

APPLICATION OF SOCIAL NETWORKS IN HIGHER EDUCATION

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Abstract

In the university studies several e-learning platforms are commonly used to exchange information between lecturers and students such as notes from lectures, examples of exams, and so on. However, the use of social networks in the last years has rapidly increased, and with a great success among students. The authors of the present work identified that they could be used in the same way as the current e-learning platforms to exchange information.

In this study several networks were identified (Facebook, Twitter, Google+, etc.), and finally Facebook was selected to be used with university students due to its popularity. The study consisted in using this social network during one semester in different groups of about 20 students, and in a subject of graphical engineering. It was designed a profile inserting different contents, the type of information that was uploaded contained notes from lectures, exams, surveys concerning past exams, reminders, etc.

After the semester, the students that used this tool filled a survey, and the results were statistically interpreted. Among the most significant conclusions it was found that only the 59% of the participants in this study have used Facebook before. However, after using this network during several months, 72% of the students thought that its use in university studies is positive. After the experience with social networks in university studies some recommendations were also proposed for lecturers to be considered when using this tool.

Keywords: Social networks, higher education, Facebook, Twitter, Google+.

1 INTRODUCTION

One of the main trends in recent years regarding with the re-definition of the essence of learning is Open Courseware (OCW). Through the framework of OCW, universities have been offering worldwide online educational materials free of charge. The use of this service has no limitations in relation to geographic situation or others such as time or curriculum barriers.

Following in this idea and observing the increasing activity in the social networks, the last ones can be seen as really potential utilities for learning [1-3]. In fact, some attempts have been made by lecturers and also students trying to bring learning activities into the online social world. The use of these utilities deserves to be studied since they allow the organization of communities with shared interests [4].

During the last years an interesting debate is currently taking place regarding the role of social networks in learning [5-6]. The present study focuses on social networks as informal learning utilities, but with a visible potential due to the easiness of transmission of information [7-8]. The studies presented in this direction are still scarce, however it is expected an increase, providing more data in the following years [8].

At the same time that the use of social networks is progressing as informal learning utilities among lecturers and students, universities are also trying to find their place in social networks as collaborative online environments [9].

The aim of this study was to study the possibilities offered by social networks in Internet, so that the formative process in higher education could be improved. Initially, a literature review was carried out and from this search several informatics tools were selected to be particularly analysed: Facebook, Twitter, Google+, iTunes, YouTube and Flickr.

Although only three of them are formally considered social networks in Internet (Facebook, Twitter and Google+), the rest of them were also tools that are frequently used to disseminate informative contents, being integrated or linked in one way or another with some of the social networks aforementioned.

Facebook: This is a website considered as a social network. It has been the social network par excellence in the last years. The users can participate in one or several networks, depending of certain factors such as the academic position, the place of work or the geographical region.

Twitter: This is a service of *micro-blogging*; it can be considered a social network because it allows sending short text messages called *Tweets* (140 characters maximum to be compatible with SMS).

Google+: This is a website considered also as a social network. Google+ is considered by now as the strongest competitor of Facebook. The potential of this social utility is endorsed by 10 million of users only two weeks after the launch of Google+, and 20 millions three weeks later, or because it is the free application for iPhone most popular in the App Store of Apple Inc.

iTunes: This is a media player developed by Apple Inc. Its use in teaching is justified by the transmission of courses free of charge, i.e. iTunes U Course Manager that is a simple tool that allows academics to upload lectures or courses. The contents of the courses or notes from the lectures are disseminated between students thanks to the links with Twitter, Mail or Messages.

YouTube: This is a website in which the user can upload and share videos. It uses an online player based in Adobe Flash to display its contents. Although YouTube has restrictions to upload those videos protected under copyright laws, this material is abundant, as well as the amateur content such as video-blogs. The links to the videos of YouTube can be also inserted in blogs, websites or social networks among some others.

Flickr: Flickr is a website that allows to store, organize, search, and share or even sell photos and videos online. The potential of this tool in teaching would be justified by its capability to administrate images. This site has tools that allow to the authors to label their photos and explore and comment the images of other users.

