Using Social Media in Lifelong Learning

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Advances in IT&C technology in the last decade have proven that in the present and also in the future people will rely more and more on technology for everyday life, from shopping to entertainment. IT&C technology has been used in education, in lifelong learning as well, through the use of eLearning and, after the appearance of Web 2.0, through the use of e-learning platforms, online training courses, video tutorials, and other IT&C related media. The use of social networks, or the use of social media in general has an increasing impact on education through the tools available in a technology-driven and knowledge-based society, although the competences and skill that users acquire are those of non-formal education. Social media tools are being used more and more in collaboration with classical teaching methods, also known as the blended learning, in order to provide recognition of skills and competences acquired through the use of these tools. Taking into account Europe 2020 strategy on lifelong learning we consider that an analysis of possible means of improving lifelong learning through the use of non-formal and informal methods is required. Thus this paper aims to analyse the potential impact that social media in general can have on education, on lifelong learning, and how social media can further be involved in education, in lifelong learning in the future. As result of the analysis, we shall present various approaches identified in education, including our own approach, in lifelong learning with use of social media and what improvements can be made to these approaches.
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1 Introduction

With the developing of Web 2.0 and the effects it had on spreading social software, with the opportunities it gave to web developers to create more interactive applications and websites, for designers to better implement their work in the online context, education began to use more digital-orientated or digital-mediated educational programs [1]. These programs are either full online programs, programs for blended learning or they are even used in face-to-face learning as teaching material by tutors/instructors.

As social activities occur more and more based around the digital world, as a result of the technological advances in the past years related to handheld devices (smartphones, phablets, tablets etc.), traditional teaching will have to find a means to make use of these features, that technology has to offer, in order to better contribute to individual learning, to lifelong learning and to society in general.

Taking into account that the Digital Agenda for Europe 2020[2] (DAE) which is a part of the Europe 2020 initiative, and the information provided by the European Union related to the digital skills that are present in the member states, it is clear that the use of digitalized material for every aspect of daily life will become more and more present. According to *The Scoreboard 2014 – Digital inclusion and skills in the EU 2014*, a percentage of approximatively 47% of the European population has insufficient digital skills, meaning that they have basic digital knowledge. There are also people of the EU that have no digital skills at all, an estimate of 23% in the year 2012.

Also taking into account the EU 2020 strategies for lifelong learning and adult education, member states have started using more and more e-learning solutions for adult training and education, for higher education with students having either full online courses either blended learning systems in place so as to facilitate the principles of lifelong learning.

Based on these factors and others that we will debate individually when they will be mentioned, a multitude of approaches for learning with the help of social media have been theoretizised or have been put into practice. The purpose of this paper is to discuss the most relevant approaches, in our opinion and to analyze their use and efficiency.

2 E-learning approaches

M-learning

The first approach we will be discussing will be that of m-learning, a term related to the use of mobile devices in education through e-learning. This approach works on the basis of using mobile devices with the help of internet connections in order to transmit data related to courses or information regarding a training program that the trainee/student can access anywhere via the mobile device.

These kind of interactions with the education software are made either to web based applications that are specially designed for mobile devices or either through a 3rd party application that is installed on that mobile device with data transfer made through a web service.

The following figure will help us understand the differences between e-learning and m-learning:

