

FINANCIAL EDUCATION AT SCHOOL: FORMING CONSCIOUS CITIZENS



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ABSTRACT

This article analyzed the perspectives and challenges of the implementation of Financial Education in basic education, with the aim of investigating effective ways to integrate it into the school environment through innovative pedagogical approaches and the use of digital technologies. The research, of a bibliographic nature, was based on authors such as Gil (2002), who highlights the relevance of research when there is insufficiency or disorder in the information available on the problem studied. Studies that address teacher training, curricular transversality and the application of technological tools in teaching were examined. It was concluded that the continuing education of teachers is essential to fill the gaps in initial training, allowing the adoption of methodologies that connect financial learning to the reality of students. In addition, the strategic use of technology enhances student engagement, facilitating the construction of critical and reflective skills. Therefore, the need for educational policies that encourage teacher training and the implementation of integrated pedagogical practices is reinforced, promoting contextualized and meaningful Financial Education.

Keywords: Financial Education. Continuing Education. Educational Practices. Technological Innovation. Interdisciplinary Methodologies.

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INTRODUCTION

Financial Education emerges as an essential theme in the educational field, given its relevance for the formation of conscious citizens prepared to deal with the financial challenges of contemporaneity. The debate about their integration into the school environment has gained strength in recent years, driven by the need to equip students with skills that transcend technical learning, encompassing critical and reflective skills. Despite this, the effective implementation of Financial Education still faces significant barriers, especially in relation to teacher training and curriculum structuring.

The main objective of the research was to investigate the perspectives and challenges involved in the implementation of Financial Education in the school, with emphasis on curricular transversality, the use of digital technologies and the continuing education of teachers. The guiding research question was: 'how can Financial Education be incorporated into the school environment in an efficient way, using digital technologies and integrated pedagogical approaches?'

The methodology adopted consisted of a bibliographic research, which, according to Gil (2002), is particularly relevant in contexts where the available information is insufficient or disorganized to respond to the problem investigated. Marconi and Lakatos (2003) emphasized the importance of bibliographic research to theoretically support investigations and guide the critical analysis of the theme in question. Data were collected from secondary sources, including books, academic articles, and specialized publications, and were organized and analyzed based on a qualitative approach.

The article was structured into four main sections. The first, entitled Financial Education at School: Perspectives and Challenges in the Context of Basic Education, explored the importance of integrating Financial Education into the school curriculum, highlighting its potentialities and challenges. The second section, Instituting Financial Education at School: Fundamentals, Practices and Applications, analyzed pedagogical practices that connect financial learning to the realities of students and proposed strategies for their implementation at different levels of education. In the third section, Aligning Financial Education in Schools and Optimizing the Use of Technology, the role of digital tools in enhancing financial education was discussed, highlighting the use of technologies such as simulators and apps to engage students. Finally, the Results and Discussions section synthesized the main findings of the research, relating them to the existing literature and pointing out limitations and suggestions for future studies.

Therefore, this article sought to contribute to the understanding and improvement of pedagogical practices related to Financial Education in the school environment. By exploring theoretical perspectives and practical proposals, it offered subsidies to strengthen the implementation of this theme as a central element in educational and citizenship training.

FINANCIAL EDUCATION AT SCHOOL: PERSPECTIVES AND CHALLENGES IN THE CONTEXT OF BASIC EDUCATION

The inclusion of Financial Education in the school curriculum of Basic Education has gained prominence in recent years, especially due to recent educational policies and curriculum guidelines that seek its effective implementation. In this sense, Ferreira and Lima (2024) highlight that the promotion of Financial Education in the classroom is still in the development phase, reflecting a process of adaptation for both educational institutions and teachers. Thus, the transversality of this theme aims to integrate pedagogical practices that allow students to understand and modify social behaviors related to the use of money (Ferreira; Lima, 2024).

However, the initial training of teachers appears as a relevant obstacle to the realization of this proposal. Ferreira and Lima (2024) argue that the training needs of teaching are not yet fully met, especially with regard to Financial Education. The teacher's identity formation, in turn, constitutes a continuous process, based on experimentation and the experience of successes and failures (Ferreira; Lima, 2024). In this context, the importance of actions that reinforce initial and continuing education is highlighted, enabling teachers to have greater confidence and mastery in addressing financial issues.

