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THE EFFECT OF CARTOON ANIMATION INTEGRATED WITH TPR ON STUDENTS' VOCABULARY MASTERY AND LEARNING MOTIVATION AT SD ISLAM KHAIRA UMMAH

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Abstract: Students still face difficulties in vocabulary mastery and learning motivation, indicating the need for more engaging instructional strategies. This study aimed to examine the effect of cartoon animation integrated with Total Physical Response (TPR) on students' vocabulary mastery and learning motivation. This research employed a quasi-experimental pre- and post-test design. The study population consisted of 101 third-grade students at SD Islam Khaira Ummah. The sample included 22 students from class 3C as the control group and 24 students from class 3D as the experimental group. The experimental group was taught using cartoon animation integrated with TPR, while the control group received conventional instruction. A vocabulary test and a learning motivation questionnaire were used to collect the data. The results showed that the experimental group achieved a higher mean post-test score in vocabulary mastery (M = 86.25) compared to the control group (M = 80.00), with a statistically significant difference (t = 2.204, df = 44, p = 0.033). Similarly, the experimental group demonstrated higher learning motivation (M = 82.67) than the control group (M = 76.50), with a significant difference (t = 3.226, df = 44, p = 0.020). These findings indicate that integrating cartoon animation with TPR can positively influence students' vocabulary mastery and learning motivation. Therefore, this approach may be considered as an alternative instructional strategy for teaching vocabulary to elementary school students.
Keywords: *cartoon animation, Total Physical Response, vocabulary mastery, learning motivation*

INTRODUCTION

Vocabulary knowledge constitutes a core component of English language proficiency because it supports comprehension, communication, and the development of other language skills. It plays an important role in comprehension and communication because it becomes the foundation of foreign language learning, supports the development of students' language skills, and enables learners to understand and express meaning effectively in communicative contexts (Talpur et al., 2025; Biseko, 2025; Ghani et al., 2025; Khoirunnisa, 2025). In the teaching and learning process, students need sufficient vocabulary to understand instructions, express ideas, and participate actively during classroom activities. Rich vocabulary knowledge can help students communicate more confidently and effectively, whereas limited vocabulary often makes it difficult for students to understand texts and express their ideas clearly (Alqahtani, 201;8 Matulessy & Kahar, 2024). It is essential for supporting the students' success in learning English. Furthermore, Nation (2001) states that vocabulary mastery involves understanding the form, meaning, and use of words. Behforouz and Al Ghaithi (2025) highlighted vocabulary mastery as an essential indicator of second-language proficiency. It means that the students are expected not only to memorize the vocabulary but also to use it appropriately.

According to the Common European Framework of Reference for Languages (CEFR), young learners at the A1–A2 levels are expected to use simple English expressions in daily

communication. Milton & Alexiou (2009) reports that A1 learners know around 1,125 words, while A2 learners know about 1,756 words. Kikuchi et al. (2025) demonstrated that vocabulary can be aligned with CEFR proficiency levels, emphasizing the importance of vocabulary development for language progression. Nevertheless, many elementary school students still struggle to remember and use basic English vocabulary effectively.

Based on the EF English Proficiency Index (2025), Indonesia ranks 80th out of 123 countries with a score of 471, which places Indonesia below the global average of 488. Indonesia has remained in the low proficiency category with only slight score changes between 2021 and 2024, indicating limited progress in English skills, which is influenced by socio-cultural, legal, and educational factors affecting English language learning outcomes in Indonesia (Nagothanawala, 2025).

One factor contributing to this issue is students' difficulty in learning vocabulary, including understanding meaning, using words correctly, mastering pronunciation and spelling, and feeling afraid of making mistakes when pronouncing words because they may be laughed at by classmates (Hasan, 2024; Satryo et al., 2024; Varisca et al., 2025). These difficulties may limit students' ability to communicate effectively and reduce their confidence in using English during classroom activities. Students may also struggle to distinguish between words with similar or opposite meanings, especially when their usage depends on context (Nurjanah, 2025);Shamsiddinova, 2024). It confuses students when choosing appropriate words in communication.

