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Research Article

Implementation of Multimedia Presentations in Enhancing the Phonetic and Speaking Abilities of Kindergarten Pupils

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ABSTRACT

This study examined the impact of multimedia presentations on the development of auditory awareness and oral communication skills in kindergarten children, as perceived by teachers in the Subic District. Emphasizing the importance of phonological awareness as a foundational skill in early literacy, the research explored how multimedia tools such as interactive whiteboards, flashcards, and video content facilitated phonetic development and speaking abilities. A total of 49 kindergarten teachers participated in the study, which employed a descriptive survey method to collect data on teachers' demographics, the level of multimedia integration, and the challenges faced in implementing multimedia in the classroom. The findings revealed that the majority of respondents were young, female teachers with limited experience. Multimedia tools were reported to be "greatly integrated" into reading and visual skills but were "reasonably implemented" for auditory skills. Variations in multimedia use were observed based on factors such as seminar attendance, years of service, and educational background. Key barriers included insufficient training, limited resources, and a lack of institutional support. Despite these challenges, the study confirmed that multimedia significantly contributed to enhancing phonological awareness. To fully maximize the potential of multimedia integration, the study recommended improving technological support, providing ongoing content-specific professional development, and regularly evaluating student progress to refine teaching strategies

Keywords: *Multimedia presentations, Phonetic skills, Speaking abilities, Kindergarten education, Language development, Early literacy, Interactive learning*

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Introduction

Phonological awareness was a crucial skill for young children as it helped them understand how language sounds, which was fundamental for both reading and speaking. This skill involved recognizing individual sounds, blending them to form words, and segmenting words into their constituent sounds. Phonological awareness laid the foundation for strong literacy skills and was closely linked to children's overall academic performance, particularly in reading comprehension and oral communication. In the digital age, multimedia played a vital role in education. Multimedia resources, such as videos, interactive software, and digital storybooks, enhanced learning by combining visual, auditory, and kinesthetic elements. These tools held significant potential for helping children develop phonological awareness by engaging multiple senses, making abstract concepts, such as manipulating sounds, easier to understand. Multimedia tools enabled children to visualize sounds, watch animated phonetic examples, and engage in hands-on activities that taught these concepts in an interactive and enjoyable way.

This study investigated the use of multimedia presentations in kindergarten classrooms to enhance phonetic and oral skills in children. It aimed to examine how multimedia applications contributed to the development of reading, listening, and visual skills, and their role in promoting phonological awareness. By exploring the experiences of kindergarten teachers, the study sought to understand the benefits and challenges of integrating multimedia into early education. The findings of this research contributed to a deeper understanding of the impact of multimedia on young learners, particularly in enhancing their phonetic abilities and oral proficiency in elementary education.

Methods

The study employed a descriptive survey design, a commonly used method for gathering and analyzing data from research participants in educational settings (Creswell & Creswell, 2017). This approach provided a comprehensive understanding of how multimedia presentations were utilized in kindergarten classrooms to enhance phonetic and speaking skills in children. It offered valuable insights into the teachers' use of multimedia tools, the challenges they encountered, and the lessons they learned from integrating such tools. This enabled a clearer picture of how multimedia was applied in early childhood education.

The participants consisted of 49 kindergarten teachers from 23 public elementary schools in the Subic District, selected through a stratified random sampling technique to ensure diversity. Data were collected using a three-part survey questionnaire. Part 1 gathered demographic information about the teachers, including their age, gender, position, educational level, and years of teaching experience. Part 2 assessed the extent of multimedia integration in the classroom, while Part 3 identified the challenges teachers faced in using multimedia, such as insufficient resources, technical difficulties, inadequate training, and time constraints. This methodology allowed the researchers to gain a deeper understanding of the trends, practices, and challenges experienced by kindergarten teachers in using multimedia to support the improvement of phonological awareness and speaking skills among their students.

Result and Discussion

Profile of the respondents

It was hypothesized that profile variables would be related to smartphone usage.

