

Social Networks in University Students: Academic Use and Learning Scenarios

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Abstract

Social networking is one of the technological tools currently used by most college students, and some companies are beginning to use it to support their business processes. Information technology has developed communication elements needed to break the paradigms of time and space in which human relationship were based, affecting all areas including education. The objective was to analyze the use of social networks in the academic field in students of the Autonomous University of Chihuahua. The study was not experimental, descriptive, transactional and quantitative type. A questionnaire was used as a tool for gathering information, since it integrates the set of questions about the variables that attempt to measure, and besides allows to standardize data collection. The results showed that there is a great opportunity to manage the social networks with academic focus, and thus generate benefits for the learning process. Some research shows that if they are properly used they can bring great benefits such as: acquisition of computing skills, access to repositories of information, and development of social capital.

Key Words: Social Networks, Academic Use, Students, Mobile Technologies and Learning Scenarios.

Introduction

The incorporation of the Information and Communications Technologies (ICT) in education means facing challenges focused on defining the degree of virtualization of content (Lara, 2013). One of the main demands on virtualization is to adapt it to the information society, thus it becomes indispensable to develop skills of information management and ICT (Salinas, 2007; Martinez & Heredia, 2010).

Information and Communications Technologies can provide an environment for teaching and learning for students and teachers. Currently, ICT is also becoming one of the most effective agents of social change for its impact on society. Given this situation of technology in society, it is clear that the educational space cannot be excluded (Marqués & Domingo, 2011).

New technological tools (social networks, blogs, video platforms, etc.) have been given the power to share, create, inform and communicate, becoming an essential element in the student's lives. All applications or social media, emerged from the Web 2.0, involve the active participation of users, becoming both producers and recipients. Social networks stand out and they have become a true mass phenomenon (Flores, 2009).

Social networks have been universalized. They have become an ideal place to exchange information and knowledge in a fast, simple and convenient space. Teachers can take advantage of this situation and the willingness of students to use social networks to incorporate them into teaching. The use of social networks, blogs, video applications involves bringing information and training to places which students associated with entertainment, and where is possible that they access with less prejudice (Alonso & Muñoz De Luna, 2010).

De la Torre (2009) notes that it is no longer a waste of time for young people to surf the Internet or use social networks as they are assimilating technological and communication knowledge necessary for the contemporary work competences. Thus, alongside the purely social use, the networks have enormous potential for education. There is evidence that students have a favorable attitude toward the academic use of social networks (Espuny *et al.*, 2011).

In the European Higher Education Area (EHEA), social media in general and social networks in particular provide several ways to face the challenges of higher education, from a technical point of view as well as pedagogical. In fact, some of its own features, such as collaboration, free dissemination of information or the generation of their own knowledge, social networks have been applied immediately to the educational field (De Haro, 2010). In this way, the student develops some of the competencies identified by the EHEA: personal (self-learning and critical thinking, recognition of diversity); instrumental (visual culture, computer skills); or systematic (research or learning potential through cases) (Alonso & Lopez, 2008).

Students use a large part of their time on social networks because of the ease of access through any device, creating problems in other areas of their life, including student achievement. The appearance on the market of smartphones, revolutionized communications technology, because through the mobile programs or applications downloaded, they improve the properties of the phone as data processing or connectivity with Internet access via Wi-Fi and thus it has unleashed connectivity to social networks. The purpose of this study was to analyze the use of social networks in students of the Autonomous University of Chihuahua.

Literature Review

Information and Communication Technologies

According to Pintado (2012) information technology (IT) is understood as "the tools and methods used to collect, store, manipulate and distribute information. The information technology is generally associated with computers and related technologies applied to decision making." Herrera (2009) mentions that ICTs offer new environments and new possibilities. Today, the use of new resources, blogs, mobile phones, iPod and various PDA (Personal Digital Assistant) in educational projects, add to other known resources such as email, instant messaging or chat, forums platforms discussion educational, simulators, multimedia materials, etc.

