IMPROVING READING COMPREHENSION FOR STUDENTS' VOCATIONAL HIGH SCHOOL THROUGH THE INTEGRATION OF DIGITAL STORYBOOK AND GRAPHIC ORGANIZERS

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ABSTRACT

This study examined the effectiveness of digital storybooks and graphic organizers integrated with the ESP framework in enhancing narrative reading comprehension among vocational high school students in Digital Business field. Employing a quasi-experimental design, the study included 61 eleventh-grade students divided into experimental and control groups. Data were obtained from pre-test and post-test scores and analyzed through paired-sample and independent-sample t-tests. The experimental group, which received treatment, presented a significant mean score increase from 46.13 to 70.77, while the control group slightly improved from 41.50 to 50.63. These results indicate that the integration of digital storybooks and graphic organizers could effectively enhance students' reading comprehension. Grounded in Multimedia Learning Theory and visual scaffolding, combining interactive digital tools with structured visual aids is an effective strategy for teaching narrative texts which support learners' comprehension through multimodal input and structured visual representation. This research contributes to ESP pedagogy by demonstrating the integration of digital storybooks and graphic organizers within vocational Digital Business contexts supports narrative reading comprehension tailored to students' occupational needs. Future studies could further explore the long-term impact of such tools, their application across different text genres, and their potential for enhancing other language skills.

Keywords: *Digital storybook, Graphic organizer, Reading comprehension, Narrative text.*
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INTRODUCTION

Reading comprehension has become one of the most essential academic competencies for students in vocational education, especially in the digital era where information is accessed primarily through online platforms, multimedia resources, and technology-assisted environments. For students enrolled in Vocational High Schools (VHS), particularly those specializing in Digital Business, the ability to comprehend English texts is crucial not only for classroom learning

but also for future employability and workplace communication. Reading comprehension enables students to understand, interpret, and critically evaluate diverse texts that are relevant to their vocational field from business proposals and digital marketing case studies to narrative business scenarios and technical documents. It involves more than decoding words, requiring making inferences, integration of prior knowledge, and interpretation of meaning (Samiei & Ebadi, 2021; Sari et al., 2019). Strong comprehension supports students' academic success and practical performance, particularly in digital business classes where they must analyze business proposals, technical documents, and narrative texts, while poor comprehension hinders their ability to meet learning demands.

Reading comprehension is a cognitive process where readers construct meaning by combining prior knowledge with information in the text (Pearson & Cervetti, 2015). It requires skills such as identifying main ideas, making inferences, locating specific information, and understanding vocabulary (Nuttall, 1996). Similarly, Samiei & Ebadi (2021), emphasized that comprehension involves active processing, inference-making, and integrating new information with prior knowledge. For vocational students, especially those in digital business programs, these comprehension skills play an essential role in understanding various types of texts that reflect real-world workplace contexts. They must be able to interpret business proposals, analyze technical documents, follow narrative-based case studies, and evaluate industry-related materials, all of which require strong inferential reasoning and the ability to synthesize new information with prior knowledge. Therefore, strengthening reading comprehension is not only important for academic achievement but also fundamental for building vocational competence.

For vocational students, reading comprehension is still one of the most difficult parts of learning the English language, despite its significance. Several studies indicate that VHS students still experience difficulties in reading comprehension. Liu (2020) found that vocational students have lower motivation to read English texts than general high school students since they have limited vocabulary, weak grammar knowledge, and poor inferential skills (Samiei & Ebadi, 2021). Laia et al., (2024) also reported that 63.7% of students struggled with making inferences, 56.15% with identifying main ideas, and 51% with vocabulary interpretation. Likewise, Samiei & Ebadi (2021) highlighted limited vocabulary and grammar knowledge as major obstacles. Furthermore, the researcher has also observed through direct teaching experiences that vocational high school students especially in digital business class students often exhibit low English proficiency, particularly in understanding text-based materials. Many students find it difficult to understand basic concepts in English written word, such recognizing important details or comprehending sentence patterns, which makes it harder for them to understand complex narrative-based content. This observation is supported by students' performance on narrative text assessments during their tenth grade, in which the average score was 50, below the school's minimum passing grade (KKM) of 68. This persistent pattern of underachievement suggests that reading comprehension issues among vocational students are systemic and require the

implementation of more innovative, supportive, and contextually responsive instructional interventions.