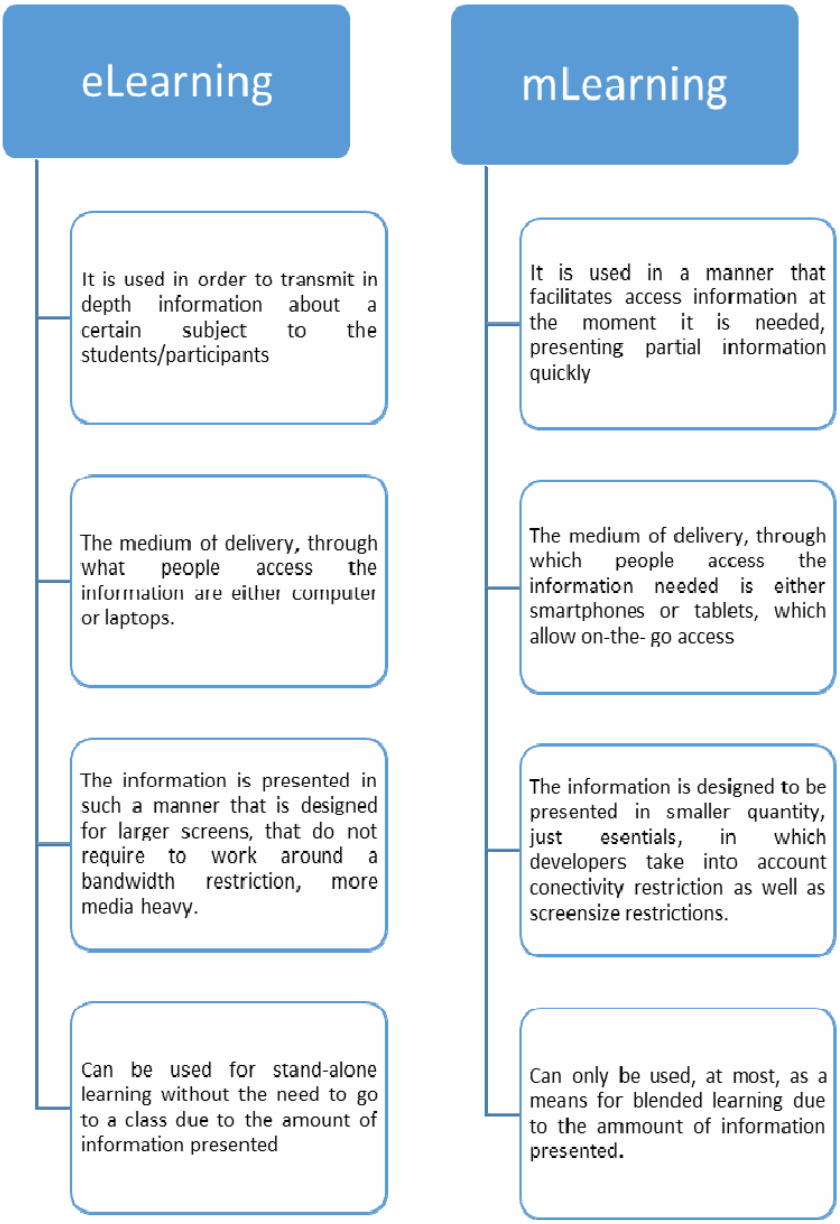

Fig. 1. Comparison between eLearning and mLearning

Taking into consideration the aspect presented above, mLearning, in our opinion, differentiates itself from eLearning by the quality and quantity of information that has been presented. When talking about eLearning and mLearning there are also many similitudes, as follows:

- Both are a means of transmitting educational information to a person;
- Both are made to be used in other places besides the classroom, making learning mobility possible;
- Both are based around the use of an internet connection;
- Both can be used for blended learning;

There are more similitudes also but these are the main ones in our consideration. Also as it can be seen in figure 2, m-learning is part of e-learning.

Fig. 2. Basic component of e-learning

In our opinion, mLearning will become more and more present in the future due to the advances in mobile technology. As technology progresses further, telephone screens become larger, mobile internet connections become faster and more accessible, the need for information on-the-go will be even greater.

In order for mLearning to become a more viable means of education, we consider that applications that use mobile devices should be made either to work in par with an e-Learning platform. This means that the mobile application can access information from the e-Learning platform in a mobile friendly manner, and allow the student to interact with different modules that, through any means of synchronization with the e-Learning platform, are necessary for the course to be completed. For example, the mobile application might be designed with modules that can allow the student to take the examinations on-the-go, this feature being, in our opinion, an easy task to handle for a mobile device.

E-learning platforms

E-learning platforms are web applications that use the internet to deliver educational information in form of courses and learning modules. The users of e-learning platforms get the educational information in different media forms, either written in electronic format (PDF, DOC, EPUB), as video tutorials that can be either downloaded or streamed

online depending on the platform and how it was designed, as interactive live webminars where the tutor present the information through live video streaming, or as podcasts. E-learning platforms are used more and more, and the main reasons for this are the following:

1. Cost efficiency – e-learning platforms have low costs, due to the fact that they can be deployed either in a Cloud based approach or on premise at the party interested in using such a platform. The costs of having an e-learning platform based on Cloud technology is lower than that of having an on premise server that hosts the platform itself but both approaches are cost efficient on medium and long term periods of time;
2. Mobility – e-learning platforms allow students/participants to access the information regarding their courses through an internet connection and a computer/laptop that they have regardless of the place they are trying to access the information. This allows participants to check their courses while at home, at a public library or even on a trip without having to be in a certain place at a certain time as they would in classic face-to-face teaching approaches;
3. Accessibility – Due to the fact that e-learning platforms are online and that students/participants can access them anywhere they have a computer/laptop and an internet connection, the need for them to be present at a certain place, usually at a considerable distance from their homes, disappears. As such, it makes learning more accessible in areas where traveling to study is difficult.