Mobile Technologies

Today social networks are migrating to mobile devices as is the case of Facebook or the messaging system WhatsApp, who is handling groups with its own features of social networking, so it is important to take into consideration mobile technologies that are constantly evolving. The diversity of devices on the market today is immense and includes roughly, mobile phones, tablets, e-readers, portable music players and game consoles. Tomorrow the list will be different. To avoid the sensitive issue of semantic precision, UNESCO has decided to use a broad definition of mobile devices, which simply recognizes that are digital, portable, controlled usually by a person (not by an institution), which is also its owner, they have Internet access and multimedia capabilities, and can provide a large number of tasks, especially those related to communication.

Mobile devices with intelligent technologies such as Smartphone, Tablet or iPod, although different between them, have similar characteristics: 1) they are portable and personal use; 2) with the possibility of Internet connection; 3) allow check email; 4) touch screen and Qwerty keyboard; 5) send text messages, and 6) communicate with other users regardless of time and place. (Castells, 2007).

We have analyzed the most commonly used forms of communication in recent years on mobile devices. The constant evolution of technology makes current forms of communication change constantly, arise and seize opportunities (Pintado & Sánchez, 2012).

Social Networks

National Polytechnic Institute (IPN in Spanish, 2015) reports that social networks are virtual communities where users interact with people around the world with tastes or interests in common. They function as a communication platform that connects people, and allows them to centralize resources, such as photos and videos, from an easy place to access and managed by the users themselves.

However, not all social networks are created equal, or serve the same purpose. Each network has a specific goal. Use the right network for the right task, and doing it correctly, it is an art: a new kind of specialization. This study will describe some of the most popular social networks in media: Twitter, Facebook, Instagram, LinkedIn and YouTube.

Networks allow and encourage to publish and share information, self-learning; team work and communication, as well as between students and student-teacher; feedback; access to other sources of information that support and even facilitate constructivist learning and collaborative learning; and contacting experts. Together, all these applications and resources make learning more interactive and meaningful and above all, they help to develop a more dynamic environment (Imbernón, Silva & Guzman, 2011).

Today Social Networks

Castro (2015) comments that Facebook is a social network where users can add friends, send messages, play games, form groups and build their own profile. Facebook is operated and privately owned by Facebook, Inc. Since September 2006, anyone over 13 years with a valid email address can become a Facebook user. Users can add friends and send them messages, and update their personal profiles to notify friends about themselves. Additionally, users can join networks organized by workplace, school or college. The site's name stems from the colloquial name of books given to students at the beginning of the academic year by university administrations in the US with the intention of helping students to get to know each other better. NorfiPC (2015) says that Google+ is a social network that provides facilities to create networks of friends and organize them into circles, enables upload content to easily share, publishing articles in the network is facilitated by the +1 button already appears on several websites and in the Google

bar in the browser that you have installed and integrated with other popular Google services like Gmail, GMaps, Calendar, Docs, etc.

Google+ is a network in full development and full of new possibilities. Google+ has made possible and is actually under development, a unique tool in social websites, which is called Hangouts. It consists simply to share video conversations with members of the network. When entering your page and selecting the corresponding options, you will see the Hangouts being made and where you can participate. This functionality can provide opportunities in the near future, to see and participate in any live interview with personalities, artists and public figures. It should be aware of all the new changes in the network, unique on the Internet by the immense possibilities of its promoter.

Castro (2015) comments that Twitter is a free web-based system that allows users to send text messages (also called tweets) of up to 140 characters that are updated in real time. Basically it is used to send and receive text messages in real time via social networking sites; it means, Twitter offers to users the opportunity to briefly explain what you are doing or what you are thinking right when it happens, which has several practical applications: 1) companies can report on launches of new products or services; 2) people can publicize current events, and in turn the recipients of news can make them also know (retweet), resulting in the spread of news sometimes faster and more effective than traditional media (newspapers, radio, TV, etc.).

Castro (2015) notes that LinkedIn is a social network aimed at professionals and businesses. It is a great resource to generate more traffic to your website and gain more visibility for yourself and your business, gaining authority in your sector. The purpose of the site is to allow registered users to maintain a list of contact information for people they know and trust for business. People on the list are called "connections". Users can invite anyone (whether a site user or not) to become a connection. This connection list can be used to find jobs, people and business opportunities through the recommendations of someone on a network.

