Utilizing Digital Storytelling with Total Physical Response to Teach English Vocabulary for Young Learners: A Conceptual Analysis

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ABSTRACT
The Utilization of Digital Storytelling (DST) and Total Physical Response (TPR) offers a dynamic and well-integrated approach to teaching English vocabulary for young learners. This study aims to bridge the gap between theoretical frameworks and practical applications by examining how the synergy between visual-verbal and kinesthetic learning can improve English vocabulary. This study uses a conceptual analysis based on three main theoretical frameworks: Dual Coding Theory, Multimedia Learning Theory, and Total Physical Response Theory. This study examines how the delivery of Digital Storytelling and Total Physical Response can be combined effectively in vocabulary retention. The findings highlight that Digital Storytelling, with its visual, auditory, and narrative elements, enhances student comprehension, while Total Physical Response encourages active learners in the form of physical responses. Despite these benefits, this study has identified challenges, including limited infrastructure, the lack of teacher readiness, and time constraints in the classroom, that hinder the successful implementation of both methods. To overcome these obstacles, this study suggests adaptive strategies by utilizing low-tech learning, teacher collaboration in forums, and learning content adaptation. In addition, this study offers a comprehensive framework and recommendations that

teachers and policymakers can follow to improve English vocabulary teaching.

Keywords: Digital Storytelling, Total Physical Response, Vocabulary Teaching, Young Learners, Teacher Strategies.

INTRODUCTION

Vocabulary is the primary foundation of communication. It is crucial for effectively conveying ideas both orally and in writing. Ismail et al. (2022) suggest that expressing an idea is influenced by a thorough understanding of grammar and vocabulary. However, learning challenges exist. Elmahdi and Hezam (2020) found that the primary obstacle for language learners lies in their lack of understanding.

Research by Chen et al. (2024), found that one method that can be used for vocabulary learning is multimedia-based narratives. In this study, Digital Storytelling was combined with Total Physical Response (TPR), which functions as a pressure response that produces a physical action in response to verbal cues, referred to as commands in the storytelling.

As reported by Pitaloka et al. (2025), there was a significant increase in vocabulary assessment using Total Physical Response. This aligns with research showing that digital storytelling with varied images has resulted in vocabulary retention, more efficient learning, and increased student engagement (Weerasinghe et al., 2022).

The advantages of the research above are not necessarily a priority, as there are still challenges in integrating digital storytelling with total physical response, especially in teaching vocabulary for young learners (Dwijayanti et al., 2025).

Furthermore, a problem arises from lacking a conceptual framework to integrate digital storytelling into the total physical response method for teaching English vocabulary. Therefore, this research seeks to bridge this gap by examining how digital storytelling and the total physical response method can be properly integrated in teaching language. This research aims to provide a data-based contribution regarding the utilization of digital storytelling and the total physical response method to teach English vocabulary learning for young

learners by investigating existing views and issues.

A. LITERATURE REVIEW

A.1 Key Concept Definitions

A.1.1 Vocabulary

In English language learning, vocabulary is the foundation, a reference based on a set of words that can be understood and used to communicate effectively in writing and orally. To express various ideas and understand the structure of a language, mastery of vocabulary is a fundamental skill that must be learned (Ismail et al., 2022). For young learners, mastery of comprehension is crucial for developing communicative skills.

A.1.2 Vocabulary Acquisition

Vocabulary acquisition is how young learners assign meaning to words and produce language. This process can occur spontaneously or through a more subtle process. In the EFL context, comprehension acquisition is hampered by limited exposure to native language input and traditional teaching practices (Elmahdi & Hezam, 2020; Pitaloka et al., 2025).

A.1.3 Digital Storytelling (DST)

Digital Storytelling is an approach based on multimedia and narrative elements. It combines text accompanied by images, audio, and visuals to convey stories or information more engagingly. In its implementation, Digital Storytelling utilizes verbal and visual elements to increase reader engagement. This aligns with Paivio's Dual Coding Theory, which argues that information encoded in multiple ways is easier to learn (Fathimah et al., 2025; Lestariyana & Widodo, 2022).

