

Posibilidades de Facebook en la docencia universitaria desde un caso de estudio

Possibilities of Facebook in university teaching from a case study

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RESUMEN

Palabras clave

Redes sociales, Facebook, educación superior, competencias digitales, formación docente, TIC

El presente estudio descriptivo tuvo como objetivo identificar las posibilidades de la red social Facebook en el ámbito de la docencia. Para ello, diseñamos y validamos una encuesta de reactivos cerrados aplicada a una muestra de 142 docentes del nivel superior. Trabajamos, además, una pregunta abierta a partir de la cual se generaron categorías de análisis que complementaron los resultados cuantitativos representados a través de frecuencias en porcentajes. Algunos de los hallazgos más significativos refieren, por un lado, la alta frecuencia de uso de Facebook (diariamente), y el dominio entre medio y alto que tiene la mayoría de los docentes (90.92%) en el uso de esta red social; por otro, encontramos una amplia variedad de usos de Facebook, tanto en el proceso de enseñanza como en las demás actividades de los docentes, lo cual puede ser del interés de aquellos que quieran implementar esta red social a su práctica. Identificamos algunos factores negativos en el uso de ella, como la falta de estructuración y el exceso de ruido visual. Concluimos que, con una dirección y un diseño adecuados, Facebook puede propiciar ambientes de aprendizaje dinámicos y atractivos para los estudiantes de educación superior.

ABSTRACT

Keywords

Social networks, Facebook, higher education, e-skills, teacher education, ICT

This article presents a descriptive study whose objective was to identify the possibilities of the social network Facebook in the field of teaching. For this purpose, a closed reagent survey was designed and applied to a sample of 142 higher education teachers. We also worked on an open question from which we generated categories of analysis that complemented the quantitative results represented by frequencies in percentages. Some of the most significant findings refer the high frequency of use of Facebook (daily), and the mastery between medium and high that has the majority of teachers (90.92%) in the use of this social network. We find a great variety of uses of Facebook, in the teaching process and in the rest of the activities of teachers, which may be of special interest to those teachers who want to implement this social network to their practice. We identified some negative factors such as lack of structure and excessive visual noise. We conclude that, with a proper direction and design, Facebook can promote dynamic and attractive learning environments for higher education students.

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After fifteen years of hearing how the
Internet has changed our lives,
We can identify that those contemporaneous
“miracles” are Applicable to certain contexts, under
some Circumstances and for specific audiences
COBO, 2010

INTRODUCTION

In Mexico, the use of social networks is an activity that has increased gradually over the last ten years. For example, in 2007, 15% of Internet users in this country had access to virtual communities such as eConozco and Orkut (AMIPCI, 2007). In 2016, the access to social networks (79%) was the main activity of Internet users (AMIPCI, 2016). This implies a 493.75% growth; Facebook continues being the benchmark social network with 92% of users. For Ciuffoli and López (2010), “Facebook is presented as a unified platform that easily articulates a plurality of functions in one single space that were previously separated and which could even compete on the Internet: personal agendas, e-mails, forums and group discussion” (p.114).

With this capacity of penetration, it is frequent that the use of social networks has expanded to the educational environment. Selwyn (2009) and Mazer *et al.* (as cited in Balula & Moreira, 2014), among other authors, point out that in the educational environment, some of the qualities of the social networks may enter in conflict with current pedagogical paradigms, since these networks are informal communication channels and have little structured spaces for academic activities and the teachers can disrupt the students’ expectations when using Facebook. However, Junco (2011) found that the use of Facebook in education has a positive impact on the academic achievement of the students, an idea supported by Amador and Amador (2014), who found that students consider Facebook as a platform beneficial for their career. For López, Flores and Espinoza de los Monteros (2015), “Facebook has educational and administrative applications that help facilitating different tasks beyond immediacy and easiness of access” (p.112); while Christakis and Fowler (2010) support the idea that “social networks are valuable because they can help us obtain what we would not be able to get on our own” (p.44), since they “generate ties of emotional belonging to a specific collectivity or social group with whom we interact” (Area and Pessoa, 2012, p. 4).

In this paper, we support the idea that the risk of integrating social networks into education, even considering the possible inappropriate uses, is far less than leaving it outside this context. Downes (2010) expresses this idea as “the stagnation we create when treating ourselves and our students as passive observers” (p. XIII). Children and youngsters already use these networks for their daily activities, review their accounts and messages several times a day, they access them from their mobiles and tablets they carry with them everywhere, and at school, they are more

interested by these virtual spaces than by the reality they have on the blackboard in front of them; students get bored easily and they need a variety of stimuli; they are impatient and expect an instant and attractive gratification (Balula & Moreira, 2014), which they can get through permanent navigation and ongoing participation on the social networks.