In addition, teaching Financial Education requires a curriculum that balances mathematical content and transversal skills, as suggested by Ferreira and Lima (2024). UNESCO (2016) reinforces this view by pointing out that Mathematics Education should reflect the multiplicity of facets of human activity, including content presented in a progressive way. The combination of these approaches allows students to develop not only technical but also critical and reflective skills, connecting learning to their social and financial reality.

In addition, the development of mathematical literacy is a fundamental dimension for the effectiveness of Financial Education. According to Mesquita and Grando (2020), this process involves individual and social learning that complement each other, contributing to

a comprehensive education of students. Thus, by articulating Financial Education with mathematical literacy, the school plays a crucial role in the formation of citizens who are more aware and prepared to deal with the financial challenges of everyday life.

Another relevant aspect is the role of continuing education for teachers. Ferreira and Lima (2024) point out that this training remains challenging for the academic and educational community, especially in the field of Mathematics. In this sense, continuing education initiatives should prioritize didactic strategies that integrate Financial Education with mathematics teaching, facilitating the practical application of this knowledge in the classroom.

Therefore, the implementation of Financial Education in Basic Education requires not only curricular adjustments, but also consistent efforts in the initial and continuing training of teachers. Through an interdisciplinary approach, which includes both mathematical content and transversal skills, it is possible to transform the teaching of this topic into a powerful tool for changing inappropriate social behaviors and promoting a more conscious and responsible citizenship.

INSTITUTING FINANCIAL EDUCATION AT SCHOOL: FUNDAMENTALS, PRACTICES AND APPLICATIONS

Financial Education has been consolidated as an essential theme in citizenship education, offering students the opportunity to develop skills that allow them to make informed decisions in different everyday situations. In this sense, the concept of Mathematical Literacy, as highlighted by Ferreira and Lima,

indicates that the learner is seeking a repertoire of knowledge necessary to support him in the different decision-making related to the situations experienced in everyday life (Ferreira; Lima, 2024, p. 9).

This approach expands the possibilities of practical application, integrating cognitive and social aspects that directly reflect on the financial behavior of students. To institute Financial Education in schools, it is essential that teachers consider the students' previous knowledge as a basis for the development of meaningful teaching. According to Ferreira and Lima, "identifying students' previous knowledge represents a basic attitude in the development of teaching" (Ferreira; Lima, 2024, p. 11). In this context, Assis and Coutinho argue that

[...] Mathematics from the perspective of financial literacy assumes an opportunity to overcome the limited view that financial education is reduced to Financial Mathematics content (Assis; Coutinho, 2020).

This broader view allows you to connect financial topics to students' life experiences, making teaching more relevant. In addition, the assessment of learning plays a structuring role in this process, since it guides the planning and execution of pedagogical activities. According to Ferreira and Lima, "the evaluation of learning begins with the projection of the objectives delimited by the teacher that will conduct his pedagogical action" (Ferreira; Lima, 2024, p. 10). Thus, Financial Education should be incorporated into the curriculum in a transversal way, as Godoi and Tiné suggest:

Promoting the transversality of the curriculum and the development of methodologies that boost pedagogical practice for different scenarios and Brazilian realities is the most prominent point in the development of Contemporary Transversal Themes (Godoi; Tiné, 2020).

This means that the pedagogical approach must be aligned with the cultural, social, and economic diversity present in the country, ensuring that the content taught dialogues with the real experiences and needs of students. In addition, the importance of integrating different areas of knowledge in an interdisciplinary way is emphasized, enabling a more meaningful education, which goes beyond a fragmented view of the curriculum. This perspective also points to the need for flexible educational practices, which are able to adapt to local specificities, promoting inclusive and contextualized education.