This e-learning approach based on e-learning platforms is a classics approach. E-learning platforms are web applications made for education purposes that are used in a variety of methods. E-learning platforms are used in some of the following ways:

- Support for blended teaching methods, where the platform is used by a certain college. The platform has courses built around the mixture of face-to-face method of teaching and the distance learning method. Students have materials posted on the platform in order to help them with studying. These materials are either written courses in PDF format, video tutorial or live webminars that are held through streaming.
- Stand-alone teaching method for lifelong training. This comes to place when e-learning platforms are being used by non-educational institution to train their personnel. Using e-learning platforms to train employees in order for them to get the required skills and competences. For non-educational institutions and companies this is beginning to become more and more present, due to the reduced costs of the training procedures. E-learning platforms, due to their structure and due to the infrastructure that they use are very cost efficient in delivering non-formal and informal means of education. If the companies use Cloud Deployment Models, the prices are reduced even more [3].

The stand-alone model for teaching through the use of e-learning platforms is also used for distance learning in some places, where university students are not obligated to come to classes, and even most of the examinations can be held in an online manner. This manner of teaching is also used for lifelong learning and training of adults as a result of the Europe 2020 strategy for lifelong learning, many European member states have started to use these e-learning platforms, many of them through external financing or through co-financing by the European Commission, in order to help the adult population in lifelong gaining of skills and competences.

E-learning, in our opinion, should be combined in such a way with social media platforms or social networks so as to provide a way for learners to obtain formal recognition of their learning experience while using such platforms. A possible way for this to happen is the implementation of a hybrid e-learning platform that combines the best of social network platforms with the means for formal education that are provided by e-learning platforms, an e-learning social platform. Such a platform should be able to combine the user-friendly approach from social networks, the communication boost it has, with courses that can be shared and brought to users through the use of their online habits like in normal social network advertising.

The e-learning system architecture should take in consideration every aspect of the blended learning advantages, and ensure the migration of the e-learning platforms to a new step forward on how to achieve a better method of teaching using the advantages of cloud computing technologies.

Cloud computing technologies, social networks and e-learning platforms are starting to combine their properties to offer new types of learning possibilities and development of acquiring competences by the people interested in continuous development.

In our opinion we consider the following architecture for an e-learning system that uses cloud technologies, as represented in Figure 3.

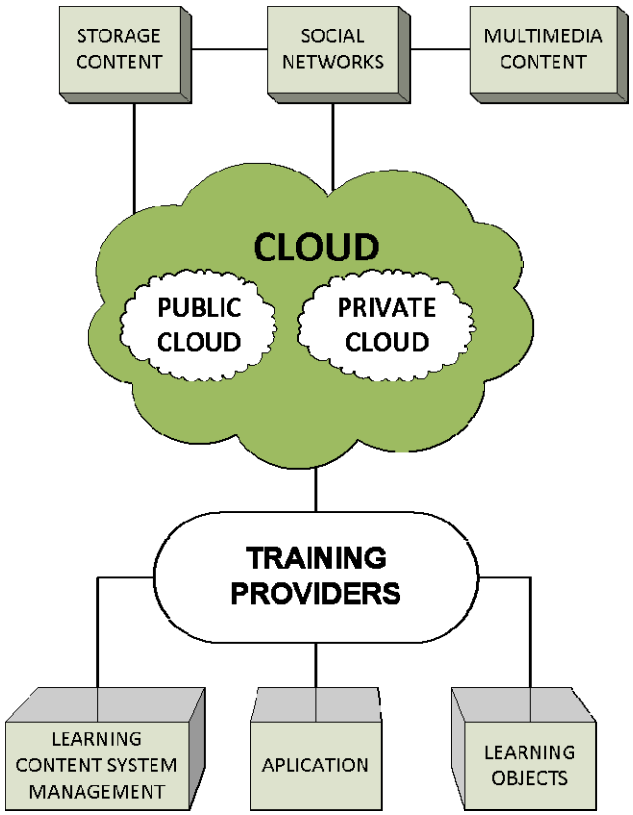

Fig. 3. E-learning system architecture based on cloud

Social media and adult education

This approach is getting more and more attention due to the growth in use of social media after Web 2.0 came into action. With the development of Web 2.0, and the interactivity between users and web applications became more and more present, the internet becoming an interactive space that could transform with the help of developers and users.

