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Facebook + LMS
Scenarios for student’s engagement in distance learning

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Introduction

Web 2.0 is part of our personal, professional and academic lives and it has been adopted by higher education institutions in different ways. Society and education are living moments of great challenges.

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and change, trying to become more personalized, with approaches focused on knowledge, socially connected and engaging as to include, both digital natives and digital immigrants (Prensky, 2001). These challenges require students to develop skills that will allow them to perform research, selection of information, reflection, collaboration, production and sharing of knowledge.

Hence, to learn in the digital age does not depend only in an individual acquisition, centred on storage or collection of information. According with Siemens (2004) actual learning depends on connectivity among individuals and tends to dissolve the boundaries between formal and informal learning.

Several authors and international reports (Horizon Report, 2012; 2013) have advocated the integration of Web 2.0 in teaching or the more individual point of view through innovative teaching practices (MEJIAS, 2006; DALSgaard, 2006; MOTA, 2009) or from an organizational point of view (MASON AND RESNIE, 2008). In a report made on its contribution to higher education, Conole and Alevizou (2010) conducted a classification on its advantages and effectiveness.

These data confirm the importance of students acquiring certain skills that help them create knowledge networks and the use of Web 2.0 tools when integrated professionally, even when seen as entertainment (games, cell phones, etc). Thus, in a society that calls itself digital, to know how to use the tools that are available effectively is a necessity, especially for the student who attends distance learning (DL) or education mediated by technology.

According to Forbes, in December 2013, Facebook continues to be the social network with the highest number of users: “Facebook continues to lead the pack in terms of number of active monthly users (1.15 billion at last count).” (DeMers, 2013). Given these data, we selected Facebook, between existing social networks, as a possible platform to be used in distance educational contexts complementing the LMS scenarios, aiming to understand the characteristics of this social network and its role when learning in Distance Education.
A Web 2.0 and Social Networks

Web 2.0 is distinguished in terms of innovation by enabling contributing with content without requiring technical IT expertise, thus enabling the involvement and participation of users in content creation and construction of knowledge in the network (Mota, 2009). Both Blogs and Wikis, bookmarking tools and social networks, for example, have collaborative features, and therefore allow the sharing and interaction among users. This engagement that Web 2.0 allows led to an increase in their daily use and marked the society of today as being digital. For Castells (2004) this is the nucleus of our society: “the network society is not the emerging social structure of the Information Age: it already configures the nucleus of our societies”.

On the other hand, with the advent of social networks and blogs (2004) a boom occur in the use of the Web. Networks like Facebook, Flickr, Youtube, LinkedIn or Twitter and platforms like Wordpress or Diigo contributed to the rapid growth in the use of Web services, simultaneously with the fact that computers have become more affordable allowed the increasing development and use of web tools, either for communication, whether for multimedia sharing (photos, videos) ideas, building collaboratively documents in real time, or even to professional disclosure portfolios.

The evolution to Web 2.0 brought with it not only the possibility of collaboration and online sharing, but a more dynamic web in which the creation/modification of content can be made by individuals and were synchronous and asynchronous communication are possible via multiple platforms including social networks. Anyone can edit content online, share and collaborate in real time with collaborative tools (eg Google Drive or Wikis). At its core, Web 2.0 is collaborative and online social networks are the “applications” more currently used by all, creating a personal involvement through, for example, the creating of a profile, the upload of photos and brief personal descriptions, as well as
publications on personal or professional interests or issues that users consider relevant for sharing.

There are several authors who seek to define and circumscribe the concept of social network as there are too many references in the literature. Ellison & Boyd (2007) and Boyd (2010), gave the following definition:

"We define social network sites as web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system. The nature and nomenclature of these connections may vary from site to site." (Boyd & Ellison, 2007: 211)

However for Ellison, Steinfield & Lampe (2007) they are seen as sites were we maintain contact with people with whom we already have relationships offline more than to connect to others or “make friends” with new acquaintances. As for Ahmad (2011) a social network is defined as a website that enables the sharing of data, images and other information between the user and its contacts on the same network, “A web site that provides a social community for people interested in a particular subject or interest together.”(Ahmad, 2011: 124).

