Does Facebook provide educational value? A critical review of theoretical and empirical advancements

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ABSTRACT
Facebook has received considerable attention from a number of research areas such as social and behavioral sciences, economics and law, business and marketing, and dozens of papers have also appeared in specialized journals and have been presented in thematic conferences in the field of education. However, the educational value of Facebook has not been fully confirmed, and results from the mainstream educational paradigms are contradictory. Generally, the literature suggests that Facebook is mainly used as a tool supporting existing social relationships and enabling the maintenance of social capital, and published reviews have emphasized how the literature has devoted particular attention to students’ usage profiles and extent of Facebook use, students’ attitudes toward Facebook, and its effects in terms of academic performance and affective outcomes. However, a number of experiences related to educational usage of Facebook as a technology-enhanced learning environment are flourishing. These latter studies account for learning experiences whereby Facebook has been used as a unique, or at least as one, learning management system tool, or as a platform for educational purposes. This seems to indicate that there is a need for a better understanding of whether and eventually how to use Facebook in education.

This chapter focuses on these issues trying to provide a wide overview of the current literature on the education value of Facebook through both theoretical positions and empirical findings, outlining a map of the most common educational uses of Facebook, and at exploring the extent to which Facebook’s pedagogical potential - usually mentioned in the literature - is actually translated into practice. Further a few preliminary guidelines about Facebook usage will be provided. The chapter finally provides some hints about emerging trends and areas that would deserve further research, such as professional development and academic practice and location-based learning.

INTRODUCTION
Of the various online social networking sites (SNS), Facebook is now the most popular, with one billion active users per month (Facebook, 2012). To date, Facebook has received considerable attention from a number of research areas, ranging from social and behavioral sciences, economics and law to business
and marketing. Indeed, in the social sciences there is a huge amount of research about the implications of Facebook for identity and self-presentation, friendship articulation and privacy concerns (see Wilson et al., 2012).

Dozens of papers have also appeared in specialized journals and have been presented in thematic conferences in the field of education, with contrasting results in terms of Facebook’s educational value. Up to now, the focus has mainly been on students and teachers’ usage of social networking sites (Hew, 2011; Yang et al., 2011) with a special emphasis on teacher/instructor presence and self-disclosure (DiVerniero & Hosek, 2011; Mazzer et al., 2009), students’ attitudes (Espuny et al., 2011), impact on academic performance (Kirschner & Karpinski, 2010), appropriate professional behavior (Ferdig et al., 2008; Hutchens & Hayes, in press), or as a tool of professional development in lifelong learning (Pimmer et al., 2012; Ranieri et al., 2012).

Generally, the literature suggests that SNS are mainly used in education as tools supporting existing social relationships and enabling the maintenance of social capital (Ellison et al., 2011), but their value as a learning environment is still questioned. On the one hand, scholars have cautioned against using Facebook for educational purposes (e.g. Selwyn, 2009). Since students seem to be reluctant to use it for academic purposes, it is suggested that the focus should move away from its educational uses and consider Facebook as a place for socialization (Madge et al., 2009). On the other hand, scholars have emphasized the potential of social networking sites for learning in so far as they would support ‘the process of building networks of information, contacts and resources that are applied to real problems’ (Anderson & Dron, 2011: p. 87). As also pointed out by the connectivist approach (Siemens, 2005), the shift of focus from the group to the network as the locus of learning relies on a concept of learning based on exploration, connection, creation and evaluation within networks that connect people, digital artifacts and content.

However, regardless of scholars’ views on the topic, we should indeed recognize that the number of people using Facebook is growing rapidly with a very high adoption rate. This could provide, for instance, an opportunity for blended and distance learning in so far as people would already be familiar with the features of this tool, reducing the risk of technological frustration which very often undermines the success of learning at a distance. Another element that must be acknowledged is that there is an increasing amount of experience whereby Facebook has been used as a unique, or at least as one, learning management system (LMS) tool, or as a platform for educational purposes. This seems to indicate that there is a need for a better understanding of whether and eventually how to use Facebook in education. This chapter aims at providing an overview of current literature on the education value of Facebook through both theoretical positions and empirical findings, outlining a map of the most common educational uses of Facebook, and at exploring the extent to which Facebook’s pedagogical potential - usually mentioned in the literature - is actually translated into practice. First, it will present and discuss the current debate around the educational value of Facebook, then it will attempt to synthesize the main empirical results emerged in the current studies on Facebook as related to academic performance, as a communication tool and as a technology-enhanced learning environment. The chapter will then provide a few preliminary guidelines about the use of Facebook for educational purposes and finally suggest new areas of interest for further research.

BACKGROUND OF THE REVIEW

Though relatively a young field of study, there are already a number of reviews that try to provide an overview about the educational uses of Facebook (Aydin, 2012; Hew, 2011; Yang et al., 2011). In one of these first systematic studies about the use of Facebook by students and teachers in relation to teaching or learning purposes (Hew, 2011), the main motive for Facebook use was identified as to maintain existing relationship with known people, whereas very few education-related activities were found. This latter result is supported by those studies according to which students mainly view Facebook use as fun and not something serious, thus confirming previous literature that Facebook has very little educational
use. Previous studies had found very few educational-related activities, because students’ perception of what the site is to be used for are very different from academic work, thus tending to purposely demarcate boundaries to keep social life and study separate (e.g. Madge et al., 2009), or because most of the education-related use reported in the past tended to center upon course or department related administrative matters (e.g. lecture schedules, etc.) (e.g. Selwyn, 2009) instead of the pedagogical aspects of teaching and learning.

Other reviews have stressed references to those studies that dealt with the reasons to use Facebook, the harmful effects of the site, the effects of Facebook on culture and language and teaching and learning (Aydin, 2012), or the learning outcomes in terms of performance and affective ones and the factors affecting the use of Facebook for learning purposes, such as trust and privacy issues, personality factors and pedagogical issues (Yang et al., 2011).

Nowadays the number of studies about Facebook as a learning tool with which to design a learning experience is flourishing. More recent reviews about the educational value of Facebook as a technology-enhanced learning environment (Manca & Ranieri, in press) have explored to which extent the pedagogical potential of Facebook, as illustrated in many theoretical positions, is actually translated into practice. Results of the sample considered have shown that pedagogical affordances of Facebook have only been partially implemented and that there are still many obstacles that may prevent a full adoption of Facebook as a learning environment such as implicit institutional, teacher and student pedagogies, and cultural issues.

