Social Media as a Valuable Teaching Tool When Used Alongside Traditional Teaching Methods at ITESI

José Raúl García León, Dennise Ivonne Gallardo Alvarez, Eduardo García Herrera, Juan Carlos Rodríguez Campos

Instituto Tecnlógico Superior de Irapuato, Mexico

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Abstract

Currently, most college students have at their disposal an electronic device that allows them to access social networks, blogs, forums and other virtual spaces that approach them to visual content, cultural, leisure and entertainment.

Classes taught in the Engineering Computer Systems in Instituto Tecnológico Superior de Irapuato (ITESI) are in the traditional way, as far as the content allow; those classes that are specifically developed using the technology are in computer labs, environments software development and configuration devices.

Regardless of the classes in question, it is necessary for communication between students and teachers be as rapid, continuous and effective. When present in class, communication is effective, but when you need to answer any questions outside of class, social networks are the solution to a low cost and with satisfactory results. They have been successful both academically and socially, which has resulted in better grades and higher learning in the various areas where these tools are applied.

To successfully implement the use of devices such as social media combined with traditional teaching, it is necessary to have bases, rules and commitments from all involved.

The objective of this research is showing significant learning compare before and after applying the use of devices and social networks. In addition to assessing the impact these tools have on the development of the teaching-learning process. To achieve this, it will take a sample of 25% of the student population and 3 different classes will be the evaluation environment.

Introduction

The information and communication technologies (ICT) can contribute to universal access to education, equality in education, the practice of teaching and learning quality and professional development of teachers, as well as address management and more efficient administration of the education system.

UNESCO is implementing a comprehensive and integrated strategy with regard to the promotion of ICT in education. Access, integration and quality are among the major challenges that ICT can address. The UNESCO Intersectoral Platform for ICT enhanced learning addresses these issues through the joint efforts of its three sectors: Communication and Information, Education and Science. (UNESCO, 2013)

The educational model for the twenty-first century is the model that is currently used and applied in higher education in Mexico. This model suggests that education should be based on the acquisition of skills by the individual. This model, in training and skills development is the response of the National System of Technologic Institutes to the circumstances of today's world, where economic, social, and cultural policies are significantly bounded by globalization, context, this, in the education itself faces the changing era of new technologies of information and communication, and the rapid development of scientific and technological knowledge. (DGEST, 2012)

In the current statistics, both worldwide and in our country, it is clear that is growing significantly the use of the same, which is to regard them as feasible spaces to deliver educational information to students, one once connected, they can use their time to consult educational content and interact with teachers and other students. (Argüelles, 2013)

Experimental design

The Instituto Tecnológico Superior de Irapuato has between its educational offer the Computer Systems Engineering career. This career has approximately 700 students divided into 12 semesters, of which 70% have a mobile device within reach (phone, ipod, tablet, laptop).

This career classes are taught in a traditional way by being a requirement of public education, however, this modality is being supplemented with different and new emerging techniques and methodologies, which expands the opportunity for a greater number of students are the scope of training and information regarding their educational plan.

In this sense, nowadays already available different information sources, which are flexible to adapt to any approach, including education, which, in this case, is the subject of this investigation and thereby increase the utilization claim educational.

This proposal focuses on meaningful learning of students in Computer Systems Engineering from the semesters 3 to 7. The review and evaluate aspects are varied and diverse, among which are the use of mobile devices, the averages of use, access to communication networks, the amount of materials and tasks by group, among others. Before and after the study reviews the conditions for determining the significance of research. (DE HARO, 2012)

It aims to achieve the following benefits:

- Increase student achievement
- Reduce failure rates
- Clarify communication between students - teachers – students
- Generate virtual studio spaces.

Model

A model is a theoretical-conceptual representation, which allows a system approach or set of phenomena in order to facilitate their studies, understand their processes and eventually predict their behavior.

This study was divided into 3 stages to identify the states suitable for achieving the objective. The first stage is the diagnosis of the current situation, the second stage is the design and implementation of strategies and communication and learning metrics. The third stage is the interpretation of the results.

