

THE ROLE OF THE EDUCATIONAL MANAGER AND THE E-LEARNING ENVIRONMENT

 <https://doi.org/10.63330/aurumpub.032-006>**Alessandra Verginelli Turatto¹****Abstract**

Information and Communication Technologies (ICT) have transformed education, promoting collaborative learning spaces, interaction between students and teachers, and enhancing communication within schools. Their strategic use expands the continuing education of teachers and school managers, encouraging innovative pedagogical practices and digital inclusion. The advancement of digitalization, especially following the remote teaching adopted during the COVID-19 pandemic, highlighted the need for school managers with digital competencies to implement technologies critically, ethically, and contextually. Despite challenges such as teacher resistance and infrastructure limitations, e-learning enables personalized learning, student protagonism, and equitable access to education. Effective integration of ICT requires strategic planning, ongoing professional development, and a collaborative school culture, consolidating innovative, inclusive educational environments focused on the holistic development of students.

Keywords: ICT, E-learning, Digital inclusion, School management.

INTRODUCTION

The presence of Information and Communication Technologies (ICT) in the school environment has brought about profound changes in educational practices, moving beyond the limited conception of use restricted to access to data and content. When incorporated in a planned and conscious manner, these technologies contribute to the constitution of collaborative learning spaces in which knowledge is

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collectively constructed, grounded in reflection, dialogue, and the active participation of the subjects involved. This movement fosters interaction and dynamism in the school environment, with a focus on the student, enhancing communication among managers, teachers, students, and families.

The use of Information and Communication Technologies also expands possibilities for the ongoing development of professionals in the educational field by broadening access to continuing education, up-to-date materials, and collaborative networks for exchanging experiences. This connectivity stimulates the circulation of innovative pedagogical practices and strengthens the process of teacher professional updating—an indispensable aspect in light of contemporary educational demands. In addition, the adoption of technologies contributes to a systemic integration among the administrative, pedagogical, and informational spheres of the school, favoring integrated and efficient management connected to the demands of the school community.

The advance of digitalization in the educational field intensified significantly as of the remote teaching experiences imposed by the COVID-19 pandemic at the beginning of 2020. This scenario highlighted the need for school managers prepared to act in contexts of technology-mediated education, such as e-learning. In this new panorama, the manager's role goes beyond administrative routines, requiring competencies to articulate pedagogical innovation, adequate structural conditions, and a digital culture coherent with the school institution's political-pedagogical project.

In view of these demands, it becomes essential for the school manager to develop digital competencies that support critical analysis, careful selection, and the strategic, responsible, and ethical implementation of technologies. These competencies include not only technical mastery of digital tools and platforms, but also analytical competence to critically assess their relevance and applicability in pedagogical practices. For administration to achieve a truly transformative effect in this scenario, it is essential that the manager adopts a reflective and proactive stance, evaluating how technologies influence learning, promote digital inclusion, and strengthen an inclusive, fair, and high-quality education.

Achieving these objectives depends, indispensably, on the continuous engagement of school managers in their own professional development. Training actions must adopt a comprehensive perspective that includes both technical knowledge and the pedagogical, administrative, and ethical dimensions related to the use of ICT.

In this way, managers will be better equipped to foster innovative school environments in which teacher autonomy, student protagonism, and the application of active methodologies supported by digital technologies are integrated in a contextualized and efficient manner.

With regard to methodological procedures, the study adopted bibliographic research as its main approach, considering it appropriate for the critical analysis of existing theoretical productions, enabling the articulation of concepts and reflections relevant to the theme. This approach made it possible to systematize and establish dialogue among different authors who investigate school management in the context of digital technologies, favoring a broad and consolidated understanding of the object of study.

The present study aims to analyze the performance of the school manager in the process of implementing educational technologies, examining the challenges and opportunities that emerge in this context. Considering the manager's role as a strategic agent allows for the formulation of institutional actions and policies that consolidate the integration of technology into school culture, promoting innovative, inclusive, and contextualized pedagogical practices capable of effectively articulating teachers' knowledge, student protagonism, and the transformation of the educational process.