Anyway, the rapid pace with which results of systematic reviews are highlighting a change of interest by educators and instructors, especially in the higher education sector, denotes a growing interest towards social networking sites for learning and identification of the potential benefits of Facebook as an instructional tool. Since Facebook has grown in size and scope and has dramatically increased in features, results of more recent studies should be confronted carefully with those achieved at early times, when the initial connection to a university setting might have made instructors think that it would have been also naturally appropriate for educational uses (Allen, 2012). Today, Facebook is changing the notion itself of social networking since the boundaries between online communication and offline life have been progressively blurred if not cancelled, and thus questioning if it can still be considered a social networking environment or even a new kind of online entity of which social networking is just one. Researchers should so be aware of this fast evolution in scope and features when empirical results also achieved in the short time frame of Facebook life are confronted.

In the following a number of recent positions are reported that underline the potential of Facebook, and open social network sites in general, for educational exploitation. A section on these theoretical suggestions is followed by one devoted to some of the many studies that have investigated the use of Facebook in relation to academic performance, as a communication tool and a learning environment, from teachers’, students’ and academic staff’s perspectives.

WHAT THE THEORY SAYS ABOUT THE EDUCATIONAL POTENTIAL OF FACEBOOK

Many scholars have outlined the benefits of using social networking sites for teaching and learning. In her paper on how these tools can serve as sites for student learning in ways not currently assessed, Greenhow (2011) presents concrete examples of how SNS, such as MySpace and Facebook, might be re-envisioned as support for revised student learning outcomes: (1) SNS can support learning, providing social learning functions such as peer/alumni support to manage the ups and downs of high school or college life, or helping with school-related tasks; (2) SNS can stimulate social and civic benefits, online and offline, which can have implications for education, such as persistence in educational settings that may increase when learners feel a strong sense of connectedness and belonging. In Greenhow’s perspective, one of the major contributions that these environments can offer is related to the third dimension of learning: that is, how ‘people learn with whom, or learn to be contributors to local and global society with what degree of...
influence’ (p. 8), next to learning discipline content and ‘learning as becoming’. Some experiences described by the author illustrate how environmental activism was promoted through a series of actions addressed to young people within an application implemented in Facebook (see also Robelia et al., 2011). Thus, role modeling, civic engagement and spread of practice could be valuable not only in education practices but also as components of a participatory democracy.

On the other hand, Halverson (2011) discusses the promise and perils of integrating social networking technologies into formal learning environments through a number of trade-offs that emerge when patterns of use of technologies for learning in formal settings collide with patterns of use of technologies for learners, whereby learners are put in control of the instructional process. The tension happens when patterns of participatory culture, mostly developed outside the context of formal learning, are confronted with the needs of education. The author lists at least three major trade-offs. The first is that of privacy and redundancy, which oblige instructors to protect students’ privacy. If, to counterbalance this effect, instructors choose closed SNS such as Ning, the result is that users already engaged in open SNS desert these spaces owing to lack of personal energy or bandwidth to participate in another one. One design solution could be to create a private group within an existing site like Facebook. Another trade-off relates to mixing participatory culture patterns with those of schooling, which results in some conflict between the learning goals established by designers/instructors and those defined by learners. Whereas closed platforms ensure that users concentrate on the features that best serve the institutional learning goals, in open platforms users gravitate towards features that may not serve the needs of learning goals, thus resulting in distracted behaviors. One solution would be to address those features that users already see as interesting and important. Finally, if in SNS users construct their online identity as a holistic framework, in formal learning environments students are usually asked to construct their identity-as-students. In order to overcome this opposition, learning environments should allow participants to play with identity as a broad, psychological construct of selfhood rather than identity-as-student in specific content areas or settings.

The potential of SNS has also been stressed in the light of e-learning provision. Anderson (2009) outlines how social networking serves the three broad functions of socializing, sharing and sojourning. Given the traditional limitations of e-learning programs mainly focused on content with limited interactions, SNS may encourage learners to share personal and professional interests and aspirations usually excluded from e-learning settings. They also may allow them to store, organize and annotate network resources created by external participants, thus extending sharing beyond traditional boundaries. Finally, SNS may allow students to manage working activities such as scheduling, meeting online and engaging collaboratively through brainstorming, mind-mapping, etc., in a more efficient way. Anderson also cautions against certain disruptive effects, such as questioning issues of privacy, individual and institutional control, providing tools that can be used for plagiarism, cheating, harassment and other types of academic and social misconduct.

In relation to the tertiary education sector, Duffy (2011) stresses three key advantages of social networking technologies: (1) they offer a set of affordances for the creation of collaborative activities that occur online; (2) since many students are already using them for socialization and communication purposes, they will be willing to use these sites in learning as well; (3) they are free to use and come without the restrictions usually found in many institutional learning management systems. Duffy also provides some practical tips on how to manage the implementation of these environments, such as the need to keep social and personal aspects separate from professional or academic ones by creating a ‘teacher’ profile separate from one’s ‘personal’ profile or asking the students to create a limited profile with controlled settings and adding the teacher to a limited profile list. Another suggestion is establishing Facebook groups to facilitate group work and collaboration around a particular topic or assignment.

