Web 2.0 Technologies: The Risks and Benefits to Consider when Expanding the Classroom Walls

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Abstract: *During the last decade the way of living and working of society has changed significantly under the influence of the new generation technologies - the social media. Their widespread use in non-formal contexts generated ideas and hopes that they can play a significant role in increasing the efficiency of formal learning or creating opportunities for the development of a new learning experiences and practices. The interest among practitioners and academics in the integration of Web 2.0 technologies in formal education has increased over the last years. It is obvious that the social media cannot fit within the existing walls of the traditional classroom - both literally and metaphorically. What are the benefits and the risks Web 2.0 carries for teachers, learners and education as a whole? Along with the answer to these questions, this paper presents the experience of an experimented university course design based on Web 2.0 technologies which tries to utilize the advantages of social media and avoid the risks associated with their educational application.*

Key words: *formal education, Web 2.0 technologies, learning design*

INTRODUCTION - The Concept of Web 2.0 and the benefits of social media application in higher education

Today seven years after the term "Web 2.0" was defined by O'Reily, [31] the Internet continues to expand its capability to inform and connect people, to provide them with opportunities to exchange information and knowledge, to reuse or co-develop artefacts, to shape communities and discourses.

There are various definitions of Web 2.0, however, all of them highlight the improved communication flexibility and the increased interaction of users as the key attributes of these tools [1,2]. Furthermore, Web 2.0 technologies are characterized by "creating network effects through an "architecture of participation" [32, p.17]. Also called 'social media', Web 2.0 tools support different kinds of both individual and collective activities among which: social networking, file sharing and review, collaborative production, networked gaming. By using Web 2.0 technologies the learners from consumers of information become active creators and co-authors of content [8, 28] both as individuals and as members of groups and communities.

Enrichment of the practice and its theoretical reflection engendered the development of specific areas of the Web 2.0 world related to its educational use, namely Pedagogy 2.0 [43]. In the basis of the idea of Pedagogy 2.0 lies the transformation of the transmission model of education, well supported by Web 1.0 technologies, into the user-cantered model [43] underpinned by the ideas of social and collaborative constructivism.

Educators and researchers are becoming gradually aware of the role that social media play in young people's life and informal learning which results in the development of models and approaches of their integration in the context of formal education. The instructional potential of different Web 2.0 such as: social networking applications [4,25], web videoconferencing [20], wikis [21,7], Twitter and blogging [11,12,19,22,33], annotating and sharing learning resources [9,10], sharing photographs or audio files [3] etc. has been explored in many different contexts in higher education. The research results suggest that social media applications can enrich student learning experience and improve educational outcomes [42].

What has also contributed for the growing popularity of Web 2.0 technologies in education is the creation of specialised educational software applications based on the idea for pedagogically sound communication, collaboration and co-production. The virtual elearning environments (VLE) were further developed to include functions and

tools typical for social media, such as forums, blogs and wikis. The accumulated practical experience led to the need of theoretical conceptualization and advancement of these practices. In parallel to finding evidence for the benefits of social media as supporting learning through dialogue, exchange and collaboration, there appear doubts as to their educational efficiency and the spectrum of their educational functionality. The explored practice of their usage shows the existence of certain risks regarding the participants in the learning process and its effectiveness.

1 – Theoretical and methodological basis of the social media based learning

One of the most significant advantages of Web 2.0 (in comparison to Web 1.0) is that they facilitate the operationalisation of pedagogical ideas and models created on the basis of contemporary learning paradigms – not only in the classroom but also beyond its confines. First, this happens by accentuating the social aspects of learning – learning in groups through dialogue and collaboration; learning in an authentic social context; learning from the more knowledgeable and competent who will take the learners from 'the zone of the actual' to the 'zone of the proximal development' [44]; learning through reflecting upon one's own experience and that of others; learning through artefacts creation based on project development and problem solving, etc. Thus, the symbiosis is built between Web 2.0 technologies and pedagogical models based on the learning paradigms of the social and collaborative constructivism. Second, this symbiosis allows for the development of models of learning and teaching which are not limited by the restrictive physical, social and psychological classroom environment and in addition it broadens the spectrum of their application in terms of resources, people, time, communication channels, and creativity and co-creativity tools.

