

Interaction on Distance Education in Virtual Social Networks: A Case Study with Facebook

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Abstract The way as people communicate and interact each other have been changing, especially with the expansion of the internet and the use of social networks. Motivated to a better understanding of this phenomenon in the educational sphere, this research aimed to identify the perception of high school students and tutors about the use of virtual social networks on a distance education course offered in public Brazilian high schools. This work is characterized as a hybrid qualitative study case, classified as pre-dominantly quantitative, but exploratory and descriptive research. The study case survey data was obtained by questionnaires and the data were collected by an anonymous online survey application filled by students and tutors that participated in the course. The main results confirm what is presented by the most current research on the topic: the use of closed groups in virtual social networks contributes in a significant way for the interaction among the participants and for the involvement of the students in the course.

Keywords Facebook · Distance education · Interaction

1 Introduction

The fast and transformative changes that are taking place in the society, especially in the last decades, accelerated by the new communication and information technologies and the popularization of the internet, impact many spheres, including the sphere of education. This impacts result in new communication and interaction scenarios both in classroom teaching as in distance education. In this

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M. Caporuscio et al. (eds.), *mis4TEL*,
Advances in Intelligent Systems and Computing 478,
DOI: 10.1007/978-3-319-40165-2_7

scenario, comes into de-bate the new improvement possibilities in the teaching and learning process through the use of information and communication technologies. Among them stands out the Facebook Social Network, due to its popularity in the last four years and the significant amount of users around the world.

The use of Facebook allows people, especially teenagers, to socialize and interact with friends and colleagues from any device with internet access [1]. With the increased popularity and having become mature, Facebook is, currently, seen as a powerful tool for many areas, including education. In 2011 it was published the document "Facebook for Educators", where the authors show that it is possible to explore the resources of this network for educational purposes [2]. In 2013, Facebook stood out as the ninth best tool for learning, according to the Centre for Learning and Performance Technologies. Confirming this idea, [3] suggest that the studies about the use of Facebook for educational purposes should continue in order to improve this procedure and evaluate if the school reorganization needed to use the Facebook as an educational tool is worth it for the benefits obtained with it.

The motivation of this research emerged from the closing event of the digital training course called Aluno Integrado, in 2013, that is a distance education course sponsored by the Brazilian Education Department and implemented by the Federal University of Santa Catarina in partnership with the Education Secretariat, that was offered for teens in the state school system.

From the testimonies of tutors and students, it was realized the importance of the social network and its potential. On the course edition of 2014, the social network was implemented as a complementary educational tool for the interaction, using closed groups. From this experience, this work aimed to identify and present the perception, from the point of view of students and tutors, about the use of the Facebook in a distance education course for high school students of the public school system in Santa Catarina. This paper contributes to the advancement of the scientific knowledge by evidencing how the Facebook can help in the decreasing of the dropout in distance learning courses, with teen students of low-income. The delimitation of this research is the digital training course Aluno Integrado, performed in Santa Catarina in 2014.

2 Theoretical Background

In distance education the interaction among participants is considered as a major factor for the learning effectiveness, since the knowledge doesn't exist only individually but also is acquired by means of these interactions [4]. The interactions can be describe and defined in three different types, [5]: student-content interaction, student-student interaction and student-tutor interaction. Accordingly, the use of information and communication technologies that facilitate this interaction is imperative for the good performance of the distance education courses [6]; [7]; [8].

The interactions in distance education are mainly mediated by some information and communication technology and it is observed that with the popularization and expansion of the use of computers and web application tools, the possibilities of interaction – synchronous or asynchronous - were modified, giving quick, safe and efficient techniques to the distance education agents. Following this thought, [9] observes that the distance education mode have more possibilities of communication (synchronous or asynchronous) among the people involved in the process, and that this may result in more effective collective and individual learnings.

[10] pointed out that the use of technologies can improve the motivation and interest for learning, contributing to the construction of knowledge. However, they warn that the use of technologies, by itself, is not enough to make difference in the learning and teaching process, and that it is needed to do a reflection, to discuss and propose effective teacher training models for using these technologies.

Among the possibilities that have arisen from the internet, there are the social networks. Nowadays the Facebook is one of the most well known social network having more than 89 million of users in Brazil. Recent researches about the use of Facebook in education indicate that: (a) this social network is the most popular among the students [11]; [12] and among the teenagers [13]; (b) the closed groups are tools with a big potential for communication, interaction and collaboration [14]; [15]; [11] and; (c) the use of Facebook can contribute to the students' learning, because it allows the interaction among the users, besides of the collaboration and actively participation of them and also because of the capability to share material and information, allowing the participants to explore their critical thinking [16]; [17].

