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MULTIBOOK AND MANAGEMENT OF THE EDUCATIONAL PROCESS IN THE LIGHT OF TEACHERS' OPINIONS

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Purpose: The main aim of this article is to analyze the role of the multimedia textbook Multibook in early primary education based on teachers' opinions regarding student engagement, the effectiveness of the tool, and the applied teaching methods.
Design/methodology/approach: The article employs a diagnostic survey method to gather opinions from early primary education teachers regarding the effectiveness and appeal of the multimedia textbook Multibook, as well as its impact on the process of learning to read and write. The study is based on an empirical analysis of the research results and a review of contemporary learning theories, such as constructivism, connectivism, and cognitivism, which provide the theoretical framework for evaluating innovative teaching methods in early primary education.
Findings: The research showed that teachers positively assess the impact of the multimedia textbook Multibook on student engagement and the effectiveness of learning to read and write. Multibook supports personalized teaching and facilitates the use of innovative working methods, which translates into better educational outcomes. At the same time, attention was drawn to the need for further support for teachers in terms of methodological resources and digital competencies.
Research limitations/implications: The research is based on the opinions of early primary education teachers from the Silesian Voivodeship, which limits the possibility of broadly generalizing the results. In the future, it is recommended to expand the study to a nationwide or international sample, as well as to include the perspectives of students, parents, and other stakeholders in the educational process, allowing for a more comprehensive evaluation of the effectiveness and impact of the multimedia textbook in various educational contexts.
Practical implications: The research findings can provide valuable support for early primary education teachers in enhancing their roles as leaders and managers of the teaching process. They highlight the need for more conscious management of innovations in the classroom, planning work using multimedia textbooks, and systematically developing digital competencies. At the institutional level, these findings can serve as a basis for implementing school development strategies that include investments in modern teaching tools and professional development for teaching staff. Furthermore, the results may influence educational policy by providing arguments in favor of creating programs that support the development of teachers' managerial competencies and promote innovative teaching methods.
Originality/value: The article offers an innovative perspective on the use of multimedia textbooks in early primary education by combining teachers' practical experiences with a theoretical analysis of contemporary strategies for managing the teaching and learning

process. The uniqueness of the study lies in integrating the evaluation of the effectiveness of the Multibook tool with the perspective of managing the educational process, which allows for identifying specific directions for developing teachers' digital competencies and optimizing methodological work.
Keywords: Multibook, early primary education, student engagement, innovative methods, digital competencies.
Category of the paper: General review, Research paper.

1. Introduction

Dynamic social, technological, and economic changes observed in the 21st century present exceptionally complex challenges to modern education. As an institution shaping the competencies of future citizens, schools must respond to the needs of students operating in a world saturated with digital stimuli and requiring constant skill improvement. Organizing an interactive learning process—not only between the teacher and learners or among learners themselves, but also between learners and interactive educational and utility software—has become feasible for individuals in developed countries' societies, leading to digital literacy development among teachers (Juszczyk, 2023). The latest UNESCO Global Education Monitoring Report 2023: Technology in Education – A Tool on Whose Terms? emphasizes that digital technologies should be used as tools supporting an education process based on interpersonal interaction (Global Education Monitoring Report, 2023).

In the first stage of education, which forms the foundation of a child's cognitive, emotional, and social development, the implementation of modern methods for managing the educational process becomes especially important. This period shapes key competencies such as reading, writing, mathematical reasoning, as well as soft skills—collaboration, creativity, and independence. Contemporary learning theories, including constructivism, connectivism, and cognitivism, stress the necessity of moving away from a traditional, passive teaching model towards an approach that engages students in active knowledge construction and skill development through experience and interaction. According to these assumptions, Multibook—as a modern, multimedia educational tool—supports personalized teaching, enables flexible management of lesson flow, and integrates various forms of content delivery, which fosters better content assimilation and the development of competencies required in a digital society. Innovative educational tools, among which Multibooks hold a special place, are a response to the challenges of contemporary education. Multibook is a modern multimedia textbook that integrates text, graphics, animations, audio recordings, and interactive exercises. Thanks to this format, students acquire content in a more engaging and multisensory manner, which enhances retention while simultaneously developing digital competencies from an early age. Implementing Multibook also opens new possibilities for teachers to manage the teaching

process. Integrated diagnostic modules, the ability to monitor student progress in real-time, and access to an extensive database of supplementary materials allow for individualized work with the child and flexible adaptation of lesson plans. In the context of the latest strategies, which assume the development of modern educational technologies and the promotion of innovative teaching methods, Multibook fits the vision of the school of the future based on personalization, interactivity, and digitization. Importantly, this direction of change aligns well with global trends outlined, among others, in the Science & Technology Trends 2025-2045 report prepared by NATO STO. This document points to the growing significance of integrating artificial intelligence, advanced data analytics, immersive digital technologies, and personalization as major megatrends transforming societies (Science & Technology Trends Report 2025-2045, 2025).