The social network development, on the one hand, and its utilisation for educational purposes, on the other, stimulates the emergence of new paradigms trying to explain, emphasize and reinforce the social nature of learning with the help of new technologies. Such are the paradigms of communal constructivism [24] and connectivism [39,40,41]. They also serve as a methodological basis for the design of new pedagogical models and study of their effectiveness in relation to teaching and learning.

Let's briefly run over the different learning paradigms and the way they give reason for the application based on Web 2.0 technologies learning and teaching models.

One of the main areas of differentiation among constructivists refers to interpreting the role of the social environment and interactions in the learning process [17,30,46]. According to social constructivists, social interactions are not merely a background but an essential component in cognitive development. As Duffy and Cunningham point out (17, p. 177), learning is always dialogic. The dialogue fulfils a lot of functions by facilitating the learner to try out and reformulate their ideas as they look into a multitude of perspectives renegotiating the meanings of their concepts.

The necessity for assisting the learning process by a more knowledgeable and capable subject [44] is a key idea which performs the transition from cognitive constructivism to social constructivism. The social-constructivist model requires a third dimension to the interaction between the learner and their environment – the others. These others can be their peers or lecturers/experts. This model involves an authentic learning context (contextual or situated learning) which reinforces motivation by making the learning goal-oriented and meaningful.

Theoretical research and focusing on the social dimensions of the learning process lead to the emergence of new conceptual frameworks for description and design of new educational realities, such as 'learning organisations' and 'learning communities'. This type of learning is characterized by self-reflection, self- and peer assessment, self-regulation and mutual regulation which result in improved activity and

level of performance of the learning community. Individuals learn from each other by sharing experience and knowledge by means of collaborative activities. This is the reason why Garrison and Archer announced the emergence of a new paradigm in response to the new realities – the one of collaborative constructivism [18].

A further step in the development of these ideas about the essence and the mechanisms of learning is made by the so-called "communal constructivism", defined as: "… an approach to learning in which students construct their own knowledge as a result of their experiences and interactions with others, and are afforded the opportunity to contribute this knowledge to a communal knowledge base for the benefit of existing and new learners [23, p. 85]. Salomon and Perkins lay emphasis on the fact that this approach is characterized by "learning to learn from others, learning to learn with others, learning to draw the most from cultural artifacts other than books, learning to mediate others, learning not only for their sake but for what that will teach oneself, and learning to contribute to the learning of a collective." [36, p. 21].

Communal constructivism is characterized by intertwining and symbiosis between tendencies in the development of theories on learning with those of technologies. In other words, the emergence of new technologies and the opportunities for their integration in the learning and teaching process create new varieties of learning experience, hence new approaches for their theoretical grounding. In this way theoretical and practical premises are created for enlarging the scope of social constructivism and the appearance of the communal constructivist paradigm, to be later superseded by that of connectivism. The latter becomes possible due to the emergence of Web 2.0 technologies ensuring communication and co-creativity between many to many users without whom its practical application becomes impossible or hard to apply.

Holmes and co-authors [23] also share the opinion that enriching and widening the scope of social constructivism becomes possible due to the synergy between modern technologies "which boost our opportunities to communicate and save larger amounts and more varied data and thus improve the development of virtual learning environments as well." [23, p.1].

The closest in view of theoretical reflection of the 'network learning' phenomenon and social media based learning is the connectivist learning paradigm and the based upon it 'connectivist pedagogy' created by the Canadian scientists George Siemens [39,40,41] and Stephen Downes [16]. They advance the thesis about learning as a process of creation of networks of information, contacts and resources applied in the solution of actual problems. The connectivist paradigm presupposes the availability of an enormous amount of accessible information which the learner does not need to memorise or even fully understand. However, they have to be capable of finding and applying the knowledge whenever this is necessary. According to the proponents of this paradigm an enormous part of cognitive processes and problem solving should be assigned to machines, which logically brings us to one of Siemens [39] most contested ideas, i.e. that: „Learning may reside in non-human appliances".

On the Web learners define their own goals/needs, filter information and resources in terms of their relevance to their goals achievement and in this way gain knowledge and experience. Connectivist learning is based much more on creation rather than on consumption of learning content. Learning activities on the Web are facilitated by a variety of Web 2.0 technologies by which learners contribute to the development of different artefacts which as a rule are public and accessible. As to the usage of constantly updating technologies, connectivist learning involves a role switch between the tutor and the learner within the learning process, i.e. the idea of reciprocal learning is formulated [39].