A.1.4 Total Physical Response (TPR)

Many methods can be used to teach language to early childhood students. Among them is the total physical response method initiated by James Asher, an American psychologist, whose implementation focuses on orders and actions. In line with that, Siti and Tadkiroatun (2019, p.257) defined “TPR is the language learning approach which stimulates the children

in acquiring their mother language, which is implemented in teaching foreign languages.

A.1.5 Integration of Digital Storytelling and Total Physical Response

Integrating digital storytelling and total physical response combines multimedia-based, narrative-based instruction with movement-based learning. In both processes, young learners engage visual, auditory, and kinesthetic abilities to enhance cognitive comprehension and vocabulary (Rahimi & Yadollahi, 2017; Al-Khatib & Hassan, 2022).

A.1.6 Dual Coding Theory

Dual Coding Theory by Allan Paivio explains that humans process information through verbal and nonverbal channels. Verbal is used to process existing linguistic input, and nonverbal is used to process visual information. Learning is most effective when both channels are stimulated simultaneously. This can help young learners remember and apply what they have learned (Paivio, 1986; Clark & Paivio, 2020).

A.1.7 Multimedia Learning Theory

Multimedia Learning Theory, developed by Richard Mayer, explains that learners retain information more deeply when presented with visual and auditory methods. This theory can inform the design of engaging narrative materials (Mayer, 2009; Mayer, 2011).

A.1.8 Young Learners

Nunan (2018) states, “Young learners are children within the chronological age period from birth to puberty”. Teaching English to young learners is a challenging task for educators. An increasing number of children are learning English as a foreign or second language (Pinter, 2017).

A.2 Digital Storytelling (DST) in English Vocabulary Teaching

Digital storytelling is a form of learning that uses digital multimedia to tell a story, combining text, images, audio, and video. Using digital storytelling generates knowledge that can be introduced and implemented (Lestariyana & Widodo, 2022). This can make digital storytelling an enjoyable English

language learning medium due to the addition of visuals and audiovisuals.

Furthermore, the Dual Coding Theory by Paivio states that all information conveyed verbally and visually will have high retention (Fathimah et al., 2025). For young learners, this allows for more engaging and easily understood vocabulary acquisition through narratives combined with visuals.

A.3 Total Physical Response (TPR) in English Vocabulary Learning

Total Physical Response (TPR) was developed by James Asher, who created a method for teaching language comprehension by connecting verbal commands and body movements. Continuing this, Asher (2009) in his research argued that TPR is highly effective for young learners due to the benefits it provides, resulting in bodily or kinesthetic engagement.

Similarly, Firmansyah (2024) demonstrated that TPR significantly improves mastery of knowledge compared to conventional teaching methods. Similarly, Sulistiyani (2023) confirmed that activities using the TPR method can increase student enthusiasm and motivation in learning. This supports the notion that Total Physical Response, a teaching method involving body movements and verbal cues, can foster interest in learning.

A.4 The Integration of Digital Storytelling and Total Physical Response (TPR)

Integrating Digital Storytelling creates a holistic learning experience. Digital storytelling presents words in a compelling narrative, while Total Physical Response (TPR) connects the narrative through physical actions, simultaneously engaging the auditory, kinesthetic, and cognitive senses (Rahimi & Yadollahi, 2017).

Furthermore, a hybrid approach between digital storytelling and TPR is recommended for classroom implementation because it enhances comprehension and fosters motivation among elementary EFL students using traditional and non-traditional methods (Al-Khatib & Hassan, 2022).

A.5 Challenges to Integrate Digital Storytelling with Total Physical Response

The obstacle that arises when Digital Storytelling and Total Physical Response are activated simultaneously is the emergence of imbalances in access, particularly to technology. Many educational institutions, especially those in rural areas, have limited resources, such as infrastructure constraints, slow internet access, or even outdated technology, leaving them lagging behind other developments (Alismail, 2021). As Sadik (2020) noted, when this occurs digitally, it can hinder storytelling, impacting students' opportunities to engage with the content.