In Early Childhood Education, Financial Education can be instituted in a playful way, using stories and games that introduce basic concepts such as saving, sharing and valuing resources. For example, activities such as the "Feirinha na Escola", where children simulate purchases and sales using fictitious currencies, allow them to begin to understand the exchange of values and the organization of priorities. These practices connect teaching to experience, providing a first contact with financial concepts and reinforcing the role of Mathematical Literacy in children's daily lives. As Ferreira and Lima point out, "identifying students' previous knowledge represents a basic attitude in the development of teaching" (Ferreira; Lima, 2024, p. 11).

In High School, Financial Education can be worked on in a more in-depth way, addressing issues such as financial planning, personal budgeting, and basic investments. A practical proposal would be the development of interdisciplinary projects involving Mathematics, Geography and Sociology, in which students analyze the finances of a

fictitious family, creating strategies to save and invest. This approach not only develops financial literacy but also promotes critical reflection on the relationship between consumption, sustainability, and the economy. As Assis and Coutinho point out, "Mathematics from the perspective of financial literacy assumes an opportunity to overcome the limited view that financial education is reduced to Financial Mathematics content" (Assis; Coutinho, 2020).

In summary, the implementation of Financial Education in schools requires the adoption of pedagogical methodologies that consider both the students' prior knowledge and the objectives well defined by the teachers. The transversality of the curriculum, as suggested by Godoi and Tiné (2020), promotes the development of methodologies that boost pedagogical practice for different scenarios and Brazilian realities. Thus, Financial Education, by articulating Mathematical Literacy with interdisciplinary methodologies, prepares students to make more conscious and responsible decisions in the social and economic context.

ALIGNING FINANCIAL EDUCATION IN SCHOOLS AND OPTIMIZING THE USE OF TECHNOLOGY

Financial Education in schools, when integrated with the strategic use of technologies, represents a significant opportunity to connect learning to the reality experienced by students. As stated by Santana *et al.* (2021, p. 2084), "more than ever, significant training is essential, contextualized with the interests of a generation immersed in the digital world". This idea highlights the need to bring pedagogical practices closer to the digital universe in which students are inserted, using technological tools that make learning more interactive, meaningful, and adapted to contemporary demands. Technology, in this case, is not just a means, but a bridge that connects traditional content to students' digital experiences, ensuring greater engagement and knowledge retention.

In addition, Santana *et al.* (2021, p. 2086) reinforce that "opening up to digital pedagogical possibilities allows the teacher to achieve the profile of the new-age student", that is, the teacher must broaden his approach to include practices that dialogue directly with the skills and interests of the new generations. In the context of Financial Education, this implies using simulators, applications, and digital platforms to teach concepts such as financial planning, expense control, and savings. For example, in high school, the creation

of financial simulators can turn theory into practice, allowing students to experiment with managing budgets or investments in controlled environments.

The continuing education of teachers also emerges as a central element in this process. According to Garcia (1999, p.124),

[...] The main purpose of continuing education is to fill the conceptual and methodological gaps of teachers that were not filled during their initial training.

This idea highlights the importance of programs that offer educators opportunities to update in relation to financial content and the use of educational technologies. Financial Education, as a transversal discipline, requires the teacher to have a mastery that goes beyond technical knowledge, covering innovative didactic methodologies that use technology as an ally in the teaching process.

In this sense, Imbernón (2010, p.24) adds that "continuing education is the main way for teachers to articulate the various knowledge mobilized in professional action in order to qualify it". In other words, for Financial Education to be effectively implemented, teachers need to be trained to integrate different areas of knowledge, articulating mathematical, economic and technological knowledge. This training must be continuous, ensuring that teachers can keep up with innovations in the pedagogical and digital field, adapting their practices to the specific needs of their students.

Ramos' reflections (2021, p. 2) highlight that "in this technological environment, it has enhanced the development of the relationship between business innovation and the competitiveness of each economic sector". This observation, applied to the educational context, suggests that the integration of technologies in Financial Education can simulate real market situations, promoting skills that go beyond the classroom. For example, in high school, students could use simulation platforms to create entrepreneurial projects, connecting financial concepts to business practices, and thus developing problem-solving and critical thinking skills.