2 THE USE OF SOCIAL NETWORKS BY SPANISH AND OTHER EUROPEAN UNIVERSITIES TO OFFER THEIR DEGREES

In order to obtain more information about the social network that could deserve a special attention for being used within the University a study was carried on the use of social networks by different Spanish and other well-known European Universities. The study involved the observation of the use of the different social utilities listed above to disseminate information related to the degrees that each selected University offer to students. Universities were selected using the 2012 Webometrics ranking of world universities [<http://www.webometrics.info/en>], as listed below:

Spanish Universities (Top 20):

1. Universidad Complutense de Madrid
2. Universidad Autónoma de Barcelona
3. Universidad Politécnica de Cataluña
4. Universidad de Granada
5. Universidad Politécnica de Madrid
6. Universidad de Valencia
7. Universidad del País Vasco
8. Universidad de Sevilla
9. Universidad de Zaragoza
10. Universidad de Santiago de Compostela
11. Universidad de Alicante
12. Universidad Politécnica de Valencia
13. Universidad Pompeu Fabra
14. Universidad de Vigo
15. Universidad de Salamanca
16. Universidad de la Coruña
17. Universidad de Murcia
18. Universidad Autónoma de Madrid
19. Universidad de Málaga
20. Universidad de Barcelona

European Universities (Top 20):

1. University of Cambridge
2. University of Oxford
3. Swiss Federal Institute of Technology
4. University College London
5. Utrecht University
6. Università di Bologna
7. University of Edinburgh
8. Universidade do Porto
9. Universität Wien
10. Norwegian University of Science and Technology
11. University of Oslo
12. Catholic University of Oslo
13. University of Groningen
14. University of Helsinki
15. Charles University of Prague
16. Universidad Complutense de Madrid
17. Delft University of Technology
18. Humboldt Universität zu Berlin
19. Freie Universität Berlin
20. Universidad Autónoma de Barcelona

Figure 1 shows a comparison of the level of use of the different social utilities identified in this work for the top 20 Spanish Universities and the top 20 European Universities according with the 2012 Webometrics ranking.

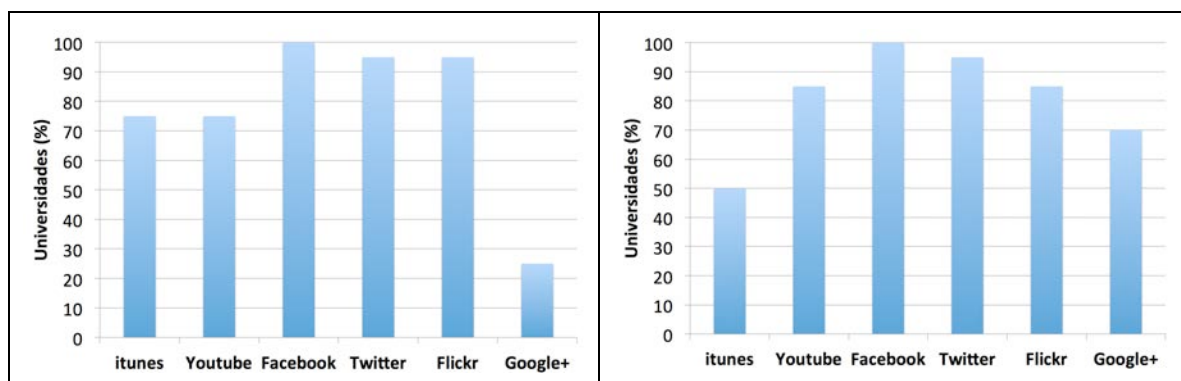


Fig. 1. Level of use of the different social utilities identified in this study for the Spanish (left side) and European universities (right side) selected.

As can be observed in Fig. 1, the social network more frequently used was Facebook, being used in all of the universities that were selected. Twitter obtained the second place following to Facebook and the third position was for Google+. However, it should be remarked that the last one has been introduced quite much later than Facebook, but it offers now similar utilities than Facebook. Therefore, special attention is given to the increasing demand of Google+. Furthermore, it is observed how among the European universities its use is higher than its use among the Spanish universities. It is estimated that in a period of one or two years its use will increase up to the level of the other European universities. This guess is not only based in the possibilities that this type of social utility offers, but also is based in a principle that has become a must among companies. This say is based in that sometimes companies do not know exactly which are the goodness of the social networks and the benefits for them, however they upload their contents because the others (competitors) also upload it.

