AN ANALYSIS OF THE USE OF THE DIGITAL SCHOOL DIARY BASED ON THE UNIFIED THEORY OF ACCEPTANCE AND USE OF TECHNOLOGY 2

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ABSTRACT
The research investigates the impact and acceptance of the Digital School Diary (DED) among teachers at the Dr. Pacífico Mascarenhas State School, in Minas Gerais, considering the management of innovation in the educational environment. Based on the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2), the study aims to analyze how the DED contributes to the optimization of pedagogical work and identify the challenges faced by teachers. The qualitative and descriptive methodology involved structured interviews, analyzed using the Bardin method and supported by the ATLAS.ti software. The results show that most teachers recognize the practicality and efficiency of DED in administrative tasks, although infrastructure and connectivity difficulties are significant limitations for the full use of the tool. The research highlights the need for continuous improvements in training and technological infrastructure to maximize the benefits of the DED, proposing recommendations for educational managers and public policy makers.

Keywords: Educational Technology. School Management. Digital School Diary. Teacher Training. UTAUT2.

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INTRODUCTION

In recent years, digital technology has profoundly transformed the educational environment, promoting significant changes in pedagogical and administrative practices in public and private schools. Tools such as digital school diaries, management platforms, and integrated information systems enable not only the optimization of processes, but also a more agile and efficient communication between the school, teachers, students, and their guardians. However, the implementation of technologies in public education faces additional challenges related to inadequate infrastructure, lack of teacher training, and educators' resistance to adopting new digital methods (Selwyn, 2016).

In this context, the Digital School Diary (DED), implemented by the Minas Gerais State Department of Education (SEE-MG), stands out as an innovative strategy to modernize educational management. The tool allows for the digital recording of attendance, grades, activities, and other academic data, replacing manual processes that consumed time and resources. This innovation aims to reduce bureaucracy, reduce the use of paper, and optimize teachers' time in administrative activities, allowing them to focus more on pedagogical practices.

In 2024, the release of the enhanced DED+ version brought new functionalities, such as a more intuitive interface and additional features to meet user demands. Despite these improvements, the effective adoption of the tool continues to depend on structural conditions, such as adequate internet access, constant technical support, and teacher training to handle technology effectively.

OBJECTIVES

The main objective of this study is to investigate the acceptance and impact of DED on the pedagogical routine of teachers at the Dr. Pacífico Mascarenhas State School, in Minas Gerais, Brazil, based on the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2). This theoretical approach offers a structured model to analyze how factors such as performance expectation, perceived effort, enabling conditions, and hedonic motivation influence the adoption of new technologies in the school environment.

More specifically, this work seeks to:

1. To understand the perception of teachers in relation to the use of the DED.
2. Analyze the role of pedagogical management in the process of implementing the digital diary.

3. Identify the main challenges faced and the benefits perceived in using the tool.

JUSTIFICATION

The integration of digital technologies in school administration is an essential theme for contemporary education, considering the growing demands for efficiency, transparency and innovation in educational processes. In this sense, DED represents a practical and strategic solution for managers, teachers, and students, offering features ranging from monitoring attendance and performance to simplifying school reports and analysis.

From the point of view of educational managers, the DED enables greater control and visibility over the functioning of schools, helping to make informed and data-based decisions. For teachers, the platform offers an opportunity to reorganize their administrative activities, reducing the bureaucratic burden and expanding the time available for planning and executing pedagogical activities.

However, for such benefits to be effectively achieved, it is necessary to overcome barriers such as the lack of technological infrastructure in many public schools and the initial resistance of some teachers to the use of new digital tools. In this sense, the research is justified by offering practical data that can guide the formulation of public policies aimed at teacher training and the strengthening of school infrastructure.

In addition, by adopting the theoretical model of UTAUT2, this study contributes to a deeper understanding of the factors that influence the acceptance of technologies in the educational context, providing subsidies for more effective implementation strategies.

METHODOLOGY

This study adopts a qualitative and descriptive approach, with the objective of understanding teachers' perceptions about the use of the Digital School Diary (DED) in the context of public education in Minas Gerais. The choice for the qualitative approach is justified by the need to deeply explore the experiences, challenges and benefits perceived by educators in relation to the implementation and use of this technology. The descriptive method complements this approach, allowing a detailed analysis of the factors that influence the acceptance of the DED by the professors.

METHOD OF DATA COLLECTION

To collect data, structured interviews were conducted with teachers from the Dr. Pacífico Mascarenhas State School, selected for their experience in the use of DED in their daily pedagogical practices. The interviews were sent and answered by email, which allowed for greater detail in the responses and offered participants more flexibility to express their opinions on the use of the DED. The interview questions were designed to explore various aspects, such as teachers' perceptions of the functionality of the DED, the technical challenges faced, and the impact of the tool on the management of their tasks.