A.6 The integration of Digital Storytelling and Total Physical Response (TPR)

The integration of Digital Storytelling and Total Physical Response depends on educators' pedagogical skills and confidence in using both strategies. Studies show that educators often feel unprepared to implement both strategies due to limited training in digital content creation (Sadik, 2015; Pratiwi & Cahyono, 2023). Therefore, implementing learning using Digital Storytelling and Total Physical Response requires professional development that can guide educators in implementing both strategies appropriately.

METHODS

1. Research Design

This study uses a conceptual analysis approach, reviewing existing literature to develop a theoretical framework for utilizing digital storytelling and total physical response to teach English vocabulary for young learners. The analysis of this study was selected based on three main theoretical perspectives: Dual Coding Theory, Total Physical Response Theory, and finally, Multimedia Learning Theory. This third theory will focus on cognitive language development, kinesthetic understanding, and the role of multimedia in vocabulary learning through the integration of digital storytelling and Total Physical Response.

2. Theoretical Lens

2.1 Dual Coding Theory

The first theory is the Dual Coding Theory (Paivio, 1986), which explains that human cognitive ability can process two information systems: verbal (words) and nonverbal (images). When the two are combined simultaneously, memory is improved. This is the basis for seeing the effectiveness of Digital Storytelling, which combines text, images, audio, and video. In a study by Fathimah et al. (2025), it was proven that students who study verbal and visual materials will better understand vocabulary with a method based on using only text. Therefore, Dual Coding Theory becomes the foundation for implementing Digital Storytelling.

2.2 Total Physical Response Theory

The second theory, Total Physical Response, is from Asher (1977), which states that language learning will be more effective if learners provide a physical response to verbal commands. This research has been proven by Firmansyah (2024) that Total Physical Response significantly increases vocabulary acquisition in young learners.

2.3 Multimedia Learning Theory

Finally, Richard Mayer's Multimedia Learning Theory asserts that learning is effective when instructions are presented visually and auditorily. In the context of digital storytelling, a study by Weerasinghe et al. (2022) showed that digital storytelling increases student engagement in English vocabulary learning.

3. Conceptual Relationships

- Implementing Verbal-Visual synergy (Dual Coding) directly improves understanding and memory.
- Multimedia design to reduce cognitive load (Multimedia Learning Theory), which will impact the effective learning process for young learners.
- Kinesthetic strengthening through Total Physical Response (TPT Theory) will ensure vocabulary is heard, seen, and physically implemented to improve vocabulary mastery.

This study is reviewed through three theoretical frameworks: Dual Coding Theory (Paivio, 1986), Multimedia Learning Theory (Mayer, 2001), and TPR Theory (Asher,

1977). This third theory explains how visual-verbal integration, multimedia design, and movement/kinesthetics response can enhance vocabulary learning in young learners.

To further enrich the analysis, this study combines the principles of these three theories, which are based on three points:

- The Intervention: This intervention integrates Digital Storytelling and Total Physical Response to implement English vocabulary learning. The stimuli provided by Digital Storytelling, in the form of narrative and visuals, create Total Physical Response, which functions in the kinesthetics area and encourages students to respond to commands from the Digital Storytelling content, presented through movement.
- The Context: This dimension targets young learners learning English vocabulary in elementary school. This situation allows for differences in the technology available in schools and rural areas. However, with minimal use of technology, multimedia materials in Digital Storytelling and Total Physical Response activities can be effectively adapted.
- The Process: This study focuses on the initial presentation of digital storytelling materials using narration and audiovisuals, which are aimed at reducing cognitive load in young learners. Vocabulary is presented, followed by a TPR activity that connects verbal cues with bodily responses/movements. Combining the two activates the kinaesthetic sense, and students are engaged in the learning process. The process begins with presenting narrative-based DST materials rich in visuals and auditory cues, designed to minimize cognitive overload.

Combining the three approaches above, it can be concluded that students are the central dynamic agents who actively understand the process, respond to, and acquire vocabulary knowledge through multimedia and kinesthetic

engagement. Furthermore, the teacher here plays only a facilitator, tasked with creating learning experiences that align with cognitive principles, ensuring that students acquire engaging English vocabulary for young learners.

