

Chapter 11

Digital Tools in Informal Learning Environments

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1. Introduction

Technology has become embedded in nearly every aspect of contemporary life, fundamentally transforming individuals' daily practices and societal structures. This transformation facilitates the more efficient and effective use of information, accelerates the circulation of knowledge among individuals, and enhances interaction. Technology can be defined as the collection of tools, methods, and processes developed by humans to control natural forces, meet their needs, and solve encountered problems. As a practical application of science in everyday life, technology not only enables the control and modification of the physical environment but also introduces revolutionary innovations in the processes of collecting, processing, storing, and transmitting information. In this context, the impact of technology on education has necessitated a profound paradigm shift in learning processes, leading to the widespread use of various technological tools as formal and informal learning resources in educational institutions (Eskici & Altun, 2023; Yagan, 2023). Alongside technological advancements, significant changes and transformations have occurred in the planning, implementation, and evaluation of education. These developments are generally explained through the concepts of Education 1.0, 2.0, 3.0, and 4.0. These concepts represent different stages of the teaching and learning processes and their defining characteristics, taking into account technological progress and societal change. Such perspectives emphasize that the rapid transformation of knowledge and its economic, political, and social implications have fundamentally reshaped educational practices across nearly all levels of education (Saritaş & Badavan, 2023; Karoglu et al., 2020; Himmetoglu et al., 2020).

While steam power served as the driving force of the First Industrial Revolution, electricity powered the Second Industrial Revolution, automation and efficiency characterized the Third Industrial Revolution, and cyber-physical systems, integration, and data have become the primary drivers of the Fourth Industrial Revolution (Genc & Tunali, 2022). These industrial transformations have inevitably shifted education from traditional models toward more advanced forms (Marpelina et al., 2023). In this regard, modern educational activities have evolved since the Industrial Revolution to meet the demand for a qualified workforce and have become increasingly interactive and efficient through the integration of technology into teaching and learning processes (Ardic, 2021). The conceptual evolution observed in educational systems is directly associated with the technological and societal transformations that emerged concurrently with the Industrial Revolutions (Topsakal, 2022). These transformations have introduced diverse philosophical approaches to the acquisition, transmission, and production of knowledge, shaping each educational stage with distinctive characteristics (Saritaş & Badavan, 2023). Particularly under the influence of evolving industrial paradigms, educational approaches have progressed from emphasizing the transmission and memorization of knowledge to fostering knowledge production and digital competencies among learners. Throughout this evolutionary process, each educational paradigm has redefined learning processes and the roles of teachers and students in accordance with the demands of the corresponding industrial era. For instance, in Education 1.0, teachers possessed and transmitted all knowledge, while students played no active role in the learning process and merely received information (Perin et al., 2023). Within this authoritarian educational model, the teacher served as the central figure, delivering content to passive learners (Moraes et al., 2022). This approach may be viewed as a reflection

of periods when access to information was limited and knowledge production was constrained. Education 2.0, shaped by the principles of mass production and standardization associated with industrial development, focused primarily on providing diplomas and vocational qualifications. It was characterized by the integration of technologies such as mechanical writing tools and calculators into educational settings (Saritaş & Badavan, 2023). During this period, a knowledge-consumption approach prevailed, in which students remained passive recipients and skills such as note-taking and memorization were emphasized (Abidin et al., 2023). However, this model proved insufficient in supporting individual learning needs and talents, particularly in an era marked by increasing access to information and rapid technological advancement. In response, Education 3.0 emerged alongside the widespread adoption of digital technologies and the Internet, placing open-access learning resources and collaborative learning environments at the center of educational practice. This approach encouraged students to engage actively in knowledge production and participation (Reddy et al., 2022). Consistent with constructivist learning theories, this paradigm shift transformed learners from passive recipients into active producers of knowledge, thereby supporting the development of higher-order thinking skills (Bilici & Yilmaz, 2024). Education 4.0, in turn, integrates digital technologies associated with Industry 4.0—including the Internet of Things (IoT), cloud computing, and artificial intelligence—into educational processes, emphasizing personalized and adaptive learning models tailored to individual learner profiles (Cetin & Karsantik, 2022). In this new era, intelligent and personalized learning experiences supported by advanced technologies such as artificial intelligence and big data analytics aim to maximize each learner's potential by providing individualized educational pathways (Caramihai et al., 2025).