Still according to Boyd & Ellison (2008), since social networks were introduced, such as MySpace and Facebook, that it was registered an attraction of millions of users that integrated these within in their daily routines, not only because it allows permanent contact with friends and other people, but also because when adding business contacts, it becomes possible to access professional interest
information almost instantaneously, making these compelling platforms because of its social component, but also due to the volume of information of interest and to the connections that they allow.

In studies conducted by Burke, Marlow & Rente (2009; 2010) have been identified a set of elements that characterize a successful social network. Among them there is the information published by users, either in groups or among all the individual's contacts. This produces a flow of exchange of messages and responses, which in turn generates the involvement of the participants and therefore a larger number of posts and participations.

Currently there are several social networks on the Web that aggregate millions of individuals around the world, even though they may have different characteristics, purposes and audiences. Among the most popular are Facebook, LinkedIn, Orkut, Twitter, Youtube and Myspace, and although the publications of users vary from network to network, the most widely used is Facebook.

Facebook has become one of the most popular social networks, both among adults and youth (Boyd, 2010). In June 2013 it was the most used social network in Europe, America and Australia. It was because of the increasing use of Facebook that higher education teachers have begun to adopt this social network as a way to keep in touch with students outside the classroom. Pempeck, Yermolayeva & Carvet (2009) report that the first studies of its use in higher education sought to investigate the use of social networks in general.

According to Arnold and Paulus (2010) Facebook or any other social networks are increasingly being used in the educational context, with the design of scenarios and activities focused on their integration and it is therefore important to know how to use them effectively.

In addition to the issues related to its use in terms of formal learning are also known experiments and investigations into its role in promoting sociability and social presence. According to Llorens
and Capdeferro (2011) “sociability” in Facebook is constructed through a deliberate strategy to connect users to each other but also, in numerous circles, subnets, events and groups assuming that the production of experiments of various types it is a social event based on features and content contributed and shared by individuals and processed through the tools.

Created in 2004 by Zuckerberg, after a month of its creation, half of Harvard students had created a profile on online social network, which is today the most widely used worldwide. In 2005 more than 800 university students and secondary school belonged to this network. In 2006 allowed access to 22,000 commercial organizations and in the same year had its boom by allowing access to any person over 13 years old and with a valid email address (Wilson, Gosling, & Graham, 2012). Their growth continues today, to expand globally and among various age groups. According to the latest statistics, the network had over 1.23 billion active users to 31 December 2013, of which 757 million used it daily (Facebook, 2014). And although it was originally designed for students in higher education, in 2010, 28% of its users had more than 34 years (Fletcher, 2010 op. Cit).

Facebook’s architecture is based on a set of profiles that are interconnected by “friends” or “taste”. Each user can view their own profile, the content feed that includes publications of all the contacts, and the individual profiles of the contacts and / or pages of interest (events, institutions, groups, etc.). It can be said that the central component of this social network are the publications made by its users, allowing to “like” or “comment” publications, thereby demonstrating the interests and opinions of the author. In addition provides the user with a private and group messages system.

In 2010, Facebook allowed the creation of closed groups between personal contacts in order to be able to manage publications and making them visible only for a portion of the contacts when the individual so wished. It is possible to create private discussion groups were only members invited by the group
administrators can view and participate. Beyond these features it does not require that members of a group are “friends.” The user also has applications such as games, polls, questionnaires and tools for network analysis and groups he belongs to.

Still according to Wilson, Gosling, & Graham (2012) although this network is constantly updated, with more and more tools and users, the studies made up to this date remain valid, since its organizational structure remains stable and with the same purposes: “(a) post self-relevant information on an individualized profilepage, (b) link to other members and create a “friends” list, and (c) interact with other members (Buffardi & Campbell, 2008; Tufekci, 2008).” (in Wilson, Gosling, & Graham; 2012; 208).

