

Social networks and their influence on students of initial, middle and higher education

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Abstract. Currently, technological advances and social networks have had an impact on the transformation of the traditional methodologies of the educational system, so that more and more, all technological resources have a greater participation in the teaching process. This allows learning to be innovative and the participation of the actors involved to be creative, motivating and cooperative. This research seeks to determine the influence of social networks on students of initial, middle and higher education, as a tool to improve the teaching and learning process at these educational levels, the repercussions on the motivation to have a better school performance, the connections that can be established when using social networks when studying, in addition to the obstacles that can arise in compliance with this current scenario, which in recent years due to the pandemic has been accentuated with greater intensity. With consideration also of the risks and difficulties that may arise if they are not used properly, since, according to the educational levels of the students, timely supervision is necessary and the establishment of limits in the use for prevent unfortunate situations.

Keywords: Social networks; initial education; middle education; higher education.

1. Introduction

Social networks in recent years, due to technological progress and the needs of people, have had a boom in different areas of daily life, especially in education. In the case of students, they have expanded even more, since, they spend many hours in the use, making publications, interacting with others and knowing the opinions of many on various topics [1].

Therefore, in the educational field, there has been an interest in implementing these tools and technological applications in the daily development of the system, having an impact on many activities and subjects, due to the innovative way of teaching and learning [1].

This indicates that social networks influence the lives of people, especially students, because they are linked in a social environment, and due to the various changes and needs generated in recent years, in the teaching process, the student has been having greater participation in the way he/she learns [2].

The presence of social networks in the educational system allows collaborative learning and implies participation in information exchange scenarios, which encourages cooperation, having greater knowledge in the way knowledge is processed [2]. Therefore, in this research we try to know the influence of social networks on students of initial, middle and higher education.

2. Methodology

The present research was conducted based on the systematic literature review guidelines proposed by Kitchenham (2004), in order to obtain information related to the study questions outlined for the development of the study. This normative manifest the following stages:

- Planning the review
- Conducting the review
- Analysis of results.

2.1 Planning the review

The objective of the research is to know the social networks and their influence on students of initial, middle and higher education, with the purpose of developing the topic, the following research questions were posed:

Q1: What are social networks?

Q2: How do social networks influence early childhood education students?

Q3: How do social networks influence middle school students?

Q4: How do social networks influence higher education students?

The information was accessed through digital databases such as: Science, ACM Digital Library, Google Scholar, IEEE, Scopus, Direct Elsevier, eXplorer and Springer Link, to search for topics related to social networks and their influence on students in early, middle and higher education, modes of application, influence, research conducted on the subject. An identification of the sources found in scientific research, academic journals and technical publications, between the years 2010 and 2022, was carried out, executing as a search plan element linked to the research questions. In the search strategy, aspects related to the research questions were determined and the following criteria were followed in order to refine the inquiry (see Table 1).

Table 1. Selection criteria

Inclusion criteria	Exclusion criteria
Articles that develop the topic of the influence of social networks in early education.	Information published in broad and general websites.
Documents that refer to the influence of social networks on middle school students.	Information from blogs.
Articles that have information about the influence of social networks in higher education.	Documents that do not make important contributions to the researched topic.

2.2 Conducting the review

In this phase, a selection was made of all the articles considering the inclusion and exclusion criteria, reviewing the titles of the articles, the content and the conclusions reached, with the purpose of determining whether they could contribute to the questions posed in this study.

As a result of the search, 80 papers were identified, of which 45 were selected that met the established criteria.

2.3 Analysis of results

In order to understand what is meant by the topic of social networks, it was possible to obtain answers to Q1: What are social networks?

Social networks are various activities where people interact with other people, post images and videos, engage in conversations about public issues, read news, play games, send chat messages in real time, advertise different products and businesses, and many other elements that have to do with networks, communication and collaboration [3].

Making a definition of social networks is very challenging as they are constantly changing and updating components [4]. However, when considering a concept, it can be said that they make a description of any number of technological systems connected with community and cooperation [5].

Therefore, they employ web-based mobile technologies for the purpose of creating content that is largely interactive so that users can share, co-create, discuss, and make modifications [6]. Information is shared among users, where their interests and motivations are implicit [7]-[10].

Consequently, social networks allow the interaction of users to share information and create material, which are interactive so that there is greater participation of the virtual community [11], [12]. Among the most popular social networks are [13]-[19]:

- Content communities such as YouTube.
- Blogs such as WordPress.
- Collaborative projects such as Wikipedia.
- Social networking sites such as Facebook, Instagram, Twitter, and LinkedIn.

- Messaging applications such as Viber, Skype, and all those for academic purposes.

