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María Stephany Ballesteros Camargo
Máster en Educación para los Derechos Humanos
Universidad Sergio Arboleda – Bogotá
mballesteros@docente.als.edu.co

Rethinking Digital Education in Elementary Students

Abstract

The integration of a digital world into the lives of elementary-aged children is a current reality that generates important concerns to consider and analyze. This unstoppable global expansion of technology and the questionable necessity of being connected 24/7 are demanding a paradigm shift in educational and parental approaches, moving from passive consumption or restrictive prohibition towards active, critical, and rights-based pedagogy. The main challenge is not the technology itself, but how we guide young learners as educators and caregivers to navigate with insight, safety, and purpose. This article reflexively explores a framework for promoting digital citizenship, based on a balanced approach between the development of 21st-century skills and intentional adult modeling.

Keywords: Technology, Devices, Children, Digital Skills, Digital Citizenship, Critical Thinking.

Resumen

La integración del mundo digital a la vida de los niños de primaria es una realidad actual que genera importantes inquietudes que deben considerarse y analizarse. Esta imparable expansión global de la tecnología y la cuestionable necesidad de estar conectados 24/7 exigen un cambio de paradigma en los enfoques educativos y parentales, pasando del consumo pasivo o la prohibición restrictiva a una pedagogía activa, crítica y basada en derechos. El principal desafío no es la tecnología en sí, sino cómo los educadores y cuidadores guiamos a los estudiantes escolares para que la utilicen con conocimiento, seguridad y propósito. Este artículo explora de forma reflexiva un marco para promover la ciudadanía digital, basado en un enfoque equilibrado entre el desarrollo de habilidades del siglo XXI y el ejemplo intencional de los adultos.

Palabras clave: Tecnología, Dispositivos, Niños, Habilidades Digitales, Ciudadanía Digital, Pensamiento Crítico.

Introduction

The digital wave that transformed how people communicate and relate to each other also changed the way we learn and access information. Children and young people are not only witnesses but have entered into the dynamic of being active users of new technologies. As Salas Pilco et al. (2022) affirm:

> These emerging technologies can potentially transform education by changing the learners' experiences both within and beyond classrooms, producing an impact on the learners' physical, social-emotional, and intellectual learning outcomes. The adoption of these technologies by education systems provides an opportunity to innovate and improve both the learning process and pedagogical strategies. (p. 2)

This leads us to think that whether for an academic purpose or fun, it is almost impossible to turn the back on a digital universe that has so much to offer and at the same time demands conscious and responsible actions.

Nowadays, it is not enough to simply be at the forefront of the most popular digital trends because social progress and inclusion now depend less on access to technology and more on how individuals and groups choose to use it. From this viewpoint, access to and use of ICT involve conceptualizing machines in a different way so that we take account of the processes inherent in their use. As Yelland (2007, pp. 14-15) points out, "when ICT is used to glitz up mundane school tasks, it does not empower learners or afford the opportunity for them to do things in innovative ways." While it is important to know all the advantages that they can offer to facilitate our daily lives, it is equally necessary to identify the risks and negative effects to which one may be exposed, especially when it comes to children. To deepen this subject, some demanding points will be analyzed about the use of technology and digital interaction that elementary children have begun to have both at home and in school.

Of course, by the very nature of the digital and technological era, it prevents universal and immutable truths from being established, because its changes and advances are constant and fast, which makes the dynamics in these media also variable. However, there are some aspects that can certainly reinforce training in digital citizenship from the educational perspective.

Fostering critical thinking

Digital literacy must encompass more than operational skills. It requires the development of a critical consciousness. From an early age, children can be engaged in appropriate conversations about the dual nature of technology. The pros can be willingly explored, like learning, interactive and play time platforms, or access to global libraries. At the same time, adults must gradually address the benefits and drawbacks they are exposed to without sensationalism

by talking about the impact of overuse of digital screens, the reality of misinformation, the potential risks of conducting hate or cyberbullying, and the reasons to keep their data privacy.

For example, Maria and Puteh (2025) confirm that excessive screen time is a significant risk factor for declining children's motor skills. On the contrary, active play represents an important element to support long-term health and learning readiness. This indicates that collaborative efforts are required between parents, educators, and curriculum developers to prioritize children's needs in the digital world in which they are growing up. They should have unplugged and movement spaces to enjoy and interact. Their recreational screen time must be limited, and there must exist clear policies on early childhood device use.

Additionally, young users leave the most significant digital footprints, as they use technology more intensely than often estimated (Surmelioglu and Seferoglu, 2019). This fact highlights the primary importance of raising digital footprint awareness among the young. While such measures may have been aimed at high school students six years ago, they now need to be discussed essentially with children.