The AI-supported personalized learning pathways and virtual learning environments envisioned by Education 4.0 enable students to engage with interactive content at their own pace and style, transforming learning from an activity confined to classroom walls into a lifelong process. Positioned as out-of-school learning environments through technologies such as virtual and augmented reality, AI-based platforms, and mobile learning applications, these digital tools facilitate seamless interaction during museum visits, home-based explorations, and global collaborations. By overcoming temporal and spatial constraints, they provide opportunities for learners to develop problem-solving and creativity skills within authentic real-world scenarios (Moraes et al., 2022). This section explains how digital learning tools can be utilized as out-of-school learning environments.

2. Digital Learning Environments

Digital learning environments are dynamic structures in which learning processes occur through technological tools and platforms. By transforming traditional learning paradigms, these environments facilitate access to learning materials, offer interactive experiences, and provide learners with flexibility. In this context, digital learning environments intersect with the categories of formal, informal, and non-formal learning in terms of how learning objectives are defined, the level of structure, and assessment approaches (Gonzalez-Sanmamed et al., 2020). E-learning (electronic learning) environments, which emerged with the widespread adoption of personal computers and the Internet

and represent the integration of technology into education, have the potential to offer flexible and personalized learning experiences by overcoming the spatial and temporal constraints of traditional classroom settings. These digital platforms, particularly through their facilitation of human-computer interaction, enable the integration of non-formal and informal learning processes that extend beyond the boundaries of formal education. Indeed, digital learning environments serve as a bridge between formal, informal, and non-formal learning processes by enabling students to develop their digital competencies and knowledge of technology use (Seufert et al., 2019). The rapid advancement of technology has driven significant changes in the education sector, paving the way for a wide variety of learning environments—such as remote laboratory work, learning management systems, and blended learning models—that go beyond traditional classroom settings (Gurcan & Ozyurt, 2020). This transformation has the potential to enhance the accessibility, interactivity, and personalization of learning by integrating innovative technologies, such as artificial intelligence and virtual reality, into learning processes (Zou et al., 2025). The process of digitalization has spread across all areas of teaching and learning by boosting innovative dynamism in education through the widespread adoption of smart boards, tablets, and the Internet, contributing to a diversification of students' preferred learning methods and making the learning process more efficient (Kucukali & Coşkun, 2021). E-learning, in parallel with technological advancements, delivers access to information, skill development, and course delivery to broader audiences at low cost and through effective distribution channels. This situation necessitates a reassessment of the role of e-learning environments in formal, informal, and non-formal learning contexts, within the framework of the flexibility and accessibility technology offers. Defined as the use of information and communication technologies to access educational content, e-learning offers the possibility of learning independent of time and place, while also bringing pedagogical opportunities such as interactivity, student-centeredness, collaborative learning, and active learning (Gorgen, 2017). This broad definition demonstrates that e-learning serves as an umbrella concept that adapts to today's digital work and learning environment by integrating various formats such as digital learning and mobile learning (Karadag et al., 2021).

2.1. The digital natives as learners

The widespread adoption of digital technologies has fundamentally transformed processes of accessing information, making the use of Web 2.0-based tools in educational settings essential (Farias-Gaytan et al., 2022). These technologies support the transition to an interactive learning model in which students are not merely passive consumers of information but also content creators (Subaşı et al., 2024). Today's students, particularly those of Generation Z, are developing different learning strategies by preferring visually and auditorily rich multimedia content over traditional text-based materials (Bilici & Yilmaz, 2024). Known as “digital natives,” this generation personalizes their learning practices by preferring to consume educational materials through hybrid models enriched with video-based content rather than traditional textbooks (Chan & Lee, 2023). Digital nativism is a concept introduced by Marc Prensky at the beginning of the 21st century to describe the deeply ingrained relationship that generations born into and raised with digital technologies have with technology. Prensky highlighted differences in technological proficiency and learning styles across generations through the concepts of “digital natives” and “digital immigrants,” arguing that the former possess a high level of media literacy

(Prensky, 2001). The hyper-connected relationship that Generation Z students have established with technology has led to a significant gap between traditional teaching methods and students' experiences in the digital world (Zitouniatis et al., 2023). This situation is forcing educators—who are digital immigrants—to make fundamental changes in their teaching methods and adopt constructivist approaches to effectively engage students with “hypertext minds” (Alkan & Tuzun, 2024).