Although a substantial part of the published papers on the educational potential of connectivism are predominantly theoretical and are based upon limited empirical evidence, this paradigm clearly points to a need for unity between person-oriented

learning environments and Web-based learning.

Regardless of the differences in the popularity and the scope of the discussed paradigms in educational practice, they all share the idea of the social nature of learning and the attempt of advancing the idea about the role of the social media for the realization of successful, innovative models for blending pedagogical and informational technologies in order to promote learning efficiency and get closer to its essence and nature. It is namely the application of these models that brings to the fore the advantages and the potential of the social software to facilitate learning in the age of technologies.

2 - The Risks to Consider when Expanding the Classroom Walls – Lessons from Theory and Practice

2.1. Myths associated with the use of Web 2.0.technology by young people

New technologies will always introduce both opportunities and challenges. The utilisation of social media in formal education undoubtedly poses particular challenges and carries certain risks for students, teachers, learning outcomes and the educational system as a whole. It is therefore necessary to critically study the social media-based learning in order not only to help taking the advantage of the benefits but also to avoid the risks of using these media to support learning.

Some of the risks in the integration of Web 2.0 technologies derive from the widespread myths related with young people and the usage of social media and technologies. Uncritical acceptance of these myths leads to making the wrong pedagogical and designer decisions when the using of social media in education is planned. Examples of such myths are: first, a big part of the young people use a big part of Web 2.0 technologies and possess skills for that; second, young people take advantage of the multi-functionality of these technologies; third, Web 2.0 technologies play a significant role in young people's non-formal learning; fourth, young people expect from their university lecturers to be acquainted with Web 2.0 and to use them for educational purposes; fifth, because Web 2.0 technologies effectively facilitate non-formal learning, they can be used to facilitate formal learning likewise.

What does statistics show about the Web 2.0 technologies usage by young people?

According to the statistics of 2013 published on the site http://www.jeffbullas.com/2013/09/20/12-awesome-social-media-facts-and-statistics-for-2013p 'uploading photos is the most popular activity on Facebook', …Twitter is a lot about sharing daily activities: like hearing about what someone had for breakfast, where they have been or who they are talking to; …photo uploads…that is one of the things that Google+ and Facebook have in common as the most popular activity. You could call it the personal news channel [48]. "

Data from research also supports the existence of the discussed above myths. S. Bennett et al [5] points out that the students' limited prior experience with the technologies was confirmed in the case studies they carried out. This challenges the claim that students' prior use makes Web 2.0 technologies intrinsically motivating and immediately usable.

For the surface level knowledge of the social software multi-functionality, also mentions W. Clark et al [13] paying attention to the fact that "learners do not appear to 'see beyond' the immediately obvious functionality of the technologies and there is little evidence of transfer". Both the questionnaire and the mapping study the authors carried out in their research support evidence from the literature that "while Web 2.0-type participatory technologies are a large part of young learners' everyday lives, very few learners use these with a high level of sophistication" [13, p.68].

The authors found 'more evidence of activity than creativity with Web 2.0 technologies and of passive interaction, such as viewing, watching and downloading,

than active interaction such as editing, uploading and creating [13, p.68].

To similar conclusions came I. Sarieva and R. Peytcheva-Forsyth [34,37] in their study of students' experiences in using Web 2.0 technology as a prerequisite for implementing this knowledge and skills in learning and in professional contexts. The analysis of the focus group data suggested that while students showed high proficiency in using specific technologies for communication (Skype, Facebook, MSN) in personal and informal settings, significant deficits in the application of these technologies in structured, professional, goal-oriented communicative environments were identified. In addition, it appeared that the participants were predominantly oriented towards consuming information generated in different communities, including professional ones. Their participation in these communities was limited to receiving information; they rarely engage in discussions and have never shared the materials developed by them [34,37].

The outcomes of the research challenge the popular myths about the ability of the young generation to use effectively various types of technologies for various goals. It seems that the informal exposure to technologies for achieving rather simple personal communicative goals does not naturally transfer into a more complex goal-oriented constructive online behaviour. This leads us to the conclusion that the educators should not expect automatic transfer of skills from informal use of technologies in every-day life to use of technology in educational structured settings.

2.2. Risks posed by the utilization of Web 2.0.technology in formal education

Uncritical acceptance of the "truths" about the "digital natives", who effortlessly use the different functions of various social media including for the purposes of learning, can lead to the generation of certain risks in the integration of these technologies in an educational context. This is the reason why surveying the students' knowledge and skills to use these technologies should precede any attempt for them being used in the achievement of educational purposes.