Considering that social networks are present in social groups through different social as well as educational convergence scenarios, it is convenient to identify and analyze the uses the institutions of our country are making of them, which most of the time, they do so without formal planning. As Ellison, Steinfield and Lampe (2007) mention that Facebook constitutes an attractive site for researchers interested in social networks given their utility patterns and technological capacities. Fogg, Bair and Fogg (n.d.) conclude that teachers have expressed their interest in learning how to integrate it into their study programs to enrich the students' educational experiences and increase the relevance of contents, and to encourage them to collaborate with efficiency with their peers, "the growing popularity of social networks underlines the need to incorporate its use as a platform for teaching and doing research on its potentialities on the academic and educational world" (Meso, Pérez and Mendiguren, 2011, p. 144).

The purpose of this paper is to identify the possibilities of social networks in university teaching from the perspective of a group of professors that resort to Facebook in the practice of different activities that include academic and administrative questions. The study environment is the Centro Universitario del Sur de la Universidad de Guadalajara [The Southern University Center of Universidad de Guadalajara], institution that has an extensive background in the use of information and communication technologies (ICTs), since, as of the year 2000, its staff has been working on the design of audiovisual materials, design and online course implementation (2002), the development of MOOC (2015) and has demonstrated the potential of social networks for more than five years (2012).

SOCIAL NETWORKS IN EDUCATION

Only two decades ago, educational institutions were discussing the relevance of ICTs in the teaching and learning processes and other educational activities; at its beginning, there were more detractors than supporters. Nowadays, as Cobo (2010) mentions, "the topic is not reduced to the level of sympathy or antipathy, trust or incredulity one has of technological devices, but it rather refers to the dichotomy between "connected" and "disconnected" (p.132). We all want to be connected, be at vanguard and have this sense of belonging that shelters us and gives us a topic for conversation, even though this is not very often the solution to the conflicts and shortcomings we live in educational systems, since according to Gairín and Darder (as cited in the preface of Majó and Marqués 2002) "a meaningful and developed education in the 21st century

is not the response needed by the individuals that must live in a new century, riddled with new perspectives and emergencies” (p. 8).

Little by little, these educational spaces have been invaded by a wave of technological developments and tools, and this increase in technologies has come most frequently from the students even though teachers have also contributed extensively in their inclusion. The emphasis has been set on the creation and transmission of information, for example, we currently know what is happening on the other side of the world immediately; communication is an activity of all and for all and printed books are losing their previous limelight to give way to e-books and hypertexts that can be updated, analyzed and discussed in the classroom, as well as the developing virtual communities. Meso et al. (2011) point out that “formal education cannot remain uninvolved in the significant changes in the creation, management, distribution and reception of the information. The teaching staff is obliged to rethink constantly the educational implications the technological developments have on society at large, and more specifically on the educational settings” (p. 139).

Under this new technological impetus, social networks have not lagged far behind and have Facebook as their main exponent, a space where interaction with education has become a possibility. According to Duffy (2010), the innovation of Facebook for teaching and learning stems from the capacity to challenge existing learning theories and paradigms based on the permanent communication among people and from allowing students to share information and knowledge within a dynamic and creative network community linked through the personal profiles of the members, associations and groups of interest. As for Siemens and Weller (2011), they point out that “if one sees learning mainly as a social business, as many people do, then the new forms of socialization allowed by social networks seem customized to be adopted by higher education” (p. 159).

As with other technologies and support tools for in-person classes, some basic elements must be observed in order to use Facebook adequately. According to Loving and Ochoa (2011), defining the optimal means of communication and message sending and clarifying all these aspects to the students must be taken into consideration at the moment of incorporating Facebook to an academic environment; this idea is supported by Balula and Moreira (2014), who claim that it is not recommendable to use a great quantity of technological tools to enrich the educational process without explaining their relevance to the students since “the idea is to adapt and select the most relevant technology according to the characteristics of the students” (Cabero, Llorente and Gisbert, 2007, p. 271).

For Siemens and Weller (2011), “networks are defined by attributes of autonomy, resistance reduced to the flow of information, connection facility, organic growth, rapid iteration and ideas and concepts improvement, besides facilitating scalability” (p. 159), which, according to

these authors, can be contrary to the existing model of higher education “in which the structure is defined by the centrality of the educator and the flow of structured content and normally in only one direction” (p. 159).

As for all the technology that is introduced in the educational spaces, social networks must be analyzed from their scopes and possibilities, integration of teaching and learning strategies in line with the educational model of the institution and the characteristics of the students, the technological possibilities of the schools as well as the disposition, capabilities and beliefs of the teachers.