The frequency and variety of digital tool usage in teaching have transcended traditional educational paradigms, becoming a fundamental element shaping individuals' informal learning experiences (Wang et al., 2024). In particular, smartphones and social networks are creating a new digital landscape in which users participate not only in consumption but also in content-sharing and collaborative editing (Avinc & Dogan, 2024). This new ecosystem extends individuals' learning experiences beyond the boundaries of traditional classrooms, positioning technology to function as a cognitive and affective prosthesis (García-Estévez & Ballesteros-Aguayo, 2022). Informal learning encompasses unstructured, self-directed experiences individuals undertake within the framework of their own interests and daily life practices, without the guidance of any institution (Szabó et al., 2021). In this process, individuals can determine their own learning paths through digital technologies, creating a “rhizomatic” learning structure that transcends the limitations of formal educational settings (Bogiannidis et al., 2023). Within this structure, individuals transition from being passive recipients of information to active content creators who transform data themselves and share it through online networks (Bilici & Yilmaz, 2024). In particular, social media networks and video-sharing platforms serve as central repositories for the visual and auditory learning materials preferred by digital natives (Chan & Lee, 2023). This section will explore how mobile phones and other media platforms that digital natives frequently use can be used as tools for informal learning.

2.2. Smartphones and Mobile Learning

Thanks to their advanced computing capabilities and constant internet access, smartphones today serve not only as communication tools but also as powerful portable computers that support individual learning (Metruk, 2021). By offering portability and instant access to information, these devices free the learning process from time and space constraints, thereby enriching informal learning experiences (Qarkaxhja et al., 2021). Mobile phones enable individuals to access the information they need in their daily lives from any location, allowing the act of learning to be transferred to a more authentic and contextual framework (Zakian et al., 2022). The constant connectivity and functionality these devices offer transform mobile phones from simple communication tools into high-potential educational service platforms, thereby enabling the expansion of learning opportunities worldwide (Okai-Ugbaje et al., 2022). Students use these technological capabilities to access course materials via mobile devices and participate in interactive content creation processes through academic platforms (Lázaro & Duarte, 2023; Oliveira et al., 2021).

Additionally, the personalized interfaces and social media integration on smartphones enable students to engage in real-time communication with peers and faculty members, fostering a collaborative, community-based learning environment (Wang et al., 2024). Furthermore, the context-

awareness and personalized content management provided by smartphones help individuals tailor their learning experiences to their needs and seamlessly integrate formal educational processes with informal practices (Gupta et al., 2021; Sage et al., 2021). In this context, smartphones promote the transformation of learning into a lifelong sociocultural activity by establishing a seamless integration between learners' personal life practices and academic processes (Luo & Watts, 2022). Thanks to their portability and constant access, smartphones support individuals' cognitive and metacognitive skills, thereby extending the learning experience beyond traditional methods (Wahyuni et al., 2022).

With the widespread adoption of mobile technologies, the use of smartphones in education and teaching processes offers the potential to enrich learning beyond traditional classroom settings, thanks to their portability and accessibility. Mobile learning (m-learning) environments contribute to the democratization of educational processes by offering individuals opportunities to learn through hands-on and visual experiences, regardless of time and place (Qarkaxhja et al., 2021). Recent studies indicate that mobile learning has become a critical component of distance education and that research in this field is steadily increasing (Sonmez et al., 2018). Mobile learning not only serves as the primary defining factor in integrating these devices into the educational ecosystem but also reconceptualizes learning as a contextual activity that occurs anytime, anywhere (Hartley & Andújar, 2022). This process enables learners to personalize their learning paths and select cognitive tools suited to their needs, thanks to the unique qualities of these devices, such as portability and instant connectivity (He & Li, 2023). In this context, mobile learning aims not only to provide access to digital content but also to extend the learning process beyond traditional boundaries by leveraging device features, such as location and mobility (Almogren & Aljammaz, 2022). Drawing on theoretical foundations such as constructivism and connectivism, this approach enables learners to blend their real-world experiences with digital interactions (Naveed et al., 2023). Particularly in informal learning processes, the ubiquity and social interaction opportunities provided by smartphones facilitate learners' integration of micro-learning practices based on their individual interests into their daily lives (Chaka et al., 2021). In the context of informal learning, mobile devices support individuals' curiosity-driven explorations, enabling ubiquitous learning practices that develop within the natural flow of daily life (Tabuenca et al., 2021). These devices extend learning processes beyond the classroom, deepening learners' engagement with the world around them.

