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Assessment of the Efficacy of Social Networks as an Educational Resource in the Teaching Process During Periods of Social Isolation

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Abstract

Objective: To evaluate the influence of social networks as educational tools and resources in the context of higher education.

Methods: A descriptive research design with a quantitative methodology was employed. Data were collected through surveys completed by 185 university students.

Results: The findings indicate that students recognize the efficacy of social networks as educational tools. Specifically, these platforms facilitate communication with educators and serve as a means for collaborative learning. Key potentialities identified include enhanced contact between educators and students, resource sharing, collaborative learning opportunities, and improved communication skills.

Conclusions: Social networks demonstrate significant potential as academic tools. They not only strengthen interaction between educators and students but also foster collaborative and resourceful learning environments while aiding in communication skill development.

Keywords: social media, teaching, isolation, COVID-19

Introduction

UNESCO reported that the pandemic led to heightened technology usage and consumption, presenting opportunities and hazards and the potential for practicing digital citizenship. Accountable. In this context, technology fosters a participatory culture that enhances social engagement through various platforms and tools, including social networks (Agrawal et al., 2024).

The utilization of ICTs has been pivotal in combating the coronavirus by disseminating life-saving information, dispelling misinformation, upholding the fundamental right to information, enhancing public interest media, providing open educational resources for remote and virtual learning, and facilitating interpersonal connections (Ayyalasomayajula, Agarwal, et al. 2024).

Digital efforts have arisen in the educational sphere to sustain teaching and



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learning, including digital communication, virtual training sessions, and using platforms and social networks, as noted by Álvarez et al.. In recent years, substantial transformations have occurred globally concerning the proliferation of social media and its user base (Danzeng 2024).

Social media encompasses websites and applications that facilitate connections among individuals within a defined area, referred to as a Personal Learning Network, enabling the discovery, creation, and sharing of content, ideas, opinions, beliefs, emotions, and personal, social, and educational experiences (Dodds, Brayne, et al. 2024).

Facebook, YouTube, WhatsApp, Instagram, and Twitter rank among the most prevalent and frequently utilized virtual social networks. As of 2020, the global population of frequent social media users exceeds 3 billion individuals. Colombia is a growing nation where social networks have expanded considerably. Numerous studies have underscored the communicative challenges commonly encountered in the educational process, adversely affecting it (Gunnes, Løe, et al. 2024).

For instance, Sainz identifies three obstacles in pedagogical communication: a hierarchical management style, an authoritarian teacher-student dynamic, and insufficient facilitation of group communicative interaction during instruction. Consequently, the educational utilization of social networks can mitigate these barriers and enhance the sense of academic community, enabling teachers to deepen their understanding of their students (Kushibiki, Aiba, et al. 2024).

Social media is vital in educational settings as a primary communication medium and a source of social support. Understanding social media applications is essential for students to leverage them for academic and personal growth. Social media facilitate extensive access to information and resources, diminish obstacles to group interaction and communication, promote collaborative learning activities, foster self-directed learning among students, enhance student engagement and motivation, improve interpersonal relationships among students and between students and teachers, and support active and social learning as well as the cultivation of skills and attitudes such as socialization, teamwork, and the significance of sharing (Lei, Matovic, et al. 2024, Rutledge, Garner et al. 2024).

Specific social networks, like Edmodo, are explicitly tailored for educational purposes; nonetheless, for any social network to be productive in the learning process, educators and learners must govern and manage it. College students constitute a significant demographic of social media users. The judicious use of social media yields beneficial academic, social, and health outcomes for students (Sengupta and Vaish, 2024).

Inadequate academic performance may result from students' improper utilization of social media. Consequently, considering the essential influence of social networks on students' academic performance and enhancing understanding of their effects on university students, this study was conceived and executed to examine the extent of social network usage among university students (Zhang, Abbas, et al. 2024).

Methodology

Research approach and design



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This research adopts a quantitative-descriptive strategy, as articulated by Kothari, as it employs procedures and methods designed to enhance data objectivity by using frequency tables, descriptive statistics, and other graphical representations. The research strategy aligns with field research, as data collecting will occur directly from the primary source without influencing their responses (Zhang, Abbas et al. 2024).

Population and sample

The population under examination comprises the total enrollment of students during the first semester of 2020 at a private higher education institution in San José de Cúcuta, which offers seven undergraduate programs across three faculties: Engineering, Health, and Humanities. A probability sampling method utilizing systematic sampling was employed to collect data, resulting in a sample size of 185 students from a limited population of 3,264 students, with an error margin of 6% and a confidence level of 95%. Systematic sampling is employed as a list of students is compiled for each academic program, arranged sequentially, facilitating the selection of students from all academic semesters of each program, so ensuring a diversity of perspectives.