TEACHERS' INTEGRATING ICTs CAPABILITY

Teachers are a group of stakeholders with greater incidence of success or failure in integrating their ICTs project in education; their responsibility is to achieve that the students make a more conscientious, structured and induced use of these technologies in efficient educational practices. To think that a teacher has a secondary role in the educational process is to belittle the intellectual, formative and emotional potential they can offer the students in their learning process, beyond the means they have to access information since “the challenge goes beyond the incorporation or non-incorporation of technology in the classroom: its resides in the innovation of pedagogical practices” (Piscitelli and Adaime, 2010, p. XVI).

Calderhead (1984, as cited in Rivas, 1997) mentions that “professors with the most experience have different schemes of work than novice teachers; this enables the former to judge and act faster before the changing situations in a classroom” (p. 133). This is an important aspect if we consider the assumption that novice teachers are the ones with greater experience in using ICTs and the capacity of older teachers with more years of service in teaching. The point to discuss is that, although technology is gaining space in the education, other factors are essential to generate a good teaching practice. As Rivas (1997) mentions, “there are two major sections that constitute the mental representation of a teacher’s professional activity: knowledge related to his theoretical training (Clark, 1987) and his experience or professional knowledge (Bromme, 1988)” (p. 132). These two aspects influence the way the teacher designs the planning and the intervention in the classroom, assigns values to the functions, distributes teaching and learning activities and design relevant evaluation processes.

In the last decade, some quality standards and levels of competence have been established that help identify the ability required by teachers to use and apply technology in the classroom. The United Nations Educational, Scientific and Cultural Organization (UNESCO) is one of the international organizations that made more proposals for the development of public and institutional policies related to the use of ICTs. In 2008, the UNESCO published a document titled “*UNESCO ICT Competency Standards for Teachers*”, that seeks to combine pedagogical knowledge with the

development of capabilities to integrate ICTs based on the following objectives:

- Contributes to solving teachers training in using and integrating ICTs.
- Contributes to improving the pedagogical practice.
- Contributes to the growing use of e-learning at different levels of education.
- Train teachers based on a theoretical positioning that considers learning as the result of a collaboration process (p. 89).

For Villa and Poblete (2007), “at a personal level, competencies are effective in so far as each one establishes the basis and the reference of his personal development. Hence, we are competent to the extent that we reach effective achievements. The origin of those achievements lies in the enhancement of our personal, individual as well as social qualities”. (p. 23). In general, for Area and Pessoa (2012), the new competencies in the use of ICTs are concentrated in:

- *Instrumental competence*: related to technical mastery.
- *Cognitive and intellectual competence*: learn how to use information intelligently.
- *Social and communicational competence*: abilities to create texts, do collaborative work and interact on social networks.
- *Axiological competence*: acquire ethical and democratic values related to the use of information and ICTs.
- *Emotional competence*: related to a set of affections, feelings and emotional impulses caused by the experience in digital environments.

Cobo (2010) makes a similar classification of the abilities an individual must possess to be considered competent in the field of technology (e-competencies):

- a. *e-awareness*: this cognitive ability consists of the comprehension of the role of ICTs in the information society.
- b. *Technological literacy*: is related to the skilled use of electronic media to study, work and leisure.
- c. Ability to understand, evaluate and interpret information from different sources.[1]
- d. *Digital informational literacy*: is the capability of developing and reproducing new knowledge in different formats supported by the strategic use of ICTs.
- e. *Media literacy*: is to understand how traditional means of communication are being transformed in the electronic media environment (p. 140).

As Cobo (2010) mentions, “in case of adopting the theoretical and conceptual approaches that form the education – technology – competency trilogy, it is essential that this be done in a critical, contextual manner and by having the indicators to evaluate the pre/post impact of these transformations”. (p. 141). With regard to the foregoing, we classify

some areas in which ICTs and the social networks have had a major impact according to the research conducted and discussions held by different authors:

- Uses of ICTs in the teaching-learning processes (T/L), with the contributions of Meso *et al.* (2011), López (2013), Pérez, Lee and De la Cruz (2014), and Rodríguez, Restrepo and Aranzazú (2014), who have identified the scopes of technology to enrich and modify these educational processes. As referred by Rivas (1997), teaching, on the one hand, is thought of as the activities provided by the teacher when showing contents and guiding the student towards the acquisition of a specific cultural baggage; learning, on the other hand, refers to the cognitive processes to attain behavioral changes. [2] In this sense, we can identify at least three elements that should be considered:
 - Teaching strategies that jeopardize didactic and methodological aspects for the development of the curriculum.
 - Learning strategies, understood as the way in which the student arranges and organizes his personal actions and manages the organization of his academic activities.
 - Control and evaluation of the teaching-learning process (Rivas, 1997) to identify achievements and merits, as well as the things to be modified along the process.
- Diversification of the routes of communication and the increase of its intensity, often passing from a face-to-face contact to the utilization of a variety of medias such as e-mail, educational platforms, instant messenger and social networks, t provides students and teachers a narrower relation that may reflect positively on the academic performance of the students (Ellison *et al.*, 2007; Roblyer, McDaniel, Webb, Herman and Vince, 2010; Duffy, 2010; Loving & Ochoa, 2011; Area and Pessoa, 2012; López, 2013; Amador and Amador, 2014).
- Thanks to the implementation of several tutorials and consultations, which have been innovated by the use of ICTs, more specifically with social networks, since success experiences have been documented on individual and group tutorials, attention to concerns and permanent assistance through Facebook, hence, students do not have to go to the campus for the activities aforementioned (Cabero *et al.*, 2007; Amador and Amador, 2014; López *et al.*, 2015).
- Work with peers refers to the work carried out in school as well as that done with other researchers through collaboration networks, participating in forums and related projects, co-creation of documents and collective reflections (Cabero *et al.*, 2007; Duffy, 2010; López, 2013).

Based on the elements developed in this paragraph, Cabero *et al.* (2007) claim that, in a mediated model using ICTs, teachers will perform the roles of:

- Information consultant / learning facilitator.
- Designers of mediated learning situations.
- Virtual moderators and tutors.
- Ongoing evaluators.
- Counselors.
- Evaluator and technology selector.

In regard to the foregoing, it is important to point out that the diversity of uses that teachers may make of Facebook varies according to the experience in the use of other technologies within and outside the classroom, and the results of these applications with the students. However, as Balula and Moreira (2014) mention, the fact that this generation uses ICTs frequently, students do not face difficulties in managing some of these tools, this is why the foregoing researchers suggest that teachers not to select complex tools; that they make sure that the students have technical assistance; that the use of the tools be relevant with the educational objectives that the students will have to attain, and to explain to the students how using one or more tools will benefit their individual learning process.

METHODOLOGY

This is a transversal study with a mixed approach and a descriptive scope based on the design and application of a closed-end reagents (Likert scale) survey that includes an open-end question. The analysis of the information was conducted through frequencies represented in percentage; a post-codification (Borsotti, 2009) was carried out in the analysis of the open-end question that reduced the responses obtained to a classification of a limited quantity of values.

Population and Sample

The initial survey identified the 158 professors of the 520 that constitute the academic staff of the Centro Universitario del Sur in 2013, who made a general use and an intentional (academic) one of Facebook; the former received the link of the survey through their e-mail account, and a total of 142 professors respond to the inquiry; this represents close to 90% of the population (89.87).

Survey Design

Two focal groups, one made up of teachers and the other of students, worked on identifying the elements to include in the design of the survey. The results are presented in Flores and López (2014), and López *et al.*

(2015). Both studies inquire on the main uses made of the Facebook social network, at both personal and academic levels. We added an open-end question to deepen the general comments on the inclusion of Facebook in the teaching practice.

Survey Validation

To validate the survey, we carried out the following procedures:

- The first process referred to the construct validation (Hernández, Fernández and Baptista, 2014) based on the theoretical revision by defining the following dimensions:
 - General data on ICTs: infrastructure, training and frequency of use.
 - Uses of Facebook in the communication processes.
 - Uses of Facebook in the teaching processes.
 - Uses of Facebook in the teaching practice at large.
- The survey was subsequently sent to four experts on the subject to verify the relevance, clarity and extension of the questions as well as the consistency of the different dimensions; the necessary corrections were made based on their observations.
- We applied a pilot test to 32 professors by sending it to their Facebook account. Based on the results obtained, we measured the internal consistency of the instrument by calculating the Cronbach Alpha, and we obtained a value of .964, which is highly reliable.
- We sent a questionnaire to the same 32 professors, who were asked to give their opinion on the clarity of the questions, their wording, spelling, extension of the survey and general comments. We resorted to their observations to design the final instrument which consisted of 35 questions and 105 items.

Application of the Survey

The survey was conducted virtually through the commercial platform SurveyMonkey linked to the professors' Facebook accounts.