RESULTS AND DISCUSSION

This section analyzes the conceptual framework for Utilizing Digital Storytelling and Total Physical Response to teach English Vocabulary for Young Learners. Based on the literature review mentioned above, this analysis identifies how the application and combination of DST and TPR will align with three theories, namely Dual Coding Theory (Paivio, 1986), TPR Theory (Asher, 1977), and Multimedia Learning Theory (Mayer, 2001), in supporting English vocabulary learning. The discussion presented includes the positive perceptions that created challenges in implementing both methods, the gap between theory and practice, and teacher strategies in combining DST and TPR. Finally, a Synthesis of the findings is written for pedagogical implications and future recommendations.

1. Positive Perception of Utilizing DST and TPR

Utilizing Digital Storytelling and Total Physical Response (TPR) has resulted in positive perceptions from both teachers and students. The first positive perception is increased engagement and motivation. In a study by Weerasinghe et al. (2022), teachers consistently observed that DST engaged students' attention with the multimedia-based narratives and stimuli presented. Meanwhile, Firmansyah (2024) revealed that TPR, which involves physical movements by verbal instructions, encourages active student participation and reduces passivity in the classroom. Students enjoy the enjoyable learning process in class; they listen and demonstrate through movements, making the story conveyed less monotonous (Sulistyani, 2023).

In improving English vocabulary retention, the kinesthetic response of TPR strengthens vocabulary due to the physical and motoric sensations it creates (Asher, 1977; Rahimi & Yadollahi, 2017). Digital Storytelling and Total Physical Response (TPR) are similar in reaching students with

various needs. The visual elements that emerge in TPR help students with language limitations or reading abilities. Meanwhile, TPR supports students in movement (Clark & Paivio, 2020; Mayer, 2009). Based on this perception, both methods can help students increase the inclusiveness of English vocabulary learning.

2. Implementation Challenges in Utilizing Digital Storytelling and Total Physical Response

The benefits of utilizing DST and TPR have been perceived; however, in its implementation, it still faces practical obstacles ranging from limited environments to very minimal teacher preparation.

2.1 Infrastructure Limitations

Educational institutions or schools are sometimes located in underdeveloped areas. This is largely due to economic factors, which impact the infrastructure provided. Digital devices available at schools, such as computers, projectors, and internet access, are often in poor condition. This condition hinders teachers' ability to present multimedia-based stories or information (Sari & Nugroho, 2023; Alismail, 2021).

2.2 Teacher Readiness

Implementing both methods requires teachers who are proficient in TPR and possess selective skills related to digital storytelling content. Studies by Hernandes & Pérez (2021) and Pratiwi & Cahyono (2023) investigated the lack of training related to multimedia and digital pedagogy skills as a contributing factor.

2.3 Classroom Management and Time Constraints

The TPR method requires numerous active movement components to maintain discipline and ensure effective classroom management (Firmansyah, 2024). The material presented in Digital Storytelling and Total Physical Response requires considerable time, resulting in a mismatch between the curriculum schedule and teachers' workloads (Rahman et al., 2023).

Table 1: Implementation Challenges in Utilizing DST and TPR

Challenge Category	**Issues**	**Impact**
Technology	The lack of computer and Internet tools	The limited of Multimedia Utilization and Ineffectiveness of DST
Teacher Readiness	Training on Multimedia and TPR	The absences of confidents
Classroom Management	The trouble on managing activity and time	The Interferenced of learning and consistency of utilization of DST and TPR

2.4 The Utilization Gaps

A clear gap exists between theory and practice in research that hinders the implementation of DST and TPR. First, Dual Coding and Multimedia Learning create visual-verbal stimuli that result in less engaging material due to the imbalance between text and audio-visuals (Fathimah et al., 2025). Furthermore, regarding school conditions, not all can be utilized optimally due to limitations (Sari & Nugroho, 2023; Sadik, 2020). Due to this gap, the utilization of DST and TPR is challenging to maintain, which affects the long-term sustainability of these methods.