It should be noted that the above objectives interpret indeed the nature of this social network, leading to reflect on the objectives of the caster: to socialize, to create links between users sharing the same interests and to maintain existing connections offline, but that because distance, without these networks, it would not make it possible to keep a daily contact or having links of interest, which benefit the user.

**The use of Social Networks in Distance Education and eLearning in Universities**

They are multiple the experiences, the reports on the good practices and research reports documenting the use of various social networks in formal and informal education, either as a supplement to other platforms or in an integrated manner. Its adoption has received attention from teachers with interventions in very different educational practice particularly in non-formal and informal contexts such as those reported by Piscitelli, Adaime & Binder (2010).

However, any approach deserves some attention when working in the perspective of a social network, or a learning community or
a group. Dron and Anderson (2007) discuss this issue by defining the characteristics and conceptual boundaries of these entities.

According to data of Allen and Seaman (2008) much of the higher education institutions have already integrated in their campus a Learning Management System (LMS) or a content management system (CMS) or a Virtual Learning Environment (VLE) in order to organize and make available its education programs in different contexts as a complement to classroom activities or even providing at least some courses, subjects or online content.

By nature, LMS are used in formal, usually closed, environments to the academic community in which they are develop, and restricted to a number of participants, course or specific topic. The LMS can be proprietary or open source such as Moodle, which is considered to be the most popular and consensus LMS.

Moodle is an online platform that integrates a set of tools to create and manage a space where students can access content made available by the teacher, and where agents can interact between them synchronously and / or asynchronously. According to Alves and Gomes (2007), the specific features of Moodle can be gathered in four dimensions:

- Secure Access and management of user profiles creating a private web environment for the participants within a course, at the same time it allows you to assign different levels of permissions to teachers and students;
- Management of access to content, allowing the teacher to put online content in various formats, to manage the amount of time that students have access to certain content and also control how students interact with the content;
- Tools for synchronous and asynchronous communication, enabling communication between users;
- Allows to monitors activity and records all activities and actions made by students and teachers.
Use of Facebook Groups as an alternative to LMS to collaborative learning

At this point it is intended to review the research on the use of the Facebook group as content and interaction platform and its differences with the more traditional LMS.

There are several studies that seek to argue the interest of using Facebook Groups as an alternative to the use of LMS among which are located for example, Loving and Ochoa (2011), Llorens and Capdeferro (2011), Alvarez and Lopez (2013). These authors document the positive use in a university context of the learning experience in a Facebook group in an Argentine university to develop collaborative activities in which students would commit to performing common tasks constructed by the group through the meaning of negotiation in the given direction by Dillenbourg (1999).

Llorens and Capdeferro (2011) studied the Facebook weaknesses and strengths for conducting collaborative activities in distance education in formal contexts in a master class course. The authors analysed and evaluated the activities carried out in the context of a group, either in technological terms and in educational terms and concluded that, from the point of view of their design and degree of development of own tools, Facebook is not the best option for development of collaborative projects especially if they involve high time tracking needs, information organization and task management flexibility. Nevertheless, the results point to the consideration of its potential, especially due to the high spread between users and what they designated as high connectivity and possibility of adopting approaches to innovative learning positioning it as a platform to consider the case of design of collaborative learning experiences.

Also Wang, Woo, Quck, Yang and Liu (2011) describe the use of Facebook groups as an alternative to a conventional LMS arguing such viability by having elements either technological or pedagogical
and social characteristic of the LMS and allowing therefore both the sharing of material and resources such as communication and interaction between individuals. However, their results showed that this platform is perceived by these students as an environment to some extent unsafe and violating the privacy of its users.

In turn, the results of the study by Meishar-Tal, Kurtz and Pieterse (2012) whose purpose was to investigate whether Facebook Groups effectively possessed characteristics of the LMS and at the same time surpassed some of its disadvantages, showed it can in fact become an alternative.