The factors contributing to low reading comprehension among Vocational High School students are complex and closely interrelated. Rasyid et al. (2022) classify these challenges into internal factors such as students' motivation and external factors, including teachers' instructional methods and the learning media used in the classroom. Vocational students often exhibit low motivation to read English texts due to their limited interest in the subject and insufficient mastery of basic English skills. Externally, the pedagogical approaches applied by teachers and the restricted use of instructional media also play a significant role in shaping students' comprehension difficulties. Many teachers continue using conventional methods, such as blackboards and textbooks, which fail to engage students effectively (Mutohhari et al.,2021; Rahman et al., 2023; Leong et al., 2019). These conventional approaches frequently limit opportunities for interaction, creativity, and active participation, rendering classroom settings monotonous and bored for students. Whenever lessons are provided in one-way explanations, using only chalkboards and printed textbooks, students tend to become passive recipients rather than active participants in the learning process. As a result, many vocational students struggle to stay motivated and find the learning process less relevant, emphasizing the importance of more interactive, technology-enhanced techniques in the classroom. The use of diversified or technology-supported learning media is thought to improve possibilities for students to connect with texts in a more meaningful way. This suggests that there is a clear need for more innovative, interactive teaching methods that are in line with the learning preferences of contemporary students.

To address this issue, integrating digital media and English for Specific Purposes (ESP) instruction provides a promising alternative. As Ma (2015) emphasized, ESP focuses on teaching English relevant to students' vocational contexts, aligning with Indonesia's Independent Curriculum, which promotes contextualized learning. Fitriani & Komala (2024) found that the implementation of the SQ3R method statistically improved the reading comprehension skills of polytechnic students. This result indicates that a structured, stage-based reading strategy can enhance engagement and learning outcomes among vocational students. These findings support the present study, which also applies a media-based approach (digital storybook and graphic organizer) to improve reading comprehension within the framework of English for Specific Purposes (ESP). The use of digital storybooks offers interactive and multimodal learning experiences that enhance engagement (Rahmawati et al., 2023), while graphic organizers such as story maps help students visually structure narrative elements. This combination aligns with Mayer's Multimedia Learning Theory, which states that integrating verbal and visual input improves learning outcomes. In the present study, ESP principles informed the selection of narrative texts embedding Digital Business themes such as entrepreneurship, online marketing scenarios, and workplace decision-making. Task design required students to analyze narrative elements while relating story events to vocational concepts, for example by interpreting characters' business decisions or summarizing narratives in professional terms. Assessment

tasks likewise evaluated students' comprehension of narrative meaning within vocationally relevant contexts. Thus, combining digital storybooks and story maps within the ESP framework can enhance narrative reading comprehension and vocational relevance (Albufasa, 2019). Integrating digital media into ESP training provides a relevant and effective way to improve vocational students' reading comprehension. The use of digital storybooks and graphic organizers promotes engagement and comprehension through multimodal and organized learning. Overall, this combination offers a pedagogically solid method that improves narrative comprehension and occupational relevance.

Empirical evidence supports the positive effects of such tools. Fitriani & Sunarti (2024) and Bala et al. (2023) found that digital storybooks and multimedia platforms improve reading comprehension and engagement. Similarly Kirikci et al. (2020) reported significant gains in students' comprehension when digital stories were integrated into classroom instruction, suggesting that digital narratives can enhance understanding by offering multimodal input. Further support comes from Gürgil & Ulusoy (2025) showed that comprehension improved further when digital storytelling was followed by retelling activities. It indicates that the use of digital storybooks when paired with structured activities like retelling and responses, can significantly enhance students' reading comprehension. Therefore, in this study, the researcher uses a combination of digital storybooks and graphic organizers, such as story maps, as teaching tools for reading comprehension of narrative texts, since graphic organizers help students visually structure information and help students to identify key elements of the story. Meanwhile, graphic organizers have been shown to facilitate students' ability to identify main ideas, make inferences, and understand text relationships (Albufasa, 2019; Pannim et al., 2022; Sari et al., 2019). Overall, previous studies demonstrate that digital storybooks, especially when combined with structured follow-up activities, can significantly improve students' reading comprehension. Graphic organizers further support this process by helping learners organize key narrative elements and understand relationships within the text. Therefore, integrating digital storybooks with story maps presents a complementary instructional approach that effectively enhances both comprehension and engagement in narrative reading.

