Adoption of Social Media in Education: A Cross-cultural Study

Abstract: Social media in education has the potential to enable new pedagogic student-centered ways by their bottom-up approach for supporting knowledge activities that harness collective intelligence unlike the hierarchical teacher-centered approaches. This paper discusses the opportunities and challenges posed by the fast growth of social media and the readiness for their adoption in education. It identifies the challenges which are included in educational use of social media. The paper presents the rationale of the SIMS (Social Media Networker) EU project. Primary data collected from both staff and students, across two countries (Greece and the UK), as well as secondary data from Finland are reported and analyzed. The paper concludes with lessons learned and provides guidelines for effective use of social media based on the core values of adoption, honesty, transparency and trust. Distribution of knowledge and responsibility is emphasized instead of centralization. The paper also suggests future research to understand the adoption issues of social-media-based e-learning.

Introduction

Despite the many contemporary technologies that support collaboration among distributed work groups, there are still enormous difficulties building online work environments. By far the most important and the most difficult aspects of effective knowledge sharing and learning seem to be concerned with people, pedagogy, processes and culture (Siakas et al. 2013).

Social networking practices have the potential to be effectively applied in teaching and learning, and bring about advantages in learning. However, integrating these innovative and contemporary practices seems to be a slow process that is likely to encounter resistance by educators, first of all, due to their previous experience as learners and teachers, and also to the current educational structures which do not allow for new ways of teaching and learning or due to the fact that the educators may not have the needed skills for applying social networking practices. In general educators who are not '*digital natives'* and are inevitably the product of traditional learning and teaching, hence are likely to be reluctant to learn and incorporate new technologies in their teaching.

The main point of this paper is to compare students' social media skills to educators' skills. Our intention is to reveal the gap between students and educators in these skills and suggest the further steps of research for improving the role of social media in education.

Drivers of social media adoption

Diffusion theories of technology can partly explain the drivers of social media adoption. The first diffusion theory for technology innovations includes innovation diffusion theory (Rogers 2003). It is from the 60s and this theory sees the adoption of an innovation as a social process. The next explanation for technology adoption is the TRA (Theory of Reasoned Action). TRA has its background in developing technology diffusion and adoption theories (Ajzen and Fishbein 1980). According to this model, a person's activity is the result of their attitude and personal norms. A person's attitude is based on values and beliefs. The personal norms are based on motivation to act according to accepted norms. The TAM (Technology Acceptance Model) model by Davis et al. (1989) discusses practical technology use issues. TAM emphasizes usefulness in addition to user friendliness. Afterwards theories have been expanded and modified. Mathieson et al. (2002) emphasise that the TAM model should be expanded by adding available resources. Venkatesh has also modified the TAM model by giving details on user friendliness. Venkatesh and Davis (2000) expanded TAM further to include the concept of perceived usefulness. This model is called TAM2. Afterwards the Unified Theory of Acceptance and Use of Technology (UTAUT) have been presented by Davis, Venkatesh and colleagues (2003). This theory is based on eight previous models on technology adoption. From these eight models four features were produced to clarify technology adoption. These are performance

expectancy, effort expectancy, social influence, and facilitating conditions. According to the UTAUT model, gender, age, experience, and willingness to use are four social variables in implementing the use of new technology.

Furthermore, social media adoption has been studied and a main finding is that the tools and the intensity of use of the tools are changing in different user and age groups. A report by Lenhart et al. (2010) claims that blogging has dropped in the age group of young people, but on the other hand older people increasingly use more blogging services. This report further discusses the differences between youth and young adults concerning many tools. Statistics Finland (2013) has studied the use of social media in different types of companies. Generally, in Finland, social media is used in 38% of the companies. Shared multimedia is used in 14% of the companies and blog and microblogs in 8% of the companies. Social media is mostly used in companies focusing on information and communication. In the companies operating in construction, transportation and storing social media is less used. In the academic area the percentage of social media is 48%. Companies like to improve their public image by using social media and use social media for marketing their products. Curtis et al. (2010) have studied the adoption of social media in US non-profit organizations based on the UTAUT model. They found that women consider social media to be beneficial and men experience confidence while actively utilizing social media. Organizations which have public relations departments were more likely to accept social media. Positive correlations between UTAUT factors and credibility indicated a greater likelihood to adopt social media.