The article consists of two parts. The first part presents the theoretical foundations for applying innovative educational tools in early primary education, with particular emphasis on contemporary learning theories such as constructivism, connectivism, and cognitivism. It outlines the possibilities of using Multibook in education in the context of these theories and its impact on modern educational practices. The second part presents a detailed analysis of empirical research results conducted using the diagnostic survey method, aimed at gathering the opinions of early primary education teachers regarding the effectiveness, attractiveness, and influence of the multimedia textbook Multibook on the process of learning to read and write. The article concludes with practical recommendations addressed to teachers, methodologists, and educational policymakers. These recommendations provide valuable guidance supporting the effective implementation of modern technologies in the first stage of education and the development of teachers' competencies as leaders and managers of the educational process. Moreover, the research results may provide a solid foundation for further analyses and the realization of future research projects in the field of digital education.

2. Theoretical foundations and practical application of the ultibook ultimedia Textbook in light of contemporary learning theories

Contemporary education faces the challenge of integrating modern technologies with traditional teaching methods, which requires an appropriate theoretical and practical approach. Multimedia tools, such as the Multibook textbook, are gaining increasing importance as support for the educational process, enabling personalized learning and student engagement. To reliably assess the effectiveness of these solutions, it is necessary to consider their practical application in light of selected contemporary learning theories—constructivism, connectivism, and cognitivism. This approach allows highlighting the role of Multibook in creating modern, engaging, and conducive-to-effective-learning educational environments.

From the perspective of managing the educational process, the effective implementation of innovative teaching technologies requires not only their technical adaptation but also a solid theoretical grounding within current learning paradigms. Referring to contemporary educational theories—constructivism, connectivism, and cognitivism—enables a multi-dimensional analysis of the functionalities of multimedia educational tools such as Multibook. Applying these concepts in educational management practice allows for the identification of mechanisms that support the individualization of the teaching process, student engagement, and the creation of effective and motivating learning environments. Thus, integrating educational theories with teaching practice forms the foundation for conscious and effective management of innovations in education. Ken Robinson emphasizes that effective education is always a balanced interplay between rigor and freedom, tradition and innovation, the individual and the group, theory and practice, as well as the internal and external worlds (Robinson, 2015, p. 298).

The following section of this paper presents a detailed analysis of selected contemporary learning theories—constructivism, connectivism, and cognitivism—with particular attention to their implications for the practical use of the Multibook textbook in managing the teaching process.

An analysis of the constructivist approach to learning, which highlights the active role of the learner in constructing knowledge through personal experiences and social interactions, allows for the identification of specific areas where Multibook effectively supports the educational process. Figure 1 illustrates the main opportunities for applying this multimedia tool in education, with special emphasis on aspects that foster the development of students' independence, creativity, and collaboration.

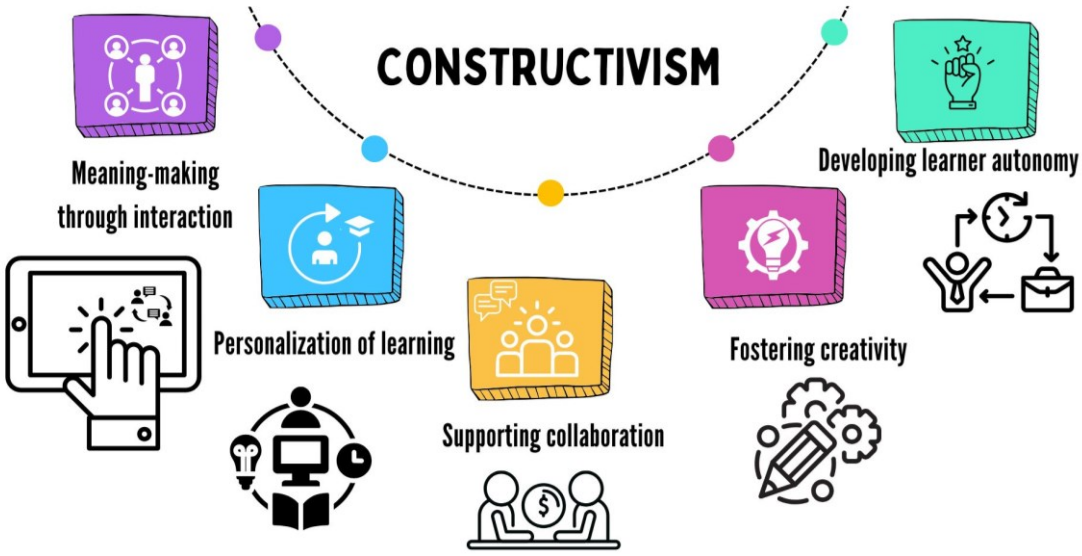

Figure 1. Possibilities of using Multibook in education in the constructivist context.
Source: Own elaboration.