Despite these promising findings, limited research has examined the integrated use of digital storybooks and graphic organizers, particularly story maps, within an English for Specific Purposes (ESP) framework for vocational high school students majoring in Digital Business. Previous research has largely focused on each tool separately (Albufasa, 2019; Fitriani & Sunarti, 2024; Gürgil & Ulusoy, 2025; Kirikci et al., 2020; Pannim et al., 2022). However, the use of combination digital storybook and graphic organizer, in specifically story maps, as innovative teaching tools to improve students' reading comprehension of narrative texts. Additionally, there are no specific research that particularly focuses on enhancing narrative reading comprehension on ESP students' vocational high school of digital business. Therefore, by integrating these two approaches integrated with ESP framework, the researcher aims to create a more engaging learning environment that not only captures students' interest and facilitates their understanding of complex narrative structures and underlying meanings but also fulfilled students'

needs in the vocational field of digital business. The current study aims to investigate the integration of these two approaches within the ESP framework to enhance narrative reading comprehension among vocational students in digital business programs. This approach is expected to increase students' engagement, understanding of complex narrative structures, and English proficiency relevant to their vocational field.

RESEARCH METHOD

The effectiveness of digital storybooks and graphic organizers (story maps) in improving students' narrative reading comprehension was investigated in this study through the use of a quasi-experimental design and a quantitative approach. The design involved two groups an experimental and a control class with both receiving a pre-test and post-test. Due to institutional and scheduling constraints, random assignment of participants was not feasible; therefore, intact classes were used. While this design allows for practical classroom implementation, it also limits internal validity, as potential pre-existing differences between groups cannot be entirely controlled. The experimental group was instructed utilizing digital storybooks and story maps, whereas the control group was taught using traditional textbook-based approaches.

The research was conducted at a vocational high school in Surabaya, which offers programs in Visual Communication Design, Digital Business, Office Management, and Computer and Network Engineering. The population comprised 250 eleventh-grade students, while the sample consisted of 61 students from two Digital Business classes selected through purposive sampling. The use of purposive sampling was intended to ensure that participants shared similar academic backgrounds and learning needs, particularly in narrative reading comprehension. However, this sampling technique limits the generalizability of the findings beyond the selected context. The participants were chosen because they had previously learned narrative texts in the 10th grade but still demonstrated difficulties in comprehension, particularly in interpreting ideas and identifying textual structures.

The research instruments consisted of a pre-test and post-test designed to assess reading comprehension. The tests included 25 multiple-choice items and 6 graph-based questions measuring aspects such as main idea, inference, grammatical features, detailed and unstated information, vocabulary, social function, and generic structure. The instruments underwent expert validation for content validity, with a mean score of 4.00 (categorized as very valid), and reliability testing using Cronbach's Alpha, yielding coefficients of 0.676 for multiple-choice items and 0.758 for graph-based questions, both indicating high reliability.

The data collecting approach started with the administration of a pre-test to both the experimental and control groups to assess the students' initial reading comprehension skills. After the pre-test, the instructional treatment was carried out in six meetings. The relatively short duration of the intervention was designed to fit the school's instructional schedule; however, it may not be sufficient to capture long-term or sustained learning effects, particularly for language components such as vocabulary and grammar development. In the experimental class, reading instruction used digital storybooks developed through the *StoryJumper* platform,

where each story contained visual illustrations, audio narration, and contextual business elements that made the learning process more engaging and relevant for vocational students. During classroom activities, students accessed the digital story, listened to the voice-over, observed the animated illustrations, and then completed structured graphic organizers that helped them identify narrative components such as main ideas, characters, settings, chronological events, implicit information, vocabulary in context, and moral values in the story. The teacher guided discussions and encouraged students to retell stories, summarize content, and connect the narrative to digital business concepts found in real-life situations.