In addition, grammatical challenges, difficulties with vocabulary recall, and low learning motivation may reduce students' engagement and persistence in vocabulary learning (Aida et al., 2024; Aji et al., 2023; Nazhira et al., 2024). These problems can make students feel less inclined to participate actively in vocabulary activities. Handayani (2025) explain that learning motivation is related to vocabulary knowledge among EFL students. Students with higher motivation are more likely to achieve better vocabulary mastery and become more active in the learning process.

Vocabulary learning problems are also related to classroom conditions. Large classes, limited practice time, and the continued use of traditional methods such as memorization and translation may result in less meaningful learning experiences (Bedilu & Degefu, 2024; Sahnan & Daulay, 2025). Kesmez (2021) also notes that vocabulary learning often becomes less engaging when students memorize words without meaningful context. In addition, limited teaching materials and a lack of teacher training can also reduce the use of engaging teaching strategies (Taddese et al., 2025).

Based on preliminary observations at Khairah Ummah Islamic Elementary School in Padang, students had difficulty pronouncing English vocabulary and showed low engagement during lessons. The use of conventional media, such as pictures and PowerPoint slides, was not sufficient to maintain students' attention. Therefore, more engaging and interactive teaching approaches are needed to improve students' vocabulary mastery and learning motivation.

According to Rafa (2025), ineffective vocabulary learning is often caused by low motivation, limited learner autonomy, and unengaging learning methods. Therefore, interactive and technology-based strategies are recommended to improve vocabulary mastery and motivation. One learning medium that can support vocabulary learning is cartoon animation. Cartoon animation represents a multimedia learning resource that combines moving visual representations and narrative elements to facilitate learners' attention and comprehension (Cevahir et al., 2022). Cartoon animation is used in education as an interactive visual medium that presents engaging stories, colorful images, and moving characters to attract students' attention and improve their understanding (Saenboonsong & Poonsawad, 2024; Suprapto et al., 2024).

A number of studies have reported that animated media contribute positively to vocabulary learning. Students who learn through animation tend to show better vocabulary mastery, engagement, and retention because the learning materials are presented visually and in context (R. Y. Putri et al., 2023; Simarmata et al., 2025; Zahra et al., 2025). Similar findings were reported in studies using cartoon videos and AI-generated animations, which found improvements in students' motivation, participation, and vocabulary achievement during English lessons (Behforouz & Ghaithi, 2025; Rizkiyana & Hiarulla, 2025; Wati, 2024). These findings indicate that visual media can support vocabulary learning by making language input more meaningful and engaging for learners.

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Besides animation-based instruction, Total Physical Response (TPR) has also been widely used in vocabulary teaching. TPR encourages students to respond to language through physical actions, allowing them to connect meaning with movement (Asher, 1969). It improves vocabulary acquisition, listening comprehension, learner motivation, and classroom participation among young learners (Mamma & Sirjon, 2024; Mala, 2025; Tabassum, 2026). Previous studies found that this approach helps students improve vocabulary mastery, comprehension, retention, and classroom participation (Asmawati, 2025; Nisa, 2025; Putri & Taslim, 2024; Shukhratova, 2025). Other studies showed that when TPR is supported by visual aids and creative classroom activities, students become more motivated, confident, and actively involved in the learning process (AlFarisi et al., 2025; Pitaloka et al., 2025).

Although both approaches have produced positive outcomes, most studies have examined animation and TPR separately. Research on animation tends to focus on the role of visual and multimedia input in facilitating vocabulary learning, whereas studies on TPR mainly emphasize physical involvement and kinesthetic learning. Several researchers have incorporated multimedia elements into vocabulary instruction and reported positive effects on vocabulary knowledge, pronunciation, comprehension, and motivation (Alhazmi, 2024; Pudjiati et al., 2025; Syafei et al., 2025). However, the use of cartoon animation as a visual stimulus within TPR-based activities has received limited attention.

Although many studies have reported the benefits of cartoon animation and Total Physical Response (TPR) in vocabulary learning, several gaps remain. Most studies have examined these approaches separately, with animation focusing on visual learning and TPR emphasizing physical movement. As a result, there is still limited evidence on the effects of combining both approaches in vocabulary instruction. In addition, many previous studies focused on a single outcome, either vocabulary achievement or learning motivation. Studies that examine both aspects simultaneously are still limited. Research on integrating cartoon animation and TPR in Indonesian elementary school settings is also scarce.