In summary, it is emphasized that the strategic performance of the educational manager is fundamental to consolidating digital culture in the school environment, promoting the integration of technologies, pedagogical innovation, and digital inclusion in an effective and sustainable manner. The stance adopted by the manager regarding educational technologies impacts the receptivity and engagement of the teaching staff. Therefore, the strategic performance of the manager as a central agent in consolidating digital culture constitutes an essential element so that ICT cease to be mere auxiliary

instruments, becoming transformatively integrated into pedagogical and administrative processes, promoting innovation, digital inclusion, and the strengthening of school learning.

THE SCHOOL MANAGER'S PERFORMANCE IN RELATION TO ICT AND E-LEARNING

According to Moran et al. (2020), in the context of the twenty-first century, ICT have become central elements in shaping contemporary society. This occurs due to the convergence among advances in computing, communication, and telecommunications, present in computers, mobile phones, and other technological devices. These resources enable multiple functionalities, including exchanging messages, accessing audiovisual content, producing images, and communicating in real time among people located in different regions of the world.

Although important advances have been recorded in recent years—especially with regard to the improvement of educational indicators and the expansion of access to elementary education—there are still significant challenges to be overcome. As Silva (2021) points out, it is necessary to qualify this access and confront the historical social exclusion that marks the Brazilian educational system.

In society in general, the incorporation of new technologies occurs at an accelerated pace; however, in the school environment, resistance, slowness, and, in many cases, the ineffective use of these resources are still observed. A recurring practice in public schools is maintaining technological equipment unused, often stored away for fear of damage or due to the absence of adequate infrastructure conditions. Although these limitations are real, Moran et al. (2020) emphasize that, in addition to teacher training, it is essential that school managers also participate in training processes in order to encourage the use of technologies in both administrative and pedagogical activities, promoting digital inclusion and technological literacy within the school context.

In this scenario, it is the school manager's responsibility to exercise functions related to planning, leadership, and the creation of spaces conducive to reflection and experimentation. Within the scope of school management, the collective mobilization of competencies and the active participation of the

community contribute significantly to achieving educational objectives. According to Vieira (2023), transformations in the school environment tend to occur more intensely when principals, teachers, staff, students, families, and the community become directly involved in the actions implemented by the institution.

Franco (2019) highlights that the manager's involvement in integrating the various segments of the school community, in implementing ICT both in administrative management and in teaching, and in promoting the continuing education of professionals can play a crucial role in transforming the school into an environment oriented toward the production and sharing of knowledge.

For this to materialize, the school manager's commitment to continuing education directed toward the use of educational technologies and media is essential. It is the responsibility of this professional to ensure that technological resources are incorporated into the school's daily life in a meaningful way. The introduction of technologies must enable innovative pedagogical practices, making learning experiences possible that would not be feasible by other means. As Silva (2021) underscores, the appropriate use of ICT favors integration among different areas of knowledge, makes the school more attractive, and contributes to the formation of independent students who are capable of exploring multiple sources of information and different means of digital communication.

In the context of e-learning, educational management faces numerous challenges to ensure the effectiveness of digital programs. A major obstacle is the insufficiency of technological infrastructure. Kenski (2020) points out that many institutions encounter difficulties related to the lack of adequate equipment and the low quality of connectivity—a situation that is even more serious in economically vulnerable or geographically remote regions. Overcoming these limitations requires continuous investments and public policies aimed at expanding digital inclusion.

Another relevant challenge concerns the resistance of part of the teaching staff to the changes imposed by the use of digital technologies. Almeida and Rubim (2021) observe that many teachers feel insecure or insufficiently prepared to use technologies as part of pedagogical strategies. According to

Vieira (2023), a shift in mindset constitutes a determining element for the success of e-learning initiatives. The educational manager, in this context, must act as a transformative leader, offering support, encouragement, ongoing training, and technical assistance to teachers during the process of integrating digital teaching into the school context.

Nevertheless, e-learning presents numerous possibilities for educational innovation. According to Kenski (2020), digital environments constitute participatory and collaborative learning communities in which students can interact, share knowledge, and construct learning collectively. Digital tools serve as enhancers of these interactions, expanding communication possibilities and promoting a more dynamic and collaborative educational process.

Pretto (2020) emphasizes that e-learning favors the personalization of the educational process, allowing content and learning rhythms to be adapted to each student's particularities. The strategic management of these digital environments contributes significantly to expanding access to education, promoting inclusion and equity, by enabling audiences frequently excluded from face-to-face education to actively participate in the educational opportunities offered by institutions.