Mobile devices offer a dynamic ecosystem that transcends the limitations of traditional computers, enabling learners to design personalized learning environments through content interaction and social networks (Lei et al., 2022). The integration of mobile devices into personalized learning processes enables students to structure their learning paths in unique ways aligned with their interests and to develop connected learning experiences. Particularly in self-directed learning processes, mobile users can demonstrate higher learning efficiency compared to traditional methods thanks to this ecosystem (Tuaycharoen, 2021). The fact that mobile technologies offer individuals learning opportunities independent of time and place, provide personalized learning experiences, and enhance technological literacy has led academics to evaluate them as a suitable and effective tool in education (Kavakli & Yakin, 2019). Since 2010, the use of mobile devices, such as smartphones and tablets, in education has increased significantly (Aydogdu, 2021). This increase is rooted in the potential of mobile devices to enhance individual productivity and enrich learning processes in

education, just as they do in various other sectors (Diri & Acikgul, 2021; Korucu & Bicer, 2019). This situation has led to the concept of mobile learning frequently being discussed alongside e-learning and has paved the way for an increase in studies on this topic in the literature. Indeed, continuous advancements in mobile technologies and the exponentially increasing functionality of mobile devices have further reinforced the importance of mobile learning by encouraging the active use of these technologies in classroom settings (Altuncekic, 2020). In this context, integrating mobile devices into education enables students to access information immediately. It provides interactive learning environments, thereby enabling the adoption of more flexible, student-centered approaches compared to traditional learning methods (Ozek & Gur, 2021). This is further supported by meta-analyses demonstrating that mobile learning is more effective than traditional instruction and enhances academic achievement (Goksu & Bolat, 2020). In particular, smartphones and other portable devices, which are accessible to a significant portion of the global population, are driving increased interest in mobile learning (Yagan, 2023). Research indicates that teachers and pre-service teachers exhibit positive attitudes toward mobile educational applications and are receptive to integrating these technologies into learning processes (Goksu & Atmaca, 2019; Kirbaş & Bulut, 2023). In this context, the growing interest in mobile learning environments, coupled with the widespread adoption of wireless communication devices such as smartphones and tablets, and the availability of fast and affordable models to individuals, has led to the widespread adoption and use of mobile devices across all countries (Koparan & Yilmaz, 2020). The time and location independence, accessibility advantages, ease of use, processing power, and connectivity features that mobile devices offer compared to desktop computers support both formal and informal learning environments and provide new learning opportunities. Mobile learning not only ensures students' continuous access to information but also enhances the effectiveness of learning processes by making learning activities more interactive and personalized (Akbiyik & Kantaroglu, 2017). Furthermore, by providing instant access to information, mobile devices support students with disabilities, promote equal opportunities, and minimize learning disruptions, thereby increasing classroom efficiency. This situation demonstrates that rapid advancements in mobile and wireless technologies have made these tools more user-friendly and accessible, thereby facilitating access to information and laying the groundwork for the emergence of mobile learning (Acikgul & Diri, 2020; Korucu & Bicer, 2019).

Mobile learning, in its broadest sense, refers to learning processes conducted via mobile devices regardless of time and place (Cam et al., 2019); beyond this definition, it points to a paradigm that offers pedagogical flexibility and personalized learning experiences. In this context, mobile learning enables individuals to satisfy their curiosity and enrich their experiences by facilitating instant access to information, content sharing, and interaction with the learning environment (Cam et al., 2019). This flexible structure of mobile learning encompasses various educational technologies, such as e-learning, thereby enabling learning to become a continuous, uninterrupted experience (Yilmaz & Cakir, 2022). In particular, the widespread adoption of wireless networks and portable devices is a key factor that makes mobile learning location-independent and accessible at all times. In this context, mobile learning stands out for its mobility and accessibility, enabling users to engage in learning activities wherever and whenever they choose (Akgun & Ustun, 2023; Alkiş & Findik-Coşkuncay, 2018). Mobile learning is a subset of e-learning that encompasses integrating learning networks via wireless networks

and mobile devices, as well as supporting instructional processes (Gokbulut, 2021). Consequently, mobile learning offers a truly time- and location-independent learning experience—particularly in the face of limitations in access to computers and the Internet—enabling information to be acquired more effectively and permanently when needed (Ozturk & Yikmiş, 2020; Panda & Kaur, 2023). By providing students with access to information without time or location constraints, mobile technologies can enhance their ability to access, understand, and retain learning materials from wherever they choose (Pocan et al., 2021). Additionally, mobile learning can better address individual learning needs by personalizing learning processes through its flexibility and offering students the opportunity to progress at their own pace (Ersoy & Gorgen, 2021; Sisouvong & Pasanchay, 2024). In this way, mobile learning supports a student-centered approach, making the learning experience more interactive and engaging.