First stage. In a study by the Mexican Internet Association (AMIPCI) indicates the current status of the population with respect to technology and social networking. The following describes some of these data.

Whereas internet users aged 6 to more than 55 years, the divisions by groups are shown in Figure 1. The group we are interested in the study for research are mentioned groups ranging between 12 and 17 and those between 18 and 24 years, indicated with orange and green. Regrouping the same data, it follows that in total are the 43% of users surveyed. This age range between 12 and 24, is where the majority of college students, making useful information collected.
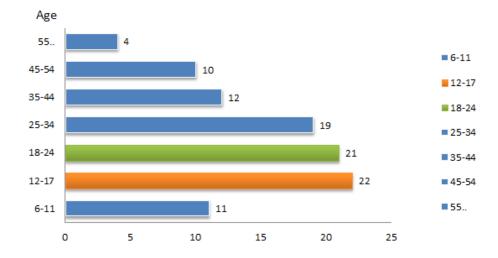

Figure 1 Internet Users. Age groups (Juárez, 2012)

Figure 2, obtained from the same study show the main activities of users each accessing internet. The three main ones are to send or receive e-mail, also for finding information and then to access social networks. Access to social networks corresponds to 82% of the main

activities of Internet users. After this understanding, it is possible to use and use of social networks to focus on activities that result in use of academic content.
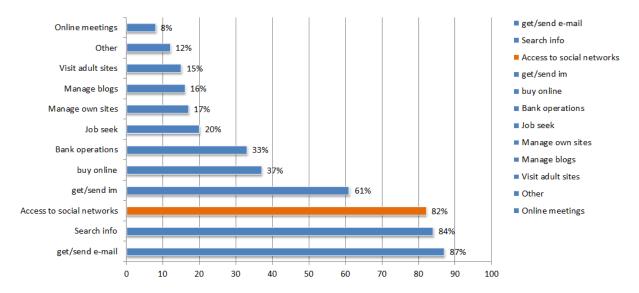

Figure 2 Main activities online (Juárez, 2012)

The intenet users were questioned about their use in social networks, if they have any profile or participated in any of the sites, the results are shown in Figure 3, which shows that 93% of respondents respond positively. Only 7% of respondents have resisted the use of social networks.
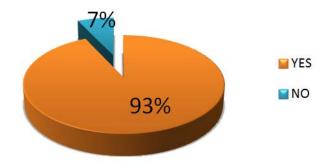

Figure 3 Social networks users (Juárez, 2012)

In traditional classes taught at the engineering career computer systems are developed several different techniques and methods of teaching and learning. The educational activities are used daily in the classroom are:

- Individual and group exhibitions
- Class exercises
- Teamwork
- Laboratory practices
- Homework

These activities allow students and teachers to take advantage as possible of the topics for each subject, which has been achieved to date with more than 10 generations of graduates.

Similarly, students have a social network usage on average 4 hours a day, according to surveys of students in the study group. Half of that time is during the college classes.

This deduction allows research can focus on using the tools provided by social networking and fast communication for effective teaching - learning. At this time the efficiency of communication between students and teachers regarding class activities is at low level. Because the solution of doubts and expansion of information is limited to the classroom.

The study began with the inclusion of basic tools of social media to observe the behavior and measure the efficiency of communication. A survey to offer programming workshops was the first thing was done with the following results.

So later developed other content on the same platform of Facebook and moodle. Some of which were readings, assignments, practical exercises. This aims to bring the content to students so that they were accessible at any time during the course.

Second Stage. In Figure 4 shows the step to create the survey on Facebook with the description of the survey, in which indications are molded so that users of the tool are clear about what should be done. In addition you must define the language of the survey, in this particular case defined in Spanish of Mexico.

Figure 4 Quiz step 1 (FACEBOOK, 2013)

In Figure 5 shows the second stage of construction of the survey, which identifies the questions that will be part of this exercise. Five questions were added to assess the interest of the students in that class will impart additional workshops. In this exercise we chose only collect this data, it will be the guideline for developing classroom activities traditionally.