To address these gaps, this study investigates the effect of integrating cartoon animation and TPR on students' vocabulary mastery and learning motivation at SD Islam Khaira Ummah.

This study addresses the following research questions: (1) Is there a significant effect of cartoon animation integrated with Total Physical Response (TPR) on elementary school students' vocabulary mastery? (2) Is there a significant effect of cartoon animation integrated with Total Physical Response (TPR) on elementary school students' learning motivation?

This study offers a new perspective by combining cartoon animation and Total Physical Response (TPR) in vocabulary instruction. While earlier research has typically examined these methods independently—either emphasizing visual support through animation or physical engagement through TPR—this study investigates their use as an integrated learning approach. In addition, it explores not only students' vocabulary achievement but also their learning motivation, providing a broader understanding of both cognitive and affective outcomes. The study further contributes to the literature by presenting evidence from an Indonesian elementary school EFL setting, where research on the combined use of cartoon animation and TPR is still relatively scarce.

METHOD

This study used a quasi-experimental design to examine the effect of cartoon animation integrated with Total Physical Response (TPR) on students' vocabulary mastery and learning motivation. The participants were third-grade students of SD Islam Khaira Ummah, who learn effectively through simple vocabulary, visual support, and physical activities. In addition, the English materials at this level mainly focus on basic vocabulary and classroom instructions that align well with TPR and cartoon animation. From a total population of 101 students in four classes, two classes were selected through cluster random sampling. Class 3D, comprising 24 students, was assigned to the experimental group, while class 3C, comprising 22 students, served as the control group, generating 46 participants in total. Based on Fraenkel, Wallen, and Hyun (2012), experimental research should involve at least 15 participants per group; thus, the sample size was considered sufficient. Although the sample size was sufficient for the study, it was relatively small. Future research with larger and more diverse samples is recommended to improve the generalizability of the findings.

Two instruments were used in this study: a vocabulary test and a learning motivation questionnaire. The vocabulary test consisted of 20

items in the form of sentence-completion and picture-based questions on action verbs and prepositions of place. Each correct answer was scored one point, while incorrect answers received zero. The test was designed based on the school curriculum. Meanwhile, the questionnaire used a four-point Likert scale to measure three aspects of learning motivation: the value component, the expectancy component, and the affective component. It has 23 items and was adapted from (Pintrich & A, 2015). Recent validation by Brouwer et al. (2025) confirmed the reliability and factorial validity of the MSLQ, supporting its continued use as a measure of student motivation.

The validity of both instruments was established through content and empirical validity. Content validity was evaluated by three experts from the English Department of Universitas Negeri Padang. Their feedback was used to revise the wording, content relevance, and suitability of the instruments for third-grade students. The empirical validity of the instruments was examined through a pilot study involving 26 students outside the main sample. Item-total correlation analysis showed that 20 vocabulary items met the validity criterion ($r > .388$) and were retained for the main study. For the motivation questionnaire, all 23 items met the validity criterion and were retained. Reliability analysis yielded Cronbach's Alpha coefficients of 0.777 for the vocabulary test and 0.856 for the questionnaire, indicating acceptable reliability.

The study began with administering a pre-test and pre-questionnaire to both groups to identify students' initial vocabulary mastery and learning motivation. The treatment was conducted over six meetings, each lasting 80 minutes. Before the treatment, independent-samples t-tests were conducted to examine whether there were significant differences between the experimental and control groups in terms of vocabulary mastery and learning motivation. The results showed no significant difference in pre-test vocabulary scores between the two groups ($p > .05$). Similarly, no significant difference was found in pre-questionnaire motivation scores ($p > .05$). These findings indicate that the two groups were comparable prior to the treatment.

Students in the experimental group learned vocabulary using cartoon animation videos with Total Physical Response (TPR). Created by the researcher to match the school curriculum, the videos included vocabulary, exercises, and action commands that prompted physical responses. An expert lecturer from the English Department at Universitas Negeri Padang validated the videos and provided feedback before being used in the study.

The implementation of TPR followed four stages proposed by (Kuo et al., 2013): Watch Stage, Listen–Watch–Do–Repeat, continued repetition and comprehension activities, and Group Race. Through these stages, students learned vocabulary by watching cartoon animations, following instructions, performing physical actions, and participating in collaborative game-based activities.