From a different perspective, Siemens and Weller (2011) emphasize how SNS can be a real benefit for learners since they are encouraged to carry out peer-to-peer dialogues, promote the sharing of resources, and foster the development of communication skills. These skills seem to be easily and rapidly accomplishable thanks to SNS, notwithstanding the efforts made in the last decades by conventional learning management systems. When teachers prefer education-specific SNS (e.g. Elgg), they are almost
entirely unused. The reason is that social networks require a critical mass that cannot be ensured by
closeness and time-limited use so users move elsewhere. Another issue for higher education is that
successful SNS blend personal and professional life. The use of multiple accounts to differentiate
personal and professional posts, commonly suggested by institutions to their academic staff, may remove
the challenge of mixing personal and professional identities, but ‘the result is a fairly dry, bland set of
communications that seems at odds with the form of dialogue found in these spaces’ (Siemens & Weller,
2011: p. 166). What the authors emphasize is that higher education that has adopted some form of online
learning has always tried to reproduce the traditional format of learning settings, such as the metaphor of
the physical campus. Conversely, SNS blur the distinction between learning spaces, social spaces and
leisure spaces, thus suggesting that mixing all sorts of activity together can be useful. Albeit educators
today are challenged to appropriate popular tools such as Twitter and Facebook for academic use, they are
also aware that ‘conflicts and tensions arise as the structure of networks clashes with the hierarchical
structure of traditional education’ (Siemens & Weller, 2011: p. 166). This implies that structures of power
and tradition may be subverted with unpredicted consequences.
In line with Siemens and Weller’s argumentation, also Allen (2012), in discussing Facebook affordances
for education, heavily focuses on the way that Facebook might be seen as blurring the boundaries
between formal and informal learning, between instruction and learning. The same existence of Facebook
in the framework of the Internet’s social effects ‘refashions academic sensibilities towards students,
online and flexible learning, and the use of time and place to manage the experiential dyad of learning-
teaching’ (p. 213). This occurs despite the numerous attempts by academic faculty to make Facebook fit
into pre-existing understanding of education and established educational practices. Also when seeking the
benefit of blurring the boundary between informal and formal learning, teachers adopt ways that allow the
contradictory demarcation of authority between teacher and student to be maintained. On the contrary,
according to Allen, any use of Facebook will necessarily confront both teachers and student with the fact
that real identities, real places and persistent communication required to be managed in new ways: ‘its
design and social affordances are all about confusion and overlap, while its computer mediated format
also trumps the traditional use of time and place as a means of enforcing the separation between people
based on role and function’ (p. 223). The argument that Web 2.0 tools and SNS are reworking social
divisions and reconfiguring human and social relations is still questionable, however, and remains largely
unanswered.

MAPPING EMPIRICAL RESEARCH ON FACEBOOK AS AN EDUCATIONAL TOOL
In the following we will provide an overview of the most common issues usually associated with
Facebook in education: 1) Facebook and academic performance; 2) Facebook as a communication tool in
education; 3) Facebook as a learning environment; 4) Facebook for specific learning purposes
and learning processes. Though these sections do not provide results of systematic and extensive search, they
are indeed representative of the major studies conducted in the several areas of interest.

Facebook and academic performance
Though not strictly associated to the educational uses, the area of studies that investigate the relationship
between Facebook use and academic performance provide some interesting hints about the potential or
harmful effects of the site in educational terms. Since its birth, Facebook has been investigated to achieve
a balance between the perceived costs and benefits of using it in relation to academic performance and
achievement. The aim of these first studies was to demonstrate that students that were more intensive
users of Facebook or of SNS exhibited worse results in terms of academic performance when compared
with non-users. One of these studies (Kirschner & Karpinski, 2010) especially explored the disruptive
role played by Facebook on multitasking as associated to classroom and study work activities. A negative
relationship between Facebook activity and studying or attending a lecture or workgroup was found that might be an indication of a deleterious effect of trying to implement these two processes simultaneously. Subsequent studies developed over those primary explorations have elaborated much more sophisticated survey tools able to include further dimensions, such as attention span or deficit, student demographic characteristics, time management skills, etc. (Paul et al., 2012). Results show that time management skills, student characteristics and time spent on SNS have direct impact on academic performance, thus confirming results of previous studies. Also Junco (2012b) found that time spent on Facebook and checking Facebook were strongly negatively predictive of overall college GPA (grade point average), congruent with Kirschner and Karpinski’s study (2010), although time spent on Facebook is slightly negatively related to time spent studying.

Some of these studies (Kirschner & Karpinski, 2010) also recognize that certain personalities of Facebook users may be inclined to use Facebook more than others. For instance, users that are usually more involved in extracurricular activities suggest more social extraversion thus using Facebook to maintain or expand their social networks. This hypothesis seems to be in line with those studies that underline the benefits of Facebook in building and maintaining different kinds of social capital (e.g. Ellison et al., 2007; Steinfield et al., 2008) and that identity information in Facebook may serve as a social lubricant, encouraging individuals to convert latent to weak ties and enabling them to broadcast requests for support or information (Ellison et al., 2011).

More recent studies, next to detrimental effects of Facebook usage on study time and learning results, have also emphasized the benefits that especially first year students may have in the use of Facebook to familiarize with the campus system, colleagues, teaching and learning methods. In one of these studies (Gafni & Deri, 2012) benefits were classified into tangible and intangibles; examples of the first type include getting academic information and support, academic relationships between students, work search and time saving in accessing educational content available as compared with other sources of information, whereas intangible benefits are acquiring self-confidence, self-esteem and enlargements of social circles. Some of these benefits have been studied especially in relation to freshmen students and the use of SNS to enhance their first year experience by immersing students into university culture through social and academic interaction between peers (McCarthy, 2010), and in relation to the support provided by SNS for ‘emerging adults’ in their educational and professional choices at the transition points of their life (Frozzi & Mazzoni, 2011).

These data are somewhat supported also by those studies that recently have investigated the relationship between Facebook use and student engagement, but especially what kind of activities students do on Facebook (Junco, 2012a; 2012b). Results show that both time spent on Facebook and time spent engaged in certain Facebook activities can be positively predictive or negatively predictive of engagement depending on the activity. Certain uses of Facebook (e.g. posting status updates and chatting) result in negative academic outcomes, while others (e.g. checking to see what friends are up to and sharing links) result in positive ones. Thus, in the author’s view, using Facebook in and of itself is not detrimental to an academic outcome such as GPA or a time on task outcome, like time spent studying, but it can indeed be used in ways that are advantageous to students, such as using Facebook in courses or to advertise campus events or services. Additionally, faculty are advised to use Facebook for activities already experimented in other social media tools such as Twitter to improve engagement and grades (Junco et al., 2011).

From this perspective, a growing awareness that students could be helped by higher education administrators, faculty and staff to use Facebook in ways that are beneficial to their engagement and to their overall academic experience is increasing. Examples of kind of interventions are already being provided by scholars, such as encouraging students to develop metacognitive and self-regulation skills, able to manage the perils and challenges of multitasking (Rosen et al., 2013), as also evidenced by some studies (Rouis et al., 2011).