As these conversations and lessons become frequent by using real-life examples, relevant to the children's context and appropriate to their age, they may inquire about matters regarding digital rights and responsibilities.

While knowing about immediate actions such as reporting, blocking, or banning, it is essential to focus on the preventive measures, ensuring users are highly informed about the inherent consequences of their choices. For Choi et al. (2018, as cited in Gallego et al, 2024), one important goal of education is to develop responsible, digitally active citizens who can make informed decisions in a web-based, connected society. Therefore, the use of technology becomes responsible, from an ethical perspective, when people are conscious of behaving appropriately and, as in any other social scenario, they must replicate actions based on respect, civility, and honesty.

This will pave the way for a transparent dialogue that demystifies the online world, builds trust between child and adult, and instills a habit of questioning and reflection before acting.

From restriction to instruction

Even if the instinctive and well-intentioned response to the risks of the digital world is to impose bans, a purely prohibitive stance is impractical and counterproductive. It transforms technology into a vice rather than a powerful tool, and it fails to equip children with the competencies they need for a digital position. The alternative is a pedagogical commitment to guided exploration.

At home, this involves co-viewing, co-playing, and discussing online content with children, transforming passive screen time into mutual learning moments. Adults could take advantage of the fact that children want to share their likes and generational trends. After active listening to them, children can be cautiously questioned about the benefits or rewards they receive from being users of certain games or platforms that capture their attention and interest. Creating an environment where children feel comfortable talking is crucial for their safety. This way, if they encounter content that is uncomfortable, embarrassing, or shocking, they will recognize it as a potential threat and know to seek help. With time and the appropriate guidance, they will be able to analyze and determine whether the content they access and share could be influenced by inappropriate, exclusionary, or even violent biases.

At school, students can explore high-quality educational apps and websites, while educators can guide them in the effective use of educational technology, searching for and evaluating sources, and creating content responsibly. Equally important is the development of Emotional Intelligence, which Martínez et al. (2022) identify as indispensable for citizenship training. This competency extends directly into the digital field, where it is essential for promoting tolerance and respect.

> Emotional Intelligence is a protector against bullying and has a positive impact on school success. It was shown that the ability to recognize feelings and manage them properly is essential to establishing positive relationships, as it improves the school climate and involvement in schoolwork and avoids problems arising from violence. (p. 7)

By framing technology as a space for critical inquiry—not just consumption—adults empower children to become architects of their own digital experiences.

Beyond access

The UN Convention on the Rights of the Child (1989) articulates rights to education, participation, and access to information, pointing out in the Article 28 that

> States Parties recognize the right of the child to education, and with a view to achieving this right progressively and on the basis of equal opportunity, they shall, in particular: (…) (d) Make educational and vocational information and guidance available and accessible to all children. (p.8)

In fact, these rights are intricately linked to digital access and competence in the development of 21st-century skills. And digital abilities must encompass computational thinking, communication, cooperation, and critical analysis as the fundamental basis for a quality basic education. However, ensuring access to technology and targeted instruction is a matter of social justice, a significant challenge in our region, given the vast digital divide.

That is precisely why organizations like UNICEF (2025) "analyse the relationship between children's internet use (screen time and online activities) and their digital skills (self-assessed ability to change privacy settings, choose the best keywords for online searches, remove people from a contact list and create video or music online)" (p.11). Therefore, the issue is not merely a question of access, but also the appropriation of skills that individuals must assume as users and citizens.

Consequently, true digital citizenship requires moving beyond functional skills, which means proactively teaching children that not everything they see online is real, and people in games or social media can be deceptive. They must understand that shared information is nearly impossible to erase and that respecting others' privacy, such as by asking consent before posting pictures, is a fundamental right. Finally, becoming a responsible user and citizen entails the ethical duty to recognize and call out online hate, harassment, and hurtful discourse, thereby actively shaping a safer and more just digital environment.

As parents and educators, we can advocate for children's rights to protection and privacy in digital spaces through conscientious digital literacy. Viewing digital education through a rights-based lens elevates it to an essential component of holistic child development and citizenship.

Digital Family Constitution

Nowadays it is undeniable that the use of electronic devices in children has rapidly increased. As OECD (2025) sets "most children who use digital devices and connect to the Internet do so through more than one device" (p.46). Even if they are used with learning or entertaining purposes, their use must come with clear rules and equitable agreements. The act of giving over, borrowing or gifting an electronic device must be accompanied by a co-created "family constitution" that includes consistent and impartial compliance by every family member.

> Parents and children need an agreement around the use of digital media, utilizing educational programs/applications related to aspects of child development, not prohibiting children from using gadgets. This does not mean that parents forbid their children to completely use digital, but that there are clear usage limits (Rahimah, 2021, p.120).