Thanks to the technologies developed today, mobile phones have become versatile devices capable of performing many new functions beyond just calling and texting. Most of these devices now include sensors for light, sound, proximity, motion, magnetic fields, acceleration, pressure, and more. These sensors enable a wide range of practical measurements. These sensor technologies enable students to collect data during fieldwork and directly observe scientific processes by transforming the physical environment into digital measurement tools (García-Tudela et al., 2021). Thus, mobile devices are no longer merely passive consumption tools but have become active laboratory equipment that enable learners to interpret environmental data and directly generate scientific evidence (Jurayev, 2023). This technological expansion serves as an effective cognitive support tool, particularly in nature-based research, helping students discover environmental phenomena and formulate scientific hypotheses (Schilhab, 2021). Similarly, the integration of immersive technologies, such as augmented and virtual reality, supports pedagogical approaches in STEM disciplines, enabling learners to learn complex concepts through concrete, hands-on experiences (Videla et al., 2021). By utilizing the various functions of their smartphones for science experiments, alternative experiments and content can be developed even under conditions where laboratory resources are limited. Such low-cost instrumentation options allow students to apply scientific practices in a range of settings beyond traditional laboratory settings (Seery et al., 2024).

Mobile phones can be used with their existing hardware as well as with additional hardware. For example, integrating low-cost microscope adapters with smartphones enables students to share their microscopic discoveries with broader communities, both in the classroom and through social media, thereby strengthening informal learning networks (Hohlbein et al., 2022). Additionally, augmented reality systems enhance interaction in learning processes and facilitate deeper information processing by delivering multimedia content through existing smart devices without requiring additional specialized hardware (Baabdullah et al., 2021). This interactive content, enabled by augmented reality technology, plays a critical role in minimizing learning barriers, particularly for students with special needs, and in developing their social and life skills (Mikropoulos & Iatraki, 2023). Students can access virtual or augmented reality content on their own devices at no additional cost or hardware requirements, underscoring the importance of “Bring Your Own Device” initiatives that support educational equity (García-Tudela et al., 2021). Additionally, augmented reality applications—which overlay digital information onto the real world through the cameras and sensors in mobile devices—

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enable the visualization of complex science concepts through interactive simulations (Singh & Ahmad, 2024). These innovative approaches eliminate spatial or temporal constraints, offering students an interactive learning experience beyond traditional classroom settings, at their own pace (Lai & Cheong, 2022).

The portability and user-friendly interfaces of mobile devices support lifelong learning by encouraging students to engage with micro-content tailored to their learning pace during their free time. This technological transformation softens the rigid boundaries of traditional teaching models, enabling education to be reshaped to meet individual needs beyond the classroom. To maximize the effectiveness of mobile technologies in informal learning processes, educational designers must both produce content with pedagogical depth and provide guidance that supports users' digital literacy. Furthermore, the sustainability of mobile-based learning ecosystems depends on educators' access to comprehensive technical and methodological guidance for integrating these innovative tools into extracurricular learning scenarios (Koutromanos et al., 2024).

The advantages of mobile learning can be summarized as ease of use, the ability to learn independently of time and place, the development of motivation and a sense of responsibility, and the enhancement of independent and collaborative work skills (Şendag et al., 2017). Despite the flexibility and accessibility advantages that mobile technologies offer in educational processes, their use also brings significant disadvantages and risks. These negative effects manifest in cognitive, social, psychological, and technical dimensions (Husnita et al., 2023). One of the most debated disadvantages of mobile technologies is that easy, rapid access to information can trigger habits of laziness and carelessness among students. The ability to access information instantly reduces students' motivation to conduct in-depth research and process information, leading to the production of similar, unoriginal work. This situation prevents students from developing themselves and increases their tendency toward plagiarism. Additionally, information overload in digital environments and the difficulties in accessing accurate information negatively impact students' critical thinking skills. The trend of moving away from reading books is another significant issue observed in this process. It is also noted that students struggle to succeed in situations requiring skills and creativity when using technology, and that the boundaries between inspiration and exploitation have become blurred (Sozuer & Buluş, 2023).