Figure 1 presents the possibilities of using Multibook in education within a constructivist context. The contemporary approach to teaching, grounded in the constructivist paradigm, emphasizes the active participation of the learner in the learning process as well as the need to adapt educational content to their individual needs and abilities. Multibook, as a modern multimedia textbook, aligns with these principles by enabling students to interactively explore content and experience learning through multiple senses. In line with the idea of "learning by doing," Multibook integrates textual, auditory, and visual elements, which supports multisensory development and the consolidation of material in different brain areas. Interactive exercises, quizzes, and creative tasks not only aid in developing reading and writing skills but also foster communication and collaboration competencies, which are key in early childhood education. Thanks to Multibook's flexible structure, the teacher can act as a guide and tutor, organizing individual, group, or project-based activities while managing the educational process in an individualized and dynamic way. The ability to select materials according to students' levels and interests allows for more effective support of key competencies development, consistent with the concept of learning as an investigative and creative process (Klus-Stańska, 2009). Importantly, Multibook stimulates student autonomy by providing space for independent discovery, experimentation, and the creation of their own texts and projects. Joint analysis and presentation of work results in the classroom enhance engagement and motivation, creating an environment reminiscent of a "master's workshop," where the student becomes a co-creator of knowledge. As a teaching tool, Multibook not only supports the development of reading and writing skills but also responds to contemporary educational needs by integrating technology with personalization of the learning process. Thus, it constitutes an essential element of modern educational management, fostering the creation of an interactive, flexible, and motivating learning environment.

In the era of rapid information technology development, connectivism emphasizes the importance of skills related to creating and using networks of connections between knowledge sources, as well as collaboration in digital environments. Multibook, as an interactive tool, enables students to develop these competencies, promoting information integration and experience exchange. Figure 2 illustrates how Multibook can support the learning process in accordance with the assumptions of connectivism.

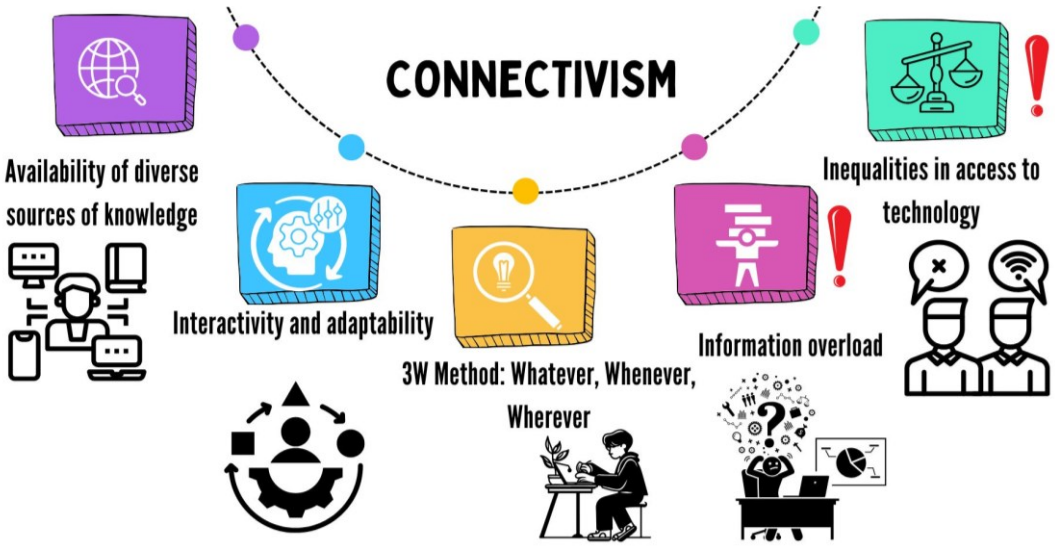

Figure 2. Possibilities of using Multibook in education in the context of connectivism.
Source: Own elaboration.

Figure 2 illustrates the possibilities of using Multibook in education in light of connectivism theory, referring to the management of the educational process and teachers' perspectives. Connectivism, emphasizing the importance of networks of connections and dynamic access to knowledge, provides a foundation for introducing modern, flexible forms of teaching. From the teachers' point of view, Multibook enables more effective planning and individualization of instructional work, allowing for adaptation of content and learning pace to students' needs.

By integrating text, images, sound, and interactive elements, Multibook supports multisensory learning and the development of reading and writing skills, while also facilitating the management of the teaching process. Teachers appreciate its potential in fostering student autonomy, increasing engagement, and monitoring progress in real time. In the context of connectivism, Multibook becomes a tool that supports conscious and flexible educational management, responding to the challenges of contemporary schools and the needs for individualized instruction highlighted by teachers.