RESULTS

The professors who participated in the survey were equivalent in gender; the age was predominantly between thirty-one and forty (45.77%), most professors had six to fifteen years (55.63%) of teaching service; 60.56% were lecturers or part time professors and the remainder of professors had permanent tenure; the same percentage (60.56%) corresponded to professors holding a master's degree. Next, we present the five dimensions worked on in this research with their frequency measured in percentage:

General Data on the Use of ICTs

Authors such as Roblyer *et al.* (2010), López (2013) and Rodríguez *et al.* (2014) highlight the importance of the elements of infrastructure, training in the use of ICTs and the frequency of use to consider that the teachers are making an extensive use of technology in the classroom. Along these lines, 77.86% of the professors have studied some program online, while 60% have given online courses. In regard to other aspects to consider, we found the following:

a) Infrastructure (ICT)

Having the proper technology is a factor that influences the frequency of use as well as the diversity of applications; it is not the same for the teachers to have their own quality equipment and broadband connections than having to borrow equipment or having one that does not meet his capacity, velocity and function needs. 1 [3] In this research, 85% of the professors surveyed had a portable equipment and 73.57% had a PC. On the date on which the survey was conducted, 50% of the professors had a smartphone, data that has been modified since in a recent general survey (2016), 98% of the professors at the Centro Universitario de Sur had this type of device. In regard to the connection to the Internet, 94.29% of the professors surveyed had the Internet at home or in their mobile devices.

b) Training (ICT)

In order for the teachers to make a more extensive use of technology, it is essential that they receive a basic training on how to use it; when asked on the training they received on the use of ICTs, 72.86% indicated having been trained through courses offered by the Universidad de Guadalajara, and only 7.14% said they had not received any training whatsoever. In regard to the foregoing, 52.14% of the teachers said they train continuously in managing and applying ICTs, while 40% do so when they need to learn a new application.

c) Frequency of use (Facebook)

In regard to the frequency of use of Facebook, 94.5% of the teachers access this social network at least once a week (See Table 1), and they do so more often from their home (84.12%), and secondly, from their place of work (53.97%). The device they used most to access Facebook is their laptop (68.25%), followed by the tablet or mobile (60.32%). It should be emphasized that the years of teaching service was a significant data, since most of the teachers with less than five years of service in the educational practice (55.56%) accessed Facebook several times a day, while only 13.3% of the professors with more than twenty years of teaching service did so. However, in regard to the intentional use of this social network – teaching and research activities – the differences among the age groups were not significant in none of the cases.

Table 1. Frequency of Use of Facebook

<i>Frecuencia</i>	<i>Porcentaje</i>
<i>Varias veces al día</i>	35.71
<i>Diariamente</i>	35.71
<i>2 o 3 veces por semana</i>	19.05
<i>Cada semana</i>	3.97
<i>Cada 15 días</i>	3.17
<i>Cada mes</i>	2.38

Source: Developed by the author.

d) Mastery of use (Facebook)

In regard to the use of Facebook, 90.98% of the professors are between the mid and high levels of use, and only 9.02% are considered beginners on this social network. The ratio between the years of teaching service and the mastery of use of Facebook is significant ($p=0.00$): 62.96% of the professors with less than five years of teaching service assure having a high level of mastery in comparison with 7.69% of the professors with more than twenty years of service in the same category (high level) (See Table 2). 82.79% of the teachers learned to use Facebook on their own and their motivation was to extend their communication with their families, friends and colleagues (95.09%).

Table 2. Mastery of the use of Facebook in relation to the years of teaching service

<i>Antigüedad en la docencia/ dominio de uso de Facebook</i>	<i>Alto (%)</i>	<i>Medio (%)</i>	<i>Deficiente (principiante) (%)</i>	<i>Nulo (%)</i>
<i>Menos de 5 años</i>	62.96	33.33	3.70	0.00
<i>De 6 a 10 años</i>	50.00	47.50	5.00	0.00
<i>De 11 a 15 años</i>	20.00	63.33	16.67	0.00
<i>De 16 a 20 años</i>	16.67	75.00	8.33	0.00
<i>Más de 20 años</i>	7.69	76.92	15.38	0.00

Source: Personal development.

Uses of Facebook in Communication Processes

a) Frequency of interactions

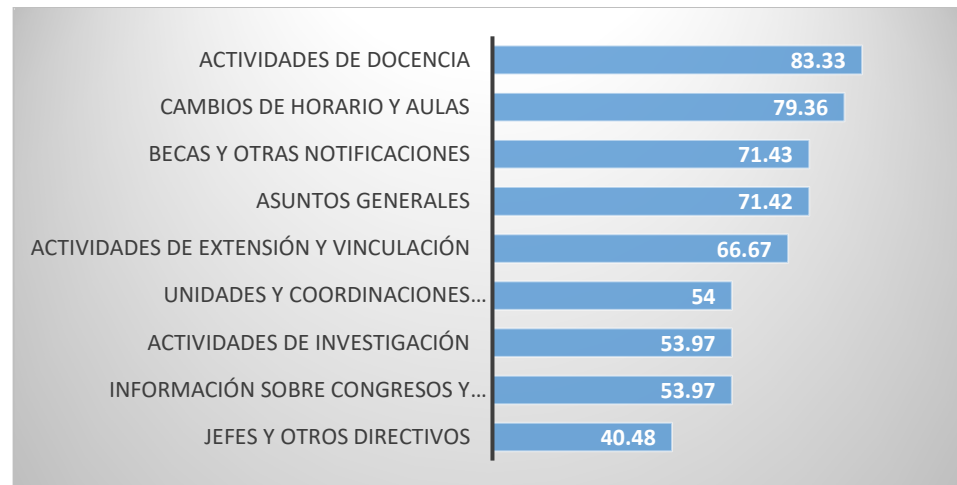
The immediacy generated through the use of ICTs is one of the most noteworthy characteristics that support the students' learning process in receiving a fast response to their concerns or feedback to their comments. In this sense, 71.42% of the teachers claim to have contact with their students on a daily basis through Facebook, and, in some cases, even on weekends; on the other hand, 16.67% do not have any interaction with their students but they admit resorting to this social network for other uses.