NorfiPC (2015) comments that Instagram is a very popular application for mobile devices, allows users to edit, retouch and add effects to photos taken with cell facilitates sharing in social networks and from the moment it is possible to navigate and explore photos other registered users, is considered a social network. Instagram is a relatively new social media website; it is a photo-sharing platform. Recently, video-sharing capabilities were introduced, and video length is restricted to a maximum of 15 seconds (Al-Bahrani & Patel, 2015). Users capture moments in their life and share them with friends. Instagram provides the opportunity for users to apply different filters on their pictures or videos before posting. Posts are accompanied by a caption. The growth of Instagram has been prolific. According to the company's Web site, as of June 2016 the platform has grown to more than 500 million active users (Instagram, 2016).

Materials and Methods

The research is not intended to modify intentionally variables for their effects on other variables, this means that no variables were manipulated, the phenomenon is observed in its natural context and then analyzed (Kerlinger & Lee, 2002), so it is a non-experimental research; as well as transversal one, as data is collected at a time and once in the sample of population elements as Malthora (2008) and Hair *et al.* (2009) point out. This was a descriptive research, Sampieri (2010) notes that a descriptive study is a second level that provides support for correlational research and seeks to specify properties, characteristics and profiles of groups, people or objects. Measures, assesses or collects data on various variables with the intention to describe what is investigated.

The population of interest for this research were undergraduate students of the School of Accounting and Administration of the Autonomous University of Chihuahua, Mexico. The sampling rate corresponding to this research was a simple random sampling, which Tamayo and Tamayo (1999) says that the most

common way to get a sample is thru a random selection that is that each of the individuals in a population has the same chance of being elected.

For a population of 3826 students (N) with a confidence interval of 95% and a confidence of 1.96 (Z) and $e = 0.05$. After replacing values in formula, it had a result of 400 students. The technique used in this research to gather information was a questionnaire. The data collection was conducted considering that the required information is quantitative. Therefore, the questionnaire was used as a tool for gathering information and integrating the set of questions about the variables that attempt to measure and standardizes data collection (Bernal, 2006).

A questionnaire with general purpose questions related to mobile media, like smartphones, as well as questions regarding its use in academic activities was used. In order to determine the reliability of the data, the technique was used Cronbach's Alpha, which provided results between .768 and .856, indicating that the results were reliable.

The total number of questions (27) were grouped to evaluate three variables: 1) related to mobile media, with five questions (Cronbach's Alpha .856); 2) use of social networks, with ten questions (Cronbach's Alpha .834); and 3) related to the use of academic activities, with twelve questions (Cronbach's Alpha .768).

Results

The objective proposed was to determine how and which social networks are used by students. The following results were obtained. Most respondents said that they have "steal" time from other activities to devote it to social networks. More than half of the students spend less time watching television and doing nothing. Social networks are occupying leisure time. Academic activities like studying and reading were also marked by a significant percentage of respondents. We could visualize that Facebook is definitely the favorite social network by students, Google + has still an incipient growth. As can be seen the frequency of use of the social network is: daily at least 65% of students, from this frequency it can be established, that if this tool is used for academic purposes could have an excellent response.

Almost half of the students (47%) use social network for 3 hours or more, which may be considered excessive if an adequate distribution of time, necessary to meet a standard student requirements is considered, but it can also represent an opportunity to use this tool in the academic environment.

The formation of groups in social networks, would be the way to work in the academic environment because through them it would be a way to share information related to the class and teaching materials. Regarding students currently participating in groups; at least 96% of students see it published, so there will be no student who does not understand what happens in class once social networks is implemented in the academic environment.

University students have more quantity of friends, acquaintances and relatives, among the contacts are schoolmates, which means that it allows them to create school groups in social networks, and thus generate an advantage for academia.

It was observed in this case that social networks do affect the student's academic environment and almost 50% have used social networks for their classes and according to the above results, usually use them to be in communication with friends, acquaintances and relatives mainly. This activity diverts attention from class issues, according to the data obtained; it shows that students do not perceive that teachers have academic support networks. They indicate that the activities are based on the initiative of students and rarely are requested by the teacher. Proof of this is that very few students have included among their contacts in the networks a professor at the University.

