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OPPORTUNITIES AND CHALLENGES IN THE USE OF DICTs IN MATHEMATICS TEACHING

OPORTUNIDADES E DESAFIOS NA UTILIZAÇÃO DE TDICS NO ENSINO DA MATEMÁTICA

OPORTUNIDADES Y DESAFÍOS EN EL USO DE TDIC EN LA ENSEÑANZA DE LAS MATEMÁTICAS

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ABSTRACT

The purpose of this study was to identify how the incorporation of Digital Information and Communication Technologies (DICTs) can support the construction of mathematical knowledge in the teaching and learning process, and to present how teachers can appropriate these technologies and use them in the classroom. The following research question guided the investigation: what challenges do elementary school teachers face in the use of DICTs in mathematics teaching? To this end, field research was adopted as the methodology, with the participation of four basic education mathematics teachers. Data were collected through a questionnaire developed by the group. The results showed that technology provides several benefits for teaching, such as greater student interest and more dynamic, interactive, and personalized learning. However, they also revealed challenges related to school infrastructure, continuing teacher education, and access to technological resources. It was therefore concluded that future studies must further examine the integration of DICTs into mathematics teaching, as well as investigate strategies that foster their critical, planned, and meaningful use, thereby contributing to improving the quality of the teaching and learning process.

KEYWORDS: *Digital technologies. Mathematics teaching. Education.*

RESUMO

O objetivo deste estudo foi identificar como a incorporação das Tecnologias Digitais da Informação e Comunicação (TDICs) pode apoiar a construção do conhecimento matemático no processo de ensino e aprendizagem e objetivou apresentar como os docentes podem se apropriar dessas tecnologias e utilizá-las em sala de aula. Buscou-se responder à seguinte questão de pesquisa: quais são os desafios enfrentados pelos docentes do ensino fundamental no uso das TDICs no ensino de matemática? Para tanto, adotou-se como metodologia uma pesquisa de campo, com a participação de quatro professores de matemática da educação básica. A coleta de dados ocorreu por meio de um questionário elaborado pelo grupo. Os resultados mostraram que a tecnologia proporciona diversos benefícios para o ensino, como maior interesse dos alunos, aprendizagem mais dinâmica, interativa e personalizada. No entanto, também evidenciaram desafios relacionados à infraestrutura das escolas, à formação continuada dos professores e ao acesso aos recursos tecnológicos.

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Dessa forma, concluiu-se que é imprescindível que futuros estudos aprofundem as discussões sobre a integração das TDICs ao ensino de matemática, bem como investiguem estratégias que favoreçam sua utilização de forma crítica, planejada e significativa, contribuindo para a melhoria da qualidade do processo de ensino e aprendizagem.

PALAVRAS-CHAVE: Tecnologias digitais. Ensino da matemática. Educação.

RESUMEN
El objetivo de este estudio fue identificar cómo la incorporación de las Tecnologías Digitales de la Información y la Comunicación (TDIC) puede contribuir a la construcción del conocimiento matemático en el proceso de enseñanza y aprendizaje, así como presentar cómo los docentes pueden apropiarse de estas tecnologías y utilizarlas en el aula. Se buscó responder a la siguiente pregunta de investigación: ¿cuáles son los desafíos que enfrentan los docentes de educación primaria en el uso de las TDIC para la enseñanza de las matemáticas? Para ello, se adoptó como metodología una investigación de campo, con la participación de cuatro profesores de matemáticas de la educación básica. La recolección de datos se llevó a cabo mediante un cuestionario elaborado por el grupo. Los resultados mostraron que la tecnología proporciona diversos beneficios para la enseñanza, como un mayor interés de los estudiantes y un aprendizaje más dinámico, interactivo y personalizado. Sin embargo, también evidenciaron desafíos relacionados con la infraestructura de las escuelas, la formación continua de los docentes y el acceso a los recursos tecnológicos. De este modo, se concluyó que es imprescindible que futuros estudios profundicen en las discusiones sobre la integración de las TDIC en la enseñanza de las matemáticas, así como que investiguen estrategias que favorezcan su utilización de manera crítica, planificada y significativa, contribuyendo a mejorar la calidad del proceso de enseñanza y aprendizaje.