Facebook as a communication tool in education
Since the very beginning of diffusion of Facebook for academic practices, a number of studies have been carried out to explore students’ and teachers’ disposition to adopt the social networking site to manage course or department related administrative matters, and in general to facilitate the communication between teachers and students in academic aspects. The studies reported in the following testify the lack of consolidated findings able to provide some settlement on a positive or negative impact of Facebook usage to address the issue of teacher-students Facebook mediated communication. Thus they only serve as one sample of different kind of results on this issue.

The pioneering study by Selwyn (2009) on students’ use of SNS has highlighted the strong resistance of students to universities and lectures making formal usage of SNS, suggesting that these practices would better continue to be unabated and firmly ‘backstage’. In their study, Madge and colleagues (2009) documented a similar attitude. Students declared that Facebook should mainly be used for social reasons, not for formal teaching purposes, though it was sometimes used for informal learning purposes. The authors recommend ‘caution about moving into a social networking space that students clearly feel is ‘theirs’ for social rather than academic purposes’ (p. 152).

In more recent times, these sort of results seem to be confirmed by one further study (Cheung & Vogel, 2011), according to which students with a higher Facebook Intensity would be more willing to use Facebook to communicate with their teachers for academic and project-related matters. However, concerns about privacy related to personal relationships and photographs seem to mitigate this willingness thus suggesting that academic and social life should be treated separately.

Different results, as anticipated above, rely on different contexts and studies. In one of them, a survey addressed both to faculty and students highlight how students are much more likely than faculty to use Facebook and similar technologies to support classroom work, whereas faculty members seem more likely to use more traditional technologies such as email (Roblyer et al., 2010). Also Ismail (2010) found that students are likely to use an SNS if their friends do the same; moreover, the technological support provided by the institution affects their intention more than their personal use, whereas the construct more associated with their intention of using Facebook has turned out to be performance expectancy. These results highlight that attitudes towards an SNS for learning purposes and willingness to use it for the same reasons rely on several factors whose internal relationships deserve further investigation.

In another case (Bosch, 2009) students reflected that their use of Facebook for checking class-related material while they were engaging in social communication was also useful. They listed a number of benefits, ranging from identifying and finding learning material, helping friends to answer questions about academic logistics, to connecting with others about holiday projects and sharing lecture and study notes. All the students also stated that the main benefit would be to access tutors and lecturers instantly, in an informal and less pressured online environment. This benefit is, however, counterbalanced by the lecturers’ unwillingness to ‘friend’ students, as well as by students’ unwillingness to accept friend requests from lecturers.

Finally, one positive experience is offered by a contribution where Facebook was used for information and support purposes following a natural disaster (Dabner, 2012). A new Facebook community was established immediately after an earthquake, enabling ongoing dialogue and information sharing between staff at the institution and the wider educational community. This case suggest that social media can effectively support communication and collaboration in higher education contexts in times of crisis, providing that a defined integrated communication strategy would be adopted by the institution that also includes the range of social media already used by students.

**Facebook as a technology-enhanced learning environment**

A growing interest among teachers and educators in the potential of Facebook as a teaching and learning tool has lead scholars, in the very last years, to focus on its instructional efficacy both as a technology-enhanced learning environment and as a supportive tool for learning (Manca & Ranieri, in press).
Firstly, a number of studies deals with Facebook effectiveness in enhancing the social dimension of learning along the continuum from online discussion to more structured activities such as online collaborative learning. Overall, they come up to contrasting conclusions with some studies emphasizing Facebook affordances in supporting discussion and community building and others not revealing any particular added value, when compared with other more traditional online tools. For example, in their study on Facebook vs WebCT, Schroeder and Greenbowe (2009) found that the number and the complexity of posts on Facebook were greater and the students used Facebook more dynamically than they did WebCT. Estus (2010) and Sapargaliyev (2012) confirmed this positive trend pointing out that Facebook allows students to discuss in a more open way and improves the development of relationships between each other. More recently, DiVall and Kirwin (2012) and Buzzetto-More (2012) compared Facebook with Blackboard and concluded that students found Facebook more effective for community building in so far as it reinforces interpersonal relationships and supports students’ interaction and engagement.

Positive results have been also found by other scholars, although they cautioned educators against certain oversimplifications. For example, McCarthy (2012) and Wang (2011) underline that Facebook is suitable for cross-cultural collaboration, but instructors have to be willing to use social media for informal communication, whereas LaRue (2012) and Lim and Ismail (2010) found that Facebook has the potential to engage students in meaningful academic conversations but timing and the topics of discussion have a relevant influence on their actual participation.

Moving the focus to collaboration related topics, Lampe and colleagues (2011) found that students are using Facebook not only for entertainment as claimed by media mainstreams but also to collaborate around classroom activities, which may lead to new forms of classroom interactions that support the loosely coupled, time-bound nature of the class as an organization. In a similar vein, Llorens Cerdà and Capdeferro Planas (2011), in their reflection paper on Facebook's potential for online collaborative learning, analyzed both technological and educational affordances of the SNS for collaborative learning. They concluded that, although Facebook is not the best option to develop online collaborative work, due to its design features and because it was not its original vocation, the wide spread of this SNS together with its external connectivity and capacity to support open projects, makes it an option to be seriously considered to support collaborative learning projects. Very recently, Lin and colleagues (2013) explored learners’ online discussion behaviors in a project-based learning activity based on Facebook and found that the most prominent knowledge dimension in students’ discussions was the meta-cognitive knowledge, while the cognitive process was primarily focused on understanding and comprehension. Both results testify that using Facebook to support online collaborative work and discussion not necessarily lead to an intellectual impoverishment of the learning interactions.

Although many studies emphasized the positive role of Facebook in supporting discussion and collaboration among students, there are also studies that lead to the opposite conclusions. For example, in their work on Moodle vs Facebook, DeSchryver et al. (2009) found that there were no differences in students’ perceptions of social presence and the frequency and length of their interactions in the two learning environments. Other critical issues emerged from Kop and colleagues (2011), who tested the use of Facebook in a MOOC course, and reported that, due to privacy or other security reasons, only a limited number of participants joined the Facebook group and used it actively for learning purposes. Likewise Vincent and Weber (2011) refer that almost all the students found Facebook as one of the aspects they liked the least, while Schroeder and Greenbowe (2009) remind us that, although students in their survey were more active in Facebook than in WebCT, they were not at ease in using Facebook for formal courses. These last studies clearly indicate students’ resistance towards the use of an informal environment such as Facebook for formal activities and institutional courses.