The control group was taught using the scientific approach (observing, questioning, experimenting, associating, and communicating), which is commonly used at the school and aligned with the curriculum. Both groups studied the same topics and were taught by the researcher in separate classes to ensure consistency. After the treatment, a post-test and post-questionnaire were administered to measure students' improvement. As the researcher conducted and scored the assessments, potential assessor bias should be considered a study limitation.

Data were analyzed using SPSS version 25. Descriptive statistics were used to summarize the data. Normality was tested using the Shapiro–Wilk test, and homogeneity was examined through Levene's Test. Paired-samples t-tests were used to analyze within-group improvement, while independent-samples t-tests were conducted to compare the results between the experimental and control groups.

RESULTS AND DISCUSSION

The effect of cartoon animation integrated with TPR on the students' vocabulary mastery

This research aimed to examine the effect of cartoon animation integrated with Total Physical Response (TPR) on students' vocabulary mastery and learning motivation. Descriptive statistics showed that students in the experimental group achieved higher post-test vocabulary scores ($M = 86.25$, $SD = 8.109$, $Min = 75$, $Max = 100$) than those in the control group ($M = 80.00$, $SD = 11.019$, $Min = 60$, $Max = 100$). Before conducting further analysis, the normality test was performed. As presented in Table 1, the p-values of the pre-test and post-test scores in both the experimental and control groups were higher than 0.05, indicating that the data were normally distributed

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Table 1 *Normality test of students' vocabulary mastery*

	GROUP (1=Experiment, 2=Control)	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
PRE TEST	Experiment	.197	24	.017	.929	24	.091
	Control	.136	22	.200*	.952	22	.349
POST TEST	Experiment	.186	24	.031	.919	24	.054
	Control	.136	22	.200*	.965	22	.592

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

The results of the paired sample t-test are presented in Table 2. The analysis showed that students in the experimental group experienced a significant improvement in vocabulary mastery after receiving the treatment. The mean difference between the pre-test and post-test scores was 33.750 points (M = -33.750, SD = 14.084), t(23) = -11.739, with a sig. (2-tailed) value of 0.000, which was lower than 0.05. The 95% confidence interval ranged from -39.697 to -27.803, indicating a consistent increase in students' vocabulary scores after the treatment.

Meanwhile, students in the control group also showed improvement in vocabulary mastery. The mean difference between the pre-test and post-test scores was 19.091 points (M = -19.091, SD = 22.341), t(21) = -4.008, with a sig. (2-tailed) value of 0.001. The 95% confidence interval ranged from -28.996 to -9.185. Although both groups experienced significant improvement, the increase in the experimental group was higher than that in the control group.

Table 2. *Paired sample t-test of students' vocabulary mastery*

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	PRE TEST - POST TEST	-33.750	14.084	2.875	-39.697	-27.803	-11.739	23	.000

a. GROUP (1=Experiment, 2=Control) = Experiment

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	PRE TEST - POST TEST	-19.091	22.341	4.763	-28.996	-9.185	-4.008	21	.001

a. GROUP (1=Experiment, 2=Control) = Control

An independent sample t-test was conducted to examine the difference in vocabulary mastery between the experimental and control groups. As presented in Table 3, the result of Levene's test showed F = 2.667 with a significance value of 0.110, which was higher than 0.05. This indicates that the variances of both groups were homogeneous and the assumption of equal variances was met.

The t-test analysis revealed a significant difference in post-test vocabulary scores between the two groups, t(44) = 2.204, p = 0.033. Students in the experimental group achieved higher post-test scores than those in the control group, with a mean difference of 6.250 points. The 95% confidence interval ranged from 0.534 to 11.966, indicating that the difference between the two groups was statistically meaningful. In addition, the effect size analysis produced a Cohen's d value of 0.65, indicating a moderate effect of cartoon animation integrated with Total Physical Response (TPR) on students' vocabulary mastery. This finding suggests that the integration of cartoon animation and TPR contributed positively to improving students' vocabulary mastery

Table 3. *Independent t- test of students' vocabulary mastery*

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
POST TEST	Equal variances assumed	2.667	.110	2.204	44	.033	6.250	2.836	.534	11.966
	Equal variances not assumed			2.175	38.388	.036	6.250	2.874	.434	12.066