The advantage of using these tools is that you can have wide dissemination of information and then, with a little luck indications and effective communication is generated. Teachers

give instructions during class to review the survey and students come to the site to answer questions. Once students review the survey and if interested, you generate a direct and effective communication between students and teachers.

Figure 5 Quiz step 2

The last part of the configuration of the survey is to publish it. Share the survey with the entire list of contacts or open to the general public depends on the margin of the population that dese cover. In this exercise it was decided that it was focused on the contacts, which are students and teachers of Engineering in Computer Systems. In Figure 6 illustrates it.

Figure 6 Quiz step 3

The survey was published for two weeks, during which 50 students were invited to participate in the survey. During this period gave rise to various questions and doubts about the outcome of the survey, that is, if they were to conduct the workshops, the usefulness of the results and so on. In the third stage we review the results obtained with this exercise.

Third stage. This stage is very important to exercise because it is the interpretation of survey results. It got good response from students and some teachers. In Figure 7 shows involving 46 people from a group of 50 students who were invited to answer the survey. Was obtained 92% participation. There are several reasons why it was not possible to 100%, within which are:

- Lack of internet
- apathy
- disinterest

- Lack of access to a device / equipment

Even with these details, the percentage obtained is acceptable and it is possible to work significantly with most involved.

Figure 7 Quiz response

The results derived from the application of this exercise are shown in Figure 8, which shows the interest on a particular topic, mobile device programming. The workshop programming mobile devices is chosen to start with the development of these workshops in person.

Figure 8 Quiz reply

One of the important aspects of the survey and that depends on the total population of the study is the genus to which it is addressed. In Figure 9 shows that the majority of respondents correspond to the male gender. In Mexico, in engineering careers the population is predominantly male. Approximately 20% of engineering students are women, and in this exercise is quite remarkable this situation.
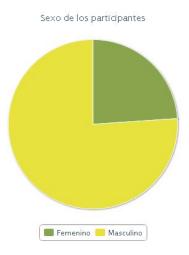

Figure 9 Quiz gender

Finally, another important aspect is the source from where, students review and answer the survey. In Figure 10 shows that approximately 95% of those surveyed use some computer equipment to answer the survey. The rest is done from a mobile device.

Engineering degree in Computer Systems, most students have a laptop computer to perform the exercises and classroom practice. Additionally, the institution has available three computer labs that are used to class, practice or external use. It is understandable then that, access to web platforms will be from any type computer equipment desktop / laptop as seen in the result of this evaluation.
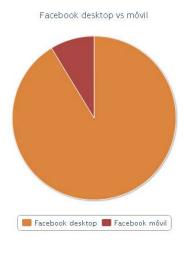

Figure 10 Desktop vs mobile

After performing this exercise and observing the response of students to communication and the interest generated by this participation, additional activities were developed to follow through this platform. Some of them are: lectures, exercises, assignments, among others.

Results

The results of the application of this exercise are acceptable, since 92% stake and the workshops allowed them to generate effective communication between teachers and students without having to be located in the same physical location in a traditional way.

From these activities in social networks has generated greater contact and streamlined the flow of information between the same classmates and teachers who teach a particular class.

Conclusions

Social networks provide a wide range of communication possibilities between students of different grades and the teachers who teach them lessons. In my case, I decided to create groups of students by subject for better information management and avoid mixing the activities between them.

It is recommended to properly review the information that is provided to members of such communication. Whereas copyright and privacy of certain information.

Although at this time, social networks are efficient to streamline communication, should be considered as a work tool without forgetting the traditional ways and methods that, according to history, it has proven to be and will remain the most effective and efficient for this purpose.

The teaching and learning is the responsibility of everyone involved, and social networks are one of the tools that can be used to access content firsthand, checking their sources. It should be ready and responsibility to manage the information that is distributed to achieve this goal, the improvement of teaching-learning process.

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