Cognitivism focuses on cognitive processes such as information processing, memory, and understanding. Figure 3 illustrates how Multibook implements the principles of cognitivism in the learning process.

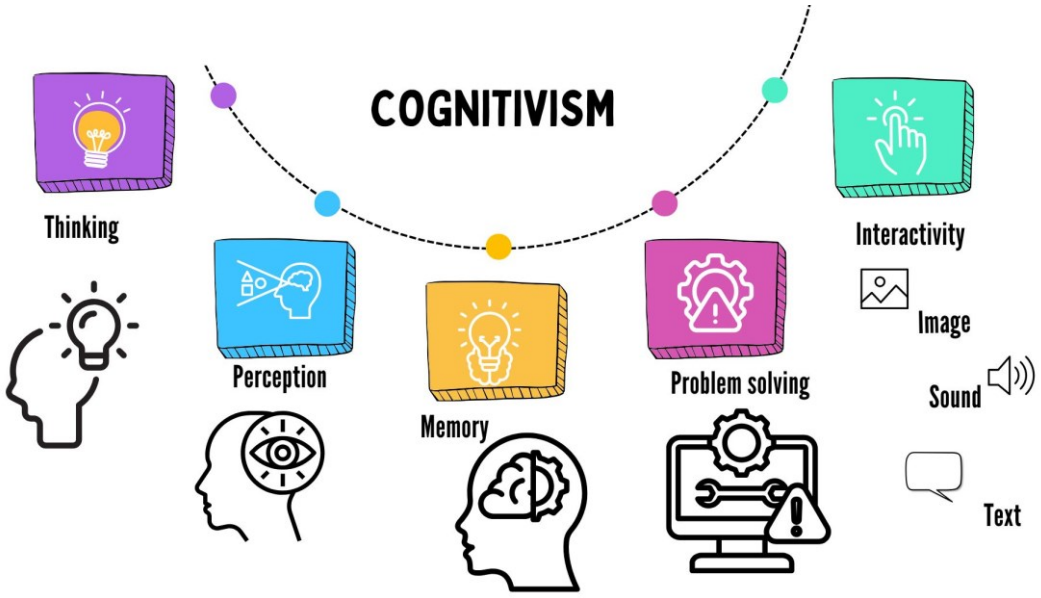

Figure 3. Possibilities of using Multibook in education in the cognitivist context.
Source: Own elaboration.

Multibook, through diverse forms of presentation and interactive exercises, effectively engages these mechanisms, supporting deeper knowledge acquisition. According to Paivio's dual coding theory, the integration of text, images, and sounds in Multibook allows students to utilize multiple channels of information processing, which enhances retention and understanding of the material. Moreover, the principles of Sweller's cognitive load theory are implemented through appropriate content organization that minimizes excess stimuli and focuses attention on key teaching elements. Mayer's multimodal learning theory emphasizes that combining words and images effectively supports the learning process, which Multibook achieves through engaging multimedia materials. In educational practice, Multibook enables, among other things, animations demonstrating how to write letters or interactive games developing phonological awareness, promoting active and efficient learning. Interactive quizzes provide immediate feedback, which is crucial for the learning process and allows ongoing assessment of students' progress. In this way, Multibook supports the management of the teaching process, linking cognitive theory with didactic practice. However, it is important to remember that excessive stimuli can lead to cognitive overload, so materials must be carefully designed and tailored to students' needs. Conscious use of Multibook allows for effective support of teaching and learning processes, addressing the challenges of contemporary education.

The Multibook textbook, grounded in the latest learning theories, is a modern educational tool that supports individualized learning, activates students, and fosters the development of key competences. Its thoughtful integration into educational practice enables the creation of engaging, flexible, and effective learning environments that respond to the needs of contemporary schools.

3. The multibook multimedia Textbook in the light of teachers' opinions

The aim of the conducted diagnostic research was to examine early childhood education teachers' opinions on the effectiveness of using the Multibook multimedia textbook at the first stage of education. The study also sought to identify teachers' educational needs and assess the availability of methodological resources necessary for the effective use of this innovative tool. Special attention was given to student engagement during the use of Multibook as well as to the innovative teaching methods employed by teachers in reading and writing instruction.

The main research tool was a self-administered questionnaire, which allowed for broad and efficient data collection. The questionnaire, specially designed for the study, contained 26 questions, including 5 on demographic data. The questions covered topics such as the frequency of Multibook use, its effectiveness in teaching reading and writing, the application of innovative teaching methods, and the identification of educational needs and availability of methodological resources.

The questionnaire was available both in printed form and electronically—the latter was provided through the popular Google Forms tool. This approach facilitated access to the survey and increased the number of respondents, especially through publication on various online platforms, including closed forums and discussion groups for early childhood education teachers.