Discussion

Universities have studies showing a relationship between the use of social networks and low academic performance. In this research, students showed a positive attitude toward the use social networks for educational purposes; there are also scientific research that shows results with a positive impact in the use of online social networks (Ellison, Steinfeld & Lampe, 2007; Holder., 2006; Ito *et al.*, 2008), highlighting the acquisition of computer skills, the development of social capital and increasing the number of reliable sources of information.

However, it is true that the misuse of such systems may cause distraction, loss of time and privacy, among other negative aspects, but well used can bring benefits to college students. Following an investigation through Facebook (Valerio-Urena, 2010a) it concludes that there are positive impacts of online social networking in college students. These networks help to: 1) acquire computer skills that will be useful to college students not only to learn, but perhaps to be more efficient professionals. Many of these learning the motivations can be obtained talking with a friend on the social network, or create a more sophisticated profile, but in any case it is important that they acquire skills; 2) develop social capital. A key element for sharing knowledge is trust. To greater confidence, greater knowledge transfer. The use of online social networks encourages the development of social capital and therefore confidence and knowledge transfer. Unlike traditional learning platform, online social networks allow constant interaction in an informal and relaxed atmosphere, as well as access to personal contact information and 3) manage information repositories.

Contacts in a social network, according to the theory of connectivism proposed by Siemens (Siemens, 2004, Siemens and Tittenberger, 2009), represent potential repositories of information to achieve learning. They allow users to manage not only contacts but potential sources of information. Through them you can make lists of users based on criteria that allows to discern which contacts could be reliable sources of information before a learning requirement.

The reality is that, like it or not, college students use social networks online. According to research like Ellison, Steinfeld and Lampe (2007) and Valerio-Urena (2010a), in certain contexts, over 90% of university students belong to a social network online. While some parents and teachers may seem a waste of time, perhaps these tools are preparing for the future that awaits them as professionals. In fact, according to Levy (2009), the term "enterprise 2.0" refers to the implementation of Web 2.0 technology infrastructure companies and according to this author there are many companies that are already 2.0. In this sense, Havenstein (2007) discusses Forrester research indicating that 106 of 119 companies with over 500 employees use some Web 2.0 tools such as blogs, wikis, podcasts, RSS, social networks or social labeling. Meanwhile Schneckenberg (2009) points out that a McKinsey survey found that 75% of managers surveyed have invested or pose invest more in Web 2.0 tools. Given this situation it is very likely that college students today work tomorrow in companies 2.0.

Conclusions

According to this research objectives and the results obtained, it can be concluded that there is a benefit derived from the proper management of social networks by students, complementing teaching activities. Thus, this is the most known tool, used by young people involved with these technologies; it is used quickly and as needed. Students are already using social networks to share information about their classes without the agreement of their teachers and that somehow contribute, in some extension, to the teaching-learning process. Therefore, a guide is required by the teacher for handling groups that will use online social networks as a complement to the class. The teacher has the ethical obligation to update his/her knowledge and participate along with their students in the handling of applications offered by the evolution of information and communications technologies (ICTs).

New generations of students redefine the way they want to interact and learn. A certain degree of digital literacy, access to electronic resources and the Internet, and the urgent need to stay connected, are conditions that allow them to participate more interactively. Because many of them largely fulfill the above conditions, social networks and social software in general are valuable tools in academic spaces. Applications like Facebook, Twitter and others have allowed people to stay in full interaction in a cheap, simple and entertaining way.

Recommendations

In order to leverage teacher's knowledge with the one students already have in the use of this technology, the following is suggested: 1) the teacher should know how to manage different social networking tools, to properly configure their profile to interact with their students groups, taking care of their own privacy, so they can lead the group in a proper way. This tool represents the possibility of issuing instructions in a timely manner that will come straight to the student's cell phone and share academic information from links, videos and essays of interest for the class; 2) it is recommended to the Universities, evaluate and organize their information, in order to be able to create their own content and share it. Although participation in social networks may seem as a waste of time, it is likely that with the help of teachers, these tools prepare better college students, to work in the knowledge-based society. Universities must prepare the professionals of tomorrow, but the requirements will not be the same as those that were taken yesterday. Tomorrow professionals, knowledge workers, need to be able to operate efficiently in an environment rich in information technologies, and using online social networks for sure.