b) Diversity of communication with students

The most frequent uses reported by teachers are those referring to the change of timetables and classrooms, information of congresses and symposia, as well as scholarships and other notifications (See Graph 1).

c) Communication with Administrative Bodies

We include the communication with the different units and administrative departments of the institution, as well as the communication with superiors and other directors (See Graph 1).



Graph 1. Uses of Facebook in communication processes.
Source: personal development.

Uses of Facebook in teaching processes

a) Methodological aspects

One of the changes introduced by the use of Facebook is related to the work methodology of teachers and students, such as the creation of discussion

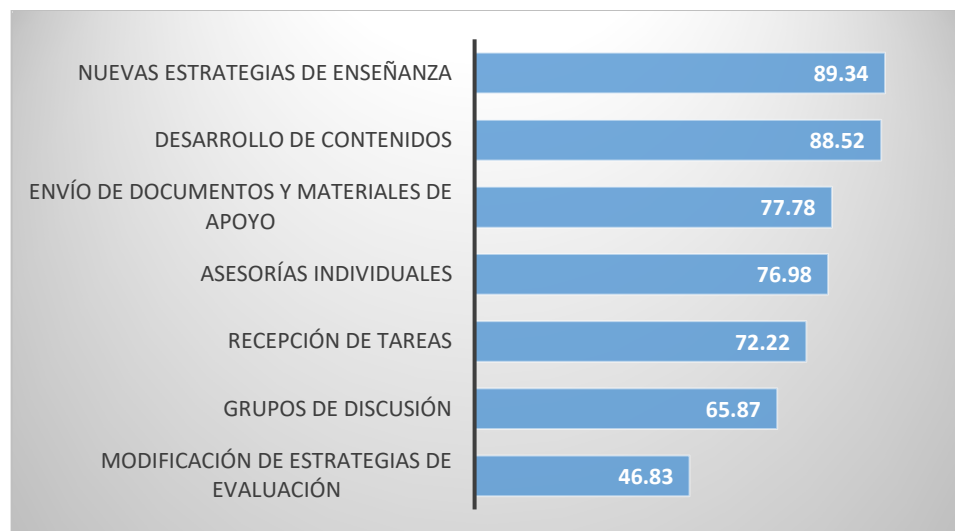
groups on specific topics, the sending of documents and support material and reception of assignments (See Graph 2).

b) Evaluation Aspects

Through different activities carried out on Facebook and the innovation of methodological aspects, a group of teachers has modified their evaluation strategies by considering the participation to forums, the creation of collaborative work groups and the evaluation of the assignments sent through this social network in the students' final score (See Graph 2).

c) Didactic Aspects

As we have mentioned in the first paragraphs, the didactic (practice) and pedagogical (theory) aspects are one of the pillars of the teaching processes; therefore, their adaptation to technological means with the appropriate contextualization is essential. In this research, some teachers have developed course contents through Facebook and have implemented new teaching strategies that imply the permanent interaction on this social network. If students need individual consultations, some teachers have even planned face-to-face sessions to work with them and, thus, facilitating the feedback process beyond the classroom (See Graph 2).



Graph 2. Uses of Facebook in Teaching Processes.

Source: Personal development.