Social networks are used for the creation of social relationships and for educational purposes [20]. Therefore, in recent years they have been used in education at all levels [21]-[24]. Children, adolescents and young people use social networks for different purposes, communication, entertainment, work, sales, shopping, information exchange, news, announcements, among others [4].

Characteristics of social networks

Social networks have the following characteristics [1]:

- Individual connectivity: the network is formed by users, who must create a profile to register and be accepted. The affiliation is done freely by each user.
- Independence and interactivity: The networks are created based on common motivations and interests, achieving an independent integration. Interactivity is achieved because users coexist in a virtual environment, exchanging information [25].
- Freedom: Networks have the independence and responsibility for the integration and dissemination of information, as well as the creation of content, which leads to the construction of knowledge.

Social networks are relevant because they facilitate the possibility of managing information and generating content that they make available to people, and in the case of education, they allow the strengthening of learning and knowledge [1]. In addition, they have become spaces for interaction, where some show a degree of specialization, favoring the use and better use of the resource [26].

Negative aspects and risks of social networks

In the use of social networks by students at different levels, there are negative aspects and risks to which they are exposed with these new styles of communication and connection. Among some of these aspects are: depression, attention deficit hyperactivity syndrome, insomnia, decreased sleep, poor academic performance, grade repetition and school dropout [27].

There are a number of psychosocial problems linked to the use of networks, addiction to online games, which affects decision-making and feedback, due to the hours spent playing, failures in the learning process [28]. In personality, due to cyberaddiction borderline personality disorders have been detected [29], [30].

In addition, there is exposure to pornography and violence in the media, video games, social networks, internet. There is little ability to observe body language and facial expressions directly. These technological tools facilitate inappropriate behaviors such as anonymity, false identity, exhibitionism, aggressiveness, deception, among others [27].

Other dangers to which students are exposed are Grooming, where an adult person uses strategies, in order to establish links with children, adolescents and young people to achieve control and sexually abuse them [31], through friendship, deception and blackmail; Cyberbullying, has to do with the way in which the media favor violence on people, manifested as follows: publications, images, videos, memes, private infor-

mation published with the purpose of embarrassing, false profiles, among others [28], [32], [33].

Among other practices that can be dangerous using the networks are sexting, which allows the sharing of sexual and personal images, with the risk that the information becomes viral without the consent of individuals, bringing consequences by being exposed to the public [32]; cyberaddiction or addictive behavior to the Internet, characterized by losing control when using the Internet, which can affect social ties, academic performance, recreation, health and personal hygiene [30], [34], [35].

Q2: How do social networks influence early childhood education students?

Social networks have become a tool of great importance in the academic environment, since they have an impact on the way teaching and learning take place, and the student can develop a cooperative work with teachers and other classmates to achieve meaningful learning [36].

From early education, a process of familiarization with new information resources begins, with the proper supervision of teachers, so that they take into consideration the maturity stage of students, being as a guide in the proper use of technological tools [36].

In the first years of schooling, students are in a stage of knowing and learning the resources with which the teaching process is given, how to use the Internet and to what extent to alternate it with playful activities that lead to the development of all the skills and functions that should be stimulated in that initial stage [36].

Therefore, the importance of the teacher's role in these beginnings with the use of these applications and educational technological tools, having a moderating role that guarantees [37]:

Security: Since the users are minors, it is necessary to consider the control of access to the network and care in the disclosure of content. Therefore, it is necessary to have an account manager to ensure the safety of early childhood education students. If the network is a social network of the educational center, it is the management staff who is responsible for administering it, but if it is a more restricted network, more at the classroom level, the administration is assumed by the teacher.

Content control: In order to manage the content with the corresponding delimitation, adapting it to the objective of the planning to be presented, to the needs of the students, with the appropriate and timely presentation, avoiding distractions. These contents can be from various technological resources, but with the expected educational purposes.

Improvement of interpersonal relationships: Education not only has to do with the intellectual development of each student, but also implies a comprehensive development, where other spheres are immersed, such as social, personal, cognitive and emotional, therefore, social networks facilitate the possibilities of also working in these other areas, while acquiring knowledge, allowing the interconnection between all students, which will be channeled through the methodological strategies applied by the teacher when using the tools.

In a study conducted to find out how social networks have an impact on early childhood education students, it was determined that students of this generation are

equipped with many technologies, using social networks such as Twitter, the use of video games, video consoles and cell phones [33].