Meanwhile, the control class received conventional instruction using printed narrative texts from an English textbook, where students read the material silently or aloud, learned vocabulary from teacher explanations on the board, and answered comprehension questions individually or in pairs. To maintain instructional comparability, lesson objectives, time allocation, and teacher guidance were aligned with those of the experimental class, the learning process in the control class did not use digital media, audio narration, illustrations, or graphic organizers, and activities focused mainly on textbook explanations and written exercises.

After the treatment phase was completed, a post-test with multiple-choice and graph-based questions was administered to both groups to measure students' improvement in reading comprehension. IBM SPSS 27 was used to evaluate the gathered data. The Shapiro-Wilk test for normality and Levene's test for homogeneity were used to verify that the data were both homogenous and normally distributed. The two groups' mean reading comprehension scores were then compared using an independent samples t-test to see whether there were any significant differences. Cohen's d was used to compute the effect size, which was classified as small (0.20–0.50), medium (0.50–0.80), or big (>0.80) in order to gauge the extent of the difference. The results of these analyses provided a basis for interpreting the effectiveness of integrating digital storybooks and graphic organizers within the ESP (English for Specific Purposes) framework in improving vocational students' narrative reading comprehension. While these analyses provide evidence of short-term instructional effectiveness, future studies are recommended to employ randomized controlled designs or longitudinal approaches to strengthen causal inference and examine the sustainability of learning outcomes over time.

FINDING AND DISCUSSION

Finding

The result reveals that the students in both the control and experimental groups demonstrated relatively similar levels of reading comprehension before the treatment was applied. The pre-test was conducted to ensure that both groups had an equal starting point, allowing the effect of the instructional intervention to be measured more accurately.

Table 1. Mean Score Analysis of Students' Pre-Test

Class	N Statistic	Mean		Std. Deviation Statistic
		Statistic	Std. Error	

Control	32	41.50	3.545	20.052
Experimental	31	46.13	3.313	18.448

The initial reading comprehension ability of digital business students was evaluated prior to the treatment through the administration of the pre-test. It was administered to 31 students in the experimental group and 32 students in the control group. The mean score analysis was conducted to ensure both groups started from relatively equal levels of ability. The control group achieved a mean score of 41.50 with a standard deviation of 20.052, whereas the experimental group attained a mean score of 46.13 with a standard deviation of 18.448. Although the experimental group showed a slightly higher mean, the difference of 4.63 points indicates that both groups had comparable initial proficiency, with noticeable score variations in each group.

Table 2 Independent Sample t-Test of Students' Pre-Test

Independent Sample Test t-test for Equality of Means								
		T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
Score	Equal Variances Assumed	0.953	61	.344	4.629	4.859	-5.086	14.344
	Equal Variances Not Assumed	0.954	60.842	.344	4.629	4.852	-5.074	14.332

To determine if the difference in mean pre-test scores between the experimental and control groups was statistically significant or a result of chance, an independent samples t-test was employed. The analysis, assuming equal variances, produced a Sig. (2-tailed) value of 0.344, which exceeded the alpha level of 0.05. This indicates that there was no significant difference in students' initial reading comprehension abilities between the two groups. The mean difference of 4.63 points, with a standard error of 4.859 and a 95% confidence interval ranging from -5.086 to 14.344, includes zero, further indicating that the difference was not statistically significant. Therefore, the null hypothesis (H_0), which states that there is no significant difference in reading comprehension scores between the groups before treatment, was accepted.

