Fenomenografía de los grupos de Facebook: innovación en el postgrado de la Escuela Nacional para Maestras de Jardines de Niños

Phenomenography of Facebook Groups as Innovation in Postgraduate Training at the National School for Kindergarten Teachers

Fenomenografia dos Grupos do Facebook como Inovação na Formação Pós-Graduada na Escola Nacional de Educadores de Infância

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Resumen

El presente estudio es de carácter cualitativo y documenta una experiencia de innovación educativa mediada a través de grupos de Facebook en la formación de postgrado en la Escuela Nacional para Maestras de Jardines de Niños. En particular, se buscó explorar y describir las experiencias de los estudiantes de postgrado en relación con los grupos cerrados de Facebook como mediadores en su proceso formativo durante el trabajo educativo a distancia y el retorno a la presencialidad. La metodología empleada fue de corte fenomenográfico, y los hallazgos revelaron un reconocimiento y valoración de la red social Facebook como una herramienta innovadora, flexible y con un amplio potencial formativo en el ámbito educativo formal e informal, según la perspectiva de los actores involucrados en esta experiencia educativa, documentada en los albores del siglo XXI y en el marco de la sociedad de la información y el conocimiento.

Palabras clave: redes sociales, entorno virtual de aprendizaje, grupos de Facebook, innovación educativa, fenomenografía.

Abstract

The study carried out reports an experience of educational innovation mediated by the use of Facebook groups in postgraduate training at the National School for Kindergarten Teachers, particularly seeking to explore and describe the experiences of postgraduate students around to the Closed Facebook Groups as mediators of their training process during the distance educational work and the return to face-to-face, the methodology used was phenomenographic and the findings pointed towards the recognition and appreciation of the social network Facebook as an innovative tool, flexible and with wide training potential in the formal and informal educational field from the perspective of the actors involved in the documented educational experience at the dawn of the 21st century and within the framework of the Information and Knowledge Society.

Keywords: social networks, virtual learning environment, Facebook groups, educational innovation, phenomenography.

Resumo

O estudo realizado dá conta de uma experiência de inovação educativa mediada pela utilização de grupos do Facebook na formação pós-graduada da Escola Nacional de Educadores de Infância, procurando sobretudo explorar e descrever as experiências dos alunos pós-graduados em torno dos Grupos Fechados do Facebook como mediadores do seu processo formativo durante o trabalho educativo a distância e o regresso ao presencial, a metodologia utilizada foi fenomenográfica e os resultados apontaram para o reconhecimento e valorização da rede social Facebook enquanto ferramenta inovadora, flexível e com amplo potencial formativo no campo educativo formal e informal na perspetiva dos atores envolvidos no a experiência educativa documentada no alvorecer do século XXI e no quadro da Sociedade da Informação e do Conhecimento.

Palavras-chave: redes sociais, ambiente virtual de aprendizagem, grupos do Facebook, inovação educacional, fenomenografía.

Introduction

The use of technological and digital tools in the educational field worldwide was already a reality before the pandemic. However, the experiences lived during confinement have profoundly transformed the conceptions and practices of educational communities regarding the possibilities, advantages and risks of technological and digital resources as tools for teaching and learning. In the case of the Ibero-American region, this is reflected in the findings of the global studies on technology in education, prepared annually for the last six years by the educational technology company BlinkLearning. In this regard, it is important to highlight the findings reported in 2018 in the fourth edition of said study, in which almost 6,000 teachers were surveyed to find out their beliefs about the integration of information and communication technologies (ICT) in the classroom.

The study revealed that 76% of the teachers surveyed considered that the main advantage of ICT in the classroom is access to a greater amount of content and tools, while 66% highlighted the direct impact of these resources on students' independent learning. On the other hand, 60% identified connectivity, professional training of teachers and the lack of creativity in students to take advantage of the potential of the available tools as the main challenges of incorporating technology in the classroom.

Furthermore, more than 40% of the teachers surveyed indicated that the greatest difficulty their students face when using ICT in their training is related to their poor skills in locating reliable information, while 90% indicated that they feel that their profession is not valued by society.

In contrast, in the sixth version of the Annual Study on the Use of Technology in Education, reported in 2021, which included the participation of 4,926 teachers (2,909 from Latin America and 2,017 from Spain), it was identified that 1 in 3 teachers considers the main advantage of using ICT during confinement to be the formation of a community with students. In fact, most teachers trust in the transformative potential of technology in education, although they recognize the need to improve their training, connectivity, school infrastructure, and their working conditions. In addition, 2 out of 3 teachers participating in the study consider that the appreciation of their work has increased after the pandemic, and they are highly motivated. In summary, the teachers surveyed identified autonomous learning, information literacy, and spelling as the main areas of opportunity for students after confinement. In addition, it was observed that the devices most used by students in their academic activities are cell phones and tablets.

These findings reveal a highly suggestive vein of research into the educational transformation processes experienced before, during and after the pandemic, both by individual actors and by educational communities as a whole. These processes appear to be related to the knowledge, incorporation and appreciation of technology in education.

Having explained the above, the main objective of this article is to report on the research findings related to the training experience of postgraduate students in the use of technological resources to carry out the educational process in non-face-to-face and hybrid contexts. To do so, the search and selection of these resources, the identification of their characteristics and benefits in learning, as well as the recognition of new scenarios, approaches and methodologies that emerge and reconfigure the educational work and its protagonists are explored.

In particular, the aim is to make these dimensions known in light of the experiences of using the social network Facebook as a virtual learning environment in the context of distance and hybrid educational intervention, both during and after confinement, with students from the second and third generation of the Master's Degree in Training of Teaching Competencies at the National School for Kindergarten Teachers in Mexico City.