Future Research

The data presented here could serve as the beginning of what could continue as a research in the use of social networks in college students and its academic use in learning scenarios. The positive attitude from students and the great possibilities of ICTs, regarding the educational use of social networks are endless, as long as the teachers plan and manage these resources properly. The academic potential of social networks is great, but the challenge is to arouse the interest of both sides, teachers and students, to integrate this online social networks as tools of the teaching-learning scenario of the future.

References

- Alonso, H. & López, I. (2008). Adaptando asignaturas al EEES: el caso de Teoría y Técnica de la Publicidad. In RODRÍGUEZ, I. (Ed.). El nuevo perfil del profesor universitario en el EEES. Claves para la renovación metodológica. Valladolid: Universidad Europea Miguel de Cervantes.
- Alonso, M. H. & Muñoz de Luna, A.B. (2010). Uso de las nuevas tecnologías en la docencia de Publicidad y Relaciones Públicas. In SIERRA, J. & SOTELO, J. (Coords.). Métodos de innovación docente aplicados a los estudios de Ciencias de la Comunicación. Madrid: Fragua; 348-358.
- Al-Bahrani, A., & Patel, D. (2015). Incorporating Twitter, Instagram, and Facebook in Economics Classrooms. *Journal Of Economic Education*, 46(1), 56-67. doi:10.1080/00220485.2014.978922 (accessed August 2016)
- Bernal (2006). Metodología de la investigación para Administración y Economía. 2da Edición Pearson Educación de Colombia.
- Castells, M. (2007). Comunicación móvil y Sociedad. Madrid España, Ariel Editores.
- De La Torre, A. (2009). Nuevos perfiles en el alumnado: la creatividad en nativos digitales competentes y expertos rutinarios. *Revista Universidad y Sociedad del Conocimiento*, 6, 1; 9.
- De Haro, J.J. (2010). Redes sociales para la educación. Madrid: Anaya.
- Kerlinger, F.N. & Lee, H.B. (2002) Investigación del comportamiento. Métodos de investigación en Ciencias Sociales. México: McGraw-Hill