Table 4. 3 Mean Score Analysis of Students' Post Test

	Class	N Statistic	Mean		Std. Deviation Statistic
			Statistic	Std. Error	
Pre-Test	**Control**	32	41.50	3.545	20.052
	Experimental	31	46.13	3.313	18.448

Post-Test	**Control**	32	50.63	3.671	20.766
	Experimental	31	70.77	3.335	18.570

After the experimental class received treatment using a combination of digital storybook and graphic organizer as learning media and materials for narrative texts, a post-test was administered to assess changes in students' reading comprehension ability before and after the intervention. The post-test was also conducted in the control class to compare the comprehension levels between students who received treatment and those who did not. Using IBM SPSS 27 for the independent samples t-test, the researcher analyzed data from both classes. The experimental class's mean score increased from 46.13 in the pre-test to 70.77 in the post-test, indicating a significant improvement following the treatment, as demonstrated by the results. Meanwhile, the control class's mean score rose slightly from 41.50 to 50.63 despite not receiving any treatment.

Table 4 Independent Sample t-Test of Students' Post-Test

Independent Sample Test t-test for Equality of Means								
		T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
Score	Equal Variances Assumed	4.055	61	.000	20.149	4.969	10.214	30.085
	Equal Variances Not Assumed	4.063	60.620	.000	20.149	4.960	10.230	30.068

The post-test results of the experimental class, which was treated with digital storybooks and graphic organizers, and the control class, which was not, were compared using an independent samples t-test. This analysis aimed to determine whether the treatment produced a significant effect on students' reading comprehension of narrative texts. The results indicated a significant difference between the two groups, as the Sig. (2-tailed) value was 0.000, which is lower than the standard alpha level of 0.05. This finding demonstrates that students in the experimental class experienced a significant improvement in reading comprehension compared to the control class. Therefore, the alternative hypothesis (H_1), stating that the combination of digital storybooks and graphic organizers effectively enhances vocational students' narrative reading comprehension, was accepted confirming the success and effectiveness of the treatment compared to conventional teaching methods.

Table 5. The Result of Effect Size Using Cohens'd

Independent Sample Effect Sizes					
		Standardizer[a]	Point Estimate	95% Confidence Interval	
				Lower	Upper
Score	Cohen's d	19.716	1.022	.492	1.544
	Hedges' correction	19.963	1.009	.486	1.525
	Glass's delta	20.766	.970	.415	1.513

According to the table of independent sample effect sizes above, the outcomes of the analysis presented that the Cohen's d value was 1.022. This value indicates a large effect of the treatment given, in accordance with Cohen's d interpretation criteria (d > 0.80). Thus, it can be claimed that the experimental group's use of a digital storybook and graphic organizer as a learning tool for teaching narrative to students studying digital business had a significant effect on their reading comprehension.

The pre- and post-test results showed substantial enhancement across all reading comprehension aspects in the experimental group after the implementation of digital storybooks and graphic organizers. Scores for identifying main ideas increased from 54.25 to 85.8, inference skills rose from 49.3 to 86.3, supporting ideas improved from 36 to 78.2, and detailed information increased from 64.5 to 103.5. Other aspects also showed improvement, including expressions and idioms from 49 to 57, grammatical features from 33.3 to 46, unstated details from 46 to 54, vocabulary in context from 56 to 58, social function from 47.3 to 54.7, and generic structure from 17 to 24. In contrast, the control group demonstrated limited and inconsistent improvement. Main idea scores increased from 44.5 to 49.3, expressions and idioms rose from 44 to 54, and inference improved from 41.3 to 62.7. However, grammatical features slightly declined from 36.7 to 36, and vocabulary in context decreased from 57 to 52. Modest gains were observed in detailed information from 33.3 to 39, unstated details from 36 to 47, supporting ideas from 28.7 to 44.2, social function from 45.3 to 51.3, and generic structure from 3 to 28.

Overall, comparison between the two groups revealed that the experimental class achieved significantly greater and more consistent improvement across all aspects of reading comprehension. The integration of digital storybooks and graphic organizers proved highly effective in enhancing students' ability to identify main ideas, draw inferences, recognize supporting details, and comprehend narrative information. In contrast, the control group showed only limited progress, with some declines in grammar and vocabulary aspects, indicating that conventional teaching methods were less effective than the innovative approach applied in the experimental class.

