
12. Do you believe information found on some Social Software such as Wikipedia is eligible?	Yes		42.51
	No		40.49
	I can't decide		17,00
13. Is information found by Social Software helpful in academic researches?	Always		35.63
	Regularly		35.22
	Rarely		29.14
	Not at all		79.35
14. Have you ever participated in making contents of some Wiki web site?	Yes		30.77
	No		65.18
15. Do you consider Social Networks such as Facebook and Twitter are places where you can gain information helpful to your academic research?	Yes		21.46
	No		3.64
	I can't decide		3.64
16. Have you heard of Web 2.0 term?	Yes		10.93
	No		46.96
	I'm not sure		38.46
17. For what purpose do you usually use Social Software (multiple answers are possible)	For browsing information		7.69
	For publishing information		36.03
	For making and maintaining contacts		44.53
	For organising social events		11.74
	Other		42.51
			40.49
18. Do you use Blogs when browsing information required for your academic work?	Always		17,00
	Regularly		35.63
	Rarely		35.22
	No		29.14
19. Do you use Forums when browsing information required for your academic work?	Always		79.35
	Regularly		30.77
	Rarely		65.18
	No		21.46
20. What is your opinion about online communication and cooperation for purpose of sharing and browsing the information?	Good, but time consuming	I completely disagree	9.31
		I disagree	33.20
		I can't decide	22.67
		I agree	31.98
		I agree completely	2.83
	It is useful solely on the same level of competence	I completely disagree	6.88
		I disagree	27.13
		I can't decide	32.39
		I agree	29.55
		I agree completely	3.24
	Communicati on rules aren't always defined	I completely disagree	0.81
		I disagree	15.79
		I can't decide	31.17
		I agree	42.11
		I agree completely	9.31
	Usually tiring and unserious	I completely disagree	7.69
		I disagree	32.79
		I can't decide	23.89
		I agree	27.53
		I agree completely	7.29
21. Do you believe Social Software should be used as educational tool?	Yes		57.49
	No		13.36
	I'm not sure		26.32
	Other		2.83
22. Do you consider general usage of Social Software acceptable mode of work in education?	As a supplement to other modes of work	I completely disagree	3.24
		I disagree	2.83
		I agree to some extent	4.45
		I don't agree nor disagree	5.67
		I agree mostly	22.27
		I agree	44.94
		I agree completely	15.38
	As replacement for some out-of-date working modes	I completely disagree	3.64
		I disagree	3.64
		I agree to some extent	3.24
		I don't agree nor disagree	7.69
		I agree mostly	25.51
		I agree	38.46
		I agree completely	16.60
	In specific curriculum	I completely disagree	2.02
		I disagree	2.02
		I agree to some extent	2.02
		I don't agree nor disagree	8.10
		I agree mostly	22.67
		I agree	44.94
		I agree completely	17.41
	In specific organisational circumstances	I completely disagree	2.02
		I disagree	1.21
		I agree to some extent	3.24
		I don't agree nor disagree	8.91
		I agree mostly	23.89
		I agree	44.13
		I agree completely	15.38
	Application as exclusive organisational mode of	I completely disagree	17.81
		I disagree	26.32
		I agree to some extent	8.91
		I don't agree nor disagree	12.55
		I agree mostly	17.00

	teaching	I agree	10.53
		I agree completely	5.67
23. Do you consider Social Software eligible and reliable information source required in education?	Yes		11.34
	Often		36.03
	Always		1.21
	Sometimes		44.94
	No		5.26
24. Can Social Software replace most information sources qualitatively (Libraries and similar)?	Certainly		9.72
	Mostly		23.48
	To some extent		21.05
	Just sometimes		30.36
	Absolutely not		12.96
	Other		2.42
25. You can, if you wish, add some personal remark if believed to be important in this matter.	Personal Opinion (strictly)		38.87 (19.24)

V. CONCLUSION

Traditional method of performing lectures is no longer interested to new generations which cause, among other things, decreased interest in educational content. Social Software make lectures fresher and closer to students. Social Networks' characteristics enable users to communicate, exchange ideas and cooperate. It is a perfect way for students to learn and adopt knowledge. It is important to recognize Social Software potential in simplifying the learning process. They encourage students to control their learning, to participate in discussions, to learn how to search qualitative information, to develop a critical way of thinking, writing and accepting other peoples' opinions.

These are some crucial factors useful to students not only during their studies but also later in their lives. They help students to connect with rich and dynamic social environment instead of learning alone by enforced rules. Purpose of conducted research is to define how much students are acquainted with concepts of Web 2.0 technology and which Social Software tools do they use for educational purposes. Furthermore, intention was to determine a measure in which they believe contents found on the Internet and whether they in general support Social Software usage in education. Research represents a qualitative basis for further analysis and shaping lectures as process in actual frames with maximal usage of existing technique and technology.

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