Background

As in communities and educational institutions around the world, the arrival of the Covid-19 pandemic in Mexico and the lockdown decreed by the Ministry of Health and the Ministry of Public Education in March 2019 represented great challenges for the educational community of the National School for Kindergarten Teachers. These challenges revealed some shortcomings in educational management, teacher training for the integration of ICT in educational work, equipment and connectivity in the homes of students and teachers and, in general, the digital and information literacy of its members.

Due to this situation , the start of distance learning activities was not easy, although it should be noted that the aforementioned difficulties were gradually resolved thanks to institutional, collaborative and individual efforts, based on previous training trajectories, self-managed and/or academic and research interests related to educational innovation.

In the case of the Normal School, although educational continuity was guaranteed for its target population, the transition to virtual work and the gradual return to hybrid and in-person work posed an uncertain panorama regarding the impact of this experience on the

intervention of teachers, on student learning and on the lessons learned by the educational community as a whole to face the new scenarios and challenges of education.

Therefore, it is essential to recover the lived experiences, as well as the strategies and resources implemented by teachers from the students' perspective in order to take advantage of and give meaning to these experiences as alternatives that potentially enrich and diversify educational practice. A relevant example of this is the use of the social network Facebook in the context of educational intervention at the postgraduate level at the National School for Kindergarten Teachers, both during confinement and in the process of returning to face-to-face classes.

From the theoretical referential framework

In the global academic field, it is increasingly common to find scientific productions that address the educational use of technological and digital tools - including social networks - as alternatives to diversify the scenarios, strategies and resources for teaching intervention at various educational levels.

This interest arises in response to phenomena related to student learning processes, the professionalization of educators, the characteristics of the social and cultural contexts in which educational institutions and communities are immersed, as well as educational policies or emergency situations, such as that caused by the COVID-19 pandemic.

Thus, in a brief exploratory exercise of scientific production in this field in the Ibero-American context, we find outstanding works such as that of Fernández *et al.* (2017), who in their documentary research entitled "Analysis of international and national research on social networks in educational contexts" state that, until the time of the publication of their study, the trend in international research was focused on analyzing different variables related to the possible transformation of social networks into educational tools. In fact, the researchers highlight that most research on social networks and education at an international level is focusing mainly on their use in upper secondary and higher education. This trend is due, on the one hand, to the policies of creating profiles on social networks and, on the other, to the fact that researchers often analyze the educational impact of these platforms in their own academic contexts.

For their part, Rodríguez-Gallego *et al.* (2017), in their descriptive *ex post facto study* entitled "Perceptions of students of educational sciences about social networks as a teaching methodology", consider that social networks facilitate greater collaboration between

students, which makes them more attractive for their integration into the teaching-learning process, especially highlighting the use of Facebook and Twitter as complements to face-to-face teaching.

From this perspective, they point out that the most widely accepted educational use of social networks is that of sharing documents, and they observe that Facebook has greater potential for this function compared to other networks. Likewise, the researchers affirm that, from the point of view of teachers, these tools represent an opportunity for learning, continuous training and professional development, as well as an increasingly common scenario for the exchange of experiences, news and personal contacts, where students learn by interacting and carrying out actions with the published content.

In line with this idea, Duque and Enrique (2017), in their doctoral thesis entitled "New pedagogical dynamics in social networks: technological use of closed Facebook groups to enhance learning processes in the area of technology and computer science in grade 11 of the IE Joaquín Cárdenas Gómez", found that the academic performance of students improved during the execution of educational work through Facebook groups. In addition, they found greater participation in the proposed classes and activities, as well as an improvement in peer relationships and even in online behavior. This author, therefore, considers it essential to train teachers to implement social networks, particularly Facebook groups, as an educational resource. In addition to this, he values these virtual spaces not only as communication tools between the different members of the educational community, but also as a follow-up tool for graduated students, through the continuity of the group as a community.

On the other hand, Scherer and Farias (2018), in their analytical documentary study entitled "Use of the Facebook social network as a teaching-learning tool in higher education courses", argue that Facebook is a collaborative tool that is especially relevant in higher education due to the ubiquitous nature of social networks and their wide penetration among students at this level. According to the authors, this facilitates greater communication, interaction and flexibility in academic work, thus extending learning beyond the formal educational space and strengthening the autonomy of learning.

However, researchers believe that methodical planning of teaching through social networks is essential, that is, taking into account the conditions of teacher and student training in the educational use of the tool, as well as the conditions of equipment and connectivity both inside and outside schools. In addition, adequate dosage of content, the design of

assessment strategies and the management of potential distractions present in the social network are required.

For their part, Salas and Salas (2019), in their documentary study entitled "Analysis on the use of the Facebook social network in the teaching-learning process through data science", find that social networks represent a valuable technological alternative to improve the organization and implementation of educational experiences, since they allow the dissemination of information, the construction of communication channels, improve interaction and contribute to collaboration during the completion of practical exercises. In particular, Facebook stands out as an application that facilitates interactive participation in the learning process through the publication and feedback of comments, which offers students diverse ways to assimilate and build knowledge through the use of technology.

In this sense, Alcívar (2020), in her analytical documentary study entitled "Educational uses of the main social networks: the student who learns while browsing", states that the educational use of social networks allows students, especially the Z or Net generation, to learn while interacting with the digital environments they know and use daily. Alcívar highlights the importance of the creative capacity of teachers to plan and include in what the researcher calls *microcurriculum* , didactic activities or autonomous work tasks, both individual and group. These activities must be practical, dynamic and, above all, evaluable to allow students to verify for themselves the skills acquired and the learning obtained.

Specifically, in the case of Facebook, Alcívar identifies the most frequent educational uses of this social network, which include the following: 1) searching for information through official pages of government entities, private and public organizations, and national and international institutions; 2) creating private groups where the teacher acts as moderator and encourages interaction between students; 3) curation of content through the selection and archiving of videos, news, links, among others, and 4) dissemination of academic and cultural events related to the subjects or the educational center.