**Facebook for specific learning purposes and on learning processes**
Although there is relatively little research that discusses the pedagogical implications of using Facebook for specific learning purposes, some progresses have been done particularly in the context of language classrooms where scholars unanimously come to the conclusion that Facebook has a positive influence on the language learning processes. In one of the first studies in the field, Blattner and Fiori (2009) suggested that pedagogically meaningful integration of Facebook in the language classroom can develop a sense of community and can also impact the development of socio-pragmatic competence in language learners, which is an essential component of communicative competence. Furthermore, McBride (2009) argued that the typical daily engagement of students with Facebook could be a motivating factor to complete pedagogically useful foreign language experiences on the same website.

Similarly, Shih (2011; 2013) discovered that the use of Facebook in college-level English writing classes could have a positive impact on the development of English writing skills and knowledge. In particular, he found in both studies that incorporating peer assessment, cooperative and blended learning with Facebook improved students’ English abilities and knowledge. Further findings from Wang and colleagues (2011) confirm that engineering students performed better on the English vocabulary after practicing making English sentences on Facebook.

More recently Blattner and Lomicka (2012) investigated the potential benefits of Facebook in language considering the students’ reactions to the use of the SNS as well as the role of Facebook in the new learning spaces. They found that, although students did not have much experience of Facebook for academic purposes, they responded in a positive manner. In particular, they appreciated the possibility to have direct contacts with native speakers and engage authentic discussion on culture and language. From the learning perspective, Facebook was perceived and used as an extension of the traditional classroom where language development can continue in a fun and enjoyable way.

Some studies start dealing with the impact of Facebook on literacy. From a critical literacy perspective, Reid (2011) explored how interpersonal and power dynamics change when tutors and students interact within a closed-group Facebook pages. Through the analysis of tutors and students’ writing on these pages, the author found that new relationships and new forms of interaction, language and texts come out. A new learning space takes shape where students bring their out-of-school literacy practices and feel safe to make their voices heard with a shift in power relationships, identities, norms of communication and modes of learning.

Two other papers focus on the use of specific Facebook applications and the development of particular attitudes. For example, Robelia and colleagues (2011), who reported on the effects of taking part in Hot Dish – a Facebook application relating to learning about environmental issues, found that users increased their understanding of these issues and developed pro-environmental behaviors through participation and peer role modeling in an informal context of learning. Similarly, Krom (2012) investigated the use of the free Zynga computer game FarmVille, which is associated to Facebook, and found that it facilitates active learning in a managerial accounting course, particularly among non-accounting majors, thus offering an alternative way to achieve managerial accounting learning objectives.

A last group of papers which deserve to be considered refers to the impact of Facebook on specific cognitive processes. In a project involving the adoption of Facebook as an educational resource with five dyslexic students, Barden (2012) examined the pedagogical affordances of this digitally mediated environment for critical literacy and found that Facebook revealed to be promising not only for supporting multimodal communication but also because it stimulated or mediated offline conversations, which left no trace on the group’s page while playing a crucial role in the formative identity work. Very recently, Alias and colleagues (2013) examined the effectiveness of Facebook to enhance students’ creativity in the secondary education. By employing a specific Instructional Design Model within the context of an experimental study design, the authors found that the combination between Facebook and the specific instructional model led students using Facebook to better results in terms of creative writing process, creative problem solving and creative productions.

Lastly, Packiam and colleagues (2013) investigated the impact of SNS on cognitive abilities and found that young people who had used Facebook for more than a year demonstrated better results in tests of
verbal ability, working memory, and spelling, when compared to their peers who used it for a shorter time period. Furthermore, longer Facebook use revealed to be linked to higher levels of social connectedness.

**CRITICAL ISSUES AND SUGGESTIONS ON FACEBOOK EDUCATIONAL USE**

Though the use of Facebook in education generates several tensions and requests many trade-offs, as pointed out by Halverson (2011) and Allen (2012), we need to design related pedagogies specifically for learning. From this perspective, as also recently stressed out by some scholars, ‘design becomes as much about understanding and promoting the desired technology-mediated processes and practices as the implementation of a specific technology or orchestration of technologies to address a defined problem or opportunity’ (Ravenscroft et al., 2012: p. 178). It is within this context that we suggest in this paragraph some guidelines about the use of Facebook in education.

As a starting point for undertaking this task, we go back to the theoretical and empirical studies we revised in the first part of the chapter with the aim of critically highlighting the pedagogical affordances and the main concerns that scholars report. In doing this, we will also take into account the contributions that have explicitly formulated some guidelines or suggestions on the educational uses of Facebook.

Among the various papers attempting to provide hints and suggestions for designers and educators, there are two very recent articles (Chen & Bryer, 2012; Wang et al., in press) that, taken together, indicate the complexity of the task. Indeed, while both papers move from similar, though not identical, premises, they come to very different conclusions about some critical issues such as the one relating to the relationships between teachers and students: on one side, Wang et al. (in press) emphasize the need for teachers of keeping separate professional and personal profiles in order to avoid undeserved and unwanted trespasses into teachers and/or students’ personal lives; on the other side, despite the existence of different roles on a formal level, Chen and Bryer (2012) stress the need of ‘keeping natural’ in the use of social networking sites and not upsetting the social context generated by users’ interactions through unnatural or artificial boundaries. At this stage, the diversity in the understanding of some crucial issues should not be denied or simply ignored by assuming that there is one unique solution that always works; on the contrary, it must be recognized as a sign of the complexity characterizing this particular phase where many aspects of the traditional educational settings (from pedagogy to communication, from technology to administration) are called into question, while there are no certain and established answers yet to the several pedagogical and socio-cultural questions concerning the role and the place of formal education today. With this in mind, we shall try in the following to provide a critical synthesis of some main trends emerging in the literature. First, we would like to emphasize Facebook technical and pedagogical affordances as highlighted by some scholars (Idris & Wang, 2009; Llorens Cerdà & Capdeferro Planas, 2010; Manca & Ranieri, in press; Wang et al., in press) (see Table 1).

