International Journal of Education and Practice
2025 Vol. 13, No. 4, pp. 1564-1579
ISSN(e): 2310-3868
ISSN(p): 2311-6897
DOI: 10.18488/61.v13i4.4475

The impact of animated video scaffolding integration in task-based learning methods on reading comprehension, reading motivation, reading anxiety, and reading persistence

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Article History
Received: 28 May 2025
Revised: 12 September 2025
Accepted: 2 October 2025
Published: 17 October 2025

Keywords
Animated video
Reading anxiety
Reading comprehension
Reading motivation
Reading persistence
Task-based instruction.

ABSTRACT

The purpose of this study was to determine how task-based education incorporating animated videos affects reading comprehension, motivation, anxiety, and reading persistence. Using a quasi-experiment, 250 primary school pupils in grades 4-6 participated in the study. The experimental group received an intervention of integrating animated videos into task-based instruction, while the control group received a conventional reading strategy intervention. Reading proficiency was assessed using the Oxford Quick Placement Test. The t-test, effect size test, and chi-square were the data analysis methods employed in this investigation. The results showed that the intervention of integrating animated videos into task-based instruction had a significant impact on reading motivation, language learning anxiety, persistence, and reading ability. Reading comprehension ability increased significantly because the use of animated video scaffolding in task-based instruction facilitated students in recognizing various language features needed in reading activities. The reduction in reading anxiety was caused by animated video scaffolding and interactive learning, which can foster a positive psychological state that reduces anxiety. Therefore, the use of animated video scaffolding in task-based instruction methods not only increases reading comprehension activities but also contributes significantly to reading psychology. This study implies that teachers and educational practitioners should consider integrating multimodal scaffolding to improve reading comprehension skills.

Contribution/Originality: This study contributes to the alternative use of multimodal scaffolding, combining animated videos and task-based instruction, which can enhance the reading comprehension skills of young students. The originality of this research lies in integrating animated video scaffolding with task-based instruction in reading education to improve comprehension skills, particularly for early-age learners.

1. INTRODUCTION

Reading ability is a core skill needed by students to obtain various information and knowledge. This is what drives teachers to present various learning activities to facilitate students in developing their long-term and short-term reading skills (Connor et al., 2019; Watter, Copley, & Finch, 2022). Through the right methods and media, students' reading skills can be developed. Training several components, such as vocabulary and grammatical structures, in engaging multimodal formats like animated videos can attract early-age students (Bouck, Adrea, Erin, & Flanagan, 2021; Sabatini, O'Reilly, Weeks, & Wang, 2020). The use of methods and media that are engaging for early-age students can not only improve reading skills but also influence other factors that support students' reading abilities, such as motivation, persistence, and reading anxiety (Butterfuss, Kendeou, McMaster, Orcutt, & Bulut, 2021; Sharma & Giannakos, 2024). Task-based instruction is one of the effective language teaching methods in various

countries. Through this method, teachers can make students active learners in exploring the meaning and use of language in various contexts (Dixon & Oakhill, 2024; Joensuu et al., 2024). Each reading teaching method has different goals, but all tasks presented must be oriented towards meaning and communication that facilitate students in achieving these reading goals. In teaching reading, task-based instruction provides benefits in practical training that is useful for practicing reading skills without worry (Alazemi, 2024; Laurent-Prophete, Greer, & Yurick, 2024). In addition, authentic texts used as reading materials will provide opportunities for students to communicate with their friends.

Reading comprehension is the ability of readers to understand the contents of a text by utilizing previous knowledge to build new meanings within the text (Kavani & Amjadiparvar, 2018). This reading ability requires dynamic communication interactions between readers and writers. Students' reading comprehension abilities can be enhanced through a variety of instructional strategies. Task-based instruction is one of them; it can help pupils obtain thorough information and boost their confidence. The focus of this method is understanding the essence of the reading, which is built from the results of the interaction between the reader and the text (Mohammadi, Saeidi, & Ahangari, 2020; Watter et al., 2022). In addition to reading comprehension, this task-based learning approach focuses on reducing language anxiety in a supportive environment. Therefore, task-based learning is an effective strategy for improving language skills and reading comprehension overall. There are two types of tasks used in instruction: focused activities and unfocused tasks (Connor et al., 2019; Leiss, Plath, & Schwippert, 2019). Focused tasks are the main part of language acquisition or implicit tasks, allowing students to learn various types of information. Unfocused tasks are activities that encourage students to participate in meaning-making. These unfocused tasks develop additional skills necessary for reading comprehension, such as motivation, resilience, and managing anxiety related to reading (Nasim, Mohamed, Anwar, Ishtiaq, & Mujeeba, 2024; Sabatini et al., 2020).