Taking into account the results of this study, Facebook was selected as the social network that deserved a special attention. Therefore, a site was created within Facebook in order to follow with the development of the present project and study its acceptance among students as well as the suitability for teaching.

3 DESIGN OF A SPACE IN A SOCIAL NETWORK

After selecting the social network to be used, a virtual space was opened in Facebook for the subject 'CAD Avanzado', in which lecturers that participate in the development of this teaching innovation project gave lectures. The different options used were the 'Facebook wall', 'notifications', 'messages', 'chat' and the bottom 'I like it'.

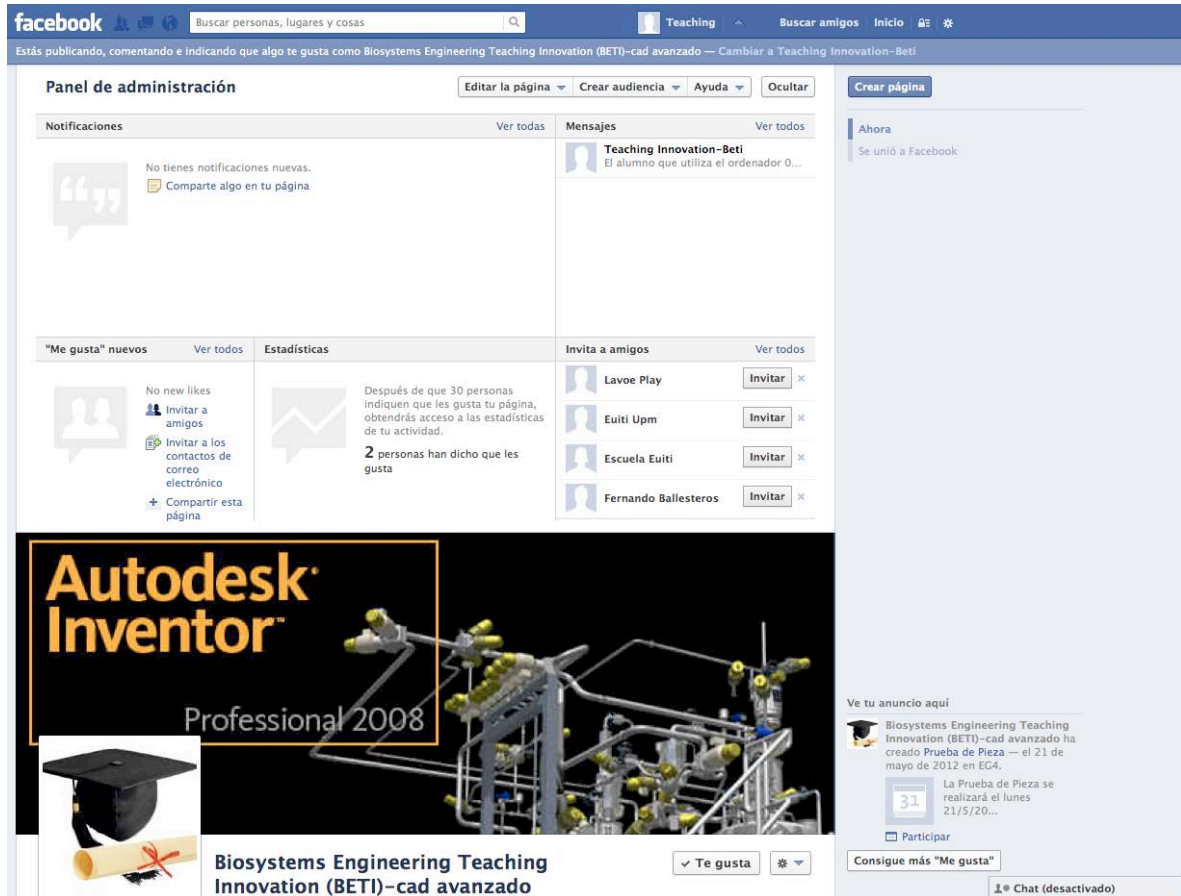


Fig. 2. Administrator profile of the virtual site created in Facebook for the subject CAD Avanzado.