Table 1. Profile of the respondents

Sex	F	Percentage
Male	0	0
Female	49	100
Age		
20 - 25	5	10.20
26 - 30	24	48.98
31 - 35	15	30.61
36 - 40	5	10.20

Civil Status		
Single	15	30.61
Married	32	65.31
Separated	2	4.08
Area of Specialization		
BEED	27	55.10
BEED w/ ECE units	19	38.78
BSKE	2	4.08
BSED w/ ECE units	1	2.04
Length of Service		
1 - 5 years	34	69.39
6 – 10 years	15	30.61
Educational Attainment		
MAT / MAED / MAECE Graduate	5	10.20
MAT / MAED / MAECE Units	19	38.78
BEED and its Equivalent Degree	25	51.02
Trainings/Seminars Attended		
District	14	28.57
Division	26	53.06
Regional	9	

The demographic profile of the 49 kindergarten teachers was analyzed, covering various factors such as age, gender, marital status, level of competence, highest educational attainment, length of service, and attendance at professional training or seminars related to kindergarten education. Of the respondents, 48.98% (24 teachers) were aged 26–30 years, 30.61% (15 teachers) were between 31–35 years old, and 10.20% (5 teachers) were aged 20–25 years. These findings suggest that a majority of the teachers were young, experienced, and motivated in their profession. Notably, all participants were women (100%), which aligns with the trend of female dominance in early childhood education (Rentzou, 2017).

Regarding marital status, 65.31% (32 teachers) were married, suggesting that many of the teachers likely brought a nurturing and family-oriented approach to their work. In contrast, 30.61% (15 teachers) were unmarried. In terms of educational qualifications, 55.10% (27 teachers) held a Bachelor's degree in Elementary Education (BEED), while 38.78% (19 teachers) had obtained additional Early Childhood Education (ECE) units, qualifying them to teach young children, as noted by Williams (2020). For work experience, 69.39% (34 teachers) had between 1–5 years of teaching experience, while 30.61% (15 teachers) had 6–10 years of service. This distribution reflects a combination of relatively new and more seasoned educators in the faculty. As for professional development, 53.06% (26 teachers) had attended training at the division level, 28.57% (14 teachers) at the district level, and 18.37% (9 teachers) at the regional level. This indicates that while there are opportunities for local professional development, there is also a need for broader national and international training opportunities to further enhance teachers' skills in kindergarten education (Oberhuemer & Schreyer, 2024).

Level of Implementation in Using Multimedia Presentation

Research has consistently shown that the integration of multimedia presentations in preschool education significantly enhances both the learning process and outcomes. Multimedia tools such as digital storytelling, interactive applications, and video content have proven effective in supporting the development of critical skills like reading and writing in young children (Lestari, 2024). However, the extent to which multimedia is utilized in early childhood education varies considerably, often due to challenges such as insufficient teacher training, limited access to resources and technology, and a lack of institutional support (Budiarti &

Darmayanti, 2018). Many educators underutilize these technologies, despite their potential to enrich learning experiences, primarily because of inadequate professional development and a lack of technological infrastructure in their schools (Abdulrahaman, Faruk, & Oloyede, 2020). To optimize the use of multimedia in early childhood education, these barriers must be addressed. This includes providing targeted training for educators, improving technological access, and fostering stronger institutional support for multimedia integration (Nwangwu, Taoufik, & Chukwuone, 2024).

Reading Skills

The table illustrates the extent to which various multimedia tools are utilized to enhance reading skills. The overall mean score of 4.64 indicates that multimedia products are, in general, frequently employed. Among the tools, Flash Cards (4.90) received the highest score, indicating their significant effectiveness in supporting reading, particularly in vocabulary acquisition and fluency. These results suggest that Flash Cards should be used regularly to reinforce these aspects of literacy development. Differentiated Instruction (4.82) and Word Blocks (4.80) also received high ratings, further highlighting their importance in addressing diverse learning needs and aiding in the development of word-building skills, which are essential for literacy growth. Additionally, Word Family Flip Books (4.71) and Reciting Rhymes/Poems (4.69) were identified as frequently used instructional materials with high levels of implementation. These tools are particularly beneficial in promoting reading fluency and developing broader language competencies. In contrast, traditional methods such as the Marungko Approach (4.33) and Word Wall (4.14) received lower scores. These approaches were less frequently used and may not be as effective in fostering reading development compared to multimedia-based tools. This suggests a preference for more interactive and dynamic teaching methods in current literacy instruction.