PALABRAS CLAVE*: Tecnologías digitales. Enseñanza de las matemáticas. Educación.*

INTRODUCTION

Digital Information and Communication Technologies (DICTs) have brought about fundamental transformations in the way people work, communicate, and interact with one another. These transformations became particularly evident during the COVID-19 pandemic, which affected social life in several ways and disrupted education through the suspension of in-person activities. During this period, teachers had to adapt their pedagogical practices to Emergency Remote Teaching (ERT), adopting different digital tools, virtual environments, and social networks as means of working and communicating with students (Bredow; Zamperetti, 2023).

This entire process took place on an emergency basis, without training for the construction of pedagogical architecture and without knowledge of the reality of the families who were, and still are, on the other side of the screen (Rosa, 2020). In this context, many institutions implemented ERT, hybrid teaching, and other initiatives that involved appropriating DICTs. These technologies became part of the school environment, with the aim of enhancing, transforming, and energizing teaching and learning relationships. The COVID-19 pandemic accelerated the

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incorporation of DICTs into educational processes, turning resources that had previously been complementary into essential instruments for the continuity of teaching. This shift produced impacts that persist in the current educational context, influencing pedagogical practices, teaching methodologies, and teacher education (Castro; Nogueira, 2022).

Technology has advanced steadily and has become fundamental to education, particularly through the exploration of digital resources as didactic-pedagogical tools in the learning process, including in mathematics. Official documents such as the National Curriculum Parameters (PCN) and the National Common Curricular Base (BNCC) (Brasil, 1998, 2017) point to the need for teacher education programs to strengthen technical knowledge, so that these education professionals recognize the importance and value of DICTs for teaching today and incorporate into their classes and educational practices the technologies required to make their methodologies more engaging and inspiring for their students. According to Kenski (2012), the incorporation of technologies into education requires teachers to develop new competencies and skills, since the mere presence of technological resources does not guarantee improvements in learning.

Accordingly, this article presents the results of a study conducted with basic education mathematics teachers. Its purpose is to present the participating teachers' perceptions of the opportunities and challenges involved in the use of DICTs in mathematics teaching.

The digital resources used for data collection were the Google Forms platform and WhatsApp support groups.

The main objective of this research was to analyze the opportunities and challenges related to the use of Digital Information and Communication Technologies (DICTs) in mathematics teaching, based on the perceptions of basic education teachers, seeking to understand how these resources can help make the teaching and learning process more dynamic and interactive. The specific objectives were as follows:

- To identify which digital technologies are used by mathematics teachers in their pedagogical practices;
- To investigate the main opportunities and contributions provided by DICTs to the teaching and learning of mathematics;
- To analyze the main challenges faced by teachers in the use of DICTs, considering aspects such as infrastructure, access to technological resources, and continuing education;
- To understand teachers' perceptions of the influence of digital technologies on students' interest, participation, and learning in mathematics classes.

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1. THEORETICAL FRAMEWORK

The incorporation of DICTs into the educational context has brought about significant changes in the ways of teaching and learning. Although the presence of technologies in education was already being discussed before the COVID-19 pandemic, that period accelerated their use, transforming digital resources that had previously played a complementary role into essential instruments for the continuity of school activities. In this scenario, DICTs came to occupy a central place in pedagogical practices, expanding the possibilities for communication, interaction, and knowledge construction (Rocha; Corrêa; Ferreira, 2022).

In mathematics teaching, DICTs have the potential to overcome practices traditionally based on the memorization of formulas and procedures. Souza et al. (2025) emphasize that resources such as educational software, videos, digital games, and interactive platforms enable the creation of more dynamic and participatory learning environments, in which students can explore different problem-solving strategies, formulate hypotheses, and discuss results. Students thus assume a more active role in the learning process, fostering the meaningful construction of mathematical knowledge.

This perspective is aligned with the guidelines set out in Brazilian curriculum documents. The PCN and the BNCC advocate the use of digital technologies as tools capable of supporting the modeling and solving of everyday problems, promoting the articulation between mathematical knowledge and the reality experienced by students (Souza et al., 2025).

In this sense, technology ceases to be merely an operational resource and becomes a pedagogical element capable of enriching learning experiences. However, the effective integration of DICTs into mathematics teaching still faces several challenges. Among these, the need for continuing teacher education stands out, as demonstrated by Almeida, Azevedo and Santos (2024).

Despite the growing recognition of the importance of digital technologies in education, many teachers still find it difficult to use them pedagogically and in an integrated manner within the school curriculum. The authors point out that there is a gap in the development of teachers' digital competencies, which limits the extent to which the potential offered by these technologies is realized in the teaching and learning process.