- Ellison, N.; Steinfield, Ch. & Lampe, C. (2007). "The benefits of Facebook friends: social capital and college students use of online social network sites". Journal of computer-mediated communication, 2007, v. 12, n. 4. <http://jcmc.indiana.edu/vol12/issue4/ellison.html>
<http://dx.doi.org/10.1111%2Fj.1083-6101.2007.00367.x>
- Espuny, C.; González, J.; Lleixà, M. & Gisbert, M. (2011). Actitudes y expectativas del uso educativo de las redes sociales en los alumnos universitarios. El impacto de las redes sociales en la enseñanza y el aprendizaje. Revista de Universidad y Sociedad del Conocimiento (RUSC). Vol. 8, n.º 1, págs. 171-185. UOC. <http://rusc.uoc.edu/ojs/index.php/rusc/article/view/v8n1-espuny-gonzalez-lleixa-gisbert/v8n1-espuny-gonzalez-lleixa-gisbert> (accessed August 2016).
- Flores, J.M. (2009). Nuevos modelos de comunicación, perfiles y tendencias en las redes sociales. Comunicar, 33; 73-81.
- Herrera, B, M. A. (2009). Iberoamericana de Educación. <http://www.rieoei.org/deloslectores/2630Batistav2.pdf> (accessed April 2013)
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2009). Multivariate data analysis. Upper Saddle River, NJ: Prentice Hall
- Havenstein, H. (2007). "CIOs use web 2.0 to keep up with competition: study". Computer world, <http://computerworld.co.nz/news.nsf/mgmt/F3CF939BD89D1620CC2572A70007CBC6>
- Holder, D. (2006). Ethnographic study of the effects of Facebook.com on interpersonal relationships. University of Chicago. <http://www.docstoc.com/docs/2374240/Ethnographic-Study-of-the-Effects-of-Facebookcom-on-Interpersonal>.
- Imbernón, F.; Silva, P. & Guzmán, C. (2011). Competencias en los procesos de enseñanza-aprendizaje virtual y semipresencial. Comunicar, 36; 107-114.
- Instagram (2016). Press News. <http://blog.instagram.com/post/146255204757/160621-news> (accessed August 2016)
- Ito, M.; Horst, H; Bittani, M; Boyd, D.; Herr-Stephenson, B.; Lange, P.; Pascoe, C. J.; Robinson, L. (2008) Living and learning with new media: summary of findings from the Digital Youth Project. The John D. and Catherine T. MacArthur Foundation. <http://digitalyouth.ischool.berkeley.edu/files/report/digitalyouth-WhitePaper.pdf> (accessed August 2016)
- IPN, Instituto Politécnico Nacional (2015) Las redes sociales, sus ventajas y desventajas. <http://www.boletin.upiita.ipn.mx/index.php/ciencia/218-cyt-numero-36/30-las-redes-sociales-sus-ventajas-y-desventajas> (accessed April 2015)
- Lara, A. (2013). Evaluación de la asignatura "Trastornos afectivos y conductuales" diseñada para entornos de aprendizaje blended learning. Tesis de maestría.
- Levy, M. (2009) "Web 2.0 implications on knowledge management". Journal of knowledge management, v. 13, n. 1, pp. 120-134. <http://dx.doi.org/10.1108%2F13673270910931215>
<http://lpiis.csd.auth.gr/mtpx/km/material/JKM-13-1d.pdf>
- Marquès, P. & Domingo, M. (2011). Presente y futuro de las pizarras interactivas según resultados de últimas investigaciones, en ROIG R. & LANEVE, C. (Eds.) (2011). La práctica educativa en la sociedad de la información. Innovación a través de la investigación. Al -coy: Marfil & Scuola Editrice.
- Martínez, R. & Heredia, Y. (2010). Tecnología educativa en el salón de clase. Estudio retrospectivo de su impacto en el desempeño académico de estudiantes universitarios del área de informática. Revista Mexicana de Investigación Educativa, vol. 15 núm. 45, pp. 371-390 <http://www.redalyc.org/pdf/140/14012507003.pdf> (accessed June 2016)
- Ministerio de educación, cultura y el deporte del gobierno de España (2015). Historia de las redes sociales. <http://recursostic.educacion.es/observatorio/web/gl/internet/web-20/1043-redes-sociales?start=2> (accessed April 2015)
- NorfiPC (2015). Las redes sociales más populares y exitosas de internet. <http://norfipc.com/internet/redes-sociales-mas-populares-exitosas-internet.html> (accessed April 2015)
- Pintado T. & Sánchez J. (2012). Nuevas tendencias en comunicación, (Segunda edición), España, ED. Gráficas Dehon.

- Sampieri, R. H. (2010). Metodología de la Investigación (5th ed., Vol. 1). México: McGraw-Hill.
- Salinas, J. (2007). El papel de las TIC en el sistema educativo. In IMAD 2.0 Cicle de Conferències sobre Noves Tecnologies i Societat. Palma del 8 al 16 de novembre de 2007. http://www.uibcongres.org/imgdb/archivo_dpo3950.pdf (accessed August 2016)
- Schneckenberg, D. (2009). "Web 2.0 and the empowerment of the knowledge worker". Journal of knowledge management, v.13, n.6, pp.509-520. <http://dx.doi.org/10.1108/13673270910997150>.
- Siemens, G. (2004). "Connectivism: a learning theory for the digital age". Elearnspace everything elearning. <http://www.elearnspace.org/Articles/connectivism.htm> (accessed August 2016)
- Siemens, G., Tittenberger, P. (2009) Handbook of emerging technologies for learning, http://umanitoba.ca/learning_technologies/cetl/HETL.pdf
- Tamayo & Tamayo. (2009). Metodología Formal de la Investigación Científica (11th ed., Vol. 1). México: Editorial Limusa.
- Valerio-Ureña, G. (2010a). E-learning 2.0 y el impacto de las redes sociales en línea en los estudiantes universitarios. Tesis doctoral, Universidad Virtual, Tecnológico de Monterrey, México. http://www.gabrielvalerio.com/ensayos/tesis_doctoral_gv.pdf.