For their part, Apaza *et al.* (2021), in the qualitative phenomenological study entitled "Pedagogical use of the Facebook social network and its contribution to the collaborative learning of students in the 1st Cycle of the Faculty of Architecture, at a private university in Lima, 2020", report that the incorporation of Facebook as an educational tool contributed significantly to collaborative learning, responsibility in the students' formative process, assertive communication, recognition among peers, and collaboration and active

participation in academic activities. The study highlights several characteristics of Facebook as an educational tool, including its organizational environment that facilitates the management of special pages for a course, the creation of work groups, the structuring of study units, and the insertion of links to access documents or videos, among other functionalities.

In addition, the experience of the group of students analyzed in the research, who worked an academic course on this platform, is highlighted. Self-management of groups and the use of teaching strategies such as debate and discussion were considered important factors in developing critical thinking, fostering research skills, recognizing individual and collective weaknesses, and promoting self-training.

In this sense, Galván *et al.* (2022), in the qualitative study with a focus on action-research entitled "Virtual learning environment: social networks for learning at the university", found that social networks, as a virtual learning environment (VLE), allow innovation in education by transforming the context and the form of interaction in the teaching and learning process. However, for their educational use, it is essential to have an adequate institutional organization, planning and organization by the teacher, training in the use of the platform and collaborative work in the reconfiguration of pedagogical practice.

The study also highlights that the design of educational materials to be used on these platforms is significantly diversified by including images, videos, audios, websites and text. This favors access to varied information, allows asynchronous participation and keeps students motivated to learn autonomously.

As for access and connectivity conditions, the researchers point out that Facebook's intuitive design facilitates interaction and optimizes work time, without requiring a complex infrastructure beyond a smartphone, a profile on the social network and an Internet connection, conditions that are widely available to most teachers and students today.

In this way, the research shows a design that adapts to the context of higher education, expanding the use of technological and digital tools to share, collaborate and exchange information, while facilitating the construction of knowledge. This approach transforms vertical teaching into one of horizontal, synchronous and asynchronous collaboration, dynamic and linked to various virtual resources and face-to-face activity in the classroom. In addition, the value of teaching work in the didactic design of an EVA is recognized, as well as the opportunities for autonomy and collaboration that social networks offer to students as potential learning communities.

In short, in recent years there has been a broad production of research and knowledge on the use of social networks in higher education in the Ibero-American context. This reflects the interest of teachers and researchers to explore and document new alternatives, experiences and resources to diversify educational work, understand the characteristics of students' learning processes, and reformulate teaching-learning strategies, as well as educational management and evaluation processes.

The above is part of the so-called Information and Knowledge Society, where technological and digital tools, such as social networks, play a crucial role in the daily interaction of the new generations. This analysis serves as evidence of the processes of appropriation by users and their use in the educational field in order to rethink and enrich both the professional experiences of educators and the formative experiences of students.

On conceptual delimitation

It is worth noting that this brief review of the scientific literature provides the theoretical foundations necessary to delimit the conceptual references that allow us to describe and analyze the findings derived from this study. Initially, the conceptualization of social networks in this research is based on the definition of Hernández *et al.* (2017), who describe them as structures in which different groups maintain sentimental, friendly or work relationships in the context of Web 2.0. These networks multiply the spaces for information, discussion and exchange according to preferences and interests, among other factors.

Regarding virtual learning environments (VLE), the definition proposed by Trejo (2013) is adopted, who characterizes them as sets of synchronous and asynchronous interaction media that, based on a curricular program, favor the teaching and learning process through an interactive administration system. This system, based on digital technological tools, allows the configuration of scenarios where an individual learns through a self-directed process, which facilitates the construction of personal and professional knowledge.

Likewise, in relation to Facebook groups, the Meta portal (2023) in the "Help for companies" section describes these digital spaces as platforms that host tools for interaction between users, allowing the formation of networks and communities of various kinds. In the educational field, these groups have the potential to promote both autonomous and collaborative learning between teachers and students.

Regarding the concept of educational innovation, the proposal of López Sáenz *et al.* (2022) is adopted, who define it as a constant and systematic process of improvement. This

process contemplates a starting point, but not necessarily an end, and can reflect perspectives on daily life in classrooms, the organization of educational institutions, the practices and interactions of their members and the institutional culture. In this sense, educational innovation promotes the transformation of educational reality by rethinking traditional methods and forms of intervention. Its objective is to improve teaching and learning processes, based on an ideological, theoretical-methodological, ethical and reflective component.

From the methodological design

This study is classified as basic research, as it seeks to generate new knowledge in relation to the object of study, which in this case includes distance and hybrid educational experiences using Facebook groups. The population under investigation was composed of students from the second and third generation of the Master's program in Training of Teaching Competencies of the National School for Kindergarten Teachers (ENMJN) , during the first and second semester of their postgraduate training.

Regarding the sources of information, these were of a documentary nature and included texts, research, scientific articles, indexed journals and research theses, mainly related to the topic of study and corresponding to the last five years of knowledge generation at the time of writing this article. In addition, the textual search strategy and the use of key concepts in Google Scholar were used.

Likewise, field sources of information were used by collecting data through a digital questionnaire and exploring the Facebook groups in which the key informants participated during the first and second semester of their postgraduate training.

The context of the study corresponds to an *in situ investigation* , since it is based on the experiences of key informants and on the participant observation (teacher-researcher) of the digital environment in which the phenomenon studied occurred. In this sense, it is a non-experimental *ex post facto study* . According to Ortiz-García (2006), this contemplates the observation and collection of information once the phenomenon under investigation has concluded.

Regarding the scope of the research, it is classified as exploratory-descriptive, since its purpose is to generate information about the object of study in order to understand it and describe the properties and characteristics that define it as an educational phenomenon.

Therefore, it was considered pertinent that the methodological orientation of the work be phenomenographic. According to Murillo *et al.* (2018), phenomenography refers to the study of the qualitatively different ways in which members of a collective perceive phenomena or social facts. The objective is to understand these perceptions in depth and the phenomenon as a whole from the perspective of its actors.