DATA ANALYSIS STRATEGY

The answers were submitted to a content analysis based on the Bardin (2016) method, which is widely used in qualitative studies to identify categories, patterns and meanings in texts. This analysis was carried out with the aid of the ATLAS.ti software, which enabled the organization and categorization of the answers in a systematic way. The use of the software facilitated the identification of recurring and significant themes in the perceptions of teachers, allowing a structured view of the factors that impact the use of the DED.

The use of the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2), proposed by Venkatesh et al. (2012), was essential to guide the data analysis. The constructs of the theory, such as performance expectation, perceived effort, social influence, and facilitating conditions, were applied in the interpretation of the data to understand how each of these factors influences the acceptance and use of the DED. The analysis sought to identify both the facilitating elements and the barriers to the use of the tool, with the aim of providing data for a more effective implementation of the DED in the school context.

RESULTS

The results of this research reveal that the implementation of the Digital School Diary (DED) in the public school system of Minas Gerais is well received by many teachers, especially in terms of ease and efficiency in the management of administrative tasks. However, structural difficulties, such as technological infrastructure and connectivity, emerge as challenges that limit the tool's full potential.

- Perceptions about the Usability and Benefits of DED: Most of the teachers interviewed considered DED a positive innovation, which brought practicality and time savings in activities previously carried out manually, such as recording attendance and grades. With the digital interface, teachers reported greater organization in daily tasks, enabling quick access to information and reports. This aspect is particularly aligned with the UTAUT2 performance expectation construct, which holds that the perception of productivity improvements is associated with a positive acceptance of the technology.

- Infrastructure and Access Challenges: Despite the advantages, the analysis found that insufficient infrastructure is a significant obstacle to the use of DED. Problems such as the lack of adequate devices and difficulties with internet connectivity were highlighted by teachers as barriers that impact the flow of work. The facilitating conditions, another construct of UTAUT2, prove to be a limiting factor, since the absence of technical support and infrastructure directly affects the intention of use and the experience of educators with the platform.

- Training and Technical Support: The study also showed that the DED learning curve generates some resistance, especially among teachers with less technological familiarity. The need for technical support and continuous training was an issue raised by many teachers, pointing to the importance of training programs that promote an easier transition to the digital environment. These findings reflect the UTAUT2 construct of perceived effort, indicating that ease of use influences the acceptance of the technology. When perceiving the tool as complex and without adequate support, teachers may hesitate to use it fully.

DISCUSSION

Analysis of the results suggests that for DED to reach its full potential, continued investment in infrastructure and technical training programs for teachers is needed. The provision of technical support in schools and the improvement of connectivity could mitigate some of the barriers reported, promoting a more fluid integration of technology in pedagogical activities. The involvement of teachers in the process of developing and updating the platform is also recommended, as it allows adjustments that better meet the specific needs of the end user.

In summary, the use of DED in the school context of Minas Gerais has clear benefits, but requires improvements so that it can be fully efficient. The findings suggest that, with improvements in structural and technical support, DED can contribute to a more modern and transparent educational environment, promoting administrative efficiency and the involvement of the school community.

CONCLUSION

The research on the Digital School Diary (DED) at the Dr. Pacífico Mascarenhas State School revealed that this tool represents an important advance in the modernization of educational management, with clear benefits in terms of efficiency and practicality for the pedagogical work of teachers. Based on the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2), it was evident that, although the perception of teachers is mostly positive regarding the potential of DED to streamline administrative tasks, structural factors still represent significant obstacles to the full use of the system.

The analysis of the responses indicated that the acceptance of the DED is conditioned not only to the expectation of improvement in productivity, but also to the presence of facilitating conditions, such as adequate infrastructure and technical support. Challenges related to connectivity and the lack of adequate equipment in schools limit the full use of the tool and can undermine teachers' initial enthusiasm for innovation. In addition, the need for continuous training and technical support was a point highlighted, signaling that familiarity with the system and ease of use are decisive for wider acceptance.

Thus, it is concluded that, for the DED to reach its maximum potential and become a resource fully integrated into the school routine, it is essential to strengthen the infrastructure and offer technological training programs for educators. Such initiatives must be accompanied by a collaborative effort between managers and teachers, ensuring that platform updates are aligned with the needs of users.

Thus, the DED will be able to effectively contribute to a more efficient and transparent school management, encouraging the engagement of the entire educational community and promoting a more modern and integrated teaching environment.

The results of this research can directly benefit educational managers, teachers and public policy makers. In the short term, it is expected to identify the main difficulties faced by teachers in the use of DED and propose practical solutions to overcome them. In the medium and long term, the study's conclusions can support the development of continuing

education strategies and the expansion of technological infrastructure in public schools, promoting a sustainable digital transformation in basic education.

Thus, this work sought not only to understand the impact of DED on the school routine, but also to contribute to the creation of a more dynamic, efficient educational environment adapted to the demands of the twenty-first century.

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