Discussion

By implementing the combination of digital storybook and graphic organizers through English for Specific Purposes (ESP) framework, this research purposed to examined the improvement of narrative reading comprehension among digital business students. The research examined overall score changes and enhancement across several reading comprehension areas by applying a quasi-experimental approach, including pre-post-tests and a control group. According to the data statistically improved following the intervention. Overall post-test means and inferential statistics (independent samples t-test, $p < 0.05$) demonstrated that students who received instruction using digital storybooks and story-map graphic organizers outperformed peers taught with conventional methods. Effect size analysis further indicated a large practical impact of the combined treatment on reading comprehension. At the subscale level, the largest gains were observed for supporting ideas, detailed information, inference, and main idea, indicating that the intervention was particularly effective for higher-level comprehension processes that involve meaning construction and information integration. In contrast, improvements in vocabulary in context and grammatical features were relatively modest. This uneven pattern suggests that while digital storybooks and graphic organizers effectively support global comprehension and inferential reasoning, language-focused components such as vocabulary and grammar may require more explicit instruction, repeated exposure, and longer instructional duration to achieve substantial gains.

The observed improvements align with prior evidence on multimedia reading interventions and graphic organizers. Studies by Rahmawati et al. (2023) and Bala et al. (2023) reported that digital stories and multimedia platforms enhance reading comprehension and engagement; the present study's gains in detailed information and overall comprehension corroborate those findings. According to Son & Butcher (2024), digital storybooks with their audio-visual features, narration, and contextually relevant illustrations create an engaging and interactive reading environment that supports comprehension, particularly for vocational students who tend to benefit from practical and visually oriented learning modalities. These features reduce students' cognitive burden by minimizing difficulties in decoding individual words, thereby allowing them to focus on constructing meaning from the text. This mechanism is consistent with Mayer (2014) Cognitive Theory of Multimedia Learning which provide a theoretical basis, especially integrating verbal and visual channels reduces extraneous cognitive load and supports deeper understanding, which is consistent with the present finding that static illustrations and audio narration aided students' ability to locate and remember textual details (Seger et al., 2021). Moreover, the results of this study reinforce multimedia learning theory by showing that multimodal input is most effective when combined with structured graphic organizers that actively support meaning construction, rather than relying on multimedia exposure alone.

The beneficial role of graphic organizers, especially story maps, is also supported by earlier research. Albufasa (2019) and Pannim et al., (2022) found that graphic organizers scaffold students' ability to parse narrative structure, sequence events, and identify relationships among story elements. The current study's

substantial gains in inference and supporting-idea scores are consistent with these claims: visual mapping appears to promote analytic linking of events and ideas, which supports inferential reasoning (Sari et al., 2019). Firmansyah & Toyyibah (2025) showed that the use of short stories in English language learning can enhance critical thinking skills and comprehension of text meaning through engaging narrative contexts. This aligns closely with the current study's outcomes, where digital storybooks that integrate textual, visual, and auditory elements provided a rich narrative environment that encouraged students to interpret story structures more effectively and extract meaning with greater depth. Additionally, the multimodal representation of information in digital storybooks complemented the structural support offered by graphic organizers, creating a synergistic effect that improved students' ability to connect ideas, infer unstated information, and understand the overarching narrative. Together, these findings highlight the combined value of digital storybooks and graphic organizers as mutually reinforcing tools that promote deeper, more analytical engagement with narrative texts.

At the same time, the finding that digital stories alone are most effective when paired with structured follow-up activities echoes Gürgil & Ulusoy (2025), who reported that retelling and response tasks after digital story exposure produce stronger comprehension gains than exposure alone. The present design combined multimodal digital stories with explicit graphic-organizer tasks and guided activities, which may explain the robust improvements relative to studies that used digital stories in isolation (Fitriani & Sunarti, 2024; Kirikci et al., 2020). Finally, the ESP contextualization embedding narrative content with Digital Business elements resonates with Salazar's (2017) argument for domain-relevant materials in ESP: contextual relevance increases engagement and transferability. The present study's reported increase in motivation and better assimilation of industry-related vocabulary supports this perspective.

