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THE DIFFERENT TYPES OF DIGITAL MEDIA INTEGRATED INTO THE SCHOOL AND UNIVERSITY CURRICULUM

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ABSTRACT

The present work aims to discuss the different types of digital media that can be used in the classroom, emphasizing how they can help to improve teaching-learning. In this way, the methodology used in this present work was based on a bibliographic review, based on the use of descriptor terms in the CAPES and Google Scholar platforms, in addition, the modules of the discipline of this master's degree were also used. After analyzing the results found, it was evidenced that technologies are inserted in society daily, and their use and coupling in education is essential, therefore, resources such as smartphones, computers and tablets can be used in the forms of digital media. Also, the use of technological resources such as videos, films, images, games and podcasts tend to be very efficient in teaching, after all, students have ease and easy adaptation to these resources, in addition to being collaborative forms between teachers and students. It is noted that technology can help in the formation of each individual, in speech, writing and way of thinking, making this young person more interested in curricular content. Therefore, it is visible that the school needs to adapt to the use of technology, making the contents be disseminated in order to reach the students, as well as making them feel interested in learning from the technologies they master.

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INTRODUCTION

Society has evolved more and more in terms of technology, where young people already grow up with a cell phone in the palm of their hand, demonstrating ease and interest in this area. When looking at education, the scenario is no different, so the teacher needs to be engaged with technological resources so that his students feel interested in learning and interacting with the proposed contents.

Thus, it is notable that the use of Information and Communication Technologies (ICTs), together with Digital Information and Communication Technologies (DICTs), are increasingly frequent in everyday school life, evidencing the increasingly concise presence of technology in teaching-learning (Silva *et al*., 2023).

However, it is relevant that communication is listed as a means of reference in this scenario, that is, even with the use of technological resources, teachers and students must be aware of the points to be studied, the forms of participation, production and support so that these resources or digital media are used consciously and correctly, in each situation (Martino, 2014).

According to Martino (2014), digital media can be classified as cultural objects that make use of technology, aiming at the distribution of content in a digital way, whether these are videos, virtual reality, figures, computer games, CDs and DVDs. In addition, these media can only be for the production and storage of content, such as television programs, feature films, magazines and books, so the use of these resources presents a range of accessories and devices that can be incorporated into the classroom.

Also, the legislations bring in their context the technological practice, as well as the use of different languages, as pointed out by the fourth competence of the National Common Curricular Base (BNCC):

> Use different languages – verbal (oral or visual-motor, such as Libras, and written), body, visual, sound and digital – as well as knowledge of artistic, mathematical and scientific languages, to express and share information, experiences, ideas and feelings in different contexts and produce meanings that lead to mutual understanding (Ministry of Education, 2018, p.9).

Thus, it is relevant that the teacher seeks ways to integrate technologies into the school curriculum, whether for basic or university education, through videos, *podcasts,* games and hypertexts, making students protagonists of learning, seeking knowledge and feeling interested in learning and discussing the planned contents, improving teaching-learning.

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In view of this, this work seeks to carry out a bibliographic review about the different types of digital media that can be used in the classroom, discussing how they can improve and integrate the teaching contents of education.

The integration of digital media into the school and university curriculum is not only a trend, but a necessity to prepare students for an increasingly digitized world. These tools offer unique opportunities to make learning more interactive, personalized, and engaging. By incorporating different types of digital media, educators can cater to diverse learning styles and foster a more inclusive educational environment.

One of the main advantages of using digital media in education is the possibility of transcending the physical limitations of the traditional classroom. Through online learning platforms and virtual reality resources, students can explore abstract concepts in a concrete way, visit distant places, and participate in experiments that would be impossible or dangerous in the real world. This not only enriches the educational experience but also broadens students' horizons, preparing them for a globalized and interconnected world.

In addition, the integration of digital media into the curriculum promotes the development of essential skills for the 21st century, such as critical thinking, creativity, collaboration, and digital literacy. By utilizing tools such as blogs, wikis, and educational social networks, students learn to communicate their ideas effectively, work as a team, and critically evaluate the information available online. These skills are crucial not only for academic success but also for students' future professional lives.