A cross-cultural study

The level of social media current use, benefits and challenges related to learning experiences and viewpoints regarding how social media could provide added value to learning was mapped and analyzed in a study (under the auspices of the SIMS project) at ATEI of Thessaloniki, Greece. The results from 172 student responses collected face-to-face from 23 departments and 5 faculties were analyzed and presented in Siakas et al. (2013). The same study was carried out among 31 teachers from the department of Informatics.

The results showed that the social media that students are using most are Facebook, YouTube, Skype, wikis and blogs (in descending order). The students considered themselves to be medium active users, meaning that they both actively create and post content and the main reasons for using social media, is because they are fast (spread of latest information), free (cost efficient) and social. The active participation of learners and unconscious sharing of knowledge was considered by the learners to improve learning. Also a feeling of team belonging and self-organization provided by social media was mentioned by the students as advantages of social media in education. The safety and security in social media (data protection), as well as lack of trust in co-created content, were considered as major challenges. Also the incompatibility between different social media platforms was confusing. However, information about gender, age or department of study the correlations between these variables have not been calculated.

Only teachers of the department of Informatics took part in the study. The questionnaires were distributed to teachers from all departments, but only teachers from the department of Informatics responded. This in itself shows that teachers from other departments do not have confidence in using social media in education. The preferences of the teachers were Google Docs, YouTube, Skype, blogs, Facebook, Second Life, Twitter and LinkedIn (in descending order).

In figure 1 we can see a comparison between the readiness of using Social Media in Education by students and teachers (see next page).

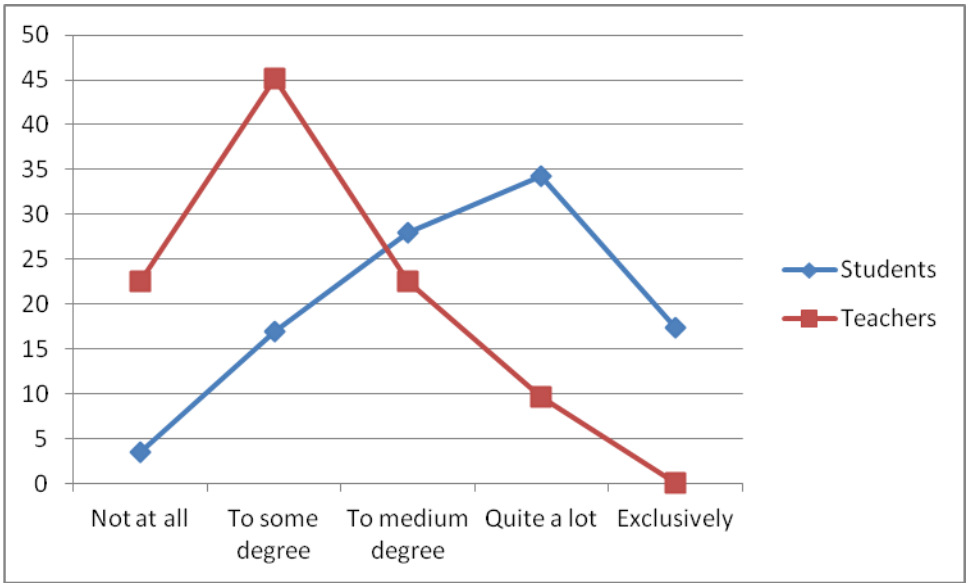

Figure 1. Readiness of using Social Media in Education

The red line shows to what degree the responding students are prepared to use social media in education and the blue line shows the preparedness of the responding teachers. The scale is a Likert scale from 'not at all' (on the left side) to 'exclusively' (on the right side). From figure 1 we conclude that the students are ready to use social media in education, whilst the teachers are reluctant.

A UK study was carried out within a Masters Programme in Business Information Systems Management offered by the Computer Science Department of Middlesex University. It must be emphasised that there is considerable use of a Virtual Learning Environment and many courses including this Masters are also offered overseas in Distance Mode. Students work in groups across countries and both the student body and the group of lecturers are multicultural. Thirty per cent of the targeted students and 50 per cent of the teachers responded to the survey.

Despite the small number of respondents (15 students and 9 teachers) qualitative indicators started to emerge. The students reported that they are active users. The teachers also show awareness of the importance of social media in education. They all use LinkedIn and Skype especially for supervising students based outside the UK but also for delivering lectures when they are away from the UK and for supervising students. They also hold online conferences with other teacher members and /or with students. As expected the awareness and readiness for adopting and using social media is very high in both groups but as expected from reports in literature the older the group the lower the readiness for adoption of new technologies and social media in particular. Thus the trends revealed from the teacher responses vary from those revealed from the student responses.