2.3. Social media as a learning tool

The history of using videos as an educational tool dates back to their use in training soldiers during World War II. From that time to the present, the technology applicable to video production, storage, and distribution has advanced significantly (Moussiades et al., 2019). Founded in 2005 as an amateur video-sharing platform, YouTube has evolved into the world's largest video archive. On this massive platform, alongside entertainment-oriented videos such as music and gaming created by various organizations and individuals, there is also a vast amount of content in the "do-it-yourself," "repair," and "make" categories, as well as content suitable for educational purposes. For this reason, in recent years, YouTube has garnered significant interest from researchers and teachers as an educational tool (Alston & Ellis-Hervey, 2015; Maziriri et al., 2020). YouTube is also widely accepted by students as a

learning environment. In his study conducted with middle school students, Kanat (2022) noted that students use this platform for educational purposes such as preparing for lessons, reviewing topics, solving problems, and rewatching topics they did not understand. YouTube has become a platform where students can both have fun and learn; particularly during the pandemic, it served as a virtual school for students who faced difficulties accessing schools and teachers.

Students seeking information also actively use other social media platforms. Social media platforms, integrated into the education system as an extension of Web 2.0 technologies, contribute to the transformation of pedagogical approaches. In this context, platforms such as Facebook, Instagram, TikTok, and X stand out as essential tools that enable student profiles across various disciplines to access academic content and have become an integral part of their learning ecosystems (Bruguera et al., 2022; Perez et al., 2023). These digital networks bridge the gap between formal and informal learning processes, enabling students to develop their digital literacy skills (Otchie et al., 2021). Students strategically select and use these platforms to meet their academic needs based on specific learning objectives and their current context (Bogiannidis et al., 2023). In this process, social media goes beyond being a mere information transfer medium, serving as a tool that supports students' collaborative learning practices and encourages interactive discussions (Purnama & Asdlori, 2023). Flexible features offered by such networks, such as instant messaging and group interaction, enable students to support peer learning and personalize their learning processes in a more dynamic way (Barrot & Acomular, 2022). The educational potential of social media platforms may vary depending on discipline-specific requirements, environmental factors, and institutional adoption levels (Chugh et al., 2023). Indeed, the use of social media not only increases students' motivation and engagement levels but also makes learning processes more accessible, yielding positive outcomes on critical thinking and academic performance (Marín et al., 2023).

On the other hand, the informal structure of social networks fosters student engagement by providing an environment where students are more familiar with and can interact more easily compared to traditional learning management systems (Godsk & Møller, 2025; Masrom et al., 2021). However, educational institutions' failure to align the informal learning opportunities offered by these platforms with the official curriculum can lead to practical issues, such as conceptual confusion arising from information from diverse sources (Coxon et al., 2022). Nevertheless, the use of these tools, which students are already familiar with, holds significant potential to increase educational engagement and motivation. Consequently, the number of channels producing content that supports in-school learning on various social media platforms is steadily increasing.

3. Conclusion

Since digital natives live in a hyper-connected world at every stage of their lives, they view technology not merely as a tool but as an integral part of their learning processes (Zitouniatis et al., 2023). Today, formal learning environments must be designed with digital natives' inclinations in mind. In this context, technology-based approaches should be used to select teaching methods and techniques, as well as to create organizational frameworks that support meaningful learning. The implications of this approach are also evident in informal learning environments. This chapter presents a review of the literature on how mobile devices and social media platforms—easily accessible from virtually anywhere—can be used as informal learning environments.

The relationship between digital natives and technology, which has reached a level of dependency, can be leveraged to enrich learning environments. Furthermore, the technology-dependent nature of Generation Z can shift the learning process toward a more participatory dimension by leveraging content from Web 2.0 tools in areas where traditional methods prove ineffective. Social networks, thanks to their interactive features and even accessibility on mobile devices, can make students' learning experiences more engaging and efficient. Therefore, digital learning tools should also be considered when developing educational policies. Digital learning tools can serve as useful environments for both formal and informal learning.

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