Other uses of Facebook in the teaching practice

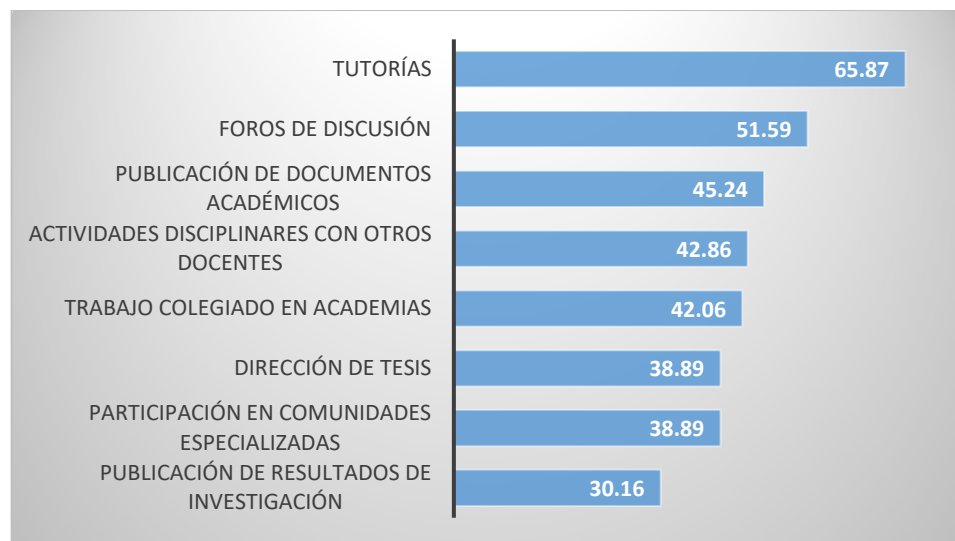
a) Collaborative Work

Teaching includes different activities that go beyond mere teaching such as school meetings for the revision and updating of the curricula; even

though very few teachers use Facebook for this purpose, they have developed other collegiate activities such as network discussion and work forums through specialized communities with the purpose of disciplinary or pedagogical updating (See Graph 3).

b) Implementation of Tutorials and Thesis Direction

Tutorial is an activity that is gaining momentum in higher education institutions, and Facebook has been considered an adequate platform for such purpose. In this research, Facebook has been used by some teachers to implement tutorials, while a minority of them direct theses. This has allowed students to express their concerns to their professors without having to make an appointment or going to the institution to do so. (See Graph 3).



Graph 3. Uses of Facebook in different activities of the teaching practice. Source: Personal development.

General Comments on the Use of Facebook in Teaching

In this section, we consider all the responses to the open-end question given by the informant units (Borsotti, 2009), and gathered them under the following categories:

a) Facebook as communication facilitator

The majority of teachers consider that the main benefit obtained from the use of this social network is to facilitate communication with students since they can inform the students immediately of the changes in the curricula, timetables and work spaces. They take into account the need to establish precise guidelines, especially in using language adequately and that the topics refer to assignments and not to social matters, even though

some teachers have indicated to have used this network to counsel and give personal advice to students that have requested such services.

b) Need of Training for the Adequate Use of Facebook in Education

Some teachers suggest that institutions provide them with specific institutional policies to give courses with didactic and pedagogical orientation and to also have an adequate planning and guidelines in order to make an adequate use of Facebook in their teaching processes; this would give them a greater support to introduce them into their teaching.

c) Negative Elements of the Use of Facebook

Few teachers (18%) have identified negative practices with the use of this social network, such as the excess of visual distracters that may cause attention deficit or the addiction that some students acquire by wanting to be connected all day long. The teachers claimed that the lack of structure of this social network represented another negative element. At a lesser degree, teachers identified the improper use of language by some students.

CONCLUSIONS AND DISCUSSION

Ten years ago, when social networks began to proliferate in the virtual space, they only included social activities such as profile interchange, general data and other personal matters, actions identified by Roblyer *et al.* (2010), as the most common among university students. Very little was thought of them as tools that could be included in educational spaces to stimulate interactions among students, teachers and administrators, to discuss topics of some assignment, to interchange documents and generate a collective construction of ideas and learning scenarios. Given the short period of time of their application to teaching, Siemens and Weller (2011) point out that “we have barely started to explore the impact of – social and technological – networks on teaching and learning” (p. 159); hence, studies such as this one may be useful to begin or to continue similar researches.

In this research, the actions most frequently carried out by teachers refer to communication, whether among peers, with students or with the principals and administrators of institutions, to exchange opinions, give students instructions, discuss topics and solve concerns about assignments. According to the data obtained, 87.7% of teachers believe that the communication with their students has improved with the use of Facebook, since it is a media that can generate spaces to build trust (Ellison *et al.*, 2007; Roblyer *et al.*, 2010) and immediacy, besides increasing and enriching the relation between teachers and students (Selwyn, 2009; Roblyer *et al.*, 2010; Loving and Ochoa, 2011; Amador and Amador, 2014).

Amador and Amador, (2014), in their study, pointed out that students consider Facebook as a mechanism to respond to some of their questions

on guidance; however, they are not interested in trusting solely Facebook for all their needs of academic counseling. Roblyer *et al.* (2010) highlighted that communicating with the principals and administrators of an institution through Facebook, has been one of the actions that has facilitated the students' transit in the academic environment. Ellison *et al.* (2007) also share the idea that Facebook has served to reduce the barriers of participation of some students who, otherwise, would have avoided initiating communication or responding to others. The possibilities this network offers have encouraged this type of students to open up.