Burke, Marlow and Rento (2009) group the types of participation in online social networks in three categories: a) Social learning, evidenced through a user’s participation being to see that other users do; b) Return, evidenced by the effects that the users have on other users; c) Distribution, manifested by the general structure of the content and exposure achieved through participation. According to this categorization are identified the levels of user involvement for example, a user who only sees what his contacts publish and which does not participate or posts, does not share what he sees as interesting or comments, will have few opportunities to increase his network and to contribute with knowledge creation to the community/network he is inserted in.

Nentwich and Konig (2014) specify types of profiles divided into 5 levels\textsuperscript{3}, which are situated between the user that almost never logs in, to the active participant with moderator role and administrator groups. According to the authors, the most common profile is one that rarely visit the network and is only sporadically active (Me-too-presence). The next profile is a more detailed one but without much participation in the network (Digital calling card). The third profile is the one of a passive user, i.e. a user with irregular publications and which reacts to contact suggestions, and sporadically communicates with other members. The second most

\textsuperscript{3} ideal profiles stating that in practice, mixed profiles exist
active profile is the *Active networking and communication*, a regular user, who uses various services available on the net, participates in discussion forums and looks for potential contacts, in addition to the ones that he already has in his network. The most active and also less frequent profile is the *Cyberentrepreneurship* in which the individual participates actively with publications and reviews and administers and manages groups.

Used to attend multiple platforms at the same time, today's students feel little enthusiasm when faced with the traditional teaching or even with static platforms. However, to have access to all this technology and apply it alone in a classroom is not enough. A teacher must know how to use these tools properly from a pedagogical point of view (Morgado, 2011) to enhance the increasing involvement of students in their learning process, developing other skills such as deep learning, critical thinking, peer collaboration and reflection.

Although many teachers see the need to develop these skills in students, in order to use Web 2.0 tools appropriately and applied to future professional contexts, they are several the constraints placed on its use, including for example, barriers placed by teachers who do not understand its potential when used in accordance with proper pedagogical principles, which have superficial views, centred on the playful immediacy and without considering any value for the development of future skills, and in many cases even prohibiting its use (Roblyer, McDaniel, Webb, Herman and Witty, 2010).

The question that arises is therefore to understand how these tools can be useful to enhance student's involvement? How can these platforms help students to learning?

It is necessary to motivate students to be active users, participatory, proactive and reflective on social networks, and this requires also that the teachers are as such. For this to happen and learning occurs in the professional or study field by using online social networks such as Facebook, it is important to create a network not only with friends and family, but with relevant contacts from a professional
point of view, with the same areas of interest, so that the probability of relevant publications on an educational point of view are higher.

The feeling of isolation and loneliness has been detected in some studies that found a link between the time spent on the internet and loneliness and social isolation. This negative aspect is referred to be general to use of the internet and not just while using social networks or in connection with Facebook in particular. However, more recent studies like that of Burke et al (2010) differentiate between the use of internet for social activities or for entertainment. These study shows that the feeling of isolation and loneliness is only prevalent in people who use the Internet only when they are alone, for entertainment.

Studies such as Zhao (2006) Kraut, Patterson, Lundmark, Kiesler, Tridas & Scherlis (1998) and Kraut, Kiesler, Boneva, Cummings, Helgeson, & Crawford (2002) and data from other studies such as Quintas-Mendes, Morgado & Amante (2008; 2010) on computer-mediated communication and online distance education show that the social return that comes from using the internet depends on the personality of those who use it, noting that most shy people, with few contacts or that interact little socially, even online, tend to feel lonely, and people with more outgoing personalities, with larger networks of contacts or greater easiness to participate with comments, posts and chats reveal tendency to feel even more accompanied, strengthening ties with those who already know offline and creating ties with those who only have contact at distance.

Apart from these issues to be addressed, as on any other platform, there are positive and negative aspects to take into consideration and the development of skills either by teachers or students, when adopting a social network like Facebook in the educational context, so that it can be possible to create knowledge mediated by these environments.