Importantly, the effective implementation of digital media in the curriculum requires careful planning and an appropriate pedagogical approach. Educators need to be empowered to use these tools in a meaningful way, aligning them with learning objectives and student needs. This implies not only the technical mastery of the tools, but also the understanding of how to integrate them in a way that promotes active and meaningful learning.

The adoption of digital media in the educational environment also brings challenges that need to be addressed. Issues such as equity of access to technology, online security, and student data protection are important concerns that should be considered when implementing these tools. It is essential for educational institutions to develop policies and practices that ensure an ethical and safe use of digital media, while promoting the digital inclusion of all students.

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Finally, it is essential to recognize that digital media are not a substitute for the role of the educator, but rather a powerful tool to enhance the teaching-learning process. The teacher continues to be fundamental as a mediator of knowledge, guiding students in the critical interpretation of information and in the development of socio-emotional skills. The combination of educators' pedagogical expertise with the potential of digital media creates a rich and dynamic learning environment, preparing students for the challenges and opportunities of the future.

THEORETICAL FRAMEWORK

The contemporary educational scenario has undergone significant transformations with the integration of digital media into the school and university curriculum. These technological tools have revolutionized the way knowledge is transmitted, absorbed, and shared in learning environments. Digital media encompass a wide range of resources, including videos, podcasts, educational games, social networks, online learning platforms, and mobile applications, each offering unique possibilities to enrich the educational process.

Incorporating videos into the curriculum has been shown to be particularly effective in promoting more dynamic and engaging learning. These resources allow educators to present complex content in a more accessible and interesting way, leveraging visual elements to reinforce key concepts. In addition, the creation of audiovisual content by the students themselves stimulates creativity, teamwork and the development of communication skills, essential in the contemporary world.

Podcasts, meanwhile, have been gaining popularity as a versatile educational tool. They offer an auditory alternative that can be especially useful for students with different learning styles or for those who want to take advantage of commuting or other activities to study. The production of podcasts by students can also be an excellent way to develop research, information synthesis and oral expression skills.

Digital educational games have gained prominence as powerful tools for student engagement. By incorporating playful and challenging elements, these games can make learning more attractive, especially for topics that are traditionally considered difficult or monotonous. Gamification of teaching not only motivates students but also promotes the development of skills such as problem-solving, strategic thinking, and decision-making.

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Social networks have transformed the way students and teachers interact beyond the walls of the classroom. These tools facilitate the exchange of ideas, the sharing of resources, and the realization of collaborative projects, promoting more connected and global learning. In addition, the use of these platforms in the educational context helps to develop digital citizenship skills, preparing students to navigate the online world ethically and responsibly.

Online collaboration platforms, such as wikis and shared documents, have proven valuable in promoting teamwork and the collective construction of knowledge. These tools allow students to work together on projects even when they are not physically in the same location, developing collaboration skills that are essential for today's job market.

Adaptive learning platforms represent a significant advance in the personalization of teaching. Using sophisticated algorithms, these tools can analyze each student's individual performance and tailor the content and activities according to their specific needs. This allows for a more individualized approach to education, respecting each student's pace and learning style, which can lead to better academic outcomes and a more satisfying educational experience.

Educational mobile applications have gained space as complementary tools to traditional teaching. The ubiquity of smartphones and tablets allows students to access educational content anytime and anywhere, promoting continuous and flexible learning. These apps can range from simple quizzes and flashcards to complex simulations and augmented reality, offering a variety of options to enrich the curriculum and make learning more interactive and engaging.

Virtual reality (VR) and augmented reality (AR) are emerging as promising technologies in the educational field. These tools offer immersive experiences that can transport students to historical environments, explore the inside of the human body, or visualize abstract concepts in a three-dimensional way. Integrating VR and AR into the curriculum can significantly increase student engagement and improve understanding of complex concepts.