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<td><strong>Simplicity and speed of use of native tools.</strong> The basic functions of Facebook (wall, discussion boards, photos, etc.) are easy to use, accessible and intuitive. In addition, they allow users to quickly share information, create and manage work groups and so on.</td>
<td></td>
</tr>
<tr>
<td><strong>A high degree of external connectivity.</strong> The enormous expansion of Facebook has forced many external services to adapt to the new social philosophy of the Web 2.0 environment.</td>
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<tr>
<td><strong>Socialization, communication and community building.</strong> It is argued that Facebook supports socialization among students promoting mutual help and facilitating communication and discussion. This reinforces interpersonal relationships and fosters community building, supports students’ interaction and engagement.</td>
<td></td>
</tr>
<tr>
<td><strong>Sharing of resources and genuine materials.</strong> Facebook enhances the</td>
<td></td>
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</table>
opportunity of sharing resources, lectures and study notes. It also allows significant content to be presented by means of genuine materials.

**Social learning and collaborative activities.** In so far as Facebook supports socialization and community building, it provides opportunities to develop social learning and carrying out collaborative activities and project based learning. Despite some limitations due technical aspects (see above), its external connectivity and capacity to support open projects help to manage and develop collaborative learning projects.

**Mixing formal and informal contexts of learning.** The inherently informal nature of Facebook may open the doors to the hybridization of contexts of learning with implications for the types of contents that are shared in it and the roles played by people as well. Students may have the opportunity to be exposed to authentic contents and real experts, and mix rather than separate life and learning, personal interests and educational goals.

As far as critical issues are concerned (Chen & Bryer, 2009; Guy, 2012; Lego Muñoz & Towner, 2011), they can be roughly grouped as below in Table 2.

**Table 2. Critical issues of Facebook use in education**

| **Technological issues** | **Digital divide and incomplete adoption rate.** Although on a global level the technical access to the Internet has been increasingly improved, there are still people who cannot access digital technologies and social media. As a consequence there could be a sort of digital divide between students who have access to Facebook and students who do not. Moreover, despite Facebook is highly spread among college students, there are individuals who have not a profile in this social network site for different reasons such as lack of interest or of skills, they are too busy or simply do not like it. |
| **Management issues** | **Lack of functionalities.** The way and the speed in which posts quickly appear and disappears on the wall together with the lack of a system for tagging, filtering, searching and organizing information make difficult to store information and manage the task of generating, classifying, saving and retrieving knowledge. |
| **Institutional issues** | **Time constraints & Faculty workloads.** Taking care of a relationship and social connections is a time-consuming activity that require regular feedback, attention and commitment. To be active in a social network site users must engage with these behaviors and attitudes. When moving to the educational context, being an active and attentive teacher in Facebook may result in a growth of the workloads which conflicts with time constrains. |
| **Institutional issues** | **Erosion of professional identities.** Since social network sites enable users to share personal information, thoughts, and behaviors, some scholars caution against the risks of accidentally sharing information to an unintended audience with negative implications for the teacher/student relationship. This can happen from student’s side and teacher’s side as well. |
| **Institutional issues** | **To be or not to be a Facebook friend.** Another problem that teachers using Facebook are facing with is whether or not to ‘befriend’ a student. Some scholars pointed out that being ‘friend’ in Facebook has a different connotation from being friend in the real life. Nevertheless, the word ‘friend’ evokes an imaginary that is not appropriate for most student–teacher relationships. In addition, since teachers receive requests for friendship without knowing whether or not the request comes from a student, it may |
happen that he/she risks becoming friend of one student over another, thus discriminating his/her students.

**Facebooking as a voluntary activity?** Being an informal environment where people connect to each other for personal interests and affinities, it is sometimes pointed out that even in the cases in which Facebook is proposed as a learning environment, the participation in it must be kept voluntary. Teachers and educators cannot impose as compulsory the registration to the social network and they must be able to manage the possible consequences of this voluntary participation.

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**Pedagogical issues**

- **Disruptive power of social network sites.** It is reported that teachers often complain that social networks divert students’ attention from classroom participation and ultimately are disruptive to the learning process. It is also underlined that an intensive use of Facebook may have a negative impact on students’ academic performance.

- **Losing the warmth of ‘real’ contacts.** There are also concerns relating to the fact that social networks may discourage face-to-face communication: if, on one hand, online interactions may create a safe space for students who are not at ease with expressing themselves, on the other hand, students are missing the opportunity to learning real-life social skills.

- **Assessment strategies.** The informal nature of Facebook as a learning environment may generate misunderstandings about whether students’ performances in Facebook are assessed or not. There is a need for a clear policy from this point of view making students know if Facebook is used only as a repository for shared works, or if their participation in the group’s activities is also part of the set of assessment criteria.

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**Ethical issues**

- **Privacy and cyber security.** As well known, the Facebook personal profile includes a huge amount of identifiable information and it is believed that it can open the door to sexual predators, cyber bullying and cyber stalking.

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On the premise that both affordances and concerns must be considered for pedagogical design, the following suggestions are provided for the use of Facebook in educational contexts (Table 3).

**Table 3. Suggestions on the use of Facebook in education**

<table>
<thead>
<tr>
<th><strong>Technological issues</strong></th>
<th>Ensure that all the students have an Internet access and verify whether they are registered to the social network or not. Promote the development of teachers and students’ basic technical and social skills in order to participate in the social network sites.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Management issues</strong></td>
<td>Support faculty members in the use of social media, both in terms of technological issues and of pedagogical design through best practices and training. Use social network as an optional tool inside and outside classes. Provide students with alternative assignments if they choose not to participate. However, if the social network site is an essential component of the learning provision discuss with students your pedagogical choice.</td>
</tr>
</tbody>
</table>
### Institutional issues

Implement institutional policies on the use of social networks in the educational environment in light of security/privacy issues, as well as faculty and student support.

Do not underestimate the importance of developing a clear and negotiated view about the student-teacher relationships. Since many things are still changing, there is no optimal consolidated solution yet at this stage. Rather, than acting as if nothing has happened, discuss with colleagues and students as well about roles and cultural norms to reach a common understanding on how to manage personal and institutional life, informal and formal spaces of learning.

### Pedagogical issues

Use social networks as tools to support and facilitate informal discussions and collaborations with clear educational goals.

Foster the development of self-regulation and metacognitive skills to manage potential distraction.

Evaluate students’ reflections on their learning through social networking sites in the form of formative assessment.

Develop assessment strategies that include participation to Facebook activities through formative assessment strategies, such as rubrics, portfolio, and reflections.

Be aware of implicit pedagogies that inform the way in which learning activities and roles are conceived.