There are several psychological aspects that support the development of reading comprehension skills, including motivation, resilience, and reading anxiety (Bouck et al., 2021; Nasim et al., 2024). Motivation plays an important role in achieving reading goals. Motivation and resilience are among the determining factors in individual cognitive differences. Individuals who are more resilient in honing their language skills tend to have better cognitive and language abilities because they are more enthusiastic about practicing (Davis, McPartland, Pryseski, & Kim, 2018; Sharma & Giannakos, 2024). Furthermore, other psychological aspects that determine reading ability are fear, stress, and discomfort or often referred to as language anxiety when learning reading skills will affect the level of student reading success (Dixon & Oakhill, 2024; Kazemi, Bagheri, & Rassaei, 2020). This language anxiety can significantly hinder the acquisition of reading skills, self-confidence, and student motivation. Language anxiety arises from various factors, namely, fear of mistakes, being evaluated by others, and feelings of inadequacy (Joensuu et al., 2024; Noor, 2021). Language anxiety often leads students to avoid participation in the language learning process. This aligns with the multidimensional perspective, which suggests that individual characteristics, class dynamics, and cultural variables all influence an individual's multifaceted nature (Tibken et al., 2022; Villanueva, 2022). Language anxiety does not only appear in adult students but is also felt by early-age students. To overcome language anxiety in the reading process of early-age students, a learning environment is needed that supports the development of reading skills and student psychology (Ritchey & List, 2021; Soto et al., 2019). One of the uses of multimodal approaches is through animated videos. These multimodal elements can be incorporated into task-based reading instructions (Ruotsalainen, Pakarinen, Poikkeus, & Lerkkanen, 2024). Animated video technology is also believed to be able to make early-age students feel more comfortable in the learning process so that reading anxiety can be reduced. In addition, this technology can increase reading motivation, which will directly contribute to students' reading comprehension skills and other psychological aspects (Brooks, Warmington, & Thomson, 2025; García, Sánchez, Calvo, & Cain, 2024).

There are several previous studies that investigate reading comprehension skills, including task-based instructions integrated into scientific procedures that can improve the ability to understand scientific texts at the high

school level (Ballenghein & Lachaud, 2024; Wang & Zhang, 2025). In addition, students' reading comprehension can also be improved using the silent reading method. This method emphasizes fast silent reading to obtain information quickly and comprehensively (Karimi & Dastgoshadeh, 2018; Kavani & Amjadiparvar, 2018). Furthermore, another study revealed that task-based instructions integrated into blended learning can also improve reading comprehension skills in literary novel texts (Amirjalili & Jabbari, 2018; Habók & Magyar, 2019). This method is provided both offline and online so that students can do it at home. Each focus of the text section includes instructional guidance to ensure students gain a comprehensive understanding of the novel text. This study differs from previous research; the key distinction lies in the use of multimodal video animation scaffolding integrated into task-based instruction. Additionally, the study focuses on early-age students, who naturally have different characteristics. Besides reading comprehension skills, the study also examines psychological factors such as motivation, resilience, and reading comprehension anxiety, which influence the development of reading abilities. Based on this reasoning, the researcher has developed several study topics, including the following.

a) What is the impact of integrating video animation scaffolding in task-based instruction methods on reading comprehension skills?
b) What is the impact of integrating video animation scaffolding in task-based instruction methods on reading motivation?
c) What is the impact of integrating video animation scaffolding in task-based instruction methods on reading anxiety? What is the impact of integrating video animation scaffolding in task-based instruction methods on reading resilience?

2. LITERATURE REVIEW

2.1. Task-Based Instruction

Task-based instruction is a teaching method commonly used in language learning that emphasizes the provision of communicative tasks and sharing ideas to achieve learning goals.

This method significantly contributes to reading skills. It integrates various tasks with multimodal scaffolding, differing from activities that focus solely on form. Task-based work is more beneficial for students and encourages them to carry out learning actions clearly. The tasks are aligned with students' real-life contexts, making early reading materials appropriate for their readability levels. Some linguists define tasks differently; initially, tasks are a series of jobs that must be completed to derive benefits. Additionally, tasks are classified as instructional or real-world activities. Real-world tasks are those that must be accomplished outside the classroom, while pedagogical tasks are activities completed within it. Activities requiring students to interact with others to complete a task are also considered tasks. For students to perform well, they must understand the primary goal of the task. In reading instruction, tasks are activities aimed at understanding the meaning of the text, modifying its language, and achieving comprehensive comprehension results.