Social networks were developed (Facebook, Twitter, Tumblr etc.), online user driven knowledge bases were developed (wikia), video streaming became possible and wider used (YouTube) and so on. We shall be dis-

cussing a couple of social media tools that can have impact on learning and how they can be used for such purposes [4].

1. Wikis – Wikis are websites that allow collaborative content creating around a certain subject, through the input of user information regarding that subject. The most know wiki is Wikipedia, an online encyclopedia. These wikis can be created through different online services. Wikis can be useful in training and education due to their specialization on a certain field or, like Wikipedia, a broad approach on every domain. The disadvantage of the information presented by this kind of website is that the information is not always accurate, not being either updated on time or the updates contain personal views of the creator on the matter at hand.
2. Blogs – Blogs are considered to be online journals where the most recent entry that the creator made appears first. Blogs allow people to publish content that can vary from text to any kind of media, like images, animations, videos, audio etc. Blogs can also be specialized on a certain domain to help other people to get started in a certain aspect of their passions, for example programming with step-by-step explanation in an informal manner on how to get started in programming, or for grafting trees and so on. This kind of websites are created by users that want to share their knowledge with others that have the same interest as them, the information presented on blogs is mostly subjective to the blogger in general, but for blogs that help people train in a certain aspect, the information presented is as accurate and as pragmatic as it is possible.
3. Forums – forums have been around even before the social media boom, before the appearance of Web 2.0. Forums are represented by online discussion areas for people who share specific interest.
4. Social Networks – Social networks are online communities in which people create their personal pages presenting information regarding themselves. Social network users can share content to online contacts, friends. The term content refers to any kind of digital content, from audio to video, text to pictures. Facebook is the most known and used social network, having over 900 million users active daily.

Many authors[5][6] have pointed out that Social Networks, especially Facebook which is the most used to date, have the potential to play a significant role in informal learning, especially in young users[7][8]. In our opinion, social networks can be redesigned in order to include education directed methods and modules, and that due to the amount of people that are using social networks on a daily routine, the information that gets passed on or that gets accessed by every user daily can be driven towards their interests.

By this we mean that through the use of intelligent or smart cookies and by user orientated content based on an internet behavior of that user, the social network can direct educational materials that are linked with the persons general interests in internet searches or in global discussions on that social network [9].

Also, by having a behavior analysis of the user's internet searches and activities related to certain domains, the social network can make use of this information in order to either direct users towards certain training programs, e-learning platforms, to show them job opportunities based on what domains they favor in their searches and even to check if they have the right training, skills and competences in that certain domain in order to help the non-formal and informal education of others that are interested in that certain domain.

The fact that social networks can be used as an e-learning instrument in the future derives from the large number of daily users and by the time these daily users spend in general on

that particular social network. Thus, while people are using interactive social networks to get in touch with friends, find common interests, share content, they can also benefit from well-placed and paced information during their use of that network. Social networks benefit from the fact that they can connect people that have a certain interest without discrimination and without being bothered by the need to be in the same geographical region, thus educational orientated serious games can be made for users for a certain interest, trainers from all over the world can contribute in general discussion areas to create groups that are used for personal non-formal or informal training and so on.

3 Conclusions

Taking into account the different approaches we discussed earlier and other approaches that are being discussed in literature about the use of social media in education, in lifelong learning, we consider that making use of social media for education is important due to the fact that people will be spending more and more time in front of technological driven social application due to the advances in technology, due to the fact that time has become a resource in itself and people prefer to use it more efficiently. Making social media driven learning applications will help student learn on-the-go while still being able to socialize with their friends, it will help people learn while traveling, while relaxing at home or while going from home to work. The manner in which developers will decide on how to approach embedding learning tools more and more into social media applications will differ, but as long as the end result remains the same, as long as the learning possibilities of using such tools are harnessed we consider that lifelong learning will be possible without having to make users access different tools made specially for learning.

It is obvious that social media is not the only exclusive factor influencing the development in use of e-learning education. Rather, it is a combination of pedagogy with course design and delivery models. By combining teaching techniques with social media tools, educators can design a holistic environment for student-centered learning where students have flexibility in making decisions on the specific learning objectives. Therefore, the trend is dedicated to the development of Web 2.0 based learning environments, incorporating valuable pedagogical features along with social media tools.

Expanding the range of features available and the use of these platforms are widely the current directions in research and development. Wider experimental studies will also help uncover the full potential of Web 2.0 education.

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