Research question

What is the assessment made by postgraduate students—members of the sample group—about closed Facebook groups as mediators of their training process at ENMJN during distance learning and the return to in-person classes?

General and specific research objectives

1.   Explore and describe the experiences of postgraduate students around closed Facebook groups as mediators of their training process at ENMJN during distance learning and the return to face-to-face classes.

1.1   To understand the experiences of ENMJN graduate students with closed Facebook groups as mediational resources for learning during distance learning and the return to face-to-face classes.

1.2   Identify the desirable characteristics of the mediational use of closed Facebook groups at the higher education level.

1.3   Assess the educational potential of closed Facebook groups in light of the experiences of ENMJN graduate students during distance learning and the return to face-to-face classes.

Research assumption

The mediation of the training experience through closed Facebook groups in ENMJN postgraduate students during the distance educational work process and the return to face-to-face classes favors individual and collaborative learning of students and the appreciation of the digital resource for its educational and innovation potential.

Results

As mentioned, a questionnaire was designed and applied in Google Forms to obtain the information, which was sent to the target population by email. A response rate of 84.2% of the total sample was obtained, that is, 16 of the 19 expected informants responded.

Regarding the gender and age range of the sample under study, the distribution is as follows: 81.3% of the participants are women and 18.7% are men. In terms of age, the distribution of the participants is as follows: 18.8% are between 20 and 29 years old, 31.3 % are between 30 and 39 years old, 18.8% are between 40 and 49 years old, 18.8% are between 50 and 60 years old, and 12.3% are just over 60 years old.

Figure 1. Gender of key informants

Source: Own elaboration

Figure 2. Age range of key informants
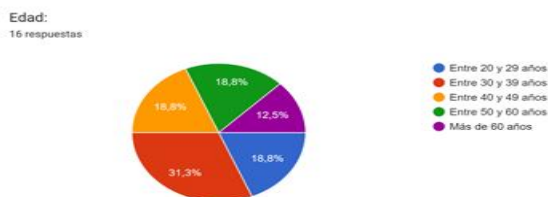
Source: Own elaboration

It is observed that 50.1% of the respondents, whose age ranges between 20 and 39 years, are in the population group in Mexico that constitutes the majority of users of the Facebook social network. On the other hand, the remaining 49.9%, aged between 40 and over 60 years, belong to a minority group of users of the social network, although this segment has shown a slight increase in its use of the platform. This information is based on the study

Facebook users in Mexico in January 2023, by age group , available on the Statista.com website.

Regarding the academic training of the informants, 43.8% have completed teacher training, 43.7% have completed university bachelor's degrees, and 12.5% indicated having additional postgraduate studies. In addition, 50% of the participants have training and/or experience in the educational use of technological and digital tools, while the remaining 50% have previous experience or knowledge in this field.

Figure 3. Academic background of key informants enter the postgraduate course
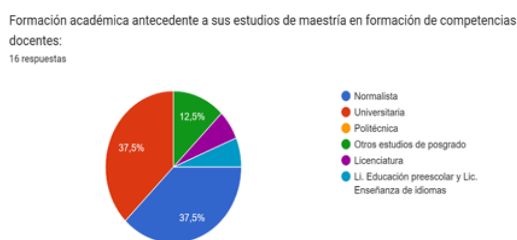
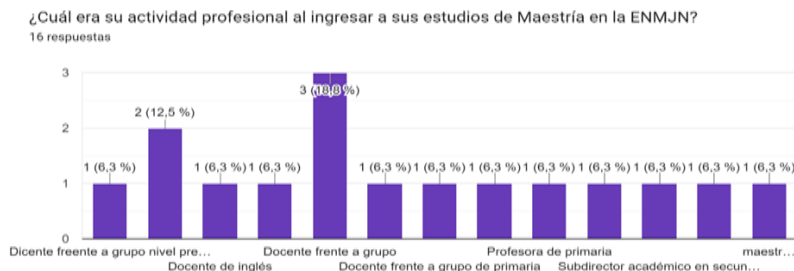
Source: Own elaboration

Figure 4. Prior training of key informants in the use educational ICT

Source: Own elaboration

Regarding the professional activity of the study population members prior to entering postgraduate training, 56.3% indicated that they were preschool teachers, 18.9% worked as primary school teachers, while 6.2% worked as secondary school principals. Another 6.2% held a position as public education officials, and the remaining 12.4% worked as English teachers at the higher education level.

Figure 5. Professional activity of key informants upon entering their postgraduate studies

¿Cuál era su actividad profesional al ingresar a sus estudios de Maestría en la ENMJN?
16 respuestas

Source: Own elaboration

On the other hand, the interviewees characterized their digital and information literacy process when entering their master's studies as follows: 18.8% considered themselves to be at an advanced level, 37.4% reported having an adequate level, 31.3% described their level as regular, and 12.5% rated it as deficient.

Figure 6. Level of digital and information literacy of key informants upon entering their postgraduate studies

Elija la respuesta que considere describa mejor su nivel de alfabetización digital e informacional al momento de ingresar a sus estudios de maestría en la ENMJN
16 respuestas
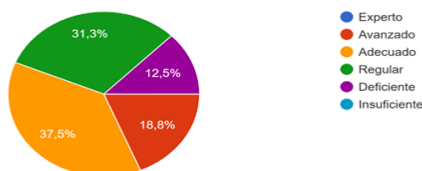
Source: Own elaboration

Among the main advantages of the educational use of Facebook groups as mediators of the teaching and learning process during master's training, key participants highlighted that these groups provided them with an experience of closeness with the module teacher and constant access to study materials, available at any time through the virtual classroom.