Three phases comprise the framework of the task-based instruction method: achievement focus, task cycle, and pre-task. Providing a general overview of the work is known as pre-tasking; the task, planning, and delivery are part of the task cycle; and analysis and practice are associated with achievement focus. During the pre-task phase, activities include topic identification and introduction. Instructors facilitate students in recalling their knowledge related to the subject, and students can also brainstorm.

In this phase, teachers can use various scaffolds to help students understand terms, words, phrases, or clauses that will be used to search for information in the text. Furthermore, in the task cycle phase, students work on assignments either individually, in pairs, or in groups. Teachers plan, guide, and provide input based on students' reading results. Analysis is conducted on each language feature within the task cycle comprehensively. In this critical analysis phase, teachers emphasize language features that are essential for reading comprehension.

2.2. Reading Comprehension

The process of creating meaning through engagement with a book is known as reading comprehension. Clarifying the meaning conveyed in the text is one aspect of reading learning, which aims to achieve comprehensive knowledge. This reading comprehension results from integrating understanding of several parts of ideas in reading activities. This process requires a mental model that represents previous knowledge, classifies reading results, and acts. Understanding written and spoken language is one of the functions of the cognitive system. Perception and prediction have a strong relationship in the process of reading comprehension. Prediction requires questions for consideration of answers to produce perception. In facilitating reading comprehension, teachers focus on four main aspects: authentic text, concentration on understanding, opportunities for collaboration, and opportunities for discussion. The indicator of achievement of reading comprehension is the creation of meaning. Some aspects that contribute to the creation of meaning are intention, previous knowledge, and language structure. Understanding is an awareness of the communicative environment and the purpose of the text. Understanding becomes a means of learning skills in language, not an end goal. Learning language skills requires creative, complex, and dynamic abilities that are integrated into the learning process. Reading skills involve activities to solve problems. Students who are not able to read well will not be able to understand the contents of the text. Additionally, the reading process is slower, with less understanding, and does not meet the demands of comprehension. Understanding what is read, including discussions about reading, is called the concept of creating meaning. Elements that must be considered in creating meaning include the relevant domain and a series of sensory processes. These elements are essential in developing reading skills.

2.3. Reading Motivation

The feeling that motivates people to read more or even avoid reading is known as reading motivation. Reading motivation can be defined as an objective, principle, or concept related to the topic, approach, and outcomes of reading. Reading motivation is multimodal because it involves various modes to enhance it. It has several dimensions, namely self-efficacy, intrinsic and extrinsic motivation, learning goals, and social aspects. Models of intrinsic and extrinsic motivation have been developed. Extrinsic motivation is driven by values, compliance, competitiveness, social factors, and recognition.

Intrinsic motivation is fostered by challenges, curiosity, and participation. Experts have identified that reading motivation can be categorized into three main types: extrinsic motivation, intrinsic motivation, and reading efficacy. This variation depends on the individual's environment. The level of reading comprehension in language learning is significantly affected by reading motivation. Researchers have not paid much attention to this aspect of reading motivation. Reading comprehension skills are linked to intrinsic reading motivation, which is supported by additional research demonstrating the predictive importance of external reading motivation on students' reading comprehension abilities.

2.4. Language Anxiety

One of the factors that determine students' success in reading is language anxiety. Anxiety is tension, worry, and apprehension caused by intrinsic and extrinsic factors. This language anxiety is also caused by temporary conditions or personality traits.

Another term for language anxiety is a complex combination of various elements, including self-perception, emotional beliefs, and behaviors that emerge during the learning process. Language anxiety related to the language learning process can arise from both artificial and natural contexts. There are three interrelated types of anxiety in reading learning: communication fear, negative evaluation concerns, and test anxiety. The degree of concern or anxiety is correlated with an individual's current or potential social interactions.

2.5. Reading Resilience

Resilience is a continuous and persistent drive to achieve long-term goals. This resilience can predict an individual's IQ and SAT scores. In addition to talent, resilience can also predict other performance indicators and plays an important role in student success. Persistence is a fundamental attribute needed to achieve high results in various language skills. The relationship between individual interest and diligence are two fundamental aspects that create resilience. Additionally, age also affects reading resilience. The more mature the individual, the more the student will appreciate hard work and persistence in achieving the goal of learning to read. Persistence is not related to gender, race, or academic ability. Therefore, resilience is not related to intelligence or physical health. Resilience or persistence is different from the desire to succeed. Persistence is the tendency of students to continue trying to complete difficult tasks within their abilities and to be persistent. Furthermore, people who are persistent are also able to set long-term goals for themselves and stick to their beliefs when facing difficulties and challenges. The difference between persistence and motivation is the loyalty or commitment of students in achieving educational goals when facing failure or difficulty. Self-control is one of the subcomponents that contribute significantly to persistence. Persistence is also different from self-control; the difference lies in the nature of the goal. Self-control involves aspects of students' short-term goals, while persistence focuses on long-term goals. Students who are persistent stick to their goals for a long time even though they experience failure or difficulty in the process.