However, there are other risks engendered from the specifics of the traditional educational system and environment, as well as such related with the learners, the university lecturers or the technologies as such. Some authors refer to these risks as "tension" or "conflicts" between different factors related to education and the Web 2.0 technologies. One of the most significant that research has revealed is the fundamental tension between the nature of the Web 2.0 technologies and traditional educational practices. In general the formal education institution 'appears to be slow to realize the potential of collaborative, communicative interactions, and the open and flexible potentials of learning 'beyond the classroom walls' [13, p.68]. Dohn [15] provided a detailed analysis of the tension between social Web practices on the one hand, and the policies and established practices within higher education institutions on the other. Different authors highlight different aspects of this tension/conflict such as: the openness of the social Web environment and the conventionally private relationship between a student's work and the person assessing it; the use of social technologies and the rules and established practices associated with university assessment and academic integrity [38]; between the apparent benefits of making students (and their work) visible to others, and lecturers' concerns about protecting students from risks associated with online exposure [5]; between the participatory views of learning underpinning social Web technologies, and the individualist views of learning that are historically embedded in higher education practices.

Some authors have identified that using Web 2.0 in education creates some paradoxes such as "the paradox of teaching collaborative learning while assessing individual contributions" [38,p.166] and 'the paradox of the social learning ideals underpinning social Web activities and the individualist and acquisition-based models of learning and assessment that have dominated higher education practices." ([47, p.93].

Web 2.0 social practice usage and educational practices contradict each other.

Whereas with Web 2.0 technologies the focus is on active participation, consumer content generation and collaboration, traditional university practices encourage learning through listening and watching, individual acquisition of massive knowledge and very often uncritical acceptance of the knowledge offered. These practices develop learning skills incompatible with those necessary for successful learning with Web 2.0 technologies. Related to the main conflict between the nature of social media and the traditional educational environment are also risks involving the key actors of the educational process: the lecturer and the students. Different studies reveal different aspects of these risks. We will try to generalize them herein below.

2.2.1. Risks related with students' knowledge, skills and attitudes

Introduction of new technologies requires a change in the well-established routine of traditional models of teaching and learning, thus introducing new practices and expectations for learners and teachers. This fosters certain fears and negative attitudes in students: fear of giving publicity to their written assignment or co-created artefacts; fear of plagiarism; fear that they might have to spend much more time in creative activities once they have learnt specific content; fear that their individual contribution will be obliterated in the group activity and it will not be assessed properly; reservations about commenting on each other's posts and disappointment with the limited participation of other students and the teacher. Different Web 2.0 studies have also identified a range of negative together with positive experiences of work editing and sharing [12,14,20,26,27,47].

Dohn [15] discusses a tension relating to the visibility of students themselves. Sharing work publicly requires students to develop and promote an online identity. However, increased exposure online can also leave students vulnerable to unfair treatment from others, requiring some caution.

Awareness of students' fears and negative attitudes to using technologies is necessary so that learning and teaching activities are designed with integrated technologies in a way that would avoid the risks.

Risks related with lecturers' knowledge, skills and attitudes

Web 2.0 technologies usage is a serious provocation to university lecturers as well. Whereas students are active users of social media, this is not necessarily the case with a significant part of the university lecturers. If the lecturers are acquainted to a certain degree with the social aspect of Web 2.0 technologies, this is not necessarily relevant to their pedagogical applicability which fosters mistrust and a preference to avoid their usage in the learning and teaching process. W. Clark et al ([13,p. 68] draw attention to the fact that collaborative and communicative tools are not well accepted or used in the school setting nor, as yet, are their potential benefits fully understood by institutions, teachers or learners.

Along with the pedagogical integration of social media in the educational process one of the greatest challenges facing university lecturers is students' assessment in Web 2.0 – based learning. Assessment in the contemporary educational system is directed to assessment of individual achievements regarding specific standards, whereas in Web 2.0 learning the active participation is much more valuable than each student's individual contribution. Dohn [15] argues that Web 2.0 values participation above recognition of an individual's contribution. Thus it creates tension between distributed authorship practices and collaborative nature of social web activities, on the one hand, and the views of learning and knowledge in formal education, on the other hand. By making the developed by the students' artefacts published in the net it becomes visible and assessable and therefore could be read, reviewed and critiqued by many other people.