Furthermore, the interviewees valued the possibilities for interaction that the virtual environment facilitated, as it promoted the exchange of experiences, knowledge and learning among members of academic groups, and highlighted the capacity of the environment to encourage individual and collaborative work through academic proposals. In other words,

Facebook groups are considered an extension of the classroom that allows the learning experience to be adapted to the individual needs of students in a self-managed manner.

In this sense, it is recognized that virtual spaces provide real-time technical and pedagogical support, which favors the teaching and learning process both in the curricular content and in the digital and information literacy of students.

Furthermore, the interface and tools of Facebook groups are considered to facilitate the organization and control of distributed information, time management for academic tasks, and access to specialized information. This promotes learning and feedback between peers and teachers, and allows educational content to be centralized in a single space, accessible free of charge.

A notable benefit of this resource is the incorporation of video call rooms for virtual sessions, as they allow real-time interaction between teachers and students, reduce stress and travel costs, and speed up the exchange of information, given that connectivity with Facebook is generally high among users.

Other advantages acknowledged by those interviewed include access to live or recorded academic events, which are essential for the development of the postgraduate programme. These events offer a means of communication and information on different aspects of the educational field and enrich teacher training through interaction with experts via audiovisual content, links, readings and permanently accessible pages.

Regarding the experiences with live broadcasts on Facebook, the interviewees highlighted that these facilitated the holding of classes and presentations, as they allow for virtual conversations and not missing work sessions. In addition, Facebook groups are considered a valuable tool in education, as they offer resources to access information, encourage the exchange of knowledge and reflect on teaching practice, thereby overcoming the barriers of time and distance.

The interviewees also highlighted the promotion of collaborative work and participation in academic activities, which facilitated the development of digital skills, the recognition of Facebook's educational potential, and the creation of a safe and trustworthy virtual environment.

In summary, they pointed out that distance educational interaction through Facebook contributed to their digital and information literacy, promoted initiative and self-management, and strengthened commitment and responsibility in the postgraduate training process, by offering a safe and appropriate virtual space for educational objectives.

However, one of the main limitations identified was the instability of the internet connection during synchronous sessions. In this regard, informants mentioned that the quality of audio and image in videoconferences and live videos was often poor, which affected the understanding of information and participation in the sessions.

Additionally, remote work meant for the informants, both in their work activities and in their postgraduate studies, interaction and access to multiple platforms, which was perceived as a "saturation of resources and notifications." In addition, they faced difficulties in finding the links to access the live sessions and experienced long periods sitting in front of the monitor.

On the other hand, an initial lack of knowledge about the educational and interaction possibilities in Facebook groups was identified. At the beginning of academic activities, the use of the social network by the informants was mainly limited to leisure, which may have generated fears related to exploring the virtual environment and its learning tools.

Therefore, it is considered necessary to implement an initial technical instruction process, in which the teacher in charge of the curricular spaces assists the participants to guide them on the interface and the interaction resources in this new medium. However, it should be taken into account that, according to the experience of the informants, not all participants regularly check the notifications of the Facebook account, which can cause the thread of the dialogues to be lost. This underlines the need to seek strategies that ensure the continuity of the formative and intersubjective experience for the learning of the students in the interface of the digital technological resource.

The time spent on work sessions through Facebook groups was also considered a limitation, as the platform offers various possibilities for synchronous and asynchronous interaction to diversify the ways of learning and teaching. This requires more time and support from the teacher, as well as openness on the part of the students to adapt to a different collaborative work and learning environment.

Among the main advantages of the educational use of Facebook groups as mediators of the teaching and learning process in the face-to-face educational context, the inverted classroom modality stands out, which allows students to interact previously with the study materials and work instructions, which makes it easier to bring doubts, questions and reflections between peers and teachers to the face-to-face session. This improved the level of participation, the depth of the theoretical and conceptual discussion, as well as the responsibility and commitment of the participants to the academic process.

Furthermore, Facebook groups are considered to allow for the diversification of teaching-learning tools, facilitate the construction of knowledge by students, and favor the pedagogical support of teachers through closer communication. The scheduled publication of educational content in these groups allows for both synchronous and asynchronous interaction, as well as providing better control of the different academic activities in the same virtual space.

Similarly, it is recognized that the use of this technological tool in academic activities motivates student participation and improves their academic performance, fosters the creativity of teachers and students, and facilitates learning and collaborative work.

As for access and connectivity, the advantages of the resource are that it is free and that it can be accessed from different devices with an internet connection via Wi-Fi or mobile data, the consumption of which is significantly low compared to other platforms. In addition, you can use a personal account or create a specific one for educational activities. In fact, the social network also offers the opportunity to maintain constant communication through reminders that are activated on the platform, which makes it easier to monitor activities, unlike other platforms such as Classroom.

As for the experiences of appropriation of the resource in professional practice, as a result of its use in postgraduate training, the creation of Facebook groups to form communities of teachers, parents and other social actors linked to education stands out. These groups have the purpose of promoting the exchange of knowledge and learning, which enriches and strengthens formal and informal educational practices according to the contexts and responsibilities of the actors involved.

Regarding the limitations of the educational use of Facebook groups as mediators of the teaching and learning process in face-to-face educational work, the risk of activity saturation, disconnection, stress and loss of information is identified if a specific schedule is not established for interaction with the platform and its contents, both in face-to-face and distance activities.

In addition, limitations are recognized as the significant decrease or underutilization of the technological resource as a learning tool in the context of face-to-face educational work, as well as the lack of integration between the possibilities offered by the technological tool and the daily activities of both teachers and students.

Along the same lines, the limitations of the resource in the context of in-person classes include the equipment and connectivity at the facilities, as well as the practices of users in

relation to the shared information, especially in terms of its reliability and relevance according to the intention of the Facebook group.

Regarding the statement "Social media platforms such as Facebook are an educational innovation tool that improves the teaching and learning process," 62.4% of respondents said they fully agreed, 31.3% agreed, and 6.3% took a neutral stance.