We observe that, in addition to communication, there are activities that are carried out more frequently than others, such as the sending of materials (77.78%), the reception of assignments (72.22%) and the individual work sessions (76.98%); among the least frequent are the thesis direction (38.89%), the publication of research results (30.16%) and field work (38.1%), such as interviews and survey application. Other elements pointed out by the 142 participating teachers have been retrieved as follows:

- 91.67% of the teachers consider that Facebook can be a fundamental support for the learning process of the students; this is reflected, among other actions, in an increase of collaborative learning (93.33%), since "when the teacher places the student in the center of the process and adapts his teaching strategies to the social network environment, a true educational experience is achieved " (Esquivel and Rojas, 2014, p.10).
- Teachers perceive the enthusiasm of students in creating their own learning spaces, such as forums, queries and comments (92.5%), which facilitates participation in the spaces that support their courses (85.83%). Siemens and Weller (2011), who also share this point of view, consider that the "tasks that were previously the responsibility of the faculty are now under the control of the students: searching for information, creating spaces for interaction, establishing learning networks, etc." (p. 158).

Knowing a technological tool is one of the elements that teachers indicated as fundamental; 92.86% of the teachers surveyed have taken courses on the use of ICTs and those remaining are self-taught; 92.14% are updated in the management and application of ICTs, either on an ongoing manner or sporadically, when they need to know a new application, essential elements to expand the diversity of uses (López, 2013). Age was another factor that influenced a greater frequency and diversity of uses of Facebook, a fact that is consistent with the findings of Rodríguez *et al.* (2014). 96.03% of the teachers use Facebook for personal uses, especially for activities related to communication; hence, by integrating this social network to their educational practice, they already knew its scope and possibilities.

Teachers have highlighted some negative elements they have identified when interacting in these virtual spaces; the lack of structure, inappropriate language and visual noise are elements that have also been discovered in other studies from the perspective of the students themselves (Selwyn, 2009; Roblyer *et al.*, 2010; Loving and Ochoa, 2011; Flores and López, 2014). However, "the purpose of social networks is to transmit positive and desirable results [...] To a certain extent, the transmission of negative behaviors and other adverse phenomena are mere side effects we must tolerate to take advantage of the networks" (Christakis and Fowler, 2010 p. 303). The discussion does not revolve solely on the effectiveness of Facebook in education, but rather on the relevance and efficiency of its applications in the pedagogical field through actions planned so both students and teachers accept them as part of their educational processes, and institutional policies are essential for the proper use of social networks in education, as Junco (2011) pointed out.

In any case, in order for Facebook to have a positive impact on these processes, teachers must consider their incorporation into the academic planning at the beginning of each school year and they must not integrate activities through this social network as the course program progresses and without the institutional agreement throughout the educational institutions, as concluded by Punie *et al.* (2006, as cited in Balula & Moreira 2014), for whom the use of ICTs in education will only produce the desired effects in the learning processes if they are accompanied by the necessary social and institutional changes.

Limitations

In this study we have identified the actions that the teachers of a university center of the Universidad de Guadalajara carried out through Facebook. One of the limitations is the number of participants and the fact of belonging to a single educational institution. We believe that by applying the survey to a larger number of participants belonging to various institutions may provide generalized data. Another limitation was to include only some common aspects of the teaching process and to set aside the students' insights, which would give a general picture of the possibilities of Facebook in higher education.

[1] For Piscitelli (2010), “la información presupone la consideración de una realidad independiente del sujeto a la que éste puede acceder mediante la puesta en práctica de determinadas competencias y habilidades cognitivas complejas. Así pues, dado que existe un saber-objetivo, éste puede ser enseñado a condición de que el sujeto adopte una posición activa en el propio proceso de aprendizaje” (p. 17).

[2] As regard Piscitelli (2010), “el aprendizaje es un proceso dinámico e implica la selección y organización de la información por parte del sujeto. Desde estos supuestos cognitivistas, el educador debe procurar hacer accesible, inteligible, el objeto de enseñanza” (p. 18).

[3] Los dispositivos de acceso a internet se han modificado en los últimos años; en 2008, la mayoría de los usuarios accedían a través de una PC o Laptop, y solo 6% de los usuarios de telefonía celular accedían a internet a través de su dispositivo móvil (AMIPCI, 2009). En 2016, la cifra de los usuarios de internet que se conectan por medio de sus teléfonos inteligentes ha aumentado a 77% (AMIPCI, 2016), lo que refleja la posibilidad de conectarse desde cualquier lugar y a toda hora.

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