Instrument

To evaluate students' perceptions regarding the viability of utilizing social media as an educational resource for academic course development, a questionnaire comprising 24 items was administered, organized into three sections: the informant's general profile, knowledge, uses, and risks associated with social media; and perceptions of the pedagogical application of social media in the teaching process. The device was utilized during the examination week preceding the conclusion of the first academic semester of 2020, during which the proclamation of mandated social isolation necessitated the transition from in-person classes to technology-assisted instruction. Due to the abrupt necessity, the initial semester was designated as a learning environment, and this research emerged as an exploratory study aimed at developing enhancement strategies for the second academic semester of 2020. The instrument was validated through expert assessment.

Data processing and analysis

Upon completing the online questionnaire's design, it was disseminated to the institutional email addresses of the sampled students, who were invited to share their experiences and complete the questionnaire. Upon completion of the sample, the data was downloaded in Excel format and subsequently exported to SPSS v25 software, where the dataset was generated. A descriptive analysis of each questionnaire section was conducted, presenting results in percentages and their corresponding interpretations (Agrawal et al. 2024).

Results

General profile

The informant profile revealed a prevalence of females, comprising 63% of the cases, with 60% of the individuals aged between 20 and 39, while the remaining percentage falls within the 15 to 19 age range. The Faculty of Human Sciences



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programs account for 52% of the responses, followed by the Faculty of Engineering at 35%, with the remaining percentage attributed to the programs of the Faculty of Health. Concerning social network usage, 98% reported daily engagement, dedicating five to ten hours per day to WhatsApp while allocating less than five hours daily to platforms such as Facebook, YouTube, Instagram, Twitter, and Snapchat (Ayyalasomayajula, Agarwal et al. 2024).

Knowledge, uses, and risks of social networks

In a survey regarding the most utilized social networks, WhatsApp emerged as the predominant program, with 45% of respondents indicating its use, followed by Facebook at 23% and YouTube at 21%. The TikTok application distinguishes itself as a burgeoning platform that attracts new fans daily. After identifying the social networks most favored by the informants, their utilizations were examined. The data has been documented in Table 1 (Danzeng 2024).

Table 1: Uses given to the main social networks

Social Network	Uses
Facebook	Forty-seven percent utilize it for entertainment by engaging with games and applications, and thirty-six percent employ it as a communication tool to connect with friends or meet new acquaintances through chatting, reading statuses, or reviewing posts. In comparison, the remaining seventeen percent leverage it to seek knowledge that aids their educational pursuits.
WhatsApp	Seventy-one percent utilize it as a mode of communication with acquaintances, through which they convey emotions, exchange experiences, or initiate new friendships. The remaining 30% indicate they utilize it for pleasure or enjoyment by reviewing statuses, some of which receive comments while others do not.
Youtube	Seventy-five percent of respondents indicate that they utilize this resource as their primary method for seeking general or academic information to share with peers. In contrast, the remaining percentage employs it primarily for entertainment, particularly to view music videos or disseminate their content.
Instagram	Ninety percent of respondents indicate that this network is predominantly utilized for communication, allowing interactions with acquaintances and the consumption of posts or statuses by individuals of national and worldwide significance. The remaining 10% use it mainly for entertainment during leisure activities, including exchanging content or images.
Twitter	12% utilize this social network to seek current information, but the remaining 88% engage with it primarily for communication by evaluating posts or statuses and articulating their support or dissent over specific contemporary problems
Snapchat	All individuals who utilize it assert that they engage solely for amusement throughout leisure and recreational activities, such as perusing posts and statuses or sharing photographs.

Source: Own elaboration



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Table 1 illustrates that specific preferences for social networks are evident among the surveyed students. WhatsApp is favored for real-time communication due to its voice, video, and instant messaging capabilities. Additionally, YouTube is the preferred platform for video sharing and accessing diverse audiovisual content, while the other mentioned networks serve primarily for asynchronous messaging, photo sharing, and various recreational activities (Danzeng, 2024).

Perception of the didactic use of social networks in the teaching process

The third element of the instrument aimed to investigate students' perspectives regarding the potential educational applications of various social networks in facilitating the educational process. Consequently, when inquiring among the group of students regarding the academic utility of social networks, it was found that 99% responded affirmatively; however, within that percentage, 54% indicated that during the first semester of 2020, they utilized some platforms as resources to enhance teaching efforts, with WhatsApp being the predominant medium for communication between instructors and students in each course. Table 2 delineates the applications proposed by the polled students, reflecting the social networks they most favor (Dodds, Brayne et al. 2024).