To feel that one belongs to a community is identified in several studies as an essential aspect for students to be motivated. Madge,
Meek Wellens & Hooley (2009) point out that socialization was one of the most significant contributions Facebook brought to university students. In their study highlights that 56% of 1st year students responded that this social network helped them in integrating within the institution, 84% use this social network daily and 68% say they feel part of the Facebook community, stating it is an important component of their social lives. The same study also states that 54% of students who entered a university already have an account on Facebook, 25% created an account on this network before joining the university, due to knowing it is recommended for college students and to make some contacts before classes begin, and 13% joined this network immediately after starting their studies.

The feeling of belonging to a community helps not only the integration of students as facilitates communication between those who belong to this community. For distance education students this may be a characteristic to be considered as positive for the adoption of Facebook in school context. Especially in creating groups among students, between teachers and students or even for specific discussion topics of a discipline or course, as this may facilitate communication among peers and between students and teachers, integrating the students and keeping close contact, causing that they feel part of the community.

This aspect could lead the student to perceive a greater monitoring by the academic community. However, this contact between teachers and students through Facebook should be done carefully. In the study of Madge et al. (2009) while 53% of students have responded positively about using this network for educational purposes and even been suggested activities, only 7% say using the network as part of formal education, only 22% said to have helped in some situations, and only 10% say they use Facebook for academic discussions with colleagues. The same study indicates that these numbers have increased over the school year, although stating that teachers should only make publications related to
the teaching, or who just follow teachers with whom they have a positive connection in the classroom situation. Some of the problems raised by students regarding the presence of teachers on Facebook can be eliminated by creating a list just for students, where the teacher only makes visible to this group publications related to the teaching or to the interests of students, disabling thus access to personal publications. Another aspect will be to sensitize students to create themselves also a list just for teachers. The question is in fact in knowing how to use intelligently social networks for teaching, filtering publications, so as not to interfere with the personal component of this network.

In educational terms, the question of increasing the contact network is also important, especially for the creation of relevant contacts in the area of interest, in order to maximize access relevant information, such as: new topics of discussion, advances in the field, reading suggestions, pages of interest, conferences, talks and other contacts.

According to Nentwich and König (2014) Facebook shows potential as a platform for public relations for scientists, universities, institutes and school associations. The same authors reports that platforms like Facebook can be used for synchronous communication to exchange information in the form of micro-blogging through the posts, or through the chat platform, specifically referring to the contribution that could bring to e-learning, because, as the authors indicate, the number of academics and scientists in social networks tends to increase, as new generations come for higher education and research. By creating a network of contacts relevant to the areas of interest, you can use Facebook not only as a means of communication but for cooperation and motivation. But for that, you must overcome or clarify certain issues, identified as negative.

In addition to the security and privacy aspect pointed out by several authors, Nentwich and König (2012) point out as negative aspects the technical limitations, lack of experience in using social networks, the scepticism about security issues, the need to create
an online collaborative culture, the distraction caused by personal publications, the possible simultaneous use of multiple platforms, the issue of accessing too much information and the need to develop filtering skills.

For those who already use Facebook, like most students, privacy issues do not arise, since they have previously accepted. For researchers and teachers reluctant to publish their academic work, this could be a problem, although, is a matter that applies to all over the internet and to any social network, not only to Facebook.

To use Facebook in education, even if it is an informal platform, implies that the student acquires some skills so that their use is effective in building knowledge. Including preparing your profile, creating multiple groups, be careful to check to whom he directs its publications, be careful to check regularly the discussions in private educational groups, seek relevant contacts for your area of interest, devote time to managing these educational networks.

As for the teachers who adopt these networks in their methodologies this involves managing multiple platforms, some formal other informal. They should maintain its presence on both platforms, and be able to manage in both frequent communication with their contacts. In addition, it is also your task to pass students the necessary skills to use these platforms for education, promoting proactive, connectivity, collaboration, reflection and know how to select from all available information, only the one that is valid and relevant.