Responding to the question "*How do you feel about the need to use social media?"* the majority of students report that they believe it is both urgent and important. The distributions are shown in Figures 2a and 2b as follows.

	Important	Not important
Urgent	10	
Not Urgent	3	2

Figure 2a. Students' view of the importance and urgency for using social media

	Important	Not important
Urgent	5	1
Not Urgent	3	

Figure 2b. Teachers' view of the importance and urgency for using social media

The majority of both students and teachers consider that the use of social media is both important and urgent. As expected, 67% of the students believe that using social is both urgent and important. The equivalent percentage for teachers is 55%.

It can be seen that 1 teacher (member of teachers) chose Urgent and Not Important which is puzzling.

Responses to the question *"Do you think social media can improve learning?"* Please, provide your views and/or an example that indicates your viewpoints.

All students consider social media as very helpful in their studies. Below are some of the student responses:

"Yes, Social media allow for collaboration and getting different viewpoints within the problem domain. Chance has it that someone already has come across the problem and has a solution (or an idea of how to approach it). It helps people to get into contact who would not be easy otherwise if in different locations."

"I certainly do. Given the amount of information one can extract from lectures and documentaries (on YouTube etc.). I would say the right kind of social media, if used appropriately, can greatly enhance your knowledge base".

"Yes I think social media can improve learning, as it has made it possible to easily collaborate with peers".

Teachers seem to be apprehensive about the correctness of co-created material but still believe that social media can assist the delivery of content and the exchange of ideas and views.

	Not at all	To a small degree	To a large degree	To a very large degree
Students			5	10
Teachers		2	6	2

Table 1. Degree to why social media can improve learning

As can be seen 67% of the students believe that social media improves learning whilst the equivalent percentage from the teachers' point of view is 22% which is a marked difference. The apprehension of the teachers can be attributed to their earlier conditioning both during their student days and during earlier pedagogic practices.

The notable result from our study is that our findings from both countries give similar information. The students are more interested in the use of social media in education compared to the teachers. On the other hand the teachers emphasise the use of other learning methods than social media. This is natural, because the possible teacher training acquired by teachers give a lot of teaching and learning methods for teachers to use. In this training social media is only one of these methods.

Summary

Our results emphasise the meaning of readiness to social media use by teachers. Both quantitative results from Greece and results from the UK support this. These results expand our earlier results (Siakas et al., 2013) on the use of social media. This occurs in two ways. First, the teachers appear to be behind the students in the adoption of social media. Second, we evaluated the adoption gap between students and teachers in two countries. The result is similar from those two countries and this result reflects that same kind of activities should be realised anywhere to improve the situation.

In the case of social media the fact is that all the time new social media services appear and some services can become really popular. The phenomenon of the year 2013 was Whatsapp (Prater 2013) which has superseded the use of Facebook among young people (Olson 2013). Our results and this news reflect continuous demand on teachers to keep abreast of new social media. This means that the changes are needed at the institutional level. The education system as a whole should support continuous learning of social media for educators. This means that workshops, online communities and other activities should be arranged by institutions' leadership.

Social media adoption should be studied for improving understanding in e-learning implementation issues. In this effort UTAUT can be a useful tool for revealing the facts affecting social-media-based e-learning. This can complement our earlier findings (Siakas et al. 2013) and the results presented in this paper. Based on the results of the survey the ECQA Social Media Networker (SIMS) project (http://www.socialmedianetworker.eu/) was identified to fill the gap between the readiness of learners in adopting social media practices and the lack of skills by trainers/educators in using these contemporary tools. The SIMS job-role facilitates the pedagogical change towards

student-centered trends that cater for bottom-up collaborative approaches supporting knowledge creation and knowledge sharing.

Age and experience from the perspective of technology adoption theories can partly explain our results. However, general technology adoption theories are not enough to explain all effects in the field of social media, because the development is so fast. These theories should be modified to obtain better understanding in social media adoption. In the era of web 2.0, learning has been widely explained using the connectivist learning theory (Siemens, 2005). Connectivism connects learning to the networked way of living and technology. Thus, connectivism could also be used to improve the technology adoption theories and after these modifications we can better understand social media adoption in education. Further studies both based on technology adoption theories and the principles of connectivism should be conducted. In this way we can find the facts which improve both social media adoption and the use of it in education.

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