From a pedagogical point of view Web 2.0 technologies pose serious challenges to the professional role and functions of today's university lecturers. As this is pointed out in the context of the new learning paradigms, the role of the lecturer transforms into

roles such as facilitator, partner, designer of learning activities and resources.They are expected to know the Web and social media well and use them for the purposes of learning design and teaching; to be able to assess social interactions and student's individual contribution to group activities. In addition, the idea of reciprocal learning is formulated within the connectivist paradigm which renders the role of a learner to the university lecturer as taught to by their students. These changes require a new attitude on the part of the lecturer to themselves and their professional status along with the requirements, new knowledge, skills and competences they need to possess.

Systematisation of challenges to social media integration in the context of formal learning does not aim to deny the serious benefits which social media learning can bring up to the formation of information society generation. Knowledge of social media and its pedagogical effectiveness is a key element in a lecturer's expertise when they have set to design learning based on Web 2.0 technologies. Thus, they will be able to reduce the risks and derive maximum benefit from the advantages of these technologies.

3 – A model of a learning scenario based on Web 2.0. technologies. Research on the impact of Web 2.0 technologies on learning from the perspective of learners.

In part 2 we discussed the risks related to the planning and performing Web 2.0-based learning and teaching. An attempt to reduce the risks and utilize the benefits of social media was made in the design of a blended course for future social workers at the Faculty of Education at Sofia University.

The research is conducted in a specific learning context: an undergraduate course entitled Information and Communication Technologies in Social Work. The course is offered to third-year undergraduate students at Sofia University "St. Kliment Ohridski", Bulgaria. The participants in the study are the 37 students who enrolled in the course; their age is between 21 and 25, there are eight men and 29 women in the course, all of them major in Social Work.

Through the design of this course we intended to expend "walls" of the traditional classroom and the VLE by using externally hosted Web 2.0 tools for key learning activities. The aim of the study was to establish the impact of Web 2.0 technologies on students' learning and the overall learning and teaching process through the eyes of the students. The research focuses on the educational aims which can be effected by means of these technologies; the degree to which their integration in the learning and teaching process can foster a more flexible and accessible learning process, relevant to the learners' needs.

The learning scenario design

The design of the course follows the principles of the constructivist approach to learning which aims at providing opportunities for active learning through practical application of knowledge, communication, and peer collaboration [49]. The pedagogical model of the learning scenario is project-based learning [50]; central for the development of the course is small group collaborative work on a project which requires active implementation of the knowledge and skills acquired during the course. The student projects aim to investigate strategies for engaging target communities in a discussion of a particular social problem.

The learning scenario consists of five stages; each stage includes the implementation of a different type of Web 2.0 technology in the progression of the course and development of the project. The analysis of the learning scenario flow and outcomes aim to evaluate the degree to which Web 2.0 technologies help to assure flexibility, accountability, and transparency of the learning flow and empower participants to engage in active and meaningful learning.

Findings Based on Pre-Focus Group Discussions

The focus group data were collected in order to identify participants' knowledge,

experiences, and perceptions about Web 2.0 technologies in the following areas: (1) personal informal settings, (2) structured general education, (3) professional education, and (3) professional settings.

The outcomes of the data analysis suggested that while students showed high proficiency in using specific technologies for communication in personal and informal settings, significant deficits were identified in the application of these technologies in structured, professional, goal-oriented communicative environments [34,37]. Their participation in these communities is limited to receiving information; they rarely engage in discussions and have never shared the materials developed by them.

Course design description

At the ***first stage*** of the implementation of the learning scenario, the students, working in groups of three or four formulated the problems they would address in their collaborative projects. The guidelines for the projects included the requirement to choose a social-work related problem and define a specific target group. The overall goal of the project is to investigate and reflect on the ways in which Web 2.0 technologies can support their work with the target group in the process of resolving the proposed problem. In this stage, the groups collaborated during face-to-face practicum meetings and summarized their work in group Wiki (Moodle tool), this assured not only effective student collaboration but also provided opportunities for receiving instructor feedback in a timely manner.

The ***second stage*** of the learning scenario focuses on research and evaluation of information related to the topic. The technologies used for the search were the academic digital databases accessible through the university library as well as information available on the Internet and accessed through various search engines including specialized and meta search engines. Again, each group shared on the Wiki (Moodle tool) the experiences gained in this stage. The final outcome of this stage was a collaboratively written review of information related to each project topic completed on the group Wikis.

