



THE EFFECT OF STORY MAPPING STRATEGY ON STUDENTS' READING COMPREHENSION: A STRUCTURED NARRATIVE REVIEW AND PEDAGOGICAL SYNTHESIS

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Abstract

Reading comprehension requires students to construct meaning from text, identify explicit and implicit information, connect story events, infer causal relations, and retain important details. However, many students experience difficulty in comprehending narrative texts because they read stories as isolated sentences rather than as organized structures consisting of setting, characters, problem, events, resolution, and theme. Story mapping has been proposed as a visual and strategic approach for helping students recognize narrative structure and organize textual information. This article examines the effect of story mapping strategy on students' reading comprehension through a structured narrative review and pedagogical synthesis of international literature on story grammar, graphic organizers, text structure instruction, and reading comprehension strategy instruction. The review indicates that story mapping can support students' reading comprehension by improving narrative text structure awareness, literal recall, inferential understanding, sequencing of events, and strategic engagement with texts. The strategy is most effective when teachers provide explicit modeling, guided practice, gradual release of responsibility, vocabulary support, and opportunities for students to complete and discuss story maps collaboratively. The article concludes that story mapping is not merely a worksheet activity but a comprehension strategy that helps students transform narrative texts into organized mental representations. Its effectiveness depends on instructional clarity, text suitability, scaffolding quality, and alignment between story map components and comprehension assessment.

Keywords: *story mapping; reading comprehension; narrative text; graphic organizer; reading strategy*

A. Introduction

Reading comprehension is a central competence in language education because students are expected not only to decode words but also to construct meaning, interpret information, make inferences, and evaluate relationships among ideas. In school contexts, reading comprehension supports learning across subjects because students encounter textbooks, stories, informational texts, examination passages, and digital resources that require active meaning-making. For students learning English as a foreign or second language, reading comprehension becomes more demanding because they must process vocabulary, grammar, discourse patterns, cultural references, and text organization simultaneously.

One recurring problem in reading instruction is that students often read narrative texts at a surface level. They may identify isolated details such as names of characters, places, or events, but they struggle to explain how the events are connected, why a problem occurs, how characters respond, and how the resolution develops. This difficulty indicates that comprehension is not only a linguistic issue. It is also a structural and strategic issue. Students need to recognize how texts are organized and how narrative elements work together to produce meaning.

Narrative text comprehension requires students to understand story grammar. Story grammar refers to the structural elements commonly found in stories, such as setting, characters, initiating event, problem, goals, attempts, consequences, and resolution. When students understand these elements, they can form a coherent representation of the story. They can locate important information, sequence events, identify causal relationships, and retell the story accurately. Research on narrative comprehension shows that awareness of story structure helps learners organize information and reduces the cognitive burden of reading.

Comprehension research explains why narrative structure matters. Kintsch (1988) distinguished the textbase from the situation model, and Cain and Oakhill (2006) and Cain, Oakhill, and Bryant (2004) showed that some children decode adequately yet fail to build a coherent representation of what they read. Kendeou, McMaster, and Christ (2016) identify the component processes involved, Rapp, van den Broek, McMaster, Kendeou, and Espin (2007) show that struggling comprehenders differ in the inferences they generate rather than in

word recognition, and Nassaji (2003) demonstrates that higher-level and lower-level processing interact in second language reading. Paris and Paris (2003) supply the assessment counterpart, showing that narrative comprehension can be measured reliably in young readers.

Story mapping is one instructional strategy designed to support this process. A story map is a graphic organizer that visually represents the key elements of a narrative text. Students complete the map by identifying the title, setting, characters, problem, major events, resolution, and lesson or theme. In some versions, the map also includes character traits, conflict, attempts, consequences, and personal response. The strategy guides students to read actively because they must locate information, classify it according to story elements, and connect it into an organized structure.

The pedagogical value of story mapping lies in its combination of visual organization, explicit strategy instruction, and comprehension monitoring. Students do not simply answer questions after reading; they build a representation of the story while reading. This process can improve comprehension because it helps students distinguish main ideas from minor details, track the development of events, and identify how each part of the story contributes to meaning. Story mapping is therefore closely related to text structure instruction and graphic organizer-based learning.

Previous studies have reported positive effects of story mapping and related story grammar instruction on students' comprehension. Idol (1987) introduced group story mapping as a strategy that could support both skilled and less skilled readers. Boulineau, Fore, Hagan-Burke, and Burke (2004) reported that story mapping improved story grammar comprehension among elementary students with learning disabilities. Dymock (2007) emphasized that narrative text structure instruction helps students comprehend stories more effectively. These studies suggest that story mapping can be useful for students who need explicit support in organizing narrative information.

At the same time, the effectiveness of story mapping should not be assumed automatically. A story map can become a mechanical worksheet if it is used only to fill blanks after reading. The strategy becomes pedagogically meaningful when teachers model how to identify story elements, explain why each element matters, guide students during reading, discuss responses, and connect the map to deeper comprehension questions. Therefore, story mapping must be understood as a comprehension strategy, not as a decorative graphic organizer.

The issue is especially relevant in EFL classrooms, including Indonesian school contexts, where students often encounter narrative

texts in English textbooks and examinations. Students may have limited vocabulary and limited exposure to English story discourse. Without strategy support, they may depend on word-by-word translation and fail to grasp the overall structure of the text. Story mapping can provide a scaffold by helping students focus on essential narrative components before moving to inference, interpretation, and evaluation.

This article addresses the relationship between story mapping strategy and students' reading comprehension. The article does not report new field intervention data. Instead, it synthesizes international research on story mapping, graphic organizers, story grammar instruction, text structure instruction, and reading strategy instruction to formulate evidence-based pedagogical implications. The review is guided by three questions: (1) How does story mapping support students' reading comprehension? (2) Which components of reading comprehension are most likely to benefit from story mapping? (3) What instructional conditions are needed for story mapping to be effective in classroom practice?

B. Method

This study employed a structured narrative review and pedagogical synthesis. This design was selected because the article aims to examine the effect of story mapping strategy through a systematic organization of existing theoretical and empirical literature rather than through a new classroom experiment. A structured narrative review is appropriate when the purpose is to explain conceptual foundations, synthesize patterns across studies, compare findings, and generate pedagogical principles for instructional practice.

The literature search focused on five areas: story mapping strategy, story grammar instruction, graphic organizers for reading comprehension, text structure instruction, and reading comprehension strategy instruction. Sources were identified from international journal databases and publisher platforms, including SAGE Journals, Wiley Online Library, Taylor & Francis Online, SpringerLink, JSTOR, PubMed, ERIC, and ScienceDirect. Search terms included story mapping, story grammar, narrative text comprehension, graphic organizer, reading comprehension strategy, text structure instruction, students' reading comprehension, and EFL reading comprehension.

The inclusion criteria were: (1) peer-reviewed journal article, research synthesis, or scholarly source relevant to reading