Table 2. Level of Implementation in Using Multimedia Presentation Along Reading Skills

	Reading Skills	Mean	Descriptive Rating	Rank
1	Marungko Approach to beginning reading	4.33	Implemented	10
2	Word Family flip book to encourage learning intelligible production of speech	4.71	Highly Implemented	2
3	Word Blocks to enhance the word building.	4.80	Highly Implemented	5.5
4	Word Family wheels to support the core meaning of a word.	4.76	Highly Implemented	3
5	Differentiated instruction anticipates and responds to a variety of students' needs in the classroom.	4.82	Highly Implemented	4
6	Digital story Telling to increase pupils understanding	4.51	Highly Implemented	7
7	Video presentation to learn in their own pace	4.80	Highly Implemented	5.5
8	Reciting rhymes/poems to boost the confident	4.69	Highly Implemented	8
9	Flash Cards to develop reading drill.	4.90	Highly Implemented	1
10	Word Wall to establish word recognition.	4.14	Implemented	9
	OWM	4.64	Highly Implemented	

The results are consistent with recent study showing the effectiveness of interactive multimedia tools in improving reading ability. Sulieman and Mustafa (2025) found that multimedia tools such as Flash Cards has a significant influence on student engagement and learning of vocabulary. The findings are supported by Dixon and Brown (2017) who highlight the importance of differentiated methodologies, such as Differentiated Instruction, to improve literacy outcomes for varying learners. Alvarado and Petty (2020) also discussed

how interactive tools such as Reciting Rhymes/Poems can enable better reading and greater confidence for students. However, traditional methods like the Marungko Instruction and Word Wall had relatively lower ratings as well which is consistent with Grabe and Zhang's (2019) assertion that other methods may not be capturing student interest in the same way multimedia approaches do particularly in today's educational context.

Listening Skills

The data indicate that diverse multimodal applications for developing listening skills were adopted at an overall level of 4.42, which is categorized as "Implemented." Songs (4.92) received the highest score, illustrating their frequent and effective use in supporting students' learning and practice of new vocabulary through repetition and auditory exposure. Following closely were Audio Materials (4.88), which underscore the importance of concentrated auditory input in enhancing listening skills. Film and Video Materials (4.67) were also widely utilized, demonstrating their success in providing visual context that complements aural learning. In contrast, Podcasts (3.84) and Voice Blogging (3.98) received lower ratings, suggesting that these tools are either less frequently used or perceived as less effective than other multimedia resources. Despite their lower scores, both tools still fell within the "Implemented" range, indicating that they provide some support for listening skill development, albeit to a lesser extent compared to more commonly used tools.

Table 3. *Level of Implementation in Using Multimedia Presentation Along Listening Skills*

	Listening Skills	Mean	Descriptive Rating	Rank
1	Film and Video Materials to analyse skills	4.67	Highly Implemented	3
2	Computer-mediated materials to refine the interest	4.41	Implemented	5
3	Flash Cards to become attentive in drill	4.33	Implemented	8
4	Audio Materials to enhance the listening skills	4.88	Highly Implemented	2
5	DVD to provide visual stimulation for better understanding	4.49	Implemented	4
6	Television to produces authentic learning opportunities	4.43	Implemented	7
7	Voice Blogging to encourage positive room environment	3.98	Implemented	9
8	Podcasts to build the skills to practice unfamiliar words	3.84	Implemented	10
9	Songs to keep them track of how often they hear these words	4.92	Highly Implemented	1
10	Linked Audio and Still-Visual Materials to increase pupil motivation	4.37	Implemented	6
	OWM	4.42	Implemented	

Research on the effectiveness of audio and video tools in improving listening skills has demonstrated their significant impact. Alvarado and Petty (2020) highlight that audio materials, such as songs, are particularly effective in enhancing vocabulary acquisition and listening comprehension. This finding is supported by the high ratings these tools received in this study. Similarly, Dixon and Brown (2017) emphasize the importance of multimedia aids, such as Film and Video Materials, in engaging students by providing both visual and auditory stimuli, which enhances understanding and retention. However, tools like Podcasts and Voice Blogging received lower ratings, which may reflect a cultural preference for more immediate auditory tools. According to Sulieman and Mustafa (2025), these technologies may not be as engaging or useful to all learners, particularly when compared to

more direct auditory tools, such as songs or recordings, which are often perceived as more effective in fostering engagement and comprehension.