The respondents were early childhood education teachers from the Silesian Voivodeship, representing diverse levels of education, work experience, and professional advancement. Data analysis provided a comprehensive picture of teachers' opinions on the use of Multibook in initial reading and writing instruction and served as the basis for designing further experimental research.

A total of 353 primary school teachers participated in the study. The dominant group consisted of those with a master's degree (88.54%). Smaller proportions included doctorate holders and graduates of bachelor's and postgraduate studies (ranging from 1.56% to 2.60%).

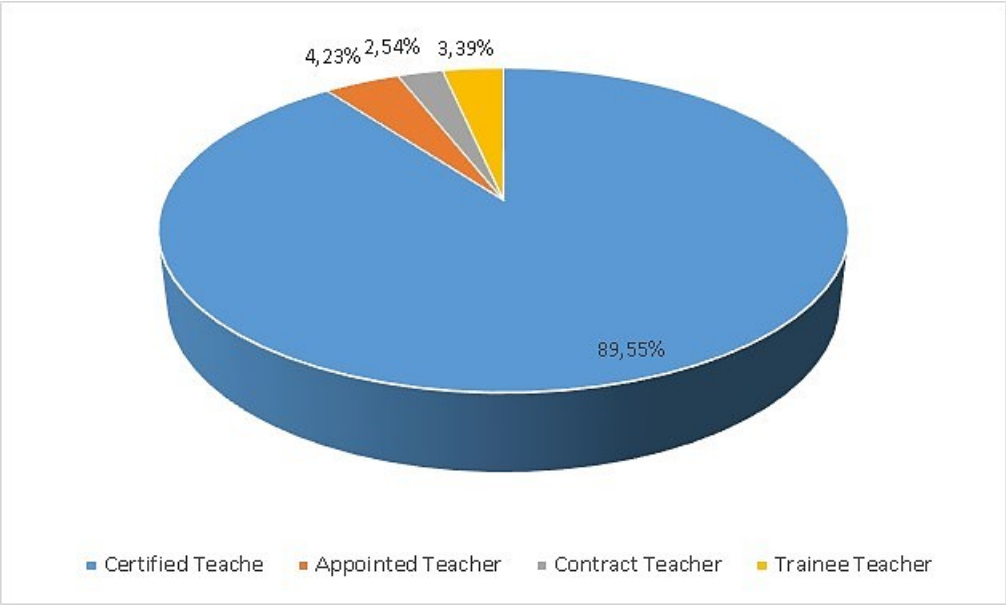

Figure 4. Chart illustrating the professional advancement levels of the surveyed teachers.
Source: Own research.

Most teachers held the title of certified teacher (89.55%), while the rest were appointed teachers (4.23%), contract teachers (2.54%), and interns (3.39%). Regarding work experience, the majority of respondents (70.06%) had over 15 years of professional experience, while smaller groups consisted of those with 5-10 years (22.60%) and 1-5 years (4.24%) of experience.

It is important to note at the outset that student engagement is a key element of an effective teaching and learning process. The value of engagement is reflected not only in students' activity and motivation but also in their willingness to participate in cognitive processes and develop skills. Investigating teachers' opinions on student engagement when using the multimedia textbook in early reading and writing instruction provided practical insights and valuable conclusions regarding effective teaching strategies that promote active student participation in the educational process, especially in the context of learning to read and write.

The analysis of early education teachers' opinions on student engagement during the use of the multimedia textbook in reading instruction is presented in Table 1. The summary includes numerical data and the percentage distribution of responses in relation to the total number of respondents (N = 353).

Table 1.
Opinions of surveyed teachers on student engagement during the use of the multimedia textbook in reading instruction (N = 353)

Indication	Number of responses	Percentage [%]
Very low	1	0,26
Low	21	4,95
Medium	88	23,96
High	105	27,34
Very high	138	35,42
Total	**353**	**100,00**

Source: Own elaboration.

The analysis of responses to the question regarding the assessment of student engagement while using the multimedia textbook in learning to read showed that most early education teachers perceive their students' engagement as high or very high. The largest percentage of respondents (a total of 62.76%) rated student engagement as high or very high. Among these, 35.42% consider the engagement to be very high, while 27.34% state it is high. Meanwhile, 23.96% of teachers rated student engagement as average.

Only a very small number of respondents (0.26%) indicated that student engagement during the use of the multimedia textbook in learning to read was very low.

The responses reveal a positive evaluation of student engagement from the perspective of early education teachers when using the multimedia textbook for reading instruction. The next part of the analysis focuses on assessing student engagement while using the multimedia textbook in learning to write, according to early education teachers' opinions. The data presented in the table show the number of responses and their percentage share of the total number of respondents (N = 353).