3. METHOD

3.1. Design and Participants

This study examined the effects of incorporating animated video scaffolding into task-based educational methods on reading comprehension abilities, as well as other psychological factors, including motivation, anxiety, and reading persistence, using a quasi-experimental research design. The study involved 250 elementary school students in grades 4-6, with an age range of 9-12 years. Participants came from several schools, including Al Iḥyā Elementary School, Meruyung State Elementary School, and Muhammadiyah Elementary School. The experimental group received an intervention involving the integration of animated video scaffolding into task-based instruction methods, while the control group received a traditional instructional approach. To prevent potential research bias, participants were selected to ensure appropriate characteristics, such as initial abilities and demographic factors. Ethical considerations were addressed by providing a consent form for students to participate voluntarily, with parental consent. The study also obtained permission from the participating schools and Prof. Dr. Uhamka University, the author's affiliated institution.

3.2. Research Instruments

This study used several instruments to measure reading skills and assessments of anxiety, motivation, and reading persistence in early-age students.

3.2.1. Reading Ability Assessment

The level of reading comprehension ability was assessed using a selected reading textbook for early-age students. This test contains 25 items, including multiple-choice, true/false, short-answer, and essay questions. The validity of this instrument was tested through an empirical assessment on the same group of participants to measure construct accuracy. The test results demonstrated reliability that met the criteria, with a Cronbach's alpha value of 0.92. Based on this value, the instrument used can be considered suitable for research purposes.

3.2.2. Assessment of Anxiety, Motivation, and Reading Persistence

Students' reading anxiety is measured using Spielberger's State-Trait Anxiety Inventory (STAI) scale (Spielberger, 1983). Using the Wigfield and Guthrie (1995) reading motivation questionnaire (MRQ), students'

motivation to read was evaluated. This measurement already has strong psychometric properties and is widely recognized. It is also effective in assessing motivational constructs. Furthermore, students' reading persistence was assessed using the persistence scale from Duckworth, Peterson, Matthews, and Kelly (2007). All of these instruments were used in both the pretest and posttest phases.

3.3. Data Collection Procedure

Data collection was conducted using all instruments employed in this study. Reading comprehension ability was assessed using the STAI scale from Spielberger (1983). Reading motivation was assessed using the Reading Motivation Questionnaire (MRQ) from Wigfield and Guthrie (1995), and persistence was assessed using the Duckworth et al. (2007) scale. The initial assessment of students' abilities and psychological conditions was conducted during the pretest phase before the intervention.

During the intervention phase, the researcher designed an animated video introduced in the pre-task phase to familiarize students with several language features to be explored in early-age learners. Additionally, the tasks were designed to be communicative and meaningful to enhance students' reading comprehension skills. All tasks encouraged active and authentic language use, which could help improve reading comprehension. Students engaged in a series of task-based activities involving various texts, including articles, newspapers, narrative stories, and academic texts. These activities focused on reading comprehension, critical thinking, and student interaction. The animated video-based instruction method facilitated students' understanding of language features necessary for reading comprehension.

This method equipped students to handle reading comprehension tasks effectively. Several interactive sessions were conducted, encouraging collaboration, idea sharing, and feedback. Activities included watching animated video scaffolds, group discussions, collaborative analysis, and material review. All activities aimed to promote reading strategies, critical thinking, and collaborative discussion. The teacher acted as a guide, providing clear instructions at each stage. In the final stage, the teacher assessed students' reading abilities through various tasks, evaluating comprehension, motivation, anxiety, and perseverance. The control group received traditional reading instruction, including lectures, discussions, and textbook exercises following independent reading activities, with no additional task instructions.

3.4. Data Analysis

Data on reading comprehension ability, motivation, anxiety, and reading persistence were analyzed using quantitative methods. The data analysis included descriptive statistics, which presented frequencies and percentages to provide an overview of the distribution of participants across different aspects. Inferential statistical analysis was also employed to examine differences between variables within each group. A chi-square test was conducted to assess the relationship between motivation, anxiety, and reading persistence variables, as well as their contribution to reading comprehension ability. Additionally, an independent samples t-test with a significance level of 0.05 was used to evaluate differences in intervention outcomes for each group's reading comprehension skills. Furthermore, an intervention effect test was performed, and data were interpreted at the conclusion of the analysis.