Parameters regarding duration, time of day, and zones of non-use, such as mealtimes, provide essential scaffolding to prioritize those moments when you

live and interact with the real world. This guidance, more than punitive, must be protective, helping children develop the executive function and self-regulation skills they are neurologically maturing. Consequently, impulsive, anxious, or irritable behaviors are an immediate warning to review the parameters that determine the environment in which children interact with the digital world and to consider alternatives that favor effective digital parenting instead of irrational dependence.

Adult modeling

Perhaps one of the most efficient pedagogical tools is adult modeling. Expecting children to do what adults say, not what they do, makes little sense. A parent or teacher constantly scrolling through a smartphone while preaching about screen limits sends a contradictory message that children will inevitably mimic. Gutierrez et al. (2024) state that "digital citizenship has the potential to promote civic engagement in matters that impact individuals, resulting in benefits for society" (p.739). A goal that forces us to examine first our own habits, such as compulsive phone use during social interaction, and the values we communicate when using digital tools. We cannot expect children to unplug and spend quality time playing or sharing if adults do not know how to regulate their own screen time.

On a wider level, we must critically evaluate what we are paying attention to. Do we agree with the flow of demanding social media, which rewards unreal status and ceaseless availability? No doubt, there are platforms and apps that offer useful content and were created with a favorable purpose. But it is also responsible to know better and get informed about those negative impacts that social media could lead on mental and physical health related to sedentarism, reduction of sleep time, depression, less face-to-face interactions, and exposure to cyberbullying (Cohen et al., 2024). Those are risks young people and adults are exposed to, and so are children.

Therefore, consciously cultivating physical presence and living fully in the moment is a powerful lesson to prioritize real and close family interaction after long periods of working on a laptop and chatting by phone.

Recognizing the Consequences

A balanced approach must begin with a clear understanding of the consequences associated with screen overexposure. As previously noted, these impacts are physical, cognitive, and social. For instance, the blue light emission can impair sleep quality, while sedentary screen time often displaces physical activity, leading to fatigue and fragmented attention. Socially, excessive digital engagement may hinder the development of empathy and face-to-face communication skills (Cohen et al., 2024). Certainly, these risks stem not from technology itself, but from its unbalanced use. Understanding these consequences should inform action rather than provoke alarm. The goal is to consciously shape daily routines, ensuring that digital activities complement essential offline experiences such as creative play, reading, sports, arts, and family interaction.

Achieving this balance requires a collaborative, holistic effort between schools and families. Schools should serve as formative environments by integrating digital well-being transversally into the curriculum, fostering socio-emotional skills and critical thinking (Sîngeorzan et al., 2025). Simultaneously, parents play a crucial role in reinforcing these principles at home, establishing a consistent framework for healthy digital habits across all aspects of a child's life.

Conclusion

Navigating digital childhood requires moving beyond immediate reactions toward reflection. Through guided pedagogy, critical dialogue, and a framework of digital rights and responsibilities, coupled with consistent structures, adult modeling, and a grounded awareness of risks, we can shepherd elementary students to become thoughtful, ethical,

and empowered digital citizens. The aim is to raise a generation that is empowered in the digital world, able to manage its influence and use its potential while consciously protecting their own humanity. This dual focus represents one of the most fundamental educational imperatives of our time.

The conclusion is not a single rule but a shared commitment. When adults embody a parenthood or educator role, the most powerful tool is their own behavior. At home, a "Digital Family Constitution" without parental adherence is a contradiction. To examine the own compulsive scrolling, to establish and respect unplugged zones during mealtimes or rest time and to transform passive consumption into active conversation, are helpful actions that should be adopted.

For teachers, digital education also demands integration, sometimes misunderstood as an addition. Digital citizenship cannot be a single, isolated lesson on cyberbullying. A transversal skills approach should be assumed, by evaluating digital research and learning sources, by promoting ethical content creation, and rehearsing social-emotional learning to manage online conflict. In schools also can exist models to follow clear device policies. Like other enterprises around the world, schools can develop digital well-being for staff by digital or technological training and unplugged healthy activities promotion.

Therefore, the final invitation is a call for purposeful alignment between families and schools. Together, it is possible to build a scaffolding of prevention, conscience, and respectful dialogue. The goal is to raise digital citizens instead of "digital natives". Children need to recognize misinformation; they must assert their right to privacy and choose kindness over hate, violence; even worse, indifference. The world also needs a generation that notices when it is time to step away from the screens to embrace the reality of social interaction and leisure. This dual aim of empowerment and humanity is attainable when parents and teachers act as partners.

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