Table 2: Suggested educational uses for major social networks

Social Network	Uses
Facebook	Consult information on various contents, discuss a topic of interest, share academic information, exchange notes or resolve doubts, and conduct research that requires completing surveys.
WhatsApp	Share notes and class materials, conduct tutorials with the instructor or various students to address inquiries or enhance understanding, and engage in discussions on specific topics within groups that could serve as forums.
Youtube	Consult academic content in audiovisual format, resolve doubts, and give presentations on class topics.
Instagram	Resolve doubts, consult the content, and exchange class notes.
Twitter	Consult content, discuss a topic of interest, share academic information, and clarify difficulties in developing a topic.

Source: Own elaboration.

In light of the potential applications of various social networks for academic activities proposed in course development, participants were inquired about the creation of groups for educational purposes. Seventy-five percent indicated that social networks have been highly beneficial during this period of enforced social isolation, owing to their participation in multiple groups. They specified that they maintain groups for each subject to interact with instructors and establish separate groups exclusively for classmates. The advancement of technology-assisted activities across various educational levels has exposed numerous deficiencies in the reliability of Internet services and vulnerabilities in ensuring the security and privacy of information disseminated on social networks. All respondents acknowledge the risks associated with social network usage;



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however, they endeavor to refrain from disclosing personal or sensitive information that may jeopardize them in the future while recognizing the influence these platforms exert on the current circumstances arising from the COVID-19 pandemic. Conversely, 75% report no issues while utilizing various social networks, and the remaining fraction indicates they have experienced cyberbullying. Table 3 endeavors to categorize the applications the assessed students have utilized across distinct social networks throughout this period of enforced social isolation (Gunnes, Løe, et al. 2024).

Table 3: Uses given to the main social networks during mandatory social isolation

Social Network	Uses		
	Study	Leisure	Others
Facebook	30%	35%	35%
WhatsApp	66%	20%	14%
Youtube	52%	43%	5%
Instagram	3%	65%	32%
Twitter	7%	67%	26%
Snapchat	2%	76%	22%

Source: Own elaboration

Among the other uses suggested by informants in times of social isolation of social networks, electronic commerce stands out mainly since it has emerged as an optional activity in which all types of products can be offered, reaching an unlimited number of potential customers without having to pay taxes or have registration with the Chamber of Commerce, emerging as an alternative for generating income, which has led them to open accounts on more than one social network. Still, Facebook and WhatsApp are preferred (Kushibiki, Aiba et al. 2024).

Discussion

The heightened utilization of social media is among the most significant repercussions of the COVID-19 pandemic. This study performed a diagnosis detailing the utilization of social media during the required confinement period, utilizing a sample of university students. The findings suggest that the communicative dimension of social media creates a novel digital environment for students to engage with teachers and other educational stakeholders, far surpassing traditional media. Conversely, educational research concerning the utilization of social networks in pedagogy has evidenced a substantial enhancement of teaching practices. This necessitates exploring innovative instructional methods, with social networks as a crucial tool due to their significant influence on student engagement (Lei, Matovic et al. 2024).

Moreover, they serve as a mechanism to understand pupils' learning process. Like other digital technologies, social media was not initially designed for educational purposes; nonetheless, it has become an essential resource for the academic community. The influence of social media on contemporary educational institutions and academic endeavors is necessary; for instance, educators are progressively using social media to enhance teaching and learning



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methodologies (Rutledge, Garner, et al. 2024).

Teachers, parents, and students across all educational levels utilize personal learning networks, which possess a social dimension reliant on relationships and interactions facilitated by ICT. This establishes them as a socio-relational medium characterized by enhanced communicative connectivity. Social media can serve as a communication tool to improve connections among members of educational institutions. Students mainly utilize social media for entertainment, information retrieval, and educational purposes. The findings of this study highlight the utilization and significance of social networks among university students. This aligns with other research, including Kircaburun, Alhabash, Tosuntaş, and Griffiths, demonstrating that social networks serve as educational resources for higher-education university students (Sengupta and Vaish 2024).

Conclusions

The rapid advancement of ICTs has integrated them into numerous facets of individuals' lives. Education was sustained through a calculated appropriation process at one time, partly due to resistance against altering established paradigms and mainly due to some families' challenges in accessing these resources. However, following the announcement of mandatory social isolation in March as a preventive measure to mitigate the spread of COVID-19, all educational institutions and their stakeholders were compelled to transition directly to utilizing various ICT resources.

Due to the pressing necessity to maintain the educational process, higher education institutions were compelled to proceed with and conclude an academic semester originally planned for face-to-face instruction. This circumstance resulted in the integration of diverse applications, which were often recognized and promptly became integral to the educational process; nonetheless, numerous constraints persisted for students. The primary motivation for this research was to demonstrate that the surveyed students extensively utilize various social networks, which their instructors may integrate as supplementary tools for enhancing their lessons. Consequently, it is determined that using novel tools is essential for enhancing the educational process and, in turn, employing social networks to elevate student learning and teacher expectations.

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