The findings of this study demonstrated that cartoon animation integrated with Total Physical Response (TPR) significantly improved students' vocabulary mastery. Students in the experimental group achieved significantly higher post-test scores than those in the control group, and the effect size analysis indicated a moderate effect (Cohen's d = 0.65). These findings are consistent with previous studies reporting that cartoon animation facilitates vocabulary learning by providing meaningful visual contexts, while TPR enhances retention through physical engagement and active participation. Studies by Liya et al. (2024), Younas and Dong (2024), and Tabassum (2026) similarly reported positive effects of animation and TPR on vocabulary development.

However, the present study extends previous research in several ways. While most earlier studies investigated cartoon animation and TPR separately, the current study examined their combined use within a single instructional model. The findings suggest that integrating visual and kinesthetic learning experiences may provide greater benefits than relying on a single modality. The results support the view that vocabulary learning can be enhanced when learners simultaneously process information through multiple sensory channels.

The findings can also be interpreted through several learning theories. From the perspective of Multimodal Learning Theory, students benefited from receiving vocabulary input through visual, auditory, and kinesthetic modes simultaneously. The results are also consistent with Dual Coding Theory (Paivio, 1986), which proposes that information presented both verbally and visually is more likely to be retained in long-term memory. In addition, the findings support the Cognitive Theory of Multimedia Learning (Mayer, 2021), which argues that meaningful learning occurs when learners actively process verbal and visual information together. The physical movements involved in TPR further align with Embodied Cognition Theory, which suggests that cognitive processes are strengthened when learning is connected to bodily actions and sensory experiences.

Although the findings support much of the existing literature, previous research has not always produced consistent results. Some studies have reported that animation alone does not automatically improve learning outcomes when students become distracted by entertaining visual features rather than instructional content. Similarly, research on TPR has shown mixed findings, particularly when the target vocabulary becomes more abstract and difficult to represent through physical movement. These differences suggest that the effectiveness of animation and TPR may depend on factors such as instructional design, learner characteristics, treatment duration, and classroom context.

The effect of cartoon animation integrated with TPR on the students' learning motivation

To examine students' learning motivation, a questionnaire consisting of 23 items on a four-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree) was administered. Higher scores indicated greater learning motivation. Before conducting further analysis, a normality test was performed. As shown in Table 4, the significance values for students' learning motivation data were greater than 0.05, indicating that the data were normally distributed.

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Table 4. *Normality test of students' learning motivation*

	GROUP (1=Experiment, 2=Control)	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
PRE QUESTIONNAIRE	Experiment	.120	24	.200*	.956	24	.365
	Control	.166	22	.116	.923	22	.086
POST QUESTIONNAIRE	Experiment	.136	24	.200*	.943	24	.194
	Control	.097	22	.200*	.941	22	.208

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

The descriptive statistics of students' learning motivation showed an increase in both groups after the treatment. In the experimental group, the pre-questionnaire scores ranged from 66 to 87 (M = 74.67, SD = 5.983), while the post-questionnaire scores ranged from 70 to 90 (M = 82.67, SD = 5.569). In the control group, the pre-questionnaire scores ranged from 67 to 79 (M = 72.59, SD = 3.686), whereas the post-questionnaire scores ranged from 56 to 88 (M = 76.50, SD = 7.347).

The results of the paired sample t-test are presented in Table 5. The analysis showed that students in the experimental group experienced a significant increase in learning motivation after receiving the treatment. The mean difference between the pre-questionnaire and post questionnaire scores was 8.000 points (M = -8.000, SD = 6.157), t(23) = -6.365, with a sig. (2-tailed) value of 0.000. The 95% confidence interval ranged from -10.600 to -5.400, indicating a consistent increase in students' learning motivation after the treatment.

Meanwhile, students in the control group also showed improvement in learning motivation. The mean difference between the pre-questionnaire and post-questionnaire scores was 3.909 points (M = -3.909, SD = 7.438), t(21) = -2.465, with a sig. (2-tailed) value of 0.022. The 95% confidence interval ranged from -7.207 to -0.611. However, the increase in the experimental group was higher than that of the control group.