### Ethical issues

Develop students’ awareness about the security and privacy issues of posting personal information online.

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**FUTURE RESEARCH DIRECTIONS**

In the following we will outline some areas that are gaining progressive attention in the framework of Facebook usage, with particular attention for professional development and academic practice and location-based learning.

### Professional development and academic practice

Networking is a fundamental aspect in developing a strong professional identity and furthering professional development. From this perspective, the role of social media to support informal learning at work is an important and topical area of research, especially as today we are moving away from formal training and more towards employees learning and developing competencies informally in the workplace (Zhao & Kemp, 2012). Social media and social networking sites may serve different forms of social capital, bridging and bonding, where both have a positive role within a community of individuals in so far as they facilitate coordination and cooperation for mutual benefit (Putnam, 2000). Individual benefits come from the exchange of resources, which can take the form of useful information, personal relationships or the capacity of creating and managing groups, but also employment connections and psychological well-being, such as self-esteem and satisfaction with life.

The notion of social capital has been adopted to denote the use of technologies to expand, enhance and accelerate an individual’s social network with an increase in available information, opportunities and benefits from this wide and heterogeneous network. In particular, Boyd and Ellison (2007) underlined that SNS are typically used by individuals for maintaining offline social relationships rather than trying to meet new people online. In this perspective, SNS are mainly seen as tools supporting existing social relationships and, therefore, enabling the maintenance of social capital (Ellison et al., 2007). However, Facebook also includes features that allow people to create new connections, whose nature may be better described through the construct of ‘latent ties’, defined by Haythornthwaite (2005) as connections that are
`technically possible but not yet activated socially` (p. 137). The information included in an individual’s Facebook profile may motivate users to activate ‘latent ties’, transforming them into the weak ties linked to bridging social capital outcomes. Briefly, although research suggests that the practice of using Facebook to maintain existing social relationships is more common than that of using it to create new connections with strangers, there is also some evidence that ‘users may use the site to convert latent into weak ties’ (Ellison et al., 2011: p. 877). This may be of particular interest in the study of Facebook groups, for instance, where it is highly likely that most members are technically linked but not yet socially connected.

In particular, it seems that something similar to a transition from a pure form of recreational use of Facebook to a new form of professional use of Facebook or professional Facebooking is now taking shape on the Web, demanding a renewed attention to the social processes occurring in these places. First studies analyzed the main purposes of using SNS in the workplace highlighting, for instance, that at Microsoft Facebook was to maintain awareness of colleagues, to build rapport and stronger working relationships, to reconnect with former colleagues, and to build social capital (Skeels & Grudin, 2009).

More recent studies have investigated, for instance, the mechanisms of group membership and their participatory dynamics, in terms of group types (generic vs. thematic), duration of membership and the interplay between offline and online activities in some groups of teachers that share resources and practices on school-related issues on Facebook (Raniieri et al., 2012). In another study Pimmer and colleagues (2012) investigated how medical students and professionals use a Facebook site centered on medical and clinical topics in the setting of developing and emerging countries. The findings show how users appropriate the site as rich educational tools in informal learning contexts, revealing explicit forms of educational content embedded in informal learning contexts in Facebook and mechanisms of negotiation of occupational status and professional identities.

In the academic context social media and Facebook are being used by faculty as tool through which to promote visibility outside (e.g. Forkosh-Baruch & Hershkovitz, 2012), but also to enhance professional development and share professional practices (Guy, 2012). According to a recent survey carried out in the United States (Moran et al., 2012), Facebook is the most-visited social media site for personal use, with over one-half of faculty visiting at least monthly. Daily use of Facebook exceeds the daily, weekly, and monthly use of any other site by faculty for personal purposes. As far as professional use of social media is concerned, comparison of results of the survey administered in the previous years shows that while in 2011 Facebook was the most visited site for faculty professional purposes by 2012 this has been replaced by LinkedIn. Use of Facebook for professional purposes dropped, while the usage of LinkedIn increased over the one-year period. On a minor scale, Chen and Bryer (2012) report how faculty is using social networking sites for personal communication, information sharing and professional connections. Indeed further investigation on how faculty and academic professionals are using Facebook for professional development is required.

**Location-based learning**

Location-based learning takes advantage of the ability of mobile devices to know where learners are located and deliver information that is time and place relevant. As an educational tool, it provides the opportunity of just-in-time content delivery, giving learners access to data that is clearly tied with what they are seeing and experiencing at the moment, and develop their own location-based projects to share with others. Location-based learning has the potential to provide a multitude of opportunities especially for informal learning, where this latter is mediated through location-based technologies to support learning at specific geographic locations, for instance nature reserves or heritage sites to learn about the surroundings from a number of different disciplines (FitzGerald, 2012).

The integration of the mobile and social networks, of whom Facebook is the most widespread, presents us with particular challenges as well as new and innovative mechanisms for learning. Location-based social networking (LBSN) applications are part of a new suite of tools (e.g. Fusco et al., 2010), where for instance geotagging, that is the capability to tag people according to images and places easily uploadable
in social networking sites, offers both opportunities and challenges. Some scholars, for instance, caution against the risks and perils of sharing data about one’s own physical locations with other persons. As pointed out by Michael and Michael (2011), ‘all this monitoring might also mean that we become acutely aware that we are being constantly watched and expected to act in particular ways in particular situations [...] It is not only the loss of privacy that is increasingly at risk, but also the wonder of improvisation. We will be playing to a packed theatre instead of being comfortable in our own skins and identities’ (p. 124). On a less negative view, some studies have shown however that LBSN may have unintended consequences that could be disruptive to relationships, as well as they could strengthen relationships because, for instance, providing one’s real-time location to a family member or a close friend would act to reaffirm aspects of trust (Fusco et al., 2011).

Another issue that is on stage is the concept of mobile social presence. It has been recently defined as ‘the degree of enriching social context-awareness, managing location-based communication, personalized multi-layered interactivity, and optimized digital social identities to other intelligents through digital mobile technologies’ (Tu et al., 2012: p. 253). Mobile social presence, though empowering learners to take more personal control on their presence through their mobile device, requires that learners are able to self-regulate their behavior deciding the frequency of access and the ways they prefer to interact (how, when and in what way). The lack of appropriate usage may indeed lead to negative impacts and withdrawing effects such as when mobile technology is used during face-to-face interactions interfering with conversations or to stressful consequences when time of responses, for instance, are not met as expected. So educators should start to provide useful and meaningful hints or some sort of guidelines to provide learners with criteria that could empower learners to make better decisions to determine when, where, how, in what way and with what means to engage in better social interaction with other network learners.