In addition to teacher education, issues related to technological infrastructure and unequal access also constitute significant obstacles. Rocha, Corrêa, and Ferreira (2022) observe that, during the pandemic, many teachers had to adapt their practices on an emergency basis, often without adequate training and without knowledge of the technological conditions of students'

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families. This reality revealed inequalities that directly influence access to educational opportunities mediated by digital technologies.

The literature therefore shows that DICTs offer important opportunities for innovation in mathematics teaching, favoring more interactive, contextualized, and student-centered methodologies. However, for their benefits to be effectively achieved, it is necessary to invest in teacher education, technological infrastructure, and digital inclusion policies, ensuring adequate conditions for teachers and students to use these resources critically, meaningfully, and transformatively.

2. METHODOLOGY

This study was developed using a qualitative approach, seeking to understand mathematics teachers' perceptions of the use of DICTs in the school environment. This approach was chosen because of the need to analyze the experiences, opinions, and challenges encountered by teachers in their pedagogical practices.

The study was conducted as field research with the participation of four basic education mathematics teachers. Data were collected through a 10-item questionnaire developed by a group of mathematics students at the State University of Pará (UEPA), with the aim of understanding how these professionals use digital technologies in their classes, which resources are part of their practices, and what difficulties and challenges they encounter in this process.

Therefore, it is worth emphasizing that the choice to include four teachers is justified by the fact that this is a focus group study, given that there are not many mathematics teachers who use digital technologies applied to mathematics-related activities in their daily classroom practices.

In this regard, Gatti (2005) states that focus group research is a technique that makes it possible to bring together participants who share certain characteristics related to the object of study, thereby fostering interaction and discussion of different perspectives on the topic under investigation. In this sense, the contributions of the participating teachers were considered fundamental to the development of the research, since their experiences made it possible to obtain relevant information for understanding the phenomenon analyzed.

The questions addressed aspects related to the possibilities that digital tools offer for teaching, the changes perceived in students' learning, teacher preparation for the use of technologies, and the challenges encountered in schools for the implementation of these resources.

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After the questionnaire was administered, the participants' responses were organized and analyzed interpretively, seeking to identify similarities and differences among the accounts provided. In this way, it was possible to understand different perspectives on the contributions and limitations of DICTs in mathematics teaching.

The methodology employed thus made it possible to bring the theoretical discussion presented in this article closer to the reality experienced by teachers, valuing their experiences and clarifying the role of digital technologies as tools that can contribute to more dynamic and contextualized pedagogical practices.

3. RESULTS AND DISCUSSION

To produce the data for this study, a questionnaire was administered to basic education mathematics teachers. The instrument was structured as follows: using Google Forms, a 10-item questionnaire was administered on the opportunities and challenges involved in the use of DICTs in mathematics teaching. Regarding the rationale for using the questionnaire as a data collection instrument, Faria (2013, p. 67-69) emphasizes its fundamental importance, as it is an essential component for understanding an object, since the introduction of an instrument expands the individual's possibilities for action and intervention in the social environment, guiding their behavior externally in relation to the object of the activity.

From this same perspective, Fichtner (2010, p. 17) adds that the instrument carries with it the function for which it was created, as well as the mode of use developed throughout the history of collective work, thus constituting a social object and a mediator of the relationship between individuals and their world. Based on this understanding, the questionnaire on the opportunities and challenges involved in the use of DICTs in mathematics teaching was designed with 10 open-ended questions, in which each participant could agree, disagree, and justify their response.

Accordingly, the methodological path for data analysis was organized through a questionnaire administered via Google Forms, a tool that made it possible to design and distribute the instruments online and to make the responses available in an organized manner for subsequent stages, as well as in person when necessary.

Finally, it should be noted that, in order to preserve the confidentiality and identity of the participants, they are identified throughout this study by letters and numbers, for example, D1, D2, D3, and D4 for the teachers.

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3.1. Analysis of the questionnaire data collected from basic education mathematics teachers

The purpose of this section is to present the results of this study, detailing the analysis of the data obtained through the questionnaire administered to basic education mathematics teachers (Chart 1). Drawing on the participants' responses, the aim was to understand their perceptions of the use of Digital Information and Communication Technologies (DICTs) in mathematics teaching, highlighting the opportunities, the challenges, and the contributions of these resources to pedagogical practice.