2.5 Teacher Strategies to Enhance DST and TPR in Teaching English Vocabulary

Responding to the challenges and gaps mentioned above, teachers employ innovative strategies to improve the feasibility and effectiveness of implementation. The first strategy is to use mixed methods with simple technology. Teachers can use flashcards or simple images as a substitute for Digital Storytelling (Hernandes & Peres, 2021). The second strategy is collaboration between teachers and the local community in sharing DST implementation and content.

Implementing this will reduce stress levels and provide quality teaching materials (Pratiwi & Cahyono, 2023). Furthermore, teachers can design the TPR method into a more extended DST session, allowing students to respond to movements without affecting classroom management. Finally, adapting the narrative or text in DST can be done to suit local culture and student interests to improve English vocabulary (Rahman et al., 2023).

3. Synthesis of Findings

This conceptual analysis confirms that utilizing Digital Storytelling and Total Physical Response (TPR) provides an effective integration to enhance English vocabulary instruction for young learners. Both use a combination of multimedia and kinaesthetic engagement, which aligns with the cognitive learning theory of TPR (Paivio, 1986; Mayer, 2001; Asher, 1977).

However, implementation challenges have been identified, primarily related to technology, teacher skills, and curriculum use. This necessitates teachers to adopt various innovative and implementable strategies to address these challenges.

CONCLUSION

1. Conclusion

The conceptual analysis in this study explores utilizing Digital Storytelling and Total Physical Response as effective methods for teaching English vocabulary to young learners. Vocabulary mastery is the main foundation for learning a language, both orally and in writing. Of the various learning methods applied to young learners, many children still find English a significant difficulty in learning a foreign language. This difficulty is caused by exposure that makes students less engaged and minimal multisensory learning experiences (Ismail et al., 2022; Elmahdi & Hezam, 2020).

The dual theory approach can overcome the difficulties of utilizing Digital Storytelling and Total Physical Response, combining multimedia-based narratives with physical movement. This approach, in line with the Dual Coding theory

(Paivio, 1986), which implements a combination of verbal and visual information to improve memory learning; Multimedia Learning Theory (Mayer, 2001), which can reduce cognitive load in presenting material; Meanwhile, the Total Physical Response Theory (Asher, 1977) suggests that movement or kinesthetics activities will strengthen language comprehension. These three existing theories form a pedagogical framework that can be used in traditional learning to become dynamic multimodal learning.

In this conceptual study, some findings show that combining Digital Storytelling and Total Physical Response produces several positive results, including increased motivation and memory in young learners. In addition, the realities in schools, such as technological limitations and teacher readiness, create a significant gap in the sustainability of this method. Therefore, when this method is implemented, it requires a strategic response from educators and policymakers to bridge the existing gap between theory and real classroom practice according to the needs of educational institutions.

2. Suggestion and Recommendations

2.1 Overcoming Technological Barriers and Infrastructure

One of the main challenges in utilizing DST and TPR is technology, especially in schools in underdeveloped areas (Alismail, 2021; Sari & Nugroho, 2023). When technology is a fundamental aspect in implementing these methods, but is not implemented optimally, the presentation of the methods becomes less interactive. To overcome this difficulty, educational authorities must pay more attention to the widespread distribution of digital infrastructure to support multimedia-based learning.

Furthermore, every educational institution must seek out or adopt storytelling-related learning media that can be used in situations that do not require an internet connection. This way, multimedia-based content can still be delivered to students. Furthermore, non-digital alternatives, such as picture books, flashcards, and audio materials that can be listened to directly

without needing more in-depth technology, should be provided. These alternative materials, referred to as low-tech, are a short-term solution to ensure students continue to experience digital methods without technology constraints (Hernandes & Peres, 2021).

2.2 Improving Training and Professional Development for Teachers

A teacher's competence and confidence can be key to successfully utilizing DST and TPR (Pratiwi & Cahyono, 2023). Some teachers recognize the value of multimedia-based teaching but lack adequate training on creating digital content and integrating these methods into the curriculum. This results in a lack of skills in designing and sustaining DST and TPR-based learning. One way to overcome this challenge is by building a community of teachers who share common goals regarding storytelling plans, practices, and resources. This mentoring can accelerate the development of skills and confidence within individuals and impact their target learners (Hernandes & Perez, 2021; Pratiwi & Cahyono, 2023).