On the one hand, researches such as [12], which talk about the decision of using the social network, defend the social influence as a very important factor to decide to use this network. Thus, if a student sees a colleague using Facebook, probably, s/he will want to use it too. Following this thought, [11] believes that the groups on Facebook, including its interactive characteristics and facility of feedback, have the potential to give to young people what they want and, thus, the Facebook closed groups can provide environments for exchanging of knowledge.

On the other hand, according to some authors the social network has some limitations for being used for educational purposes. These authors [15] point out that there is support only for one kind of document, the discussions can not be listed and ordered and, also, Facebook is not perceived as a safe environment for most users.

It is observed, from the cited references, that the use of Facebook in education is still a field open to new findings. This is explained by the novelty of the social networks and because of the dynamics interactions in them.

This work differs from the previous related works found in regarding to the researched context; The research was conducted with a population of students and tutors who participated in a non-formal and voluntary participation course offered as an ex-tra-curricular activity for high school students in the public school network.

The course was offered totally in a distance education mode. In this context high rates dropout are expected and the Facebook was used as a complementary tool together with E-Proinfo learning management system as the main learning tool. In this context the main expected role of the Facebook would be help in the iterative communication process to minimize the dropout rate.

3 Methodological Procedure

This research can be characterized as descriptive and empirical. The methodological approach can be classified as predominantly quantitative, the applied methodology was an exploratory and descriptive study case, the study case survey data was obtained by questionnaires. The object of study was the training course Aluno Integrado, edition of 2014 as part of a larger project funded by the Brazilian government to spread knowledge about digital technology in public high schools. The primary data were obtained through anonymous online questionnaires applied to tutors and students of this course. The data was collected from the answers of 158 students and 37 tutors, from September 1st to October 26th of 2014, using exclusively questionnaires that were made available on Google Drive. The participants were users of the social network who were also members of the closed groups created on Facebook for this edition of the course.

The data collection instrument used with the students was adapted from [12] to gather more converging data with the research context within a broader project Aluno Integrado. It was created a questionnaire with 10 multiple choice questions. The first two for knowing the age and genre of the students and the other eight for knowing their habits regarding to the use of internet having as a main focus the Facebook (frequency of use, motivation for using it, number of friends, among others).

The questionnaire applied with the tutors was adapted from [18]. This questionnaire had 17 questions, 10 multiple choice questions and seven open field question. The first four were created for knowing the age, level of education, background and experience in distance education, and the other 13 for knowing the perception of the tutors regarding to the use of the groups in Facebook and the students participation in those groups, besides knowing about the difficulties in the use of the tool and their opinion about the contribution of the network in the students learning. The data analysis was made based on interpretivism. Originally it was aimed to trace a profile of the students and tutors to, in sequence, identify the perception of both of the groups about the use of Facebook in the course.

3.1 Characterization of Aluno Integrado Course

The Aluno Integrado digital training course in distance mode is a course offered for students of the 1st and 2nd year high school in public schools of the Santa Catarina state in Brazil. The Aluno Integrado is part of the National Program of Continuing Training in Educational Technology called Proinfo and its goal is to promote the pedagogical use of the Information and Communication Technologies in the public school system. The program brings computers, digital resources and educational contents to the schools. In turn, states and counties must warrant the proper structure to maintain the computer rooms and to train the students and teachers for the use of the machines and the technology. The focus is centered in education and technology aiming to provide to these students an expansion of knowledge in this field, trying to explore different perspectives in basic education.

The course is offered by means of the Learning Management System (LMS) E-Proinfo, and the contents and learning activities were developed totally for learning in distance education mode. In this platform the students learn main concepts about this educational modality, about history of computer, hardware (physical part of the computer), computer maintenance and operational systems. In this environment the contents of the course and the evaluation activities that have to be performed by the students are available.

In the 2014 edition, 63 classes were created, each one of them had a distance tutor responsible for guiding the students about the content of the course and the activities, and also, for encouraging them to interact in the platform using forums and messages. Besides the tutors there was another role, the tutor guide, in this edition there were three professionals who did this work, each of them had 21 tutors/classes to guide and supervise in regarding to the deadlines, students participation, resistance, evasion, among other.