3.5. Research Ethics Considerations

All participants in the study participated voluntarily. Participants filled out a consent form indicating their willingness to participate. All data used in the study are anonymous and used solely for research purposes. This study received permission from the participating schools, namely Al Ihya Elementary School, Meruyung State Elementary School, and Muhammadiyah Elementary School. Additionally, the Ethics Committee of Muhammadiyah Prof. Hamka University, Indonesia, approved this study on October 4, 2024 (Ref. No. 2014/B.04.02/2024).

4. RESULTS

4.1. The Impact of Intervention on Comprehension of Reading

To evaluate the effect of incorporating animated video scaffolding in task-based teaching methods on reading comprehension skills, an independent samples t-test was performed. Nonetheless, prior to the analysis, a normality test of the data was conducted using the one-sample Kolmogorov–Smirnov (K-S) test. The outcomes of the normality test can be found in Table 1. Additionally, Table 2 displays the descriptive analysis of the two groups. During the pretest phase, both groups exhibited identical reading comprehension skills, with a Mean value of 4.583, SD of 1.764, compared to a Mean of 4.685, SD of 1.42. Nevertheless, during the posttest phase, the experimental group demonstrated a notably superior reading comprehension skill compared to the control group, with values (Mean = 11.357, SD = 5.784 vs. Mean = 5.437, SD = 1.745). Table 3 displays the variation in reading comprehension skills between the two groups during the pretest and posttest stages. Furthermore, according to the outcomes of the homogeneity test using the Levene test, the values of the two groups during the pretest phase indicated the same value since the sig. value exceeds ($p > 0.05$). This is further confirmed by the t-test, indicating that the reading comprehension abilities of both groups during the pretest phase are equivalent, with values of ($F = 0.189$, $df = 248$, $p > 0.05$, Average difference = 0.957). Nonetheless, according to the t-test outcomes, the experimental group demonstrated a more considerable improvement in reading comprehension skills compared to the control group, with values of ($F = 23.168$, $df = 248$, $p < 0.05$, MD= 7.352), and the effect size is (0.45). According to Cohen (1988), eta square data, 0.01 indicates a small effect, 0.06 represents a medium effect, and 0.14 or above signifies a large effect.

Table 1. Normality test using the Kolmogorov–Smirnov sample test.

Component	Measurement	Group	Pretest of reading	Posttest of reading
Normal parameters	Mean	1.563	4.684	8.468
	SD	0.514	1.935	5.756
Most extreme differences	Absolute	0.342	0.173	0.185
	Positive	0.342	0.173	0.185
	Negative	− 0.342	− 0.120	− 0.116
Kolmogorov–Smirnov Z		3.425	1.150	1.356
Asymptotic Significance (2-tailed)		0.000	0.152	0.092

Table 2. Results of descriptive analysis of the impact of the intervention on reading comprehension levels.

Phase	Group	N	M	SD	Std. error mean
Pretest of reading	Experiment	125	4.583	1.764	0.457
	Control	125	4.685	1.642	0.478
Posttest of reading	Experiment	125	11.357	5.784	0.835
	Control	125	5.437	1.745	0.458

Table 3. Independent sample test of the impact of intervention on reading comprehension ability levels.

Phase	Measurement	Levene's test for equality of variances		t-test for equality of means						
		F	Sig.	t	df	Sig.	Mean difference	Std. error difference	95% confidence interval of the difference	
									Lower	Upper
Reading pretest	Equal variances assumed	0.189	0.756	− 0.164	248	0.957	− 0.0814	0.635	− 1.142	0.985
	Equal variances not assumed			− 0.164	48.784	0.956	− 0.0814	0.635	− 1.142	0.985
Reading posttest	Equal variances assumed	24.275	0.346	7.358	248	0.000	7.352	0.976	5.342	9.258
	Equal variances not assumed			7.368	32.268	0.000	7.3152	0.976	5.342	9.258

4.2. The Impact of Intervention on Reading Motivation

A chi-square test for group independence was performed to evaluate the effect of incorporating animated video scaffolding into the task-based instructional approach on reading motivation. The results of the test can be found in Table 4. According to the test outcomes, during the pretest stage, no more than 50% of the samples exhibited strong reading motivation in both groups shown in Table 4. Nevertheless, during the post-test phase, participants in the experimental group demonstrated an increase in the number of students exhibiting high motivation. More than half of all students showed an increase in their high reading motivation. The findings from the examination of reading motivation during the posttest phase are shown in Tables 5 and 6. In comparison to the control group, there was no notable difference in the number of students who felt highly motivated to read. Table 7shows the disparity in reading motivation conditions between the experimental and control groups. According to the analysis findings, the number of students exhibiting strong reading motivation increased significantly in the posttest stage, with a value of ($df = 1$, $p < 0.05$). Furthermore, the implementation of animated video scaffolding within the task-based instruction approach on reading motivation demonstrated a significant effect size, with a Cramer's V value of 0.520. This value indicates that the impact of the intervention is substantial.