2.3 Classroom Management Strategies and Curriculum Adaptation

Implementing DST and TPR sometimes faces difficulties aligning with the existing curriculum (Rahman et al., 2023). This requires flexibility in lesson planning so that teachers can allocate sufficient time for narrative and kinaesthetic activities without time constraints.

Educational policymakers should consider curriculum guidelines for multimedia learning approaches and support schools in adopting DST and TPR as official methods. Furthermore, teachers' strategies in classroom management must be clear, such as the following activities and developed rules (Firmansyah, 2024).

2.4 Driving Cultural Relevance into Learners-Centred Adaptation

In implementing the DST and TPR methods, teachers must involve students in the story adaptation process so they

can easily express their creativity. When students can express themselves, they will reflect their experiences and deep interests. This is in line with a study by Rahman et al. (2023) that DST can provide a sense of contextual learning in relevant stories appropriate to the surrounding culture. Furthermore, attention must be paid to student inclusivity to adapt kinaesthetic instructions in TPR to local cultural norms. The comfort created is a sensitive matter that can influence the process of acceptance of kinaesthetic learning by students (Clark & Paivio, 2020; Mayer, 2009).

The challenges identified in Utilizing DST and TPR in Teaching English Vocabulary require collaboration from all sides. Table 2 below outlines recommendations, along with responsibilities and possible actions.

Table 2 Recommendation: Utilizing DST and TPR

Recommendation	Stakeholder	Action Sample
Increasing access to digital multimedia and tools	The Government	Giving subvention related ICT
Organize Teacher Training	The Ministry of Education	Provide workshop about DST and TPR
Flexibility of Curriculum	Policymakers	Establish curriculum with cultural relevance
Teacher Collaboration	Teachers	Design teacher forums to share any platform related DST and TPR

3. Final Reflection

Utilizing Digital Storytelling and Total Physical Response provides a multidimensional approach to English vocabulary learning. By engaging the visual, auditory, and kinaesthetic senses, this approach transcends the limitations of traditional methods that rely on memorization. The advantages of Dual Coding, Multimedia Learning, and Physical Response reinforce vocabulary learned through motor skills.

This study emphasizes that the potential of DST and TPR lies not only in terms of vocabulary retention but also in student motivation and inclusiveness in learning.

Empirical research is urgently needed to provide long-term evaluations of the use of Digital Storytelling and Total Physical Response in various educational settings.

In conclusion, digital storytelling and total physical response to teach English vocabulary to young learners can transform education and language teaching. When applied wisely, these two methods will create an effective, enjoyable, and empowering English vocabulary learning experience.

REFERENCES

Al-Khatib, M., & Hassan, H. (2022). Integrating digital storytelling and Total Physical Response: A hybrid approach for enhancing vocabulary learning. *Journal of Language Teaching and Learning*, 48(2), 134–147.

Alismail, H. A. (2021). The impact of technology limitations on integrating digital tools in rural classrooms. *Educational Technology Review*, 39(3), 78–90.

Alismail, H. A. (2021). Challenges and opportunities of using technology in education in rural areas. *International Journal of Educational Research*, 35(2), 129–144.

Asher, J. J. (1977). *Learning another language through actions: The complete teacher's guidebook*. Sky Oaks Productions.

Asher, J. J. (2009). *Learning another language through actions (6th ed.)*. Sky Oaks Productions.

Chen, Y., Zhang, H., & Li, W. (2024). The effectiveness of multimedia-based narratives in vocabulary learning: Integrating digital storytelling with Total Physical Response (TPR). *Journal of Educational Technology*, 32(4), 220–235.

Clark, J., & Paivio, A. (2020). Dual Coding Theory: A framework for teaching and learning. *Cambridge University Press*.

Clark, J. L., & Paivio, A. (2020). The role of imagery in learning and memory: From theory to practice. *Cognitive Psychology*, 57(4), 341–358.

Dwijayanti, R., Santosa, S. B., & Suryani, N. (2025). Challenges in integrating digital storytelling with Total Physical

Response in vocabulary teaching for young learners. *International Journal of Language Teaching*, 41(3), 101–115.