Table 2.
Teachers' opinions on student engagement while using the multimedia textbook in learning to write (N = 353)

Indication	Number of responses	Percentage [%]
Very low	1	0,26
Low	19	4,95
Medium	92	23,96
High	105	27,34
Very high	136	35,42
Total	**353**	**100,00**

Source: Own elaboration.

The largest percentage of teachers, 35.42%, observed very high student engagement while using the multimedia textbook in learning writing. High engagement was reported by 27.34% of teachers, which also represents a significant share. Average engagement was noticed by 23.96% of teachers. Only a small percentage, 4.95%, reported low student engagement. Very low engagement during the use of the multimedia textbook in writing instruction was noted by one teacher, representing a minimal percentage.

Analyzing this data, it can be concluded that the majority of teachers perceive student engagement as high or very high when using the multimedia textbook in writing instruction. This is a positive indication, suggesting that this type of educational media is an effective tool for motivating students to learn writing. However, there is also a certain percentage of teachers who observed lower levels of engagement, which suggests differences in the perception of the effectiveness of multimedia textbooks.

Student engagement in the writing learning process reflects their active participation in knowledge construction through interactions with multimedia textbooks. A high percentage of teachers rated student engagement as "very high," indicating the potential of multimedia tools to engage students through interactive content presentations and the opportunity to explore diverse materials.

The conclusions from the analysis confirm that multimedia textbooks have a significant impact on student engagement in the writing learning process. The effectiveness of these tools results from their ability to engage students and support cognitive processes. Research on the optimal use of multimedia in education, especially in writing instruction, points to the need for further exploration of even more effective teaching methods.

The analysis also examined teachers' opinions on supporting initial reading instruction through the use of the multimedia textbook Multibook. Table 3 presents the survey results, where teachers were asked to express their opinion on this topic by choosing one of five response options. Respondents were asked to rate their opinion on a scale from 1 to 5, where 1 means no support and 5 means full support. The results were summed and presented as percentages, reflecting the degree of teachers' agreement on the effectiveness of the multimedia textbook in supporting early reading instruction.

Table 3.
Teachers' Opinions on Supporting Early Reading Instruction through the Use of the Multimedia Textbook (N = 353)

Indication	Number of responses	Percentage [%]
Not supportive at all	1	0,28
Supports to a small extent	13	3,68
Supports moderately	83	23,51
Supports to a significant extent	106	30,02
Supports very effectively	150	42,49
Total	**353**	**100,00**

Source: Own elaboration.

Most early childhood education teachers positively assess the impact of using the multimedia textbook on initial reading instruction. It is worth noting that 72.52% of respondents (a total of 256 teachers) believe that Multibook supports this learning process to a significant or very effective degree. Only one teacher indicated that the multimedia textbook does not support the reading learning process at all. The absence of missing data means that all questions were completed, suggesting a high representativeness of the obtained results. It is also important

to note that responses were evenly distributed across different levels of support, indicating a varied perception of the multimedia textbook's effectiveness among teachers.

The next part of the analysis focused on teachers' opinions regarding the support of initial writing instruction through the multimedia textbook. The data presented in the table reflect respondents' views on the degree of support offered by the multimedia textbook, expressed both in the number of responses and as percentages relative to the total number of participants (N=353). The multimedia textbook responds to the needs of Industry 4.0 transformation by utilizing advanced technologies, interactive elements, and adapting content to evolving educational and socio-economic requirements.

The multimedia textbook appears to be perceived by teachers as an effective tool supporting initial reading instruction.

Table 4.
Teachers' opinions on the support of initial writing instruction through the use of a multimedia textbook (N = 353)

Indication	Number of responses	Percentage [%]
Not supportive at all	12	3,40
Supports to a small extent	91	25,78
Supports moderately	98	27,76
Supports to a significant extent	146	41,36
Supports very effectively	6	1,70
Total	**353**	**100,00**

Source: Own elaboration.

Most teachers (52.06%) believe that the multimedia textbook supports writing instruction—41.36% to a significant degree and 1.7% very effectively. Meanwhile, 25.78% see only slight support, and 3.4% state that it does not help at all. Teachers note that the textbook increases students' interest in writing, improves technique, develops sentence construction skills, and builds confidence. It motivates students through interactive exercises, rewards, and diverse topics, fostering creativity and individualized learning. However, multimedia textbooks are considered more effective for teaching reading than writing, which requires more varied exercises and precision that are harder to implement multimedia-wise. Traditional methods are rated as more effective overall, although multimedia textbooks do enhance student engagement in both writing and reading learning processes.

Attention was also given to evaluating the role of the multimedia textbook in differentiating the teaching process according to students' needs, based on early education teachers' opinions. The data presented in the table show the number of responses and their percentage share of the total respondents (N = 353).