Table 5. *Paired sample t-test of students' learning motivation*

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	PRE QUESTIONNAIRE - POST QUESTIONNAIRE	-8.000	6.157	1.257	-10.600	-5.400	-6.365	23	.000

a. GROUP (1=Experiment, 2=Control) = Experiment

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	PRE QUESTIONNAIRE - POST QUESTIONNAIRE	-3.909	7.438	1.586	-7.207	-.611	-2.465	21	.022

a. GROUP (1=Experiment, 2=Control) = Control

An independent sample t-test was conducted to examine the difference in students' learning motivation between the experimental and control groups. As presented in Table 6, the result of Levene's test showed F = 1.167 with a significance value of 0.286, which was higher than 0.05. This indicates that the variances of both groups were homogeneous and the assumption of equal variances was met.

The t-test analysis showed a significant difference in post-questionnaire scores between the two groups, t(44) = 3.225, p = 0.002. Students

in the experimental group obtained higher learning motivation scores than those in the control group, with a mean difference of 6.167 points. The 95% confidence interval ranged from 2.313 to 10.021, indicating that the difference between the two groups was statistically significant. In addition, the effect size analysis yielded a Cohen's d value of 0.95, indicating a large effect of cartoon animation integrated with Total Physical Response (TPR) on students' learning motivation. These findings suggest that the integration of cartoon animation and TPR contributed positively to improving students' learning motivation.

Table 6. *Independent t- test of students' learning motivation*

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
POST QUESTIONNAIRE	Equal variances assumed	1.167	.286	3.225	44	.002	6.167	1.912	2.313	10.021
	Equal variances not assumed			3.186	39.055	.003	6.167	1.935	2.252	10.081

The findings also showed that cartoon animation integrated with TPR had a stronger effect on learning motivation (Cohen's d = 0.95) than on vocabulary mastery (Cohen's d = 0.65). This difference indicates that the intervention influenced affective outcomes more strongly than cognitive outcomes.

Motivation responds more rapidly to enjoyable and interactive learning environments. The colorful visuals, engaging storylines, and movement-based activities likely increased students' attention, enjoyment, and participation during lessons. In contrast, vocabulary acquisition is a more gradual process that requires repeated exposure, retrieval practice, and long-term reinforcement before substantial gains can be achieved.

The improvement in learning motivation can also be explained through Self-Determination Theory (Ryan & Deci, 2000). The integration of cartoon animation and TPR promoted students' sense of competence through successful task completion, autonomy through active participation, and relatedness through interaction with teachers and peers. Also, autonomous motivation is associated with higher language achievement and lower anxiety, while autonomy-supportive teaching practices promote sustained learner engagement (Alamer et al., 2025; Parrish et al., 2025).

As these psychological needs were supported, students became more motivated to participate in classroom activities and engage with English learning. Overall, the findings contribute to the growing body of literature on multimodal and embodied learning by demonstrating that combining cartoon animation and TPR can simultaneously enhance vocabulary mastery and learning motivation among young EFL learners. The study provides evidence that multimodal instruction may exert a particularly strong influence on affective engagement while also producing meaningful improvements in cognitive learning outcomes.

CONCLUSION

This study showed that integrating cartoon animation with Total Physical Response (TPR) improved students' vocabulary mastery and learning motivation. The combination of visual support and physical activities created a more engaging learning environment and encouraged students to participate actively in the learning process.

The findings contribute to the literature on multimodal and embodied learning by showing that visual and physical learning experiences can work together to support both cognitive and affective outcomes among young EFL learners. The study also extends previous research by examining vocabulary mastery and learning motivation within the same instructional approach. From a pedagogical perspective, the findings suggest that English teachers can

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integrate cartoon animation and TPR to make vocabulary instruction more interactive, meaningful, and enjoyable for elementary school students. At the policy level, the results support the use of multimodal learning activities in primary English education and may inform the development of teaching materials and classroom practices that encourage active student participation.

This study was conducted with a relatively small sample from a single elementary school, which may limit the generalizability of the findings. Future research is recommended to involve larger, more diverse samples, examine long-term vocabulary retention through delayed post-tests, compare the integrated approach with cartoon animation and TPR used separately, and explore its application to other language skills, such as speaking, listening, and reading.

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