Data analytics and learning analytics tools are becoming increasingly important in digital education. These technologies allow educators and institutions to collect and analyze data on student performance and behavior, providing valuable insights to improve the teaching-learning process. With this information, it is possible to identify patterns, predict challenges, and personalize educational interventions more effectively.

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Artificial intelligence (AI) is starting to play a significant role in education, with virtual tutors and content recommendation systems. These technologies can offer personalized support to students by answering questions, providing immediate feedback, and suggesting relevant learning resources. As AI becomes more sophisticated, its potential to transform education and deliver highly personalized learning experiences continues to grow.

Finally, it is important to recognize that effectively integrating digital media into the curriculum requires not only the implementation of technologies but also a change in pedagogical approach. Educators need to be empowered to use these tools in a meaningful way, aligning them with learning objectives and student needs. Additionally, it is crucial to address issues of equity and access, ensuring that all students have equal opportunities to benefit from these technological innovations in education.

DIGITAL MEDIA AND EDUCATION

The context of digital media is associated with new technologies, being defined as a set of communication vehicles and/or devices that offer the possibility of sharing information and interactions. However, even before these media entered society, traditional media were already used daily, represented by newspapers, telephones and magazines, that is, there is an evolution in the concepts of communication and dissemination of content (Martino, 2014).

With the end of World War II, the first computer appeared, proving to be a valuable tool in the construction of knowledge, in addition to the practicality to perform tasks, justifying the reason why young people are interested in this scenario and its practicalities (Silva; Correa, 2014).

These changes also impacted education, causing teachers and students to change the way they teach and learn, after all, the new generations have easy access to the *internet*, allowing any information to be just a click away, so it is visible and understandable that there is a certain lack of interest in the old teaching methods that used blackboards, notebooks and textbooks.

Thus, new active methodologies need to be employed in the classroom, demonstrating to the student new ways of thinking and learning, but now with the use of technological resources that facilitate this path (Da Cruz *et al*., 2024). "In all parts of the world, evolving technology is the main force that is transforming society" (Daniel, 2003, apud Bittencourt; Albino, 2017, p.209).

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Bittencout & Albino (2017) state that the use of technology, even with so many facilitators, is still a challenge in education, especially for teachers, as they have many doubts about the use and adaptations that can be made to the contents, aiming at the use of technological resources, so questions arise about the real value of these uses. However, it is essential to understand that these methods tend to bring young people closer to school, improving the forms of learning and communication between student and teacher.

> Information and communication technologies are changing the relationship between teaching and learning. They open new horizons and offer educators the possibility of using various tools that can improve the teaching-learning process, making the act of learning more interactive, concrete and cooperative (Nunes, 2013, apud Peixoto; Oliveira, 2021, p.87).

It is thus observed that the use of technologies in the classroom is a way to adapt to the student's world, carrying out collaborative learning where the student learns the contents of the school curriculum and the teacher improves his technological skills, facilitating teaching and consequently forming closer relationships between both sides.

Thus, the use of technological tools is necessary so that classes do not become boring and all the needs foreseen in each school cycle or in the subjects of university students are met.

TECHNOLOGICAL TOOLS IN TEACHING AND LEARNING

The use of technology in the classroom encompasses how and which tools can be used, in order to improve the student experience, which can be used on a smartphone, computers or *tablets.*

The basis for the use of these resources is linked to the way the contents are made available to students, always understanding their individual needs and specifications so that teaching is carried out in an equal and concrete way for all. Thus, the use of various materials and digital media in each situation is justified (Martino, 2014).

One of the scenarios that can be used, thinking about teaching-learning and the use of technology, are the so-called transmedia narratives. This concept brings a new experience to students, so they can have access to the same story told in different ways, that is, it is possible to read several versions, draw their own conclusions and interpret the story more concisely. It is noted that these narratives are very common in films, where the same story can be told by different people and in different ways, covering the concept of interpretation and creativity of each student (Martino, 2014).