Several plausible mechanisms explain why the combined intervention produced strong, wide-ranging gains. First, the multimedia affordances of digital storybooks (text + illustration + audio) likely reduced decoding demands for lower-proficiency EFL students, freeing cognitive resources for comprehension and inferencing (Mayer, 2014; Son & Butcher, 2024). This mechanism helps explain the pronounced gains in detailed information and inference: illustrations and narration make events and causal relations more salient, which supports both memory for specifics and the drawing of implicit conclusions (Seger et al., 2021). Second, graphic organizers provided an external cognitive scaffold that structured students' processing of narrative elements. By making relationships explicit (characters → events → resolution) and prompting targeted attention to idioms, referents, and cohesion devices, organizers guided learners through inferential steps they might otherwise skip. This structural support accounts for improvements in supporting ideas and main-idea identification, complementing the multimedia input. Third, ESP integration increased task authenticity and motivation. When narrative scenarios incorporate digital-business contexts and terminology, learners perceive immediate relevance to their vocational goals; heightened motivation supports sustained attention, rehearsal, and deeper processing factors associated

with improved comprehension. This explains the study's qualitative observation of increased student motivation and the quantitative gains across content-relevant aspects.

Similarity with previous study, the pattern of strong gains when multimedia input is combined with active processing tasks mirrors studies that pair digital story exposure with retelling, summarizing, or response tasks (Gürgil & Ulusoy, 2025). The study also concurs with Albufasa (2019) and Pannim et al. (2022) on graphic organizers' role in facilitating narrative understanding. Differences and caveats: Some earlier studies reported more modest or mixed effects of digital storybooks alone, suggesting that multimedia exposure without guided analytic activities is insufficient (Gürgil & Ulusoy, 2025). The present study's comparatively larger effects likely stem from the explicit coupling of digital stories with graphic organizers and ESP contextualization thus differing in instructional design from studies that tested digital stories in isolation (Kirikci et al., 2020). Additionally, The relatively modest vocabulary gains may also be attributed to the short duration of the intervention, as lexical development typically requires sustained and repeated exposure across varied contexts. (Bala et al., 2023). This discrepancy may reflect differences in treatment duration, the extent of targeted vocabulary instruction, or baseline proficiency levels. However, the observed improvement cannot be attributed exclusively to the instructional approach. A potential novelty effect may have influenced students' performance, as the introduction of digital storybooks and graphic organizers constituted a new and stimulating learning experience for learners who were predominantly exposed to conventional instructional methods. Moreover, increased learner motivation associated with visually enriched media and vocationally relevant content may have temporarily elevated students' engagement and task involvement during the intervention period. Although these factors do not diminish the pedagogical value of the approach, they indicate that the gains reflect a combination of pedagogical design and motivational influences.

CONCLUSION AND SUGGESTION

This study examined the effectiveness of using digital storybooks and graphic organizers within the ESP framework to enhance the reading comprehension of vocational high school students majoring in Digital Business. The findings showed a significant improvement in students' reading comprehension scores after the intervention, particularly in identifying main ideas, supporting details, inferences, and text structures. The experimental class outperformed the control class, confirming that these media effectively support ESP-oriented reading instruction. The use of digital storybooks increased students' motivation and understanding through engaging multimedia elements, while graphic organizers helped them visualize story structure and organize key information. the results suggest that ESP teachers are encouraged to incorporate digital storybooks that reflect students' vocational contexts and to use graphic organizers, such as story maps, to explicitly guide learners in analyzing text structure and making inferences. Curriculum designers may consider embedding multimedia-based reading tasks and visual scaffolding strategies into ESP syllabi to better align reading instruction with vocational learning objectives and workplace literacy demands. Nevertheless, the

findings should be interpreted with caution due to several methodological and contextual limitations. Methodologically, the study employed a quasi-experimental design with a relatively small sample size and a short intervention period. Contextually, the research was limited to a single vocational program and focused solely on narrative texts, which may restrict the generalizability of the results to other text genres and vocational specializations. Future research is recommended to examine the effectiveness of this instructional approach across different text genres, vocational fields, and longer instructional durations in order to investigate sustained learning outcomes, retention, and transfer of reading skills to authentic workplace contexts.

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