Table 5.
Teachers' opinions on the role of the multimedia textbook in differentiating the teaching process according to students' needs (N = 353)

Indication	Number of responses	Percentage [%]
Not helpful at all	1	0,28
Helps to a small extent	90	25,50
Helps moderately	11	3,12
Helps significantly	155	43,91
Helps very effectively	96	27,20
Total	**353**	**100,00**

Source: Own elaboration.

Most teachers (71.1%) positively evaluate the multimedia textbook as a tool supporting differentiated instruction, with 43.9% considering its support significant and 27.2% viewing it as very effective. The textbook offers interactive exercises tailored to different student levels, helping to individualize writing instruction. However, about 29% of teachers recognize limitations of this tool, pointing to insufficient flexibility and adaptability to individual needs.

To improve the effectiveness of such textbooks, they should allow real-time adjustment of content and difficulty levels, offer games and interactive tasks, and track student progress. Support and training for teachers are also important to enable effective use of these tools. Continuous collaboration between teachers, designers, and educational experts will help create more engaging, pedagogically valuable, and user-friendly multimedia textbooks that better support the individualization of writing instruction in first-grade classrooms.

The teachers' opinions reveal noticeable differences in the development of reading and writing skills influenced by the use of multimedia textbooks in the teaching process. The following analysis focuses on the evaluation of students' reading skills using the multimedia textbook in instruction, according to teacher feedback. The data in the table present the number of responses and their percentage share of the total respondents (N = 353).

Table 6.
Opinions of surveyed teachers regarding the effectiveness of the multimedia textbook in teaching reading (N = 353)

Indication	Number of responses	Percentage [%]
I did not notice any improvement	1	0,28
I noticed minimal improvement	86	24,36
I noticed moderate improvement	8	2,27
I noticed significant improvement	186	52,69
I noticed very significant improvement	72	20,40
Total	**353**	**100,00**

Source: Own elaboration.

Analysis of Table 6 shows that 73.09% of teachers noticed a significant or very significant improvement in students' reading skills thanks to the multimedia textbook (52.69% + 20.40%). 24.36% reported minimal improvement, and only 0.28% did not observe any effects. The results suggest that the textbook effectively supports reading development, especially for students

needing additional help. It offers interactive exercises and adjusts the difficulty level to individual needs, promoting engaging and personalized learning. Despite positive evaluations, there are differences in perceived effectiveness, so further refinement of these materials is important to better support all students.

Table 7.
Surveyed teachers' opinions on the effectiveness of the multimedia textbook in teaching writing (N = 353)

Indication	Number of responses	Percentage [%]
I noticed minimal improvement	96	27,20
I noticed moderate improvement	9	2,56
I noticed significant improvement	163	46,18
I did not notice any improvement	13	3,68
I noticed very significant improvement	72	20,40
Total	**353**	**100,00**

Source: Own elaboration.

Most teachers (66.58%) noticed a significant or very significant improvement in students' writing thanks to the multimedia textbook (46.18% + 20.40%). Minimal improvement was reported by 27.20%, moderate improvement by 2.56%, and 3.68% did not notice any effects. Minimal or moderate improvement may result from high expectations, comparisons with other methods, individual student differences, and technological limitations. The multimedia textbook is an effective tool supporting writing instruction, although further research and adaptation to different learning styles are needed.

The surveyed teachers highlighted the benefits of using the multimedia textbook in learning to read and write. The data in the table show the number of responses and their percentage share of the total number of respondents (N = 353).

Table 8.
Opinions of surveyed teachers on the benefits of using the multimedia textbook in learning to read (N = 353)

Indication	Number of responses	Percentage [%]
Increased motivation to learn reading	90	20,32
Better retention of content	82	18,51
Improvement in reading comprehension	271	61,18

Source: Own elaboration.

Most teachers (61.17%) noticed that the multimedia textbook improves students' reading comprehension, while 18.51% observed that it helps better retention of content. Previous studies (Mayer, 2009) indicate that multimodal learning approaches, especially those using multimedia, can support memory and information processing. Interactive and diverse forms of presentation foster engagement and effective learning. Increased motivation, better content retention, and improved reading comprehension are outcomes that can positively influence the learning process.

At the same time, these results emphasize the importance of interactive educational tools in supporting various aspects of reading development in children. The increase in motivation to learn reading (20.32%) is a significant aspect highlighting the multimedia textbook's role in engaging students in the learning process. According to constructivist approaches, motivation is a key factor affecting learning effectiveness. Multimedia textbooks can boost motivation by providing interactive, attractive content and enabling students to explore materials independently.

The conclusions from this analysis confirm the important role of multimedia textbooks in elementary education, especially in reading. Motivation, crucial for educational success, grows thanks to appealing multimedia materials. Improvements in reading comprehension and memory support cognitive theories and constructivist learning approaches. The importance of reading comprehension as a key educational aspect influences the development of critical thinking and text analysis (Duke, Pearson, 2002).