Visual Skills

The data highlight the widespread and effective use of multimedia tools in fostering visual learning across diverse educational settings. With an overall mean score of 4.55, these tools are widely integrated into classroom instruction, underscoring their significant role in supporting various aspects of cognitive and academic development. Among the most frequently utilized resources, Puzzle activities (mean = 4.92) and Memory Games (mean = 4.82) were found to be particularly effective in enhancing spatial awareness and concentration, which are essential cognitive skills for learning through visual engagement. Other highly rated tools, including Visual Cues (mean = 4.78), Flash Cards (mean = 4.71), and Alphabet Strips (mean = 4.69), proved to be valuable in developing foundational literacy skills, such as letter and sound recognition. These tools illustrate the crucial role that interactive and visual aids play in early childhood education, providing learners with engaging ways to reinforce pre-reading and language skills. While tools like Interactive Whiteboards (mean = 3.94) and PowerPoint Presentations (mean = 4.41) received lower ratings, they still remain integral to the multimedia educational framework. Though these tools are not as widely employed or as interactive as others, they continue to be effective in supporting visual learning, albeit to a lesser extent compared to more dynamic, hands-on resources. Their inclusion in educational settings suggests that, despite relatively lower engagement, they still contribute to the visual learning experience.

Table 4. Level of Implementation in Using Multimedia Presentation Along Visual Skills

	Visual Skills	Mean	Descriptive Rating	Rank
1	Interactive Whiteboards to enhance presentation content	3.94	Implemented	10
2	DVD's can often spark a response in children who otherwise appear uninterested in literacy	4.41	Implemented	7.5
3	Power Point presentation	4.41	Implemented	7.5
4	Smart TV encourage pupils to participate in classroom discussions	4.39	Implemented	9
5	Puzzle to build spatial perception	4.92	Highly Implemented	1
6	Basic Sight Words to master the words	4.47	Implemented	6
7	Memory games to improve concentration and aid future learning	4.82	Highly Implemented	2
8	Flash Cards to promote acquisitions of pre reading skills	4.71	Highly Implemented	4
9	Alphabet Strips to guide in identifying letters	4.69	Highly Implemented	5
10	Visual Cues to helps to remember the sound and the shape of the letter	4.78	Highly Implemented	3
	OWM	4.55	Highly Implemented	

Studies have highlighted the significant role of interactive and visual media in enhancing visual competencies and supporting early reading development. Alvarado and Petty (2020) emphasize the effectiveness of Flash Cards and Alphabet Strips in helping children develop reading skills by promoting letter and sound identification. Sulieman and Mustafa (2025) discuss how tools like Memory Games and other interactive resources help re-engage students, leading to sustained learning over time, which is reflected in the high ratings these tools received in the study. Dixon and Brown (2017) recommend the use of Smart TVs and Interactive Whiteboards, noting that these tools enhance classroom engagement by providing

vivid presentations and interactive content that enrich the educational experience. Despite their potential, PowerPoint Presentations (mean = 4.41) and Interactive Whiteboards (mean = 3.94) received lower ratings. This suggests that while these tools are effective, they may not capture students' attention or foster learning to the same extent as more interactive, hands-on multimedia tools.

Challenges in Multimedia Implementation in Kindergarten

The results indicated that using multimedia lessons to enhance learners' visual skills was considered somewhat important, with an overall mean score of 2.92. The most significant issues identified were the absence of seminars or training on the use of multimedia (mean = 3.33) and insufficient technical support services (mean = 3.33). These ratings demonstrated that these were substantial challenges, highlighting the need for professional development and improved technical infrastructure to maximize the effectiveness of multimedia in the classroom. Additionally, more "moderately serious" issues, such as poor time management (mean = 3.02) and lack of materials in the classroom (mean = 3.02), were reported. These findings suggested that teachers faced difficulties in managing their time and resources effectively when incorporating multimedia tools into their lessons. Lower scores for issues such as the lack of information during presentations (mean = 2.39) and insufficient teacher knowledge of current topics (mean = 2.41) indicated areas that required further attention and improvement.