Figure 7. Key informants' opinions about social networks as a tool for educational innovation and their influence on teaching and learning
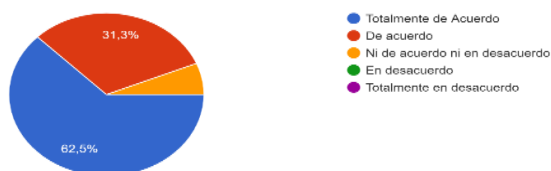
Source: Own elaboration

In other words, 93.8% of the sample studied recognizes in their experience during postgraduate training the innovative nature of Facebook groups as tools that, through their educational use, can significantly improve the teaching and learning process.

Regarding the statement "The educational use of social networks such as Facebook promotes learning and collaborative work among students," 62.5% of respondents said they fully agreed, while 37.5% said they agreed with these characteristics.

Figure 8. Key informants' opinions regarding the educational use of social networks and their influence on collaborative work

Source: Own elaboration

The above indicates that the sample group as a whole considers that the educational use of Facebook has the potential to encourage learning and collaborative work among students, which broadly coincides with the findings reported by Rodríguez-Gallego *et al.* (2017).

Regarding the statement "The educational use of social networks such as Facebook increases students' motivation to learn," 31.3% of respondents said they fully agreed, 43.8% said they agreed, while 25% expressed a neutral opinion on the matter.

Figure 9. Key informants' opinions about social networks and their influence on motivation towards learning

Source: Own elaboration

In this sense, it is identified that 75.1% of the interviewees recognize a significant relationship between the educational use of social networks such as Facebook and the increase in motivation towards learning, which agrees with the results reported by López (2017).

Regarding the statement "The use of social media such as Facebook in education contributes to a number of teaching and learning purposes, such as accessing and posting

links, discussing and reflecting on the work of others, tutoring with teachers, and hands-on learning," 56.2% indicated they strongly agreed, 37.5% indicated they agreed, and 6.3% indicated a neutral stance.

Figure 10. Key informants' opinions regarding the educational use of social media and its influence on access to specialized information, tutoring and practical learning

Elija la opción de respuesta que mejor refleje su punto de vista y experiencia con respecto a la siguiente afirmación: "El uso de redes sociales como...as con los profesores y el aprendizaje práctico".
16 respuestas

- Totalmente de acuerdo
- De acuerdo
- Ni de acuerdo ni en desacuerdo
- En desacuerdo
- Totalmente en desacuerdo

37,5%
56,3%

Source: Own elaboration

The above situation indicates that 93.7% of the informants consider that the use of social networks as an educational tool facilitates access to different study materials, analysis and discussion about their own and other classmates' academic productions, communication with teachers and practical learning, which agrees with what was reported by Salas and Salas (2019).

On the other hand, in reference to the statement "The use of social networks such as Facebook in education is very important to encourage and develop creation, learning, the exchange of knowledge and respectful coexistence", 37.5% of the informants indicated that they fully agreed, 56.2% said they agreed, while 6.3% expressed a neutral opinion.

Figure 11. Key informants' opinions regarding the educational use of social networks and their influence on creativity, learning and interaction between students

Elija la opción de respuesta que mejor refleje su punto de vista y experiencia con respecto a la siguiente afirmación: "El uso en la educación de la...bio de conocimiento y la convivencia respetuosa".
16 respuestas

Source: Own elaboration

It is observed that 93.7% of the informants recognize the potential of Facebook as an educational tool to encourage creativity, improve learning, promote the exchange of experiences and knowledge, and build an environment of respect for educational work; while 6.3% expressed a neutral opinion on the matter, which is consistent with the results of Alcívar (2020) and Apaza *et al.* (2021).

Likewise, based on the experience of working with Facebook in the master's degree, the sample group recognized the existence of different evaluation practices: 56.3% mentioned carrying out diagnostic evaluation, 75% identified formative or continuous evaluation, 37.5% referred to summative or results evaluation, 81.3% reported participatory evaluation practices (self-evaluation, co-evaluation and/or hetero-evaluation), and 50% recognized flexible or contextualized evaluation exercises.

Figure 12. Key informants' opinions regarding assessment practices in the Facebook group during their postgraduate training

En su experiencia durante la maestría, señale las opciones de respuesta que correspondan a las características de las prácticas de evaluación realizadas en el grupo de facebook:
16 respuestas
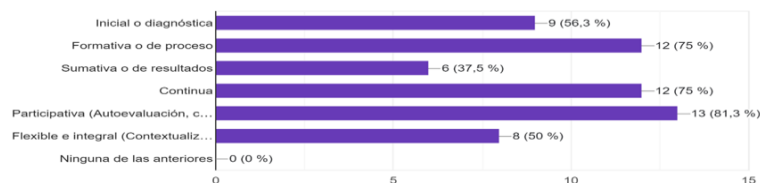
Source: Own elaboration

In this sense, the perception of the training experience by the sample group highlights participatory assessment practices, such as self-assessment and co-assessment, as well as formative and continuous assessment and its flexible nature, as desirable and effective features in the assessment of the training process when using Facebook in the educational field.

Regarding the statement "The educational use of social networks such as Facebook encourages professional competitiveness, collaboration between groups, activity monitoring, motivation, creativity, sociability, interaction and participation in students", 50% of the informants fully agreed, 43.7% expressed agreement, and 6.3% had a neutral opinion on the matter.

Figure 13. Key informants' opinions regarding the influence of the educational use of social networks on competitiveness, collaboration, motivation, creativity and interaction between students
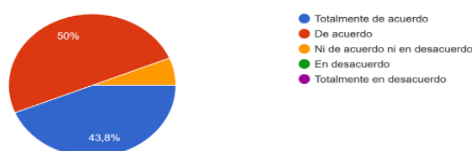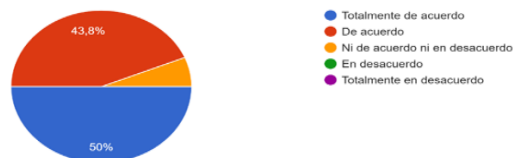

Source: Own elaboration

In this regard, it is observed that 93.7% of the interviewees agree that educational work with Facebook can promote motivation and autonomy, collaboration and horizontal communication between students and teachers, as well as monitoring the sequence of activities and competitiveness among students. For their part, 6.3 % expressed a neutral opinion on the matter, which is consistent with what was pointed out by Galván *et al.* (2022).