Almeida and Rubim (2021) stress that this modality is particularly relevant for continuing and professional education, as it enables students to conduct their learning autonomously, flexibly, and in a personalized manner, fostering the use of opportunities provided by digital technologies.

In this context, Pretto (2020) highlights that digital inclusion becomes a fundamental requirement to ensure that all individuals can benefit from the opportunities offered by e-learning, promoting educational equity and enabling student protagonism through innovative pedagogical practices mediated by digital technologies, regardless of geographical location or socioeconomic condition.

FINAL CONSIDERATIONS

Technologies, in and of themselves, do not generate significant changes in education. When used critically, contextually, and reflectively, ICT function as tools capable of significantly expanding

pedagogical possibilities and learning processes. However, the mere presence of ICT in the school environment does not promote effective changes in pedagogical practice. For these changes to be consolidated, it becomes essential to consolidate a critical and reflective stance among professionals, so that they can adequately evaluate the limits and potential of technologies in the school context.

The effective implementation of technologies in school processes requires training processes that consider sociocultural and institutional specificities. Teachers, managers, and other professionals need to be prepared to recognize the demands of the school community, as well as the obstacles and resistance that permeate the adoption of digital resources. This recognition presupposes practices of listening, analysis, and collective reflection, fostering commitment and shared responsibility among the different members of the educational process.

Based on this contextual diagnosis, it becomes possible to outline strategies that contribute to the re-signification of pedagogical practices. Such strategies must be aligned with innovative and participatory methodologies, supported by educational conceptions that value student protagonism and the teacher's mediating role. In this process, resources such as virtual learning environments, interactive digital platforms, educational games, diverse media, and collaborative tools can enhance more meaningful formative experiences.

In view of this context, it is incumbent upon the educational manager to promote and organize guidelines related to ongoing professional development. It is the educational manager's responsibility to promote the strategic articulation of institutional cooperation with universities, educational technology centers, and digital learning platforms, with the aim of making courses, workshops, mentoring programs, and other formative actions feasible. These initiatives are fundamental to strengthening the qualification of education professionals and to the innovative and pedagogical integration of technologies into teaching and learning processes.

Ultimately, the consistent integration of technologies into the teaching process depends on consolidating an institutional culture grounded in valuing collaborative work, ongoing professional

development, and educator autonomy. This path requires not only investments in technological resources, but also the formulation of public policies aimed at promoting digital equity and valuing education professionals. Only through this approach will it be feasible to establish dynamic, accessible, and innovative learning environments in which technology functions as an essential ally in the humanization of teaching, in promoting fair access to digital tools, and in strengthening student protagonism—stimulating innovative, relevant pedagogical practices focused on students’ integral development.

REFERENCES

- Almeida, M.; Rubim, L. *O papel do gestor escolar na incorporação das TIC na escola: experiências em construção e redes colaborativas de aprendizagem* [The role of the school manager in incorporating ICT in schools: experiences under construction and collaborative learning networks]. 5. ed. São Paulo: Editora PUC, 2021.
- Franco, M. *Política educacional e o e-learning no Brasil* [Educational policy and e-learning in Brazil]. 3. ed. São Paulo: Editora Atlas, 2019.
- Kenski, V. *Implicações pedagógicas e administrativas da adoção de tecnologias na educação* [Pedagogical and administrative implications of adopting technologies in education]. 1. ed. São Paulo: Editora Atlas, 2020.
- Moran, J. M. et al. *Novas tecnologias e mediação pedagógica* [New technologies and pedagogical mediation]. 6. ed. São Paulo: Editora Papirus, 2020.
- Preto, N. L. *Uma escola sem/com futuro* [A school without/with a future]. 10. ed. Rio de Janeiro: Editora Papirus, 2020.
- Silva, A. *Desafios e oportunidades na implementação do e-learning no Brasil* [Challenges and opportunities in implementing e-learning in Brazil]. 1. ed. São Paulo: Editora Atlas, 2021.
- Vieira, A. *Gestão educacional e tecnologia* [Educational management and technology]. 6. ed. São Paulo: Editora Avercamp, 2023.