Table 4. Cross-table of reading motivation levels in the pretest phase.

Group	Motivation time		Total
	Motivated	Unmotivated	
Experiment	12	113	125
Control	10	115	125

Table 5. Results of the chi-square test of reading motivation in the pretest phase.

Measurement	Value	df	Asymp. sig.	Exact sig.	Exact sig.
Chi-squared Pearson	0.148	1	0.825		
Continuity correction	0.001	1	1.002		
Probability ratio	0.148	1	0.824		
Fisher's precise test				1.000	0.524
Linear-by-linear correlation	0.144	1	0.828		
N	250				

Table 6. Cross-table of the impact of intervention on reading motivation in the posttest phase.

Group	Motivation time		Total
	Motivated	Unmotivated	
Experiment	120	5	125
Control	25	100	125

Table 7. Results of the chi-square test of the impact of the intervention on reading motivation in the post-test phase.

Measurement	Value	df	Asymp. sig.	Exact sig.	Exact sig.
Chi-squared Pearson	14.634	1	0.000		
Continuity correction	12.640	1	0.002		
Probability ratio	15.315	1	0.000		
Fisher's exact test				0.002	0.000
Linear-by-linear correlation	14.357	1	0.000		
N	250				

4.3. The Impact of Intervention on Reading Anxiety

Subsequently, to evaluate the effect of incorporating animated video scaffolding into the task-based instruction approach on reading anxiety, a chi-square test was performed. The findings of the analysis are depicted in Table 8. According to the analysis findings, the quantity of students with high reading anxiety and low reading anxiety in both the experimental and control groups was nearly identical. The findings from the analysis of reading anxiety levels during the pretest phase for both groups are shown in Tables 9 and 10. Nonetheless, during the posttest phase,

the count of students with elevated anxiety levels exhibited a significant decline. The quantity of students with low anxiety levels grew. Nonetheless, in the control group, there was no significant change in the count of students exhibiting high and low anxiety levels. The findings from the examination of the variations in reading anxiety levels between the experimental and control groups are shown in Table 11. According to the findings from the analysis of anxiety level differences between the two groups, it was notably significant during the posttest phase, with a value of ($df = 1$, $p < 0.05$). The effect size is nearly large (Cramer's $V = 0.546$).

Table 8. Cross table of reading anxiety levels in the pretest phase.

Group	Anxiety time		Total
	High anxiety	Low anxiety	
Experiment	115	10	125
Control	118	7	125

Table 9. Results of the chi-square test of reading anxiety in the pretest phase.

Measurement	Value	df	Asymp. sig.	Exact sig.	Exact sig.
Chi-squared Pearson	0.096	1	0.860		
Continuity correction	0.000	1	1.000		
Probability ratio	0.096	1	0.862		
Fisher's precise test				1.000	0.502
Linear-by-linear correlation	0.094	1	0.878		
N	250				

Table 10. Cross-table of the impact of intervention on reading anxiety levels in the posttest phase.

Group	Anxiety time		Total
	High anxiety	Low anxiety	
Experiment	4	121	125
Control	115	10	125

Table 11. Chi square test of the impact of intervention on reading anxiety in the posttest phase.

Measurement	Value	df	Asymp. sig.	Exact sig.	Exact sig.
Chi-squared Pearson	12.758	1	0.001		
Continuity correction	10.842	1	0.003		
Probability ratio	13.436	1	0.000		
Fisher's precise test				0.001	0.002
Linear-by-linear correlation	12.583	1	0.001		
N	250				

4.4. The Impact of Intervention on Reading Persistence

A chi-square test was performed to evaluate the effect of the intervention on students' reading persistence. The findings of the analysis are shown in Table 12. During the pretest stage, only a small number of students exhibited strong reading perseverance in both experimental groups. Nonetheless, during the posttest stage, over fifty percent of the students demonstrated exceptionally strong reading perseverance. The experimental group exhibited a more pronounced increase in the number of students demonstrating reading persistence compared to the control group. The findings from the analysis of reading persistence in both groups during the posttest phase are shown in Tables 13 and 14. During the posttest phase, the experimental group's reading persistence exhibited a notable rise in the posttest phase, indicated by a value of ($df = 1$, $p < 0.05$) and an effect size of (Cramer's $V = 0.536$). Table 15 shows that the variation of reading persistence level between the experimental and control groups is shown in According to the findings of the analysis of the difference in reading persistence level between the two groups, the difference was very significant during the post-test phase with a value of ($df = 1$, $p < 0.05$). The effect size was almost large (Cramer's $V = 0.546$).