In 2014 the use of the Facebook social network was expanded (in 2013 it was used the Fan Page and the profile for disclosing the course), by creating closed groups for each of all the virtual classes, including all the tutors, students and project coordinators in separated closed groups. At the end, before the classes started, 63 closed group was created by the technical team of the project. The members of each group were the tutor and his/her students of each class, having approximately 50 students.

4 Results

4.1 The Student Perspective

From the answers of the 158 students who participated in the survey, it was possible to trace their technological profile, understand their motivation to use the social network and know how the use of the Facebook can influence in the course progress. In order to characterize the target group, initially is presented the technological profile of these students.

The group of students is predominantly female (59%). The aged of the students is between 14 and 17 years old. The students can access the internet from different places, from home, from the school and from different mobile devices. This question was created for the participants to have the possibility to select more than one option, the reason for doing this is because the students can have more than one place to access the internet. For accessing the internet, almost all (95%) use the computer at home, 40% use also at the school, 49% of the students accesses the internet also on the cell phone and 13% use also the tablet (Figure 1).

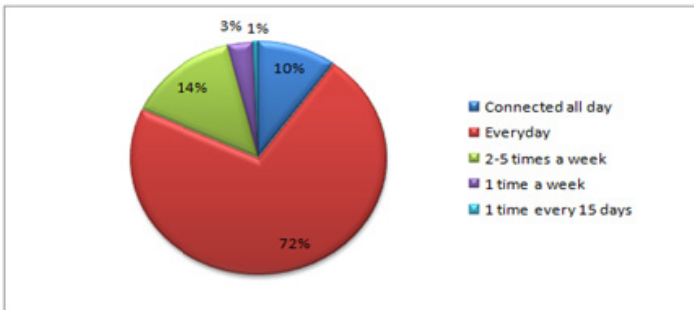


Fig. 1 Frequency of the use of Facebook by students

These results show that the use of cell phones to access the internet begins to pre-vail in comparing to the use of the computer at the school and, even though having just 13% using the tablet, the use of mobile devices (cell phone + tablet) represents a significant amount of the results.

Asked about the motivation to use the Facebook, 89% answered that they use the network to be in touch with their friends, 45% said that wants to be in contact with people that doesn't see a long time ago, 42% try to talk with the colleagues about school tasks and 30% of the students accesses to make new friends. About the number of friends of the students, the majority of them (49%) has a network of between 250 and 1000 friends and 34% has a network of more than 1000 friends.

With these results it was perceived that the main purpose of the students is to make new friends and interact with them. This is reflected in the quantity of friends that they can have, but also, it was observed that a big group of them (42%) use the social network for educational purposes, for being in contact with colleagues and talk about tasks from the school.

Specifically about the use of the Closed Groups tool in the course, the perception of the students is that they were able to be closer to the tutor, using the social network, 94% of the students answered that the communication with the tutor was facilitated with the Facebook. Besides, the students said that this method also helps for the interaction with the colleagues of the class (57%) and that the doubts were answered more quickly by the tutor (47%). Thus, the use of groups increased the interaction between the students and facilitated the communication of them with their tutors, whom were able to help them in less time.

In regard to the frequency of the use of Facebook, some of the students said that they are connected during all day. Also, almost all of them are connected everyday. About the difficulty of the use of the network, 99% said that they don't have problem using the Facebook.

With these results it can be concluded that the insertion of the social networks in education can be performed without causing any frustration to the students for not having much knowledge about the tools offered by the network, because they affirmed that they know and are familiar with the environment, not having difficulties using it.

4.2 The Tutor Perspective

The function of the tutor in the Aluno Integrado course is to guide, monitor and evaluate the student during the course. This process is made answering the questions about the content and the course progress, through the interaction between the tutor and the student using the different communication tools. The communication tools defined in this course were: forum and message in the e-proinfo learning management environment, institutional e-mail, phone and Facebook.

The group of tutors participants of the survey is heterogeneous in regards to the age and knowledge and, also, regarding the perception of the use of the social network for educational purposes. The participants are between 24 and 58 years old, the majority (76%) has specialization or master (19%). The education of the tutors is characterized by the heterogeneity: computer science, information systems, languages, administration, accounting, arts, pedagogy, history, mathematics, biology and physical education. In regard to the experience in distance education, 49% of the tutors have until three years of experience, 21% have between three and five years and 30% have more than five years of experience. However, the most of them (68%) have never used Facebook for educational purposes.