The ***third stage*** of the learning scenario aims to engage students in collaborative creation of a Flickr presentation on the topic. The goal of this stage is to create visual support for the discussion of the topic with the possible target group. An integral part of this stage was students' discussion of the role of the visual media for the identification of problems related to social issues and their professional work for problem resolution.

During the ***fourth stage*** of the learning scenario, each group creates a blog related to the problem addressed in their projects using the Blogger platform (www.blogger.com). In the blog, the students bring together the outcomes of the previous stages: they are expected to present the results of their problem-based research in an engaging format suitable for their target group and support it with the visual materials they developed.

The overall goal of the blog is to engage a broader, real-life audience in the discussion of the topic and to develop strategies for reaching this audience through popularizing their blog using various Web 2.0.-based strategies. The learning activity is introducing students to blogging as a possible contemporary practice of the social workers thus making the learning task 'authentic' in relation to their future professional contexts. In addition, students work on developing strategies and instruments that would allow them to analyse systematically the outcomes of their blog interaction with the audience. The analysis of the process of the blog development and of the outcomes of the blog interactions are in the core of the next stage of the learning scenario, which is a research essay with elements of reflection.

The ***final stage*** of the study is the presentation of project outcomes, their discussion with the whole class. The peer feedback received during these discussions along with the ongoing instructor feedback are supported the composition of the final research essay. The collaborative writing of these essays is supported with Web 2.0

applications, namely Wiki technologies and Google docs.

Findings Based on Post-Focus Group Discussions

In the post-focus group discussions the students outlined that the course supported their understanding of technologies as well as of the place of technologies in their learning process. They also outlined that the course gave them a better understanding of the development of technologies and the conceptual differences between Web 1.0 and 2.0 technologies. The students came to the consensus about the effectiveness of learning in Web 2.0 environments and in general with technology. However, it was evident that in the further discussion flow, the students did not differentiate explicitly between Web1.0 generation technologies and Web 2.0.They were merging them when reflecting on the ways technologies supported their learning. We found this not to be surprising: one of the reasons is that the participants were more focused on their learning goals, strategies, and outcomes than on technologies. For them the technologies seemed to be a tool or a vehicle that would take them to the final goal rather than the goal itself [34,37].

They emphasized that the technologies including Web 2.0 tools give them an opportunity to draw meaningful connections between theory and practice. One of the aspects the students appreciated highly is the multiple opportunities for dynamic communication during their collaborative work. The forums hosted on the courseware used in this learning scenario seemed to be the communication environment that they highly appreciated.

The participants highly appreciated the fact that they acquired new skills – technological, communication, and professional; however, they shared that because there is no active support of the inclusion of such technologies in educational and professional activities in the field of social work, they are not convinced that these skills will be appreciated by everybody in the field among their current instructors and future employers.

In other words, if the usage of Web 2.0 technologies is only episodic and is not applied in practical learning activities in most disciplines, students do not see the point in acquiring skills non-transferrable to other educational contexts. The same applies to professional contexts to which these skills are relevant. For example, in learning and teaching practice. Therefore, it is necessary to motivate the utilisation of these technologies in learning in view of their applicability in other learning and professional contexts.

Together with the pre- and post- focus group interviews two final course questionnaires were filled out by all students which aimed to reveal students' views on key aspects of the course related to the quality of its content, learning activities, and instruction.

The first course questionnaire addressed specifically their work with Web 2.0 technologies in the context of the course. The following are the main highlights of students' responses to this questionnaire. When asked if they know more about Web 2.0 technologies after the completion of the course, 96.6% of the students answered positively. Most of the students (86%) responded that after the course they understand better the potentials that Web 2.0 technologies have for professional development and communication. All students consider that after this course they understand better the potentials that Web 2.0 technologies offer for supporting their learning. The majority of the students (89.7%) consider that their work in the course provides enough information to the instructors for objective and fair assessment. The students perceived that the stage of the project development that is most suitable for online communication with Web 2.0 technologies is the collaborative design of the online survey and data collection (78.6%). Among the difficulties that the students experienced during the course - work skills related to the use of Web 2.0 technologies were mentioned by the highest number of students (40%), followed by the variety and

number of different learning tasks (28%), and group work (24%). An equal number of students consider that the key expertise for an instructor of a Web 2.0 technologies blended course is related to course content knowledge and teaching with Web 2.0 technologies including virtual learning environments (89.7%).