Another relevant point is the role of the family in the educational process, as mentioned by Santana *et al.* (2024, p. 1): "Building effective bridges between school and home is essential to strengthen students' educational, social, and emotional performance." In the case of Financial Education, family involvement can be stimulated through shared digital activities, such as financial control apps or educational games that promote discussions about finances at home. This interaction strengthens the relationship between

school and family, creating a collaborative environment that reinforces school learning in the students' daily lives.

Finally, Narciso *et al.* (2024, p. 724) state that

[...] Teacher training should not be seen as an isolated event, but as an ongoing process that emphasizes constant updating and collaboration among education professionals.

This perspective underlines the need for a collaborative and dynamic approach in the training of educators, promoting spaces for the exchange of experiences and collective construction of pedagogical practices. For Financial Education, this means creating networks of teachers who share strategies and technological resources, enriching the pedagogical repertoire of each one.

In Early Childhood Education, Financial Education can be addressed, for example, through a digital game that simulates a fair. Children would have to choose items within a fictitious budget, learning to differentiate between needs and wants. Not only does this introduce basic financial concepts, but it also fosters organization and planning skills. The use of digital tools, in line with the recommendation of Santana *et al.* (2021) makes the activity attractive and meaningful for the little ones.

In high school, a practical application would be the creation of an interdisciplinary project in which students used financial simulators to manage the budget of a fictitious company. The project could involve disciplines such as Mathematics, Geography and Sociology, promoting the learning of concepts such as profit, expense and sustainability. This proposal, as suggested by Ramos (2021), connects school learning to the broader economic context, preparing students for future challenges.

Therefore, aligning Financial Education with the use of technologies in schools requires coordinated actions that involve the continuous training of teachers, pedagogical innovation and the engagement of families. As stated by Santana *et al.* (2021, p. 2084), it is essential that teacher training is contextualized with the interests of a digital generation. In this way, Financial Education can not only prepare students for a responsible financial life but also equip them with the skills they need to thrive in a digital and economically dynamic world.

RESULTS AND DISCUSSIONS

The present research sought to analyze and discuss the practices related to Financial Education in the school, focusing on the integration of technologies and the continuing education of teachers. The analyses carried out led to important conclusions that deepen the understanding of the theme, highlight the relevance of the findings and suggest future directions for the improvement of educational practice.

The following table presents the main authors and references that support the research, evidencing the years of publication, the central themes of their investigations and the relevance of their contributions to the understanding and implementation of this theme in the educational environment.

Table 1 - Main theoretical frameworks

| Author(s) | Year of Publication | Research Subject | Relevance of the Research |
|-----------------------|---------------------|---|--|
| Ferreira; File | 2024 | Promotion of Financial Education and teacher training | It highlights the importance of integrating Financial Education into the school curriculum and improving teacher training. |
| UNESCO | 2016 | Mathematics Education and its connection with multiple facets of human activity | It proposes the progressive presentation of content that connects learning to the students' reality. |
| Mosque; Gh | 2020 | Development of mathematical literacy in individual and social dimensions | It focuses on the complementarity between individual and social learning in Financial Education. |
| Gandhi; Tiné | 2020 | Curricular transversality and innovative pedagogical methodologies | It points to transversality as a strategy to connect different areas of the curriculum. |
| Santana <i>et al.</i> | 2021 | Financial Education aligned with the demands of a digital generation | It highlights the need for digital and contextualized pedagogical practices to engage students. |
| Marcelo García | 1999 | Importance of continuing education to fill gaps in initial training | It defends continuing education as essential for teacher improvement. |
| Imbernón | 2010 | Continuing education for professional qualification | It emphasizes continuing education as a means to articulate different knowledge in teaching practice. |
| Branches | 2021 | Technological innovation in the economic and educational context | It explores the impact of technology on innovation and economic competitiveness, applied to education. |
| Narciso <i>et al.</i> | 2024 | Teacher training as a continuous and collaborative process | It emphasizes constant updating and collaboration among educators as pillars of teacher training. |

Source: author himself.

One of the main conclusions was the confirmation that Financial Education, although recognized as an essential theme in the development of citizenship, still faces significant

challenges for its effective implementation in the school environment. As Ferreira and Lima (2024) argue, initial teacher training is not sufficient to address the competencies required by this theme, which reinforces the need for continuing education. In addition, the research highlighted that curricular transversality is a powerful tool to connect Financial Education to other areas of knowledge, as pointed out by Godoi and Tiné (2020). Finally, the use of digital technologies was identified as a central element to engage students and bring the contents closer to their realities, as defended by Santana *et al.* (2021).

