

Exploring the role of interactive multimedia in supporting the teaching of reading comprehension: EFL teachers' beliefs and practices

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Abstract

This study explores the role of interactive multimedia in supporting reading comprehension in English as a Foreign Language (EFL) classroom, focusing on teachers' beliefs, practices, and the challenges. Guided by three research questions concerning these aspects, this study employed a qualitative case study design. Data were collected from nine EFL teachers teaching grade VIII in several junior high schools in Karawang through questionnaires, in-depth interviews, and textbook analyses. Thematic analysis of the transcribed and coded data revealed that teachers hold strong positive beliefs regarding the pedagogical benefits of interactive multimedia, particularly in enhancing student engagement, motivation, and comprehension. Teachers reported employing diverse multimedia tools, including YouTube, Canva, Padlet, and Google Classroom, to create multimodal reading experiences and support instructional and assessment practices. Despite these positive perceptions, several obstacles were identified, including technical limitations, time constraints, student-related challenges, and the need to balance multimedia with traditional reading activities. The study highlights the interconnectedness of teachers' beliefs, practices, and contextual challenges, suggesting that effective multimedia integration requires not only teacher confidence and pedagogical knowledge but also sufficient resources and institutional support. The findings provide insights for professional development, curriculum design, and instructional strategies to optimize the use of interactive multimedia in EFL reading instruction.

Keywords

Classroom practices, EFL, Interactive multimedia, Reading comprehension, Teachers' beliefs

Introduction

Reading comprehension is an important part of English as a Foreign Language (EFL) instruction because it allows students to acquire information, develop critical thinking abilities, and interact with academic and genuine literature [7]. However, in many EFL environments, students continue to struggle with reading, citing poor vocabulary

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knowledge, low motivation, and difficulties deciphering meaning beyond surface-level understanding [1], [3]. These issues highlight the need for appropriate instructional approaches and tools to help learners acquire greater reading comprehension abilities [2].

The quality of reading teaching is heavily influenced by the instructional materials used. Effective reading materials should improve comprehension, increase learner engagement, and provide meaningful exposure to language use [1]. Materials in EFL settings are also intended to be culturally appropriate and responsive to the requirements and competence levels of the learners [5]. Previous research has found that the applicability and quality of instructional materials utilized in the classroom are strongly related to the success of reading instruction [3].

In recent years, interactive multimedia has received increased attention as a method of improving reading instruction. Multimedia-based resources combine many forms of communication, such as text, graphics, audio, and video, to help learners visualize content and activate prior knowledge during reading tasks [8]. According to research, multimedia use can improve comprehension by delivering information across many channels and increasing learner engagement [9]. As a result, multimedia has become an important component of modern EFL training, especially in technology-mediated learning contexts [4]. Despite its potential benefits, the successful use of multimedia in reading teaching is entirely dependent on teachers. Teachers are responsible for selecting, customizing, and implementing instructional resources based on learning objectives and classroom conditions [6]. Teachers' ideas about teaching, learning, and technology have a substantial impact on their pedagogical decisions, such as whether and how multimedia is used in reading courses [10], [11].

In addition to teachers' opinions, contextual factors such as technology infrastructure, institutional support, time restrictions, students' digital competence, and curriculum demands all influence multimedia implementation in EFL classrooms [13, 15]. Even when teachers have good attitudes toward multimedia, contextual obstacles may restrict their capacity to effectively integrate multimedia-based instruction [13]. According to previous research, such constraints frequently result in differences between teachers' attitudes and classroom behaviors [15].

Given the growing emphasis on technology integration in education, as well as the ongoing issues that EFL learners experience with reading comprehension, it is critical to investigate how interactive multimedia is implemented in real-world classroom settings. Understanding the relationship between teachers' views, instructional methods, and contextual obstacles might help improve multimedia-supported reading instruction in EFL settings.

Method

This study employed a qualitative research design using a case study approach to explore EFL teachers' beliefs and practices in selecting reading materials. Data were collected through multiple instruments, including questionnaires, in-depth interviews, and textbook analyses [16]. The participants consisted of nine EFL teachers who taught grade VIII in several junior high schools in Karawang, selected through purposive sampling to ensure data relevance and depth [16]. The instruments included a questionnaire with 60 Likert-scale items and open-ended questions to measure teachers' beliefs about reading materials, and in-depth interviews with 30 core questions to gain detailed, context-rich narratives [17], [18]. Data collection involved distributing questionnaires, conducting recorded, transcribed interviews. Finally, data from questionnaires and interviews were analyzed using semantic analysis to identify teachers' perceptions, beliefs, and criteria for selecting appropriate reading materials [19].