Chart 1. Analysis of the justifications provided by basic education mathematics teachers, by statement

Question	Teacher	Response	Analysis
What motivated you to choose the profession of mathematics teacher?	**D1**	"A liking for the exact sciences."	The responses show that the choice of the mathematics teaching profession was motivated mainly by an interest in the exact sciences and by facility with calculations. In addition, factors such as commitment to the profession, the desire to share knowledge, and employment opportunities also influenced this decision. The career choice is therefore related both to personal interest and to professional considerations.
	D2	"Commitment."	
	D3	"Facility with calculations and with solving mathematical problems; a job opportunity close to home (even before starting the program)."	
	D4	"I have always liked the exact sciences, and when I realized that I could share knowledge and help other people develop, the decision to become a mathematics teacher followed."	
How long have you worked in education?	**D1**	27 years	The responses indicate that the participants have different lengths of experience in education, ranging from 4 to 27 years. This shows the presence of teachers with distinct levels of professional experience, which may contribute to
	D2	4 years	
	D3	12 years	
	D4	No response	

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			different perspectives and practices in mathematics teaching.
What are the greatest challenges encountered in teaching mathematics today?	**D1**	"The difficulty of transposing abstract concepts into everyday applications."	The teachers highlight as their main challenges students' learning difficulties, their lack of interest and of basic knowledge, as well as structural limitations and the need to relate mathematics to students' everyday lives.
	D2	"Students' learning difficulties, since many of them have trouble interpreting problems, performing calculations, and applying logical reasoning."	
	D3	"Students' lack of basic knowledge, lack of concentration, and lack of interest."	
	D4	"Many schools lack infrastructure, teachers face excessive demands, workloads are very heavy, and the teaching profession receives little recognition. There is also the challenge of making students realize that mathematics is not a difficult subject to learn when it is studied in the right way."	
Do you use technology in your classes?	**D1**	Yes, I do.	The responses indicate that technology is used in mathematics classes, whether frequently or occasionally.
	D2	Sometimes.	
	D3	No response	
	D4	No response	
What methodologies or strategies do you	**D1**	"I use problems drawn from students' everyday lives, playful activities,	The teachers use different strategies to make classes more engaging, such

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use to make classes more engaging?		and engaging classroom dynamics.”	as activities related to students' everyday lives, educational games, digital resources, and software, seeking to promote greater participation and facilitate learning.
	D2	“The use of digital educational games to develop logical reasoning and problem solving.”	
	D3	“I always try to involve students in the skill being addressed; I use software, spreadsheets, and so on…”	
	D4	“I have recently been using virtual games in the classroom.”	
How does technology influence mathematics teaching in the classroom?	**D1**	“As a facilitator of students' teaching and learning.”	The teachers emphasize that technology makes mathematics teaching more dynamic, interactive, and engaging, arousing students' interest and facilitating their understanding of content through digital resources and educational games.
	D2	“Technology influences mathematics in several ways, making teaching and learning more dynamic and accessible. It facilitates the visualization of graphs, functions, and geometric solids. It allows the use of software and applications to solve problems and perform calculations. It increases students' interest through educational games and interactive activities. It makes classes more engaging, with videos, simulations, and digital resources. It fosters personalized learning, respecting each student's pace.	

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		It develops technological skills that are important for life and for the job market."	
	D3	"The use of cell phones and computers arouses greater interest in learning, since these are devices that students use all the time in their daily lives."	
	D4	"With technology, in this case games, students create an environment of competition among themselves. This encourages them to seek more knowledge about the topic being addressed, making the class much lighter, more dynamic, and more productive."	
In your opinion, what are the drawbacks and the benefits of technology in the classroom?	**D1**	"Technology speeds up access to information and facilitates knowledge of the subject matter. However, excessive use has disadvantages, such as social isolation and distractions during class."	The teachers consider that technology brings several benefits to teaching, such as greater student interest and more dynamic and personalized learning. However, they stress that excessive use, or use without proper guidance, may lead to distractions and dependence and may compromise the development of certain student skills.
	D2	"One benefit is personalized learning, which allows each student to progress at their own pace. One difficulty is technological dependence, which reduces the development of mental calculation and of manual problem solving."	
	D3	"As long as the rules of use are followed, I see no drawbacks. It only	