According to Bassani (2011) online learning definition has had different terminologies, such as e-learning, Web-based learning, distance learning, though all refer to the use of the Internet to access online materials and interact with content, with teacher and other students in order to get support during the learning process, in order to acquire knowledge, to build personal meaning and grow professionally with the learning experience. (Bassani, 2010: 931). All these features can only be enhanced by social networks like Facebook.
In a study in 2010 by Burke are mentioned the benefits that social media can bring because of their social structure. Benefits that include access to new information gained through contacts established on social networks, and the approval and support of publications by their peers. These aspects, together with the possibility of exchanging ideas and publications online with relevant contacts to their fields of study, along with the social component and sense of belonging in these communities, means that Facebook is a platform with potential for distance education.

But why suggest the use of Facebook and not other social network more dedicated to research? The professional social networks are not attractive to most students, unlike Facebook, which is part of their daily routines. “Research has suggested that Facebook is a potentially useful tool for promoting effective academic practice” (Madge et al. 2009). And while to create a network with users relevant at educational and scientific level can take time and the benefits of it cannot be seen in the short term, Nentwich and Konig (2010: 116) argue that for the success of educational investment in this network, scepticism must be exceeded. An initial step may be to create closed groups with access only to students from a course or specific chair, where only the students of this course, institution or discipline may enter.

Social networks like Facebook have the potential to increase the frequency and diversity of collaborative work among students and even between teachers and researchers. Particularly for distance education, where one of the problems is the isolation of students, sometimes leading them to drop out of their studies. These networks will contribute positively due to their social characteristic that makes possible a frequent and close contact with either peers or teachers, but also to experts, creating the feeling of belonging to a community and fostering integration, sharing and collaboration.

According to Burke et al. (2009) the success of discussion groups in a community depends on a motivating participation generated by a group with several participants, where the quantity
and quality of contributions tends to grow with the motivation of the participants. As Junco (2011: 163) points out “A small-scale survey (Mazer, Murphy, & Simonds, 2007) found that students who experienced more instructor self-disclosure on Facebook reported more motivation and higher levels of learning”. The belonging to a community that does not show as closed as in their formal platforms, but that is dynamic and open to the world and to collaboration, as are the social networks that students already call theirs, could provide the necessary motivation to higher education students in distance learning, to not only maintain but also to excel in their studies.

**Final considerations**

Although, as stated by Rambe (2012: 295), the impact of online social networks in education and in the teacher student relationship is still just speculative due to the low number of investigations into the matter, the number of teachers who use Facebook in their teaching practices has increased. As has also been increasing the number of students who use these and other online social networks for learning.

On the other hand we agree with Burke et al. (2009: 945), when they consider that social networks have enormous potential, as great as that of their users. “Social networking sites (SNS) as only as good as the content their users share. Therefore designers of SNS seek to improve the overall user experience by encouraging members for contribution more content.” Facebook may have an important role in the socialization and integration of students in distance education, and a great potential to build and expand the network of contacts of interest to students and even teachers, enhancing collaboration and connectivity. The use of social networks like Facebook in distance education will depend on the role that teachers adopt to integrate these networks into their teaching methods. As in any learning situation, students learn from the example set by the
teacher. Therefore should be teachers to lead by example and take the first step by creating discussion groups, to have a network of contacts aimed for education and research, that they can pass on to students facilitating contact and the exchange of ideas.

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398


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It is this movement that enables us to state that the work to which you have access, at this time, has elements capable of instigating reflection on the Facebook social media in several contexts and situations involving the uses people make of this media; the issues that arise and how they are configured as an object of study in a dialog environment. By Reading, you might better understand the socio-technical and educational potentials of Facebook as spaces of subjectivity, sociability and difference; as well as the uses of Facebook in higher education and continuing education of teachers. This version in English consolidates as an effort for more and better accessibilities. We understand the importance of extend our academic networks and mark the beginning of partnerships in internationalization processes of our researches groups from Brazil and Portugal.