Results

The data obtained from semi-structured interviews were transcribed and analyzed using thematic analysis. Themes from the personal interviews were drawn based on the research questions: "What are EFL teachers' beliefs about the role of interactive multimedia in supporting reading comprehension?", "How do EFL teachers practice the use of interactive multimedia in teaching reading comprehension?", and "What obstacles do EFL teachers encounter when using interactive multimedia to support reading comprehension?". Based on those research questions, the interview data were analyzed. The recorded data were transcribed into written form, translated into English, and coded into thematic structure according to the study objectives.

The theme analysis's findings show trends in the beliefs, methods, and difficulties EFL teachers had when utilizing interactive multimedia to improve reading comprehension. The replies from the participants were coded and categorized into themes that aligned with the study's three research topics. The results show that the use of interactive multimedia in reading education is shaped by the beliefs, instructional strategies, and challenges faced by teachers. Contextual challenges encountered during classroom implementation changed teachers' attitudes about the efficacy of multimedia, which in turn influenced their classroom practices. Overall, the findings imply that the dynamic interplay between teachers' attitudes, their methods of instruction, and contextual limitations determines the use of interactive multimedia in EFL reading comprehension. These three elements teacher attitudes, classroom practices, and environmental constraints form an interrelated sequence that adds to a thorough understanding of the role of interactive multimedia in promoting EFL reading comprehension. Teachers' views influence their instructional decisions and classroom techniques, while their practices reflect how these ideas are carried out in reading instruction. Contextual limits, such as technical access, time constraints, and institutional support, also have an

impact on attitudes and practices. This interaction demonstrates that the use of interactive multimedia in EFL reading comprehension is a dynamic connection in which beliefs, practices, and restrictions constantly impact one another. Teachers' beliefs influenced how they applied multimedia in practice, while both beliefs and practices were often challenged by contextual factors such as technical limitations, student-related issues, and curriculum demands. The following sections present the findings according to the three research questions.

Teachers' beliefs about the role of interactive multimedia in supporting reading comprehension.

The findings revealed that the participants held strong beliefs about the positive role of interactive multimedia in enhancing students' reading comprehension. Teachers consistently emphasized that multimedia increases students' motivation, makes reading texts more engaging, and supports deeper content understanding. Several participants explained that multimedia helps students maintain focus and sustain their attention during reading activities. This was expressed by some teachers as presented in [Table 1](#).

Table 1. Teachers' beliefs about the role of interactive multimedia

Participant Code	Direct Statements
P1	I believe that interactive multimedia can improve students' reading comprehension by providing visual and audio support that makes texts easier to understand.
P2	Multimedia enriches the learning experience, increases engagement, facilitates visual learning, and encourages creativity and innovation, enabling students to think more creatively.
P3	I used interactive videos when teaching descriptive texts about Komodo Dragon, which made students more enthusiastic and understood the reading better because they could connect it with visuals.
P4	Using multimedia is effective to attract students' attention and improve the effectiveness of material delivery to support comprehension.
P5	I assess multimedia effectiveness through students' engagement, quiz results, and reflections. If they understand the main ideas and vocabulary better, I consider it effective.
P6	I evaluate multimedia by observing students' responses. If they can answer questions, retell the text, or relate it to the media, it means it supports comprehension.
P7	I believe interactive multimedia makes texts more interesting and easier to understand.
P8	Multimedia makes students more motivated and active in reading. It also helps comprehension through attractive audio-visual elements.
P9	I confidently use interactive multimedia because it makes students more interested and motivated to understand texts.

Based on [Table 1](#), all participants believe that the usage of interactive multimedia can help pupils improve their reading comprehension. Teachers see multimedia as an excellent educational technique for increasing students' engagement, motivation, and comprehension of reading texts. They stated that visual and auditory aspects, such as films and interactive activities, make texts more accessible and understandable.

Furthermore, teachers think that multimedia promotes diverse learning styles, stimulates active engagement, and assists pupils in connecting reading material to real-world circumstances. The effectiveness of multimedia was frequently assessed using students' performance, involvement, and feedback during reading activities.