Data analysis shows that using multimedia textbooks in reading education can bring numerous benefits to students.

Subsequently, attention was turned to difficulties encountered by teachers while using the multimedia textbook in the teaching process. The presented data include the number of responses for different types of difficulties, along with their percentage share of the total respondents (N = 353). The study focuses on identifying obstacles teachers may face when using multimedia textbooks.

Table 9.
Teachers' opinions on difficulties encountered while using the multimedia textbook (N = 353)

Indication	Number of responses	Percentage [%]
No difficulties	316	89,52
Students' technical skills	1	0,28
Lack of access to appropriate technology at school	36	10,20

Source: Own elaboration.

Most respondents (89.52%) reported no difficulties using the multimedia textbook, indicating its effectiveness as a tool supporting active learning. According to connectivism theory, the lack of difficulties suggests that the textbook promotes the integration of diverse knowledge sources and encourages independent exploration. One case (0.28%) pointed to students' lack of technical skills, which requires adapting teaching methods. Meanwhile, 10.20% of teachers reported inadequate technological infrastructure, limiting the teaching process and affecting students' ability to learn effectively in a digital environment.

In summary, multimedia textbooks are positively evaluated, but technical barriers in some schools may hinder their implementation.

Finally, teachers' opinions on traditional and innovative methods used in early reading and writing instruction were analyzed. The goal was to understand which innovative practices are currently employed and what benefits they bring to students' skill development. The analysis

of responses from 353 teachers reveals a diversity of approaches and helps better understand educators' preferences in early childhood education.

Table 10.
Teachers' opinions on traditional and innovative methods used in teaching reading and writing (N = 353)

Indication	Number of responses	Percentage [%]
traditional methods	213	60,34
innovative methods	140	39,66
Total	**353**	**100,00**

Source: Own elaboration.

The analysis of data regarding teachers' preferences in teaching reading and writing revealed interesting insights. Among the 353 respondents, the majority — 213 teachers (60.34%) — prefer traditional methods, while 140 teachers (39.66%) indicated a preference for innovative methods. This result shows that although many teachers still rely on proven, classical approaches, interest in innovative methods is growing. The choice of method often depends on experience, pedagogical beliefs, and the availability of tools. Teachers who prefer traditional methods value their predictability and proven effectiveness, whereas supporters of innovative approaches are more open to experimentation and adapting teaching to the contemporary needs of students. It is worth noting that many teachers combine elements of both approaches, creating flexible and more effective teaching models.

4. Discussion

The conducted research revealed a positive attitude among early childhood education teachers toward using the Multibook multimedia textbook, especially in teaching reading. The vast majority of respondents (72.52%) agreed that this tool significantly or very effectively supports the development of this skill, confirming its potential in shaping key competencies such as reading comprehension and content retention.

In the context of teaching writing, opinions were more varied—although 66.6% of teachers noticed a significant or very significant improvement, some respondents rated Multibook's effectiveness lower. This is partly due to the different demands of the writing learning process, which often requires greater individualization and a variety of exercises. The multimedia textbook can support this process but still requires further improvements.

High ratings for student engagement in both reading and writing highlight the great potential of multimedia tools in motivating and activating children. According to constructivist theory and connectivism, interactive materials encourage independent knowledge discovery and competency development through active participation.

It is worth noting that many teachers combine traditional methods with modern ones, allowing flexible adaptation of teaching to students' needs. However, barriers such as lack of access to adequate equipment (10.2%) and occasional technical difficulties may limit the use of such tools.

Multibook was highly rated as a tool supporting the development of reading and writing skills as well as individualized teaching. The research results confirm the need for further development and adaptation of multimedia textbooks to better meet the diverse needs of students and support teachers in their educational work.

5. Conclusion

With the rapid development of digital technologies, including artificial intelligence, new opportunities are emerging for teaching and learning in early childhood education. Research on the use of the Multibook multimedia textbook confirms that modern educational tools can significantly support personalized learning and improve the effectiveness of the teaching process. Thanks to the flexibility and interactivity of such solutions, it is possible to better adapt teaching methods and pace to the individual needs of students, which enhances their motivation and engagement.

The use of advanced technologies based on artificial intelligence, such as adaptive learning systems and big data analysis, has the potential to further individualize the educational process by offering personalized materials and real-time learning support. As M. Sysło points out (Sysło, 2022), the time has come for AI to openly enter schools and become an integral part of education. However, implementing these solutions requires collaboration between teachers, developers, and students, as well as appropriate systemic and infrastructural support.

The future of early childhood education seems to be moving toward greater integration of multimedia textbooks with augmented and virtual reality technologies, which can enrich students' experiences and enable more engaging, interactive learning environments. Multibook and similar tools represent an important step in this transformation, showing that digital education can be an effective tool for managing the learning process and developing key competencies in young learners.

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