Table 5. Challenges Faced by Kindergarten Teachers in Implementing Multimedia Presentations in the K-12 Curriculum

	Visual Skills	Mean	Descriptive Rating	Rank
1	Lack of information doing some presentation	2.39	Slightly Serious	10
2	Lack of materials in the classroom	3.02	Moderately Serious	5.5
3	Lack of Seminars /Trainings Attended in using multimedia	3.33	Moderately Serious	1.5
4	Lack of exposure understanding and learning the multimedia	2.78	Moderately Serious	7.5
5	Lack of time management in conducting the multimedia presentation	3.14	Moderately Serious	3
6	Lack of the technical support	3.33	Moderately Serious	1.5
7	Lack of gain in teacher knowledge for the current topics	2.41	Slightly Serious	9
8	Poor time management in conducting the multimedia presentation	3.02	Moderately Serious	5.5
9	Lack of interest to perform the task	2.78	Moderately Serious	7.5
10	Challenging preparation of materials needed	3.06	Moderately Serious	4
	OWM	2.92	Moderately Serious	

The issues with the data are consistent with what research is telling us about the importance of training, resources and support for good use of multimedia. (2024) Added there is lack of technical support and the teachers are not well trained to facilitate appropriate use of multimedia. Sulieman and Mustafa (2025) stress that lack of adequate technical support and insufficient training for teacher are two major challenges hindering effective integration of Multimedia in education. They found that if teachers are trained and well-endowed in terms of technical skills and material resources, the level of use of multimedia increases significantly. Dixon and Brown (2017) also emphasize how critical it is for teachers to receive additional training so that they can feel confident using multimedia tools. Additionally,

Alvarado and Petty (2020) noted that when organizing how to use multimedia within a classroom setting, teachers often do not consider time management and the access of teaching materials; however both are very important factor in terms of aiding effectiveness of multimedia use in the classroom. This confirms the moderately serious concern on lack of materials and managing time in this study.

Analysis of Variance on Respondents' Profile Variables and Their Level of Implementation of Multimedia Presentation

The analysis of variance (ANOVA) reveals a significant difference between the profile variables of respondents and their level of implementation of multimedia presentations. As shown in Table 5, Age ($F = 1.276$, $p = 0.104$) and Civil Status ($F = 0.362$, $p = 0.416$) did not exhibit significant differences ($p > 0.05$) in the level of multimedia presentation implementation, indicating that these variables do not significantly impact the utilization of multimedia tools in educational settings. The associated p-values for both variables are above the standard threshold for significance, suggesting that factors such as age and marital status do not substantially influence the integration of multimedia instruments in teaching.

Conversely, notable differences were observed in the following variables: Highest Educational Attainment ($F = 0.819$, $p = 0.001$), Length of Service ($F = 2.913$, $p = 0.002$), and Attendance at Trainings/Seminars ($F = 3.001$, $p = 0.007$). These variables exhibited p-values closer to 0.00, signifying their substantial influence on the extent to which multimedia presentations are utilized. Specifically, the data suggest that higher educational qualifications, greater years of service, and participation in relevant professional development activities, such as training workshops and seminars, contribute significantly to the integration of multimedia tools in teaching. These findings align with the literature, which suggests that higher educational attainment and professional development are predictors of successful multimedia use in the classroom (Dixon & Brown, 2017). Furthermore, Sulieman and Mustafa (2025) emphasized the importance of professional training in fostering teachers' confidence and competence in utilizing multimedia resources. The lack of significance for Age and Civil Status mirrors the findings of Alvarado and Petty (2020), where demographic factors like age and marital status were not significantly associated with the adoption of multimedia teaching methods.

Relationships Between Respondents' Level of Multimedia Presentation Implementation and Their Profile Variables

The analysis also revealed positive relationships between respondents' profile variables and their level of implementation of multimedia presentations, specifically with regard to reading, listening, and visual skills. The results indicate that all profile variables are significantly correlated with multimedia utilization, with p-values less than 0.05, suggesting that these factors influence the adoption of multimedia tools in teaching. Notably, Age demonstrates a strong positive relationship with Visual Skills ($r = 0.861$), indicating that older teachers are more likely to use multimedia resources to develop visual competencies. However, the relationship with Reading ($r = 0.126$) and Listening Skills ($r = 0.325$) is relatively weak, although still statistically significant ($p = 0.000$).