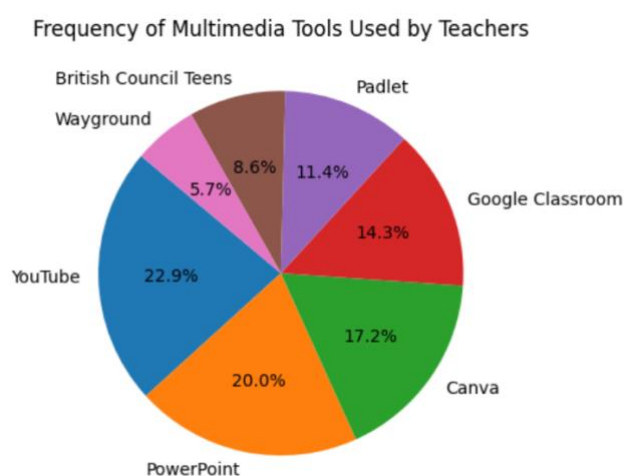
Teachers' practices in using interactive multimedia

Teachers reported using a variety of strategies to include interactive multimedia into reading instruction. Teachers sometimes presented reading texts with audio narration, drawings, and short movies to help pupils understand the content and context. According to one teacher, reading tools that include visual and auditory features help students absorb texts more efficiently, while another emphasized that combining reading with audio narration allows pupils to read and listen at the same time, enhancing both skills.

These activities suggest that teachers see interactive multimedia as an effective instructional tool for improving reading comprehension through multimodal involvement. Teachers hope that by incorporating visual and auditory resources, they may make texts more relevant, accessible, and engaging, hence keeping pupils motivated and engaged during reading exercises.

In addition, interactive multimedia was used in both instructional and assessment activities. Teachers reported using digital tools for interactive quizzes and formative assessments, as well as modifying multimedia content based on students' skill levels. They also stressed the significance of combining multimedia use with traditional reading activities to ensure that technology enhances rather than replaces traditional learning (Figure 1).

Figure 1. Frequency of multimedia tools used by teachers



Moreover, various digital platforms were employed to facilitate multimodal learning experiences in reading instruction. The most frequently cited tools included YouTube, Canva, PowerPoint, Google Classroom, Wayground, British Council Teens, and Padlet. These platforms were primarily utilized to provide multimodal input such as audio-text

combinations, videos, and interactive quizzes, that enriched students' reading comprehension and created a more engaging learning environment.

The analysis of teachers' responses further revealed that YouTube (88.9%) and PowerPoint (77.8%) were the most commonly used multimedia, primarily due to their accessibility, ease of use, and flexibility in presenting both visual and auditory materials. Meanwhile, Canva and Google Classroom were frequently employed to design interactive and collaborative reading activities. In contrast, Padlet, British Council Teens, and Wayground were used less frequently and served primarily as supplementary platforms to support classroom discussions and foster students' digital literacy skills.

Obstacles encountered in using interactive multimedia

Despite their positive perceptions and diverse practices, teachers faced several obstacles in applying interactive multimedia for reading instruction, as shown in [Table 2](#).

Table 2. Obstacles encountered by teachers in implementing interactive multimedia

Participant Code	Direct Statement
P1	The main obstacle is the limited availability of devices for students.
P2	The obstacle I usually face when using interactive multimedia in teaching reading is limited facilities, such as unstable internet connections or devices not owned by all students.
P3	Network issues, limited time, and students' short attention span.
P4	The provision of e-books is sometimes difficult because students experience minor bugs that prevent them from opening the files.
P5	Limited phone use—most students cannot bring their phones because they live in a boarding school. The number of computers is also insufficient for all students.
P6	The risk is that students become distracted by the media instead of focusing on the text. Not all multimedia tools are suitable for classroom use.
P7	The main weakness is the lack of facilities; not all schools have sufficient space and storage for multimedia technology.
P8	Interactive multimedia use requires adequate hardware and software, and teachers must also have the technical skills to operate it effectively.
P9	Limited time and resources to maintain consistent implementation.

As presented in [Table 2](#), the obstacles encountered by teachers in integrating interactive multimedia for reading comprehension are primarily associated with technical, infrastructural, and pedagogical challenges. Most participants (P1, P2, P5, P7) highlighted limited device availability and school facilities, which impede equal access to multimedia resources among students. Technical issues such as unstable internet connectivity and software bugs (P2, P4) further constrain the smooth implementation of multimedia-supported reading instruction. Moreover, participants (P3, P8, P9) noted that time limitations and insufficient teacher competence in managing multimedia tools often hinder consistent application in daily teaching practices. A few participants (e.g., P6) also expressed concerns that multimedia, if not carefully managed, might distract students from the main reading objectives.