In general the tutors find out that the most of the students use this social network, confirming the researches of [13]. From the tutor's point of view, is easier to be in contact with the student using the Facebook, than using the email or phone, because the students are online everyday. Another perception is that the communication through the network makes the course be more attractive and interesting.

A new aspect is the issue of sense of belongingness. According to the tutor 14 "they view their friends that are together in the class and, being users of the tool, they give 'likes' in the posts. It is favorable to the disclosure of the activities and deadlines of tasks". This issue is raised for [12], confirming the impacts of the social influence in the decision to use or not the network.

The perception of the tutors is not unanimous in regard to the effectiveness of the use of Facebook. There is a group of tutors who believe that the creation and the use of the closed groups for each class played a key role in the exchange of

additional content, clarifying questions and in the student engagement, being characterized as a facilitator environment for learning.

For this group of tutors the network still works as an incentive of the communication, making easy the contact with the student in less time. This can be perceived when the tutor 08 said: "I perceived that the contact with the students becomes more frequent, because is a tool that the students like and use". In the same sense, tutor 04 said: "always (and only in this way) they are in contact through Facebook, in everything they need, in any situation, and always I am able to help and solve the problem, in a quick and efficient way, almost immediately, and this is a facilitator and is a motivation in the participation and continuity in the course". Tutor 18 still makes a relation between the participation in the group and the contributions in the forum of the course: "once they establish the communication through Facebook, they feel more comfortable to interact, also, through the forum".

In contrast, a group of around 16% of the tutors believe that the use of this tool doesn't have relevant impact in the learning of the students. Tutor 28 said that: "what makes difference for the student to learn or not is her/his engagement with the course, the responsibility level and the time that s/he takes to do the course". In this direction, tutor 37 affirms that the most of the students don't understand that "Facebook can also be a learning tool and an exchange information tool, and not just entertainment".

Based on the reports is clearer that the use of the tool alone doesn't warrant the improvement in the teaching learning process, as have been pointed for [10], requiring both awareness and maturity of the students as management with planning, control and monitoring of network usage.

An additional issue that has emerged from the data is the use of another communication tool, Whatsapp. According to tutor 15 "the Whatsapp is being much more used than Facebook. The Facebook group is more for the students that are not in the Whatsapp group, because who are in this group prefers to communicate through it". This testimony shows the trend of popularity of this new communication tool among the teenagers.

The results encountered in this research, contextualized in the scenario of the public schools of the state of Santa Catarina, confirm the main points shown by the international literature and emphasize the point of view of the students and tutors, main actors in distance education courses.

5 Final Remarks

The main contribution of this research is to demonstrate that the use of groups in Facebook as interaction spaces among the students and tutors is effective and brings benefits for the engagement of the students in the studied course. It was possible to notice an increase in the interaction levels among the students, among students and tutors and among students and course content. This fact affected directly the decrease of the course dropout. In this research the groups in

Facebook were important tools in the communication and interaction with the students of the course, allowing the tutor to be closer of them, strengthening the relations between all the participants of the course.

As we pointed above, it can be concluded that the insertion of the social networks in education can be performed without causing any frustration to the students for not having much knowledge about the tools offered by the network. But the group of tutors participants can be heterogeneous in regards to the age and knowledge and, also, regarding the perception of the use of the social network for educational purposes.

We observed that the tutors find out that the most of the students use this social network, and it is easier to be in contact with the student using the Facebook, than other tools and the communication through the network makes the course be more attractive and interesting.

It is important to highlight that the use of these groups is possible, because of the previous knowledge of the students about the Facebook and their preference to be online, with friends or to interact in the platform. In contrast, it was evident that the existence of the groups in Facebook doesn't ensure its effective use, being needed planning and pedagogical guide for having a successful tool for education.

This knowledge can help in the creation and implementation of communication and interaction strategies through the social networks in distance education courses focused, specially, for teenagers. Contributing for the improvement of the quality of the course, and for the increase of the interaction of the students with their colleagues, and with the tutor, decreasing the distance existent in a distance education course.

As a future research works, we intend to perform additional studies to identify if the participation and interaction of the student in the group of Facebook has any influence, positive or negative, in her/his academic performance in it. Additionally we consider the integration of a regression analysis to provide a more clear and scientific framework using a multinomial logistic regression considering each technological profile of students and tutors. By this improvement in this research, participants would be classified according to their assiduity: frequency on platform (for students) and number of assignments (for tutors), creating a sort of index.

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