Elmahdi, M. A., & Hezam, S. S. (2020). Language learning challenges: Understanding the role of vocabulary and grammar comprehension. *International Journal of Applied Linguistics*, 28(2), 145–159.

Firmansyah, I. (2024). The effectiveness of Total Physical Response (TPR) in improving English vocabulary mastery for young learners. *Journal of Language Education*, 42(1), 53–64.

Firmansyah, M. (2024). The effectiveness of Total Physical Response in early childhood language acquisition. *Journal of Language and Education*, 45(1), 43–60.

Fathimah, F., Zulkarnain, Z., & Husna, R. (2025). Dual Coding Theory and vocabulary acquisition in young learners. *International Journal of Educational Technology*, 18(1), 100–118.

Fathimah, M. N., Ali, S. S., & Murni, N. (2025). Enhancing vocabulary retention through multimedia: Integrating digital storytelling with visuals. *Journal of Educational Psychology*, 33(1), 49–61.

Hernandes, J., & Pérez, L. M. (2021). Teacher training for multimedia integration: Overcoming the barriers. *Journal of Educational Technology Development*, 12(3), 35–48.

Ismail, N. R., Abdullah, M. N., & Ahmad, R. (2022). The role of grammar and vocabulary in language acquisition. *Journal of Language and Communication*, 35(1), 25–40.

Lestariyana, T., & Widodo, M. (2022). Digital Storytelling: A tool for enhancing engagement and learning in language classrooms. *Indonesian Journal of Language and Education*, 29(2), 180–193.

Mayer, R. E. (2001). *Multimedia learning*. Cambridge University Press.

Mayer, R. E. (2009). *Multimedia learning (2nd ed.)*. Cambridge University Press.

Mayer, R. E. (2011). Applying the science of learning to multimedia instruction. *Educational Psychology Review*, 23(4), 405–424.

Nunan, D. (2018). *Teaching English to young learners*.

Cambridge University Press.
Paivio, A. (1986). *Mental representations: A dual coding approach*. Oxford University Press.
Pinter, A. (2017). *Teaching young language learners*. Oxford University Press.
Pratiwi, D. A., & Cahyono, B. Y. (2023). Professional development for educators: Enhancing skills in digital storytelling and Total Physical Response integration. *International Journal of Education and Pedagogy*, 46(3), 210–222.
Pratiwi, D., & Cahyono, B. (2023). Multimedia-based teaching strategies in ESL classrooms: A case study. *TESOL Journal*, 20(2), 209–220.
Rahimi, M., & Yadollahi, F. (2017). Total Physical Response as an effective method for young language learners. *Language Teaching Research*, 21(5), 456–471.
Rahimi, M., & Yadollahi, M. (2017). A comprehensive approach to vocabulary learning: Combining digital storytelling and Total Physical Response. *Language Teaching Research Quarterly*, 36(4), 215–229.
Rahman, A., Ismail, S., & Yadollahi, A. (2023). Digital storytelling in language classrooms: Enhancing engagement and learning outcomes. *Education and Information Technologies*, 28(4), 123–141.
Sari, A. R., & Nugroho, A. (2023). Challenges of using digital storytelling in Indonesian rural classrooms. *International Journal of Educational Development*, 49(3), 215–226.
Sadik, A. (2015). Teachers' preparation for integrating digital storytelling in language classrooms. *Language Teaching Research Journal*, 39(2), 98–110.
Sadik, A. (2020). Barriers to the effective use of technology in language learning: The case of rural schools. *Educational Technology Review*, 38(1), 47–59.
Siti, N. A., & Tadkiroatun, H. (2019). Total Physical Response (TPR): A methodology for early childhood language learning. *Journal of Early Childhood Education*, 41(2), 256–268.
Sulistiyani, D. (2023). The effect of Total Physical Response activities on student motivation and vocabulary acquisition. *International Journal of Language Teaching*,

44(2), 77–90.
Sulistyani, S. (2023). The impact of Total Physical Response on language development in elementary students. ELTT, 9(1), 204-210.