Table 12. Cross-table of reading persistence levels in the pretest phase.

Group	Grit time		Total
	Gritty	Non-gritty	
Experiment	8	117	125
Control	9	116	125

Table 13. Results of the chi-square test of reading persistence levels in the pretest phase.

Measurement	Value	df	Asymp. sig.	Exact sig.	Exact sig.
Chi-squared Pearson	0.178	1	0.675		
Continuity correction	0.000	1	1.000		
Probability ratio	0.175	1	0.676		
Fisher's precise test				1.000	0.502
Linear-by-linear correlation	0.173	1	0.695		
N	250				

Table 14. Cross table of the impact of intervention on reading persistence in the post-test phase.

Group	Grit time		Total
	Gritty	Non-gritty	
Experiment	123	2	125
Control	10	120	125

Table 15. Results of the chi-square test on the impact of the intervention on reading persistence during the posttest phase.

Measurement	Value	df	Asymp. sig.	Exact sig.	Exact sig.
Chi-squared Pearson	13.607	1	0.000		
Continuity correction	11.594	1	0.001		
Probability ratio	14.327	1	0.000		
Fisher's precise test				0.001	0.000
Linear-by-linear correlation	13.335	1	0.000		
N	250				

5. DISCUSSION

The results of the study indicate that the integration of animated video scaffolding in task-based instruction teaching methods can improve reading comprehension skills. Additionally, the intervention can increase reading motivation, reduce reading anxiety, and enhance students' reading persistence. Therefore, the intervention not only improves reading comprehension skills but also supports the development of psychological aspects that facilitate reading development, such as motivation, persistence, and reduced reading anxiety. These findings align with previous studies showing that task-based instruction can enhance students' reading comprehension skills (Barnes et al., 2024; Karakolidis, O'Leary, & Scully, 2021). This increase occurs because the animated video scaffolding introduces several language features in advance that are needed in the reading comprehension stage. Additionally, the learning process that presents task-based instructions in various individual activities, collaborations, and discussions can improve students' reading comprehension skills (Bouck et al., 2021; Sharma & Giannakos, 2024). This finding is also reinforced by the use of the right learning process and scaffolding, which not only facilitate students in achieving good learning outcomes but also enable them to acquire long-term skills (Davis et al., 2018; Kazemi et al., 2020).

The next finding is that the integration of animated video scaffolding in the task-based instruction method can increase reading motivation more than traditional reading interventions. Based on the results of the effect test, it was also found that the intervention had a significant effect on students' reading motivation. The results of this study demonstrate that the intervention is highly effective in increasing the reading motivation of early-age students. This increase in motivation occurs because animated video scaffolding can enhance the appeal of early-age students in understanding each reading. Additionally, students' reading motivation also increases because of task instructions that encourage students to engage in various learning activities both individually and collaboratively, which not only

improve reading comprehension skills but also motivate students to read and actively participate (Joensuu et al., 2024; Kwakkel, Droop, Verhoeven, & Segers, 2024). This finding is consistent with other research that demonstrates that multimodal scaffolding and task-based instruction can boost early-age reading motivation because the activities are age-appropriate and can hold children's attention (Bello-Bravo, Abdoulaye, Ibrahim, & Pittendrigh, 2018; Dixon & Oakhill, 2024).

The integration of animated video scaffolding in task-based instruction methods significantly contributed to reducing students' reading anxiety. This reduction occurs because the intervention creates a learning environment that does not cause students to feel afraid or worried about their reading abilities. An environment integrated with animated videos makes young students feel happy to participate in the learning process. This animated video scaffolding not only helps students understand various language features and vocabulary necessary for reading comprehension but also fosters a positive psychological state that can reduce anxiety during reading activities. These findings align with previous studies, indicating that multimodal scaffolding in language learning can better promote a positive psychology, including reducing students' language anxiety (Joseph, Ross, Xia, Amspaugh, & Accurso, 2023; Noor, 2021). Language anxiety is caused by various factors, such as worry or fear, negative evaluation, unpleasant learning processes, and feelings of difficulty in the learning process (Tibken et al., 2022; Villanueva, 2022). All of these anxieties can be reduced or eliminated by selecting appropriate and enjoyable scaffolding and teaching methods. In addition, the findings of this study are also reinforced by the theory of language learning, which shows that language learning psychology is greatly influenced by the use of scaffolding in the learning process (Ritchey & List, 2021; Soto et al., 2019).