Another result obtained in the study is the ability of minors to make use of screens in different activities and exercises, performing several processes at the same time [33]. These resources allow them to communicate, play, consume and display content [38]. In the impact that social networks have on students in early education, the presence of parents and teachers plays a very important role, for the confrontation of the dangers to which minors are exposed, the risks for which they do not have the maturity or the mechanisms to confront some content and certain inappropriate behaviors [33].

Q3: How do social networks influence high school students?

With the changes that are made in the world through technological advances, social networks allow students an opening in the management of their functions, which although it is true that it is used by education for the fulfillment of academic responsibilities, they are also used in daily life to establish links with other people [28], [39].

In the educational field, its purpose is for the teacher to generate knowledge together with the students in a constructive and cooperative manner, so that the appropriate use is achieved that leads to meaningful learning [39].

In studies conducted with high school students, to know the influence of social networks on academic performance, it was found as results: that each student has the knowledge of what social networks are, and they make use more frequently of Facebook, followed by Twitter and then Instagram [28], [39].

Although students may use social networks to research homework information, it is greater the use of the networks of their preference to interact with other people through chat and to be updated on what is happening with friends [39].

In addition, middle school students have a prolonged time of investment in social networks, which merits those parents and teachers can give appropriate guidance, because of the risks and consequences that can be generated [33].

In this evolutionary stage in which students are, there is a gap in the communication of parents with their children, there is only an endowment of technological resources without any limitation or control, which generates problems in adolescents [33].

Among the problematic situations is the so-called precocious cyberadolescence, where students have knowledge of everything, but are lost, due to the lack of teaching how to cope with the proper use of technologies. This is where the teacher and the family must play an active role to show what is appropriate, establishing parameters to prevent risks [33].

All this leads to consider the important role played by teachers and parents for the responsible use of social networks. Students should be aware of the proper way to use these tools, both inside and outside the educational institution [33].

Q4: How do social networks influence higher education students?

Social networks constitute a communication resource that has no boundaries, allowing proximity despite distance, and contact with others who have similar needs, interests and concerns [39].

Therefore, faculty in higher education are encouraged to discover or reinvent different ways to use social networks effectively, using them for content creation, sharing, participation, and collective socialization [40].

In addition, they can enable up-to-date teaching materials and educational data, which promote contact and collaboration. Many researchers argue the use of social networks to foster communication between faculty members and students, for the strengthening of the student community [41], [42].

Therefore, the use of these tools in higher education has become indispensable, since, they are young people who have risen in a generation of technology, and they need to have the training and transmission of concrete skills in the university careers they have chosen for professional preparation [43].

Social networks have provided a teaching and learning environment for both students and teachers [44], since the incorporation of these tools in the university classroom implies an effort on the part of both, so that the process is satisfactory [45], encouraging mutual help so that with the resources the solution of the needs and problems raised is sought [44].

These tools give continuity to the school activity in the classroom, but in many cases in a virtual way, allowing the expansion of continuous interaction, the incorporation of new strategies and materials for communication [45].

In a study conducted to know the influence that social networks have on higher education students, the following was found: among the most used networks are Facebook, MySpace, Twitter and Tuenti; it is a minority who use the networks for educational purposes, in addition, they do not see the networks as dangerous, they think that they do not affect their personal life [12].

This indicates that young people use social networks for academic activities but more as a means of communication, to establish links and interactions with other people, without realizing the danger of excessive and inappropriate use [12].

University students are exposed in a dangerous way, when they manifest their private life in social networks, in addition, the face-to-face relationship is shrouded in fears and difficulties to establish adequate links. Many prefer virtual interaction, but run the risk of being deceived, extorted, disappointed, which can generate low self-esteem, depression and suicide [12].

This determines that the inappropriate use of social networks can lead to unfortunate consequences. Using it in a timely and appropriate manner, understanding the benefits they have to achieve meaningful learning, training and preparation for professional life, would generate a successful and healthy outcome for students.

3. Conclusions

Social networks are immersed in the daily lives of individuals today. Technological advances with the different tools and resources they offer have made changes and adjustments in the way people function in the different areas where they develop.

And in the educational field it has had greater repercussions, in the way of teaching and learning, which has caused the respective adjustments and changes to be made in the planning of educational strategies to make the corresponding adjustments, which facilitate the training of students to make proper use of these technological resources.

Therefore, the use of social networks has had a boom at different levels of education, and both the teacher and each student have the opportunity from what corresponds to their duties and functions, to perform the planned activities and respond with the greatest effectiveness to achieve meaningful learning.

However, it is also known the risks that arise when using social networks, of which both parents and teachers must supervise and monitor the interactions that are made by these means, so that these resources are used to nurture knowledge and not to generate dangerous conditions or situations that put at risk the integrity of the most vulnerable people.

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