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Another very useful way that has been incorporated into schools is the use of *online* or *offline games*. One can thus mention the use of the Matific platform in many Brazilian states such as São Paulo and Paraná. This platform is based on the gamification between the game and the way of thinking about concepts of the Mathematics discipline, presenting itself as a relevant resource to help in problem solving, subtraction and addition calculations. At the end of the activity, the student is scored, according to their correct answers, and earns stars and rewards to exchange for clothes and character characterizations. Thus, playfulness, technology and learning are mixed, drawing attention and arousing the interest of students (Rodrigues; Couto, 2024).

The use of games evidences an active methodological approach, focused on the conception of knowledge and adaptation of individual and collective development, so specific games can be used and even created by teachers and students. Also, teaching based on trial and error shows the student that he will not always be right or wrong, it all depends on the way he interprets the concepts and answers the questions, so it helps in the actions and formation of each being as an individual.

Therefore, depending on the situation and the classroom in which the teacher is inserted, the use of videos can be a relevant alternative in learning. Students can choose some content they are interested in learning, search the *internet*, choose the most relevant topics and record videos about the subject. In this way, the student can use his creativity, learn through digital search platforms and put into practice the knowledge acquired.

In view of this, the context of making a video also helps in the students' speaking and writing issues, after all, it is necessary that there is a preparation or a *script* to be developed and followed, so the organization of each individual is worked on (Martino, 2014).

In the same vein, the *podcast* can be another technological tool to be used in the classroom. Currently, many social media make use of this resource, either in a listened way or with images, depending on the platform. Therefore, in the digital world, it is common for young people to know this means of communication, facilitating acceptance and interest in its use. Thus, students can organize themselves to conduct research on a topic and ask questions to other students, such as a guided conversation circle, allowing them to use smartphones, computers and the *internet* during learning.

In view of this, using technology is a way not only to bring student and teacher closer together, but also to develop skills, improve teaching-learning and allow teachers to share

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technologies, improving their way of teaching and emphasizing that students can also be protagonists while learning.

FINAL CONSIDERATIONS

Technological tools are everywhere, including in the school environment, where even with limited resources or lack of knowledge of teachers, it is possible to use them to bring students closer to curricular content.

In this way, digital media such as videos, images, films, games, videos and *podcasts* are shown to be relevant elements for the school day-to-day, allowing students to use the ease with these resources in teaching-learning, in addition to collaborating with teachers by teaching new resources, evidencing a moment of collaboration between the parties.

Therefore, it is important that teachers seek to improve their classes for adaptation with technological resources, in order to place students as protagonists of teaching and to arouse their curiosity and interest in school content.

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The integration of digital technologies into the educational environment is not only a trend, but a necessity to prepare students for an increasingly digitized world. By incorporating these tools into the teaching-learning process, educators are providing students with essential skills for the 21st century, such as critical thinking, collaboration, and digital literacy.

One of the main benefits of using technological resources in education is the possibility of personalizing learning. Through adaptive platforms and educational software, it is possible to identify the individual needs of each student and offer content and activities

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appropriate to their level of knowledge and learning pace. This contributes to a more inclusive and effective education.

In addition, technology allows the expansion of the boundaries of the classroom, enabling access to a wide range of information and educational resources available on the internet. Students can explore virtual museums, participate in interactive simulations, and connect with experts from different fields of knowledge, significantly enriching their educational experience.

However, it is essential to emphasize that technology should not be seen as a substitute for the teacher, but rather as a complementary tool. The role of the educator continues to be crucial in mediating knowledge, guiding students, and developing socio-emotional skills. Technology, when well used, enhances the teaching action and expands the possibilities of learning.

For technological integration to be successful, continuous investment in teacher training is necessary. Training and professional updating programs are essential for teachers to feel safe and competent in the use of digital tools in the classroom. In addition, it is important that schools have adequate infrastructure, such as quality internet access and up-to-date equipment.

Finally, it is important to consider the ethical and safety challenges that arise with the intensive use of technologies in education. Issues such as student data privacy, online security, and responsible use of social media must be systematically addressed in the school curriculum, preparing students to be conscious and responsible digital citizens.

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