When asked which communicative activities were effectively supported by Web 2.0 technologies in the process of their work on the course project: all students reported that they actively used the opportunities that Web 2.0 technologies provide for file and digital materials exchange; 82.8% found that the ability to store information effectively supported their work; 69.0% engaged actively in synchronous communication via Web 2.0 applications; 31.0% engaged actively in asynchronous communication via Web 2.0 applications

The second questionnaire refers to the quality of separate elements in the blended course design. We will look at only those answers which concern students' opinions and attitudes to the opportunities of creating artefacts accessible to others.

In their responses to open-ended questions regarding the pros and cons of publishing co-created artefacts in the learning environment and on the Web, the following groups of advantages can be delineated in the students' opinions: the possibility which publishing provides for achieving accessibility and transparency of the created materials; the opportunity for individual contribution; an opportunity for comparing personal achievements with those of others and receiving acknowledgment for this; opportunities for giving and receiving feedback; transforming the created materials into "an information resource for everyone"; sharing of experience and "alternative viewpoints"; boosting competition among learners; raising interest and learning motivation; saving costs for copying materials. In conclusion – most of the arguments are of psychologically educational nature and refer to the motivation of learning and its effectiveness. Researchers have noted that social Web publishing enhances the authenticity of student written assignments: by publishing on the Web students have the opportunity to produce work for a real external audience [see 35].

The analysis of responses in view of the negative aspects of publishing students' assignments in the VLE or in the net leads to the conclusion that their nature is of rather technical, technological and ethical character (among them: lack of internet connection – 5.36%, technical problems – 5.36%, differences of the software used – 3.57%). The largest number of drawbacks ascertained are related to the possibility of plagiarism of their work (32.14%) and the usage of unreliable information sources by students (10.71%). Some of the students express concerns that publishing on the net or in the VLE can expose incompetence and lack of information about the topic among some of the students. In addition, the results from the publishing reveal lack of productive group work in some of the cases.

Analysis and Discussion

The discussed herein advantages/benefits, on the one hand and risks/obstacles/provocations on the other of social media usage in support of formal learning are drawn from empirical studies, and the observations and personal experience of the author. It can be concluded that Web 2.0 technologies pose a serious challenge to learning and teaching in view of all actors involved in it. Knowing both sides of using these technologies is a reliable basis for designing effective learning scenarios whose undoubted benefits are based on the social nature of learning, on the one hand and the accelerated development of digital technologies, on the other. As indisputable conclusions drawn from the study of practice in using Web 2.0 in order to support learning are:

- Their pedagogical effectiveness cannot be proven outside a specific educational context in terms of their capacity to foster the realization of specific educational aims. It is essential that a pedagogical answer is given to the question about the spectrum of

educational aims to whose achievement Web 2.0 technologies can contribute (respectively about the achievement of which aims they cannot play a significant role), so that claims (myths) about a universal applicability of these technologies can be avoided.

- Drawing benefits from using these technologies for the purposes of learning calls for a relevant pedagogical design of learning tasks and activities when designing online education. This conclusion is confirmed by a great number of empirical studies: ('task-technology' fit [29]. In other words the design should aim to achieve what Biggs [6] calls 'constructive alignment' between assessment and intended learning outcomes.

- The design of the learning process supported with Web 2.0 technologies should be based on the needs of the specific learners taking the course – taking into account their preliminary knowledge and skills, their personal and professional needs.

The integration of social media technologies in the learning and teaching brings forward some serious questions/issues:

On an institutional level there is the issue about the capacity of the currently educational system to undergo a substantial change in the direction of its dialogicality, openness, adaptability and flexibility with all due ensuing consequences.

In view of the design of Web-based learning environments and scenarios, there is the methodological question about whether these technologies have to adapt to the dominant models of teaching and learning, pedagogical communication and assessment without changing them substantially or theoreticians and practitioners have to work to create models corresponding to the specific characteristics of Web 2.0 technologies?

At the level of the educational theory and practice there are the questions about knowledge, skills and competences of the main actors in the educational process so that effective usage of these technologies is achieved.

The answers to these and other questions should be sought by way of empirical study and critical analysis of specific educational practices done from the standpoints of all actors involved.

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