In the Facebook wall it was uploaded information to be assessed as part of the teaching innovation project *“Improvement of the higher-education process taken advantage of the opportunities given by the social networks in internet – Mejora de los procesos formativos universitarios aprovechando las oportunidades que ofrecen las redes sociales en internet”* granted by the Universidad Politécnica de Madrid, images such as those from the two exams developed during the academic course, adding the option of evaluating the difficulty level by means of the three different categories (high, medium and low).

The notifications facility was basically used to inform students about marks, rules to do the exams and another issues (lost material, etc.).

The message and chat facilities were used to solve singular doubts and held very concise tutoring sessions. It should be remarked that the use of this facility for tutoring is possible always that a detailed material and complete manual or notes previously exist and the student own from the beginning of the course. This way, it is possible to redirect to the exact site in that manual or notes where the explanation is detailed and extended in relation to the explanations given in the classroom. It should be remarked that in any moment this facility could substitute to the tutoring sessions face-to-face. One of the benefits of the use of Facebook is that in many cases the simplest doubts were being solved in advance due to the communication among the students using also Facebook.

It should be remarked that depending on the character of the subject the results in this way could differ. It would be a different case and the procedure would be different to solve questions in case the subject has calculations such as algebra, physics, chemist, rather than it had graphical content such

as technical drawing, or if they have theoretical content such as those subjects given as master classes.

The facility of the bottom 'I like it' was used to know the degree of satisfaction of the student in every material uploaded during the academic course.

4 ASSESSMENT OF THE LEVEL OF SATISFACTION OF STUDENTS

The assessment of the satisfaction of the students was carried out by means of surveys. The surveys tried to compile information on the gender and the age of the participants. Information was also tried to be obtained in relation with the current situation about the use of social networks by students and mainly with Facebook, what type of social networks they have previously used or their opinion about replacing other utilities that are now being used in the University such as Moodle by Facebook. In relation to the different options provided by Facebook, information was obtained concerning which of those that were used through the project were better and which ones would be interesting for their use in teaching and for what.

Examples of the type of questions are: 'Do you have more than 30 years old?'; 'gender?'; 'Have you participated actively in this teaching innovation project?'; 'Did you use any type of social network before participating in this initiative?'; 'Do you give a positive value to the use of a social network in teaching?'; 'Do you use Facebook now?'; 'What do you use Facebook in issues related to teaching for?'; 'Do you think that the use of a social network such as Facebook could replace Moodle?'; 'Would you prefer another social network (that is not Facebook) for teaching activities?'. With the aim to facilitate the interpretation of the results the answers to the different suggested questions basically were YES/NO.

The agents were distributed according to the age and gender in the following way: those older than 30 years were 50% males and females, while those under 30 years old were mostly males. Students who declare participating actively in the project (21.88%) mostly used the 'News', while the others mostly indicated the use of other different uses to the forum and news. The majority of those that participated actively in the project thought that Facebook could replace Moodle, while the opinion of those that do not participate in an active way was the opposite.

Only 18.75% of the students who participated in this initiative have not used before a social network and all the under-30 participants have previously used it.

The 71.88% of respondents felt that the use of social networks for lecturing purposes was positive, while 25% do not feel it positive.

'Forums' were valued by the students as the most used option when they use social networks for learning purposes (34.38%).

The majority of the surveyed students (58.25%) preferred Facebook to other networks, while the 28.13% would have preferred another network and 15.63% they did not answer to the question. This answer has relation with the assessment of teaching resources used through a social network. Those that prefer Facebook give more value to the tutoring sessions, while the rest gave a little bit more value to the videos. In both cases the exercises solved were the second most valued option.

5 CONCLUSIONS

This work discusses the use of social networks in higher education. The main conclusions are:

- Social networks have good acceptance among the university students.
- The use of social networks increases motivation among the students to formulate doubts.
- Interaction between lecturer and student is improved, as these tools are considered as a friendly way of communication.
- Social networks allow quick exchange of information.
- Facebook have been identified as a useful resource to students enrolled in syllabus in extinction.

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