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		improves students' interest and participation.”	
	D4	“Using technology can have a negative effect if it is not guided by the teacher, since students may use these technologies to obtain answers to assignments, which compromises the teaching and learning process. However, if the use of these technologies is properly guided by the teacher in the classroom, the benefits are endless; by using a technological medium, the teacher opens up any number of possibilities for presenting and teaching a given subject.”	
How do you assess students' interest in the subject in recent years?	**D1**	“Students' interest is low.”	The teachers assess students' interest in mathematics as low and as having declined over recent years, this being one of the challenges faced in the teaching and learning process.
	D2	“Students' interest is poor.”	
	D3	“The percentage of students who are interested in the subject is still very low.”	
	D4	“Unfortunately, interest has been declining year after year.”	
What advice would you give to students who wish to pursue a teaching career in mathematics?	**D1**	“Let us work together to change the reality of the subject, helping students to overcome their fear of mathematics.”	The teachers advise future educators to seek continuous professional development, to be patient and dedicated, and to innovate in their pedagogical practices, thereby helping to make mathematics more accessible and meaningful for students.
	D2	“Being a mathematics teacher is more than teaching calculations and formulas. It means helping students to develop logical reasoning, creativity, and the ability to solve everyday	

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		problems. Therefore, study mathematical content with dedication and depth.”	
	D3	“Practice patience and always remember that you will constantly need to review topics that seem easy for certain grade levels, because many students lack the basic knowledge.”	
	D4	“My advice is: get trained! Take courses in your field so that, once you are in the classroom, you can innovate in your classes. I also believe it is essential to have knowledge of behavioral psychology, so that you are not caught off guard by the countless demands that arise in the classroom and can apply this knowledge to create environments conducive to learning.”	
How do you assess the use of games, playful activities, and concrete materials in mathematics teaching?	**D1**	“I consider it a good thing.”	The teachers assess positively the use of games, playful activities, and concrete materials, noting that these resources make classes more dynamic, encourage student participation, and facilitate the understanding of content, although interest in digital resources is greater among older students.
	D2	“Identifying participation, cooperation, and problem solving.”	
	D3	“In the early grades, they are still very helpful. However, as students mature, interest in concrete materials tends to decline. Today, there is greater interest in digital technologies.”	
	D4	“Excellent! Especially when the topic is very complex. Playful activities, games, and the like have	

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		the capacity to ‘break’ students' insecurity, making the class more dynamic and even enjoyable.”	

Source: Prepared by the authors (2026).

The analysis of the data obtained through the questionnaire administered to the four basic education mathematics teachers made it possible to understand how DICTs are being used in the school environment and to identify the main challenges teachers face in incorporating these tools into their pedagogical practices. Even with a small number of participants, the responses raised important points that dialogue with the literature discussed in this study and help to provide a clearer understanding of the reality experienced in schools.

Overall, all participating teachers recognized that DICTs play an important role in mathematics teaching. According to them, these technologies make classes more engaging, arouse greater student interest, and facilitate the understanding of content that is often considered abstract or difficult to grasp. This perception is consistent with Kenski (2012), who emphasizes that digital technologies expand the possibilities for teaching and learning when used in a planned manner and aligned with pedagogical objectives.

Among the resources most frequently used by the teachers are computers, multimedia projectors, educational videos, digital platforms, and applications designed for teaching. These resources have helped to diversify the methodologies used in the classroom, allowing content to be presented in different ways that are closer to students' realities. However, the responses show that the use of these tools still depends on the conditions provided by the school, particularly regarding the availability of equipment and access to the internet.

When asked about the main difficulties in using DICTs, the teachers indicated that the greatest obstacles are related to the infrastructure of educational institutions. Problems such as unstable connections, an insufficient number of devices, and limitations of technological spaces were frequently mentioned by the participants. In addition, some teachers stressed that continuing education still represents a challenge, since the constant advance of technologies requires ongoing updating. This finding reinforces the argument of Almeida, Azevedo and Santos (2024) that simply making technological resources available does not guarantee improvements in learning. For technologies to be genuinely used to their full potential, it is also necessary to invest in teacher education.

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Another aspect that stood out was the teachers' perception of student behavior during classes that use technological resources. According to the participants, students tend to show greater interest, participation, and engagement when activities include videos, digital platforms, mathematical software, or other interactive tools. This occurs because such resources make classes more dynamic and foster more participatory learning, allowing students to take a more active role in the construction of knowledge.