To conclude, when LBSN are applied to learning contexts, new challenges and issues we are asked to confront with, such as trust, self-regulation, metacognition, social networking skills and literacies, etc., able to empower learners and teachers and to provide effective ways to use these new socio-technical devices for learning.

CONCLUSION

In this chapter we have provided a critical overview of Facebook use in relation to several educational practices. Since its birth in 2004, educators and instructors have suggested numerous ways to appropriate Facebook in academic contexts: from mere communicational channel to deliver and distribute information about courses and to manage communication between students and teachers on organizational issues, up to a real usage of Facebook to support and foster learning processes as a technology-enhanced learning environment. Advocates of Facebook use in education have stressed the importance of social networks as one of the places where learning can be based on exploration, connection, creation and evaluation within networks that connect people, digital artifacts and content, and have started to provide some preliminary suggestions and guidelines on how to integrate the informal nature of Facebook and of open SNS into formal education. Tensions and trade-offs between participatory culture patterns and schooling practices, as underlined by many scholars, still need to appropriately addressed, though provisional solutions are already being envisaged. However, we are still in the early stages of a ‘Facebook area’ in education and much further work needs to be done. From this perspective, scholars from education area, but also from other social and humanistic disciplines, shall make an effort also towards the definition and provision of a new kind of digital literacy that would be able to address the specific issue of living and studying in SNS and in Facebook. Learning online social network skills and, specifically, Facebook use skills, will be mandatory if students, teachers and general users are expected to make an aware and informed use of these sites. These skills are included in the wider concepts of digital and media literacy. Following the American scholar Renée Hobbs (2010), these concepts can be operationalized into five main abilities, including the capacity of making responsible choices and accessing pertinent information, being able to
analyze messages and evaluate their credibility, the ability to create content using new digital tools, the capacity to reflect on one’s own conduct and communication behavior by applying social responsibility and ethical principles, and lastly the ability to take social action by working individually and collaboratively to share knowledge and solve problems and participating as a member of a community. In a similar vein, Calvani and colleagues (2012) define digital competence as the capacity of exploring new technological situations, the ability to analyze and critically evaluate information, the ability to build collaborative knowledge and the awareness of one’s own personal responsibilities towards themselves and the others. Among the various abilities included in these definitions, those related to the social and ethical aspects of communication and literacy seem to be promising to help identify a set of digital skills for Facebook. In particular, as highlighted by Hsieh (2012), online social networking skills can be viewed as the capacity of understanding the technological properties that enable users’ social interactions and of knowing the practices that can lead to the improvement of the interactivity. However, since the reflection on the skills required for the aware and effective use of social networking sites is still at its very beginning, further research in the field is needed to enable users to face with the ethical and societal challenges that social networking sites are raising in the multiple contexts of contemporary daily life.

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**ADDITIONAL READING SECTION**


KEY TERMS & DEFINITIONS

Academic performance: Academic performance is the extent to which a student has achieved his/her educational goals. It is usually related to Grade Point Average (GPA) and measured by examinations or continuous assessment, although there is no general agreement on how it is best tested or which aspects are most important. In the United States most of the measurements of academic performance rely on standardized testing.

Facebook: Facebook is a social networking service founded by Mark Zuckerberg in February 2004 that as of December 2012 has more than a billion monthly active users, more than half of whom use Facebook on a mobile device. Facebook allows any users who declare themselves to be at least 13 years old to become registered users of the site. Users may create a personal profile, add other users as friends, exchange public and private messages, join common-interest user groups, support fan pages and categorize their friends into different lists.

Informal learning: Informal learning refers to any activity which entails the acquisition of understanding, knowledge or skill outside a prescribed curricular setting. It may occur in any contexts through the life and its basics (objectives, contents and so in) are decided by the individuals and the groups that are engaged with it. Two different types of informal learning can be distinguished: intentional informal learning and unintentional formal learning. Intentional informal learning is different from all other tacit forms of learning to the extent to which it involves the retrospective recognition of the knowledge and skills developed without a predetermined curriculum and an awareness of the process of acquisition that lead to it.

Location-based learning: Location-based learning refers to the complex of technologies - geolocation, data visualization, mobile devices, wireless internet - and educational methodologies that takes advantage of the ability of mobile devices to know where they are located and deliver information that is time and place relevant.

Professional development: It consists in the continuous process of acquiring new knowledge and developing new skills that refers to one’s profession, job responsibilities, or work environment. Professional development plays a key role in sustaining people over time for the benefit of their career development, regardless of job typology. In recent years, there has been a growing emphasis on the role of information and communication technology: on one side, they have been considered as a factor demanding continuous retraining of the workforce, on the other, they have been perceived as a resource enabling innovation processes and supporting learning anytime and anywhere.

Social Networking Sites: A social networking site (SNS) is a web service allowing users to create a public or semi-public profile, create lists of friends and traverse their list of connections, forming a public online network community. There are a number of web services enabling people to create a profile and connect,
but while the specific activity of SNS is networking, the other types of services are focused on uploading and sharing.

Technology-enhanced learning (TEL): Although the term ‘technology enhanced leaning’ is very common in the field of educational technology, explicit and complete definitions of it are rare. Generally speaking, it is used to describe the application of information and communication technology (ICT) to enhance teaching and learning. What is particularly difficult in the understanding of this expression is the meaning of ‘enhancement’ which can refer to different type of improvements: operational improvement (e.g., greater flexibility and more accessibility), learning improvement in terms of productivity (e.g., better scores in the tests), learning improvement in terms of increased quality of students’ cognitive processes (e.g., increased metacognitive processes).

\^ To counterbalance the positions of the advocates of Facebook and its value as educational tool, also positions expressed by skeptics and contraries should be reported. Since the main focus of the chapter is not, however, to present an overview of both positions, we limit our presentation only to those who envisage the potential of Facebook use in education. To cite a different perspective, see Friesen & Lowe (2012) that provide a powerful critique about the commercial nature of Facebook that would offer only a partial capacity to foster disagreement and debate because of a dominant model of conviviality and “liking”.