The incorporation of animated video scaffolding into the task-based instruction teaching approach has been found to enhance students' reading persistence. Greater perseverance from students results in increased motivation, perseverance, and ultimately improved reading abilities. Summarizing, analyzing, and discussing are just a few of the learning exercises that motivate students to actively engage with the text and their classmates, which leads to increased reading perseverance. This contrasts with conventional instruction that primarily focuses on reading comprehension strategies through individual practice and lectures. This learning environment can support the development of students' reading comprehension skills. These findings are reinforced by previous studies indicating that a language learning process that encourages students' active involvement in various learning activities can increase their motivation for language learning (Direkci, Canbulat, & Nalçacigil, 2025; Ruotsalainen et al., 2024). Through this learning process, it is believed that students will find relevance and autonomy in their learning. Active interaction in the task-based instruction method can also reduce reading anxiety because this method promotes interactions that can lessen the fear of making mistakes. Students' persistence in solving problems in the given tasks will increase resilience and continuous effort in reading comprehension activities (Alvares De Azevedo & Davidson, 2024; García et al., 2024).

The results of this study are generally in line with the affective hypothesis of Krashen (1985) that the integration of animated video scaffolding and task-based instruction methods that provide authentic and meaningful tasks is considered effective in reducing students' reading anxiety. Interactive learning activities contribute to the formation of a conducive learning process that can reduce students' reading anxiety levels. A supportive and engaging learning environment, an affective filter, can reduce and eliminate emotional factors that inhibit language acquisition. According to other research, task-based activities might boost students' intrinsic motivation to read by promoting autonomy, relevance, and engagement (Ahmed, Cuba Carbajal, Zuta, & Bayat, 2023; Alazemi, 2024). Finally, task-based instruction that encourages persistence, problem solving, and active participation can contribute significantly to students' reading persistence. These findings confirm that creating a classroom context that supports students' positive emotions will facilitate effective language learning (Ballenghein & Lachaud, 2024; Sabag-Shushan, Katzir, & Kanat-Maymon, 2024). This study implies that teachers and education practitioners should consider integrating the

use of multimodal scaffolding and task-based activities into the language learning curriculum to increase students' engagement with texts and their peers in order to improve reading comprehension skills.

6. CONCLUSION

The integration of animated video scaffolding in task-based instruction methods can improve students' reading comprehension skills, reading motivation, reading persistence, and reduce reading anxiety. The use of animated video scaffolding in task-based instruction methods can facilitate students in recognizing various language features needed in their reading activities. The increase in reading motivation occurs because animated video scaffolding can enhance the appeal of early-age students in understanding each reading. Additionally, task-based activities can promote autonomy, relevance, and participation all of which have a substantial positive impact on students' intrinsic reading motivation. As a result, students' reading motivation also increases. The increase in reading persistence occurs because of a series of learning activities that encourage students to actively interact with the text and with their peers, such as summarizing, analyzing, and discussing. Furthermore, this animated video scaffolding not only facilitates students in understanding various language features such as vocabulary, phrases, and clauses needed for reading comprehension but also helps develop a positive psychology that can reduce students' anxiety in participating in reading activities. This study implies that teachers and education practitioners should consider integrating multimodal scaffolding and task-based activities into the language learning curriculum to increase students' engagement with the text and their peers, thereby improving reading comprehension skills. This study has several limitations, including focusing only on reading comprehension skills, samples consisting of early-age students, analysis primarily based on quantitative data, no consideration of gender differences, and psychological aspects supporting reading development limited to motivation, anxiety, and reading persistence. The researcher recommends testing interventions on other language skills, such as writing, including middle school students, supplementing data analysis with qualitative methods, conducting gender variable analysis, and exploring other psychological factors that may contribute to improving reading comprehension skills.

Funding: This study received no specific financial support.
Institutional Review Board Statement: The Ethical Committee of the Universitas Muhammadiyah Prof. Dr. Hamka, Indonesia, has granted approval for this study on 4 October 2024 (Ref. No. 2014/B.04.02/2024).
Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.
Competing Interests: The authors declare that they have no competing interests.
Authors' Contributions: All authors contributed equally to the conception and design of the study. All authors have read and agreed to the published version of the manuscript

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