Despite these benefits, the teachers also emphasized that technology alone does not solve the challenges of education. DICTs should be used as tools to support the work of teachers rather than as substitutes for them. Lesson planning therefore remains an essential factor if these resources are to contribute effectively to student learning. The use of technologies must be connected to the objectives of the lesson and to the needs of the class, so that they are not employed merely to make the class more appealing.

The responses also showed that the period of the COVID-19 pandemic directly influenced the way many teachers came to use digital technologies. The need to adapt classes to remote teaching led teachers to become familiar with new platforms, applications, and methodologies, many of which are still in use even after the return to in-person classes. This scenario demonstrates that, despite the difficulties faced during that period, the pandemic also helped to accelerate the incorporation of DICTs into everyday school life.

When the research results are considered in relation to the BNCC, it becomes clear that the use of DICTs also supports the development of General Competency 5, which encourages the critical, responsible, and meaningful use of digital technologies. In this sense, teachers' work goes beyond the use of technological equipment, seeking to develop competencies that prepare students to act consciously in an increasingly connected society.

Overall, the results show that there is a positive perception of the use of DICTs in mathematics teaching. The teachers expressed interest in using these tools and recognized their benefits for the teaching and learning process. However, it also became evident that significant challenges remain regarding school infrastructure, access to technological resources, and teachers' continuing education.

The data obtained in this study thus reinforce that DICTs have great potential to contribute to mathematics teaching, provided that they are used in a planned and critical manner and are integrated into pedagogical practices. More than introducing technologies into the classroom, it is necessary to create the conditions for teachers and students to use them meaningfully, fostering more dynamic, interactive, and participatory learning.

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4. FINAL CONSIDERATIONS

The aim of this study was to identify, investigate, and analyze the main challenges faced by teachers in the use of DICTs, considering aspects such as infrastructure, access to technological resources, and continuing education. It sought to answer the following question: what challenges do elementary school teachers face in the use of DICTs in mathematics teaching?

The results presented show that the question was answered and that the objective was achieved. This study therefore demonstrates that DICTs can contribute significantly to mathematics teaching by generating greater student interest and participation and by fostering more dynamic, interactive, and personalized learning. However, challenges related to school infrastructure, continuing teacher education, and access to technological resources were also identified. The results thus show that the use of DICTs in mathematics teaching depends not only on the availability of technological tools, but also on adequate conditions for their use and on teachers' preparation to integrate them into pedagogical practices in a critical, planned, and meaningful way.

Although technologies are a reality in the daily lives of teachers who teach mathematics, the participants reported a significant gap in their professional preparation, which makes their conceptions of the use of DICTs for mathematics teaching relatively superficial.

Meaningful learning in mathematics is not related solely to the mastery of techniques, rules, and formulas, but to the use of mathematics as an instrument for reflection, analysis, and the resolution of problem situations.

Furthermore, the use of technologies in the classroom does not in itself guarantee a break with traditional mathematics education; rather, it constitutes a possibility that must be combined with investment in educational resources (software, platforms, digital games, computer labs, and internet access) and in both initial and continuing teacher education along two lines: inclusive mathematics teaching and the use of technological resources in mathematics teaching.

During this study, it became evident that the incorporation of technologies into mathematics teaching fosters students' active participation, making the learning environment more dynamic and enjoyable by enabling better visualization of content and a clearer understanding of its practical application. In this process, both the teacher and the student assume active roles in the construction of knowledge, and the teacher is called upon to act not merely as a transmitter of information, but as a pedagogical mediator in an interactive setting.

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A limitation of this study is the small number of participants, comprising four teachers. This limitation is related to the difficulty of finding teachers who, in addition to teaching Mathematics, integrate digital technologies into their pedagogical practices in the classroom. Therefore, it should be emphasized that the findings are not intended to represent the reality of all teachers, but rather to contribute to an understanding of the topic based on the experiences of the selected participants.

In mathematics teaching that draws on technological didactic-pedagogical resources, teachers and students alike are the protagonists of a more democratic and inclusive educational proposal. Students feel more engaged in learning, and teachers, in turn, take on the role of facilitators of classroom interactions.

It is therefore concluded that digital technologies constitute highly relevant tools for the teaching and learning of mathematics, provided that they are used intentionally, critically, and inclusively.

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