Sex is positively correlated with all three skills: Reading ($r = 0.022$), Listening ($r = 0.056$), and Visual ($r = 0.076$), with each relationship showing statistical significance (p-values < 0.05). This suggests that gender plays a role in how multimedia tools are employed in the classroom. Civil Status exhibits a strong positive association with Listening Skills ($r = 0.346$) and Visual Skills ($r = 0.443$), and a moderate relationship with Reading Skills ($r = 0.259$), implying that married individuals may use multimedia differently from their unmarried counterparts.

The Area of Specialization shows a particularly strong correlation with Listening Skills ($r = 0.861$) and Visual Skills ($r = 0.528$), underscoring the importance of teachers' expertise in utilizing multimedia tools to enhance both listening and visual learning. Additionally, Highest Educational Attainment is highly correlated with Visual Skills ($r = 0.735$) and moderately with Reading ($r = 0.443$) and Listening Skills (r

= 0.214), suggesting that higher education levels contribute significantly to the integration of multimedia tools, especially for improving visual learning. Length of Service, particularly as a Kindergarten Teacher, correlates strongly with all three skills, with Visual Skills (r = 0.314) showing the strongest association. This indicates that more experienced educators are more likely to use multimedia tools effectively, particularly for visual learning. Furthermore, participation in workshops and seminars for kindergarten education programs is positively correlated with all three skills, particularly Visual Skills (r = 0.518), reinforcing the need for continuous professional development to enhance multimedia proficiency.

These findings corroborate previous research that highlights the importance of age, sex, area of specialization, education level, years of service, and professional development in the use of multimedia resources in education. The experience and education of teachers significantly influence their ability to integrate multimedia tools into their teaching practices (Dixon & Brown, 2017). Sulieman and Mustafa (2025) also noted that training and seminars play a crucial role in improving teachers' competencies and confidence in utilizing multimedia for effective teaching. Additionally, research by Alvarado and Petty (2020) demonstrated that specialist teachers are more likely to adopt multimedia resources. The strong correlation between demographic factors and multimedia use, as observed in this study, is consistent with the findings of Grabe and Zhang (2019), which emphasized the impact of personal and demographic variables on pedagogical practices, especially in heterogeneous educational environments.

Conclusion

This study aimed to assess the effectiveness of multimedia presentations in fostering the development of reading, listening, and visual skills among kindergarten pupils in the Subic District, as perceived by their teachers. Multimedia tools, such as flashcards, video presentations, and interactive whiteboards, were recognized as instrumental in enhancing early childhood education outcomes. Despite the challenges associated with resource limitations, insufficient technical support, and time management constraints, kindergarten teachers continued to integrate these multimedia tools into their instructional practices, particularly in teaching phonetics and language development.

The findings from this study suggested that specific teacher profile variables namely, educational attainment, years of experience, and participation in professional development activities, such as training courses and seminars significantly influenced the degree to which multimedia tools were employed in the classroom. In contrast, demographic factors such as age, marital status, and gender were not found to exert a substantial impact on the adoption and utilization of multimedia resources in teaching. Furthermore, strong correlations were identified between teachers' profile variables and the use of multimedia tools, especially in relation to the enhancement of visual skills among students.

While the benefits of multimedia tools in early childhood education were undeniable, several challenges persisted. These included the lack of adequate teaching staff, limited access to multimedia resources, and suboptimal time management practices. These barriers highlighted the urgent need for targeted interventions to support teachers in overcoming these obstacles. Such interventions should have included improving access to educational resources, offering consistent professional development opportunities, and enhancing technical support. Addressing these challenges was essential for ensuring the seamless integration of multimedia tools into the classroom, which, in turn, led to more effective and impactful learning experiences for young learners.

The findings of this research underscored the critical importance of continuous professional development for teachers and the need for improvements in educational resources to fully capitalize on the potential of multimedia in early childhood education (ECE). Given the evolving nature of educational technologies, it was essential for teachers to be equipped with the necessary skills and resources to integrate multimedia tools effectively into their pedagogical practices. Future research should focus on examining the long-term effects of multimedia

integration on students' academic performance, as well as investigating strategies to mitigate the challenges that teachers faced in utilizing these tools. Additionally, further studies should explore the sustainable impact of multimedia use on student learning outcomes and identify best practices for overcoming the inherent difficulties associated with its implementation.

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