Figure 14. Key informants' opinions regarding the influence of the educational use of social networks on motivation and autonomy, collaboration and communication between students and teachers, learning monitoring and competitiveness

Elija la opción de respuesta que mejor refleje su punto de vista y experiencia con respecto a la siguiente afirmación: "El uso educativo de redes soc...d, interacción y participación en los estudiantes".
16 respuestas

- Totalmente de acuerdo
- De acuerdo
- Ni de acuerdo ni en desacuerdo
- En desacuerdo
- Totalmente en desacuerdo

43,8%

50%

Source: Own elaboration.

Now, at the end of the work experience with the closed Facebook group in the first year of the Master's Degree in Training of Teaching Competencies, the informants identified the following areas of opportunity to improve the educational experience with the use of Facebook: 12.5% considered it important to improve the digital skills of the teacher responsible for the study spaces on the platform, while 75% indicated that it is necessary to improve their own digital skills for the proper use of the resource.

In addition, 37.5% expressed the need to improve teachers' teaching-pedagogical strategies on the platform, 50% considered it desirable to improve the digital tools of Facebook groups for education, 43.8% pointed out the need to improve evaluation strategies on the platform, 31.3% expressed the need to improve the security and privacy of personal data on Facebook, and 50% mentioned the need to improve the interaction and communication guidelines between students and teachers.

Figure 15. Key informants' opinions regarding areas for improvement in educational work with the Facebook group in their postgraduate studies
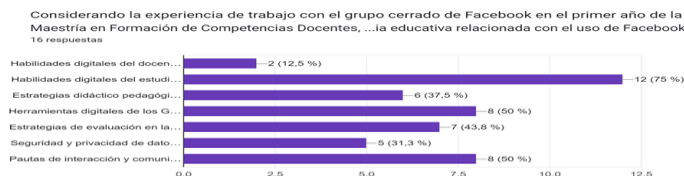
Source: Own elaboration.

Regarding the improvement of the level of digital and information literacy at the end of the experience of using Facebook during the master's studies at ENMJN, the members of the group reported the following: 6.3% identified themselves at an expert level, 43.8% at an advanced level, 31.3% at an adequate level, and 18.8% at a regular level.

Figure 16. Key informants' assessment of their level of digital and information literacy at the end of their experience with the Facebook group in their postgraduate studies

Source: Own elaboration

In this way, a significant improvement in the digital and informational skills developed from the educational experience mediated by the digital environment of Facebook groups and their tools is observed in the self-perception of key informants.

In this sense, and based on the experience of working with the closed Facebook group, most of the informants indicated that they would use the social network in their teaching. They highlighted characteristics of Facebook that benefit the educational process, such as agile and effective communication with students, parents and other teachers, as well as the diversification of the ways of working with students.

Likewise, it is recognized that Facebook is a social network that facilitates the development of the distance learning-teaching process, both synchronously and asynchronously, through different pedagogical elements and teaching tools. In fact, its use

can enhance the creativity of students and teachers, which increases the motivation to carry out academic sessions.

Among the additional advantages recognized by the interviewees for the educational use of Facebook are its accessibility and frequent use by members of educational communities (especially young people). They can find a connection between a virtual environment of daily use and its educational possibilities, which also favors closer communication with teachers.

The importance of promoting communication practices between teachers and students based on values such as respect, tolerance and active listening was also highlighted. These practices are considered viable in a more intimate environment such as Facebook, which is accessible and allows for the efficient organisation and exchange of information.

However, some arguments against using Facebook in educational practice included the need for training, concerns about the privacy of personal information, limitations of the platform in terms of information management and distribution tools, and the population it serves, especially if they are minors. In addition, the saturation of notifications and the perception that the social network can be a source of distraction were mentioned.

Finally, in relation to the experience of using closed Facebook groups, the interviewees identified various possibilities for using this resource in different areas and activities of their professional life. These possibilities include collaborative learning between education professionals, where Facebook is presented as an option for professionalization among peers. In addition, its potential is recognized for the performance of academic tutoring functions between teachers and students, as well as for the formation of learning communities that include students, teachers and parents to address curricular and extracurricular issues, support networks, etc.

Discussion

Undoubtedly, the production of academic literature on the use of technological and digital tools in the educational field is vast today and will probably continue to grow in the coming years. The experiences documented before and after the Covid-19 pandemic have taken different directions, which highlights a necessary debate between technophobes and technology enthusiasts. This seeks to focus on the practices of users, their processes of appropriation of technological and digital tools, and their heuristic and innovative nature.

Although these processes entail risks and difficulties, they also highlight the great advantages of the intelligent use of contemporary tools.

From the perspective of the content prosumer - that is, someone who has developed skills for searching for and strategically consuming information on the Internet with a defined agenda and who is capable of restructuring it or generating their own content to solve specific problems in their context - the possibility of adapting this content in a practical way by other users with similar objectives opens up.

In this way, the study confirms the perspective of Fernández, Rodríguez and Haya (2017) and Alcívar (2020) on the transformation of social networks into educational tools and how these potentially increase collaborative work and learning, continuous training and professional development. This finding is aligned with what was stated by Rodríguez-Gallego *et al.* (2017), López (2017) and Scherer and Farias (2018). Likewise, it corroborates what was stated by Salas and Salas (2019) regarding the fact that the Facebook interface and tools facilitate the interactive participation of students in the learning process.