Overall, the findings indicate that while teachers recognize the pedagogical potential of interactive multimedia in enhancing reading comprehension, substantial challenges

persist in terms of accessibility, technological reliability, and teacher preparedness. Addressing these challenges requires improved infrastructure, continuous professional development, and strategic integration planning to ensure the sustainability of multimedia-based reading instruction.

Discussion

The findings of this study illustrate the intricate relationship among EFL teachers' beliefs, practices, and the challenges they encounter in using interactive multimedia to support reading comprehension. Consistent with previous literature, teaching reading in EFL contexts requires instructional materials that are engaging, culturally relevant, and pedagogically effective [1], [2], [3]. This study confirms that teachers' beliefs are essential in shaping how multimedia is integrated into reading instruction, supporting Richards and Lockhart's in Karim et al. [6] assertion that beliefs directly influence classroom practices.

Teachers' Beliefs. The participants demonstrated strong convictions regarding the pedagogical benefits of interactive multimedia, particularly its potential to enhance motivation, engagement, and comprehension. These findings align with prior studies indicating that multimedia facilitates visualization, contextualization, and active engagement in language learning [8], [9]. Teachers' confidence in the effectiveness of multimedia also aligns with the broader understanding of teachers as facilitators who design interactive and learner-centered experiences rather than merely delivering information [5]. Furthermore, aligning multimedia activities with curriculum objectives and digital literacy development reflects the evolving expectations of 21st-century EFL teaching [7].

Teachers' Practices. Teachers employed diverse strategies and tools, including YouTube, Canva, Padlet, and Google Classroom, to create multimodal reading experiences. These practices illustrate the application of multimodal learning principles, whereby combining text, images, audio, and video enhance comprehension and engagement [20]. The integration of multimedia into assessments, such as online quizzes and comprehension checks, demonstrates teachers' efforts to align technology with traditional reading instruction. These findings support previous research that identify a gap between beliefs and practices in EFL classrooms due to contextual constraints and limited professional knowledge [10], [12].

Obstacles in Multimedia Integration. Despite positive opinions, teachers experienced obstacles such as technical limits, time constraints, student-related variables, and balancing multimedia with traditional reading tasks. These challenges are similar with previous studies, which identified infrastructure impediments, student motivation, and curriculum alignment demands as important concerns in EFL contexts [4], [5], [13]. The findings emphasize the significance of professional support and ongoing training for efficient multimedia integration.

Teachers' beliefs influenced their pedagogical choices, while both were shaped by contextual constraints, supporting Borg's [14] framework on teacher cognition. This interconnectedness highlights that effective multimedia integration is an iterative process requiring adaptation, reflection, and support. Consequently, professional development should emphasize not only on technical competence but also pedagogical confidence. Policymakers and school administrators should address infrastructural limitations to enable consistent use of multimedia tools. Moreover, teachers need guidance in balancing multimedia with traditional literacy instruction to foster comprehensive reading skills, consistent with the call for relevant and strategically selected instructional materials [1],[2].

In sum, the study confirms that interactive multimedia can significantly enhance EFL reading instruction when teachers' beliefs, practices, and contextual challenges are considered together. By connecting teachers' perceptions and classroom strategies with existing literature, this research contributes to a deeper understanding how to design effective, engaging, and contextually appropriate reading materials, and how teacher beliefs and practices can be supported to optimize learning outcomes in EFL classrooms.

Conclusion

This study investigated the use of interactive multimedia in EFL reading comprehension instruction, concentrating on instructors' beliefs, instructional practices, and problems encountered during classroom implementation. The data show that EFL teachers usually regard multimedia as a valuable educational resource that enhances student involvement, motivation, and comprehension. Teachers used digital resources such as YouTube, Canva, Padlet, and Google Classroom to provide reading materials in a variety of formats, including text, audio, photos, and video, in accordance with curriculum goals and digital literacy standards.

Nonetheless, the study revealed various challenges to the regular use of interactive multimedia, such as technological limits, limited preparation time, student-related variables, and the need to balance digital resources with traditional literacy education. These obstacles illustrate the intricate interplay between instructors' educational views, classroom reality, and institutional contexts, demonstrating that favorable impressions alone are insufficient to enable effective multimedia integration.

Overall, interactive multimedia has significant potential to improve EFL reading instruction when accompanied by proper infrastructure, professional development, and creative instructional preparation. Addressing the gap between teachers' views and classroom practices necessitates ongoing institutional support and focused training that improves both pedagogical and technological skills. By addressing these needs, EFL classes can provide more interesting, effective, and context-sensitive reading instruction that fits learners' changing needs.

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