These findings have a broad meaning, as they point to the need to restructure pedagogical practices in Financial Education, with a focus on continuing education and the use of technological tools. In addition, they reveal that the integration of interdisciplinary methodologies can expand the impact of Financial Education, promoting not only technical learning, but also the development of critical and reflective skills. This approach contributes to forming citizens who are more aware and capable of making responsible financial decisions.

The results dialogue with the contributions of authors such as Imbernón (2010), who highlights continuing education as essential for the professional qualification of teachers. The research also reinforces the ideas of Mesquita and Grando (2020), who argue that the development of mathematical literacy in individual and social dimensions is fundamental for the effectiveness of Financial Education. Additionally, the findings corroborate the perspectives of Ramos (2021), by emphasizing that technology can not only innovate pedagogical practice, but also create bridges between the school context and the financial market.

The limitations of this study are associated with the scarcity of empirical research that explores the practical implementation of Financial Education in different educational contexts. As observed by Ferreira and Lima (2024), initial training still lacks specific approaches to this topic, which makes it difficult to generalize the proposed strategies. In addition, the research did not directly explore the impact of technological tools in the classroom, limiting itself to theoretical and qualitative analyses. This limitation suggests the need for quantitative studies to assess the concrete impact of these practices on student performance.

One of the unexpected results was the resistance of some teachers to incorporate digital technologies into pedagogical practice, even recognizing their importance. This resistance can be explained by the absence of specific training in the use of these tools, as

pointed out by Garcia (1999), who highlights that initial training rarely prepares teachers to integrate innovative methodologies. In addition, the overload of responsibilities and the lack of adequate technological infrastructure in schools can contribute to this resistance, corroborating the structural limitations identified by Ramos (2021).

Given these findings, it is recommended that future research explore empirical approaches that assess the impact of specific Financial Education methodologies on student learning. Studies that investigate the role of digital technologies at different levels of education, as well as the perceptions of teachers and students about these practices, are also needed. In addition, it is crucial to analyze how public policies can be improved to offer adequate support for the continuing education of teachers, as suggested by Imbernón (2010). Finally, research that connects Financial Education to the cultural and economic realities of different regions could contribute to making pedagogical practices more inclusive and effective.

CONCLUSION

The research carried out addressed the theme of Financial Education in schools, highlighting its relevance for the development of citizen skills and its potential as a tool to prepare students for the financial challenges of contemporary times. The proposed objectives were fully met by exploring curricular transversality, continuing teacher training and the use of digital technologies as fundamental pillars for the effective implementation of this theme in the school environment.

The study demonstrated that Financial Education should be understood as an interdisciplinary process, integrated with the contents already present in the curriculum and adapted to the cultural, social and economic realities of the students. At the same time, it was evidenced that teacher training is a critical point, since the absence of adequate training compromises the effectiveness of pedagogical practices related to the theme. Through the analysis of theoretical and practical contributions, it was found that the use of digital technologies, associated with continuing education, expands the possibilities of student engagement and facilitates the connection between school content and their experiences.

However, it was recognized that Financial Education still faces significant challenges in terms of curriculum structuring and teacher training, especially due to the absence of specific public policies that foster its integration in a consistent manner. Thus, the study

contributes to broaden the understanding of educational practices aimed at Financial Education, while signaling the need for advances in terms of training, research and educational policies.

In view of this, the importance of stimulating more studies that deepen the relationship between Financial Education, digital technologies and innovative pedagogical practices is reinforced, addressing both the challenges and opportunities that emerge from this intersection. Thus, it is encouraged that more research be carried out on this topic, not only to improve the teaching of Financial Education, but also to investigate how it can contribute to the formation of a more conscious and responsible citizenship, capable of facing the economic and social challenges of the twenty-first century. These initiatives will be fundamental to consolidate Financial Education as a transforming element in the educational and social context.

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