In this same sense, the research findings support the approaches of Apaza *et al.* (2021) on how the educational use of Facebook influences the increase in responsibility in the students' own educational process, assertive communication, peer recognition, collaboration and participation. Likewise, the experience reported in this study contrasts with the requirements pointed out by Galván *et al.* (2022) regarding the necessary conditions for a widespread educational use of social networks, such as institutional organization, training in the use of the platform and collaborative work between teachers to rethink their pedagogical practice.

In short, the findings of this study, by focusing on a little-explored area such as postgraduate training and from the perspective of the actors involved, provide novel characteristics in the context of the information and knowledge society at the dawn of the 21st century.

Conclusions

Based on the above, it can be stated that the study provided a deep description and assessment of the experience of key informants regarding the mediational nature of closed Facebook groups in the postgraduate training process at ENMJN, both during distance learning and upon returning to face-to-face learning. This was achieved through the qualitative exploration and description of the various ways in which the members of the sample group perceived the educational work carried out through Closed Facebook Groups.

This analytical exercise sought to understand perceptions as qualitatively different constructions of the educational phenomenon mediated by technological and digital tools, as well as the phenomena that together shaped the distance and hybrid educational experience from the perspective of its actors.

In conclusion, the study provides relevant knowledge about the characteristics necessary for effective educational mediation through closed Facebook groups in the context of higher education, and offers a critical assessment of the digital resource for its innovative and educational nature.

Future lines of research

Based on the findings of this research, it is considered appropriate to continue with qualitative studies on educational experiences at the postgraduate level, with special emphasis on variables such as age, gender, previous professional training, prior training and development of digital skills in the use of technological-digital tools by teachers and students, access to equipment and connectivity by members of the population under study, and the type of curriculum that frames the educational experience to be documented, among others.

References

Alcívar, A. M. (2020). Usos educativos de las principales redes sociales: el estudiante que aprende mientras navega. *Revista Científica Ecociencia*, *7*, 1–14. https://doi.org/10.21855/ecociencia.7.294

Apaza, S. N., Bravo Bonifaz, D. A., Marruffo Risco, A. M. y Ulloa Taylor, G. G. (2021). *Uso pedagógico de la red social Facebook y su aporte en el aprendizaje colaborativo de los estudiantes del I ciclo de la facultad de arquitectura, en una universidad privada de Lima, 2020* (tesis de maestría). Escuela de Postgrado, Universidad Tecnológica del Perú. https://repositorio.utp.edu.pe/handle/20.500.12867/4786

Duque, L. y Enrique, W. (2017). *Nuevas dinámicas pedagógicas en redes sociales: aprovechamiento tecnológico de los grupos cerrados de Facebook para potenciar los procesos de aprendizaje en el área de tecnología e informática del grado 11 de la I. E. Joaquín Cárdenas Gómez* (tesis de maestría). Facultad de Ingeniería en Tecnologías de Información y Comunicación, Universidad Pontificia Bolivariana. https://repository.upb.edu.co/handle/20.500.11912/3163

Fernández-Díaz, E., Rodríguez-Hoyos, C., y Haya Salmón, I. (2017). Análisis de la investigación nacional e internacional sobre redes sociales en contextos educativos. *Profesorado, Revista de Currículum y Formación del Profesorado*, *21*(1). https://doi.org/10.30827/profesorado.v21i1.10365

Galván, A., López Pérez, O., Chávez López, J. K. y Contreras López, E. X. (2022). Entorno virtual de aprendizaje: las redes sociales para aprender en la universidad. *Innoeduca International Journal of Technology and Educational Innovation*, *8*(1). https://doi.org/10.24310/innoeduca.2022.v8i1.12340

Hernández, K., Yánez Palacios, J. y Carrera Rivera, A. (2017). Las redes sociales y adolescencias: repercusión en la actividad física. *Revista Universidad y Sociedad*, *9*(2), 242-247. http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S2218-36202017000200033&lng=es&tlng=es

López Sáenz, M., Martínez Dávila, L. y Barbosa-Granados, S. (2022). *Innovación en educación superior: perspectivas latinoamericanas II México, Argentina y Colombia*. Editorial Académica Española.

Murillo, F. J., Hidalgo, N. y Martínez-Garrido, C. (2022). El método fenomenográfico en la investigación educativa. *RiiTE Revista Interuniversitaria de Investigación en Tecnología Educativa*, (13), 117–137. https://doi.org/10.6018/riite.549541

Ortiz-García, J. M. (2006). Guía descriptiva para la elaboración de protocolos de investigación. *Salud en Tabasco*, *12*(3), 530-540.

Rodríguez-Gallego, M. R., López Martínez, A. y Martín Herrera, I. (2017). Percepciones de los estudiantes de ciencias de la educación sobre las redes sociales como metodología didáctica. *Pixel-Bit. Revista de Medios y Educación*, (50), 77–93. https://recyt.fecyt.es/index.php/pixel/article/view/61766

Salas, R. A. y Salas, R. D. (2019). Análisis sobre el uso de la red social Facebook en el proceso de enseñanza-aprendizaje por medio de la ciencia de datos. *Revista de Comunicación de la SEECI*, (50), 1–26. https://doi.org/10.15198/seeci.2019.50.1-26

Scherer, A. L. y Farias, J. G. (2018). Uso da Rede Social Facebook como Ferramenta de Ensino-aprendizagem em Cursos de Ensino Superior. *Revista Brasileira de Aprendizagem Aberta e a Distância*, *17*(1). https://doi.org/10.17143/rbaad.v17i1.44

Trejo, R. H. (s. f.). *Uso de los entornos virtuales de aprendizaje en la educación a distancia*. Uned.ac.cr. https://www.uned.ac.cr/academica/edutec/memoria/ponencias/hiraldo_162.pdf

Usuarios de Facebook en México por edad 2023 (s. f.). Statista. https://es.statista.com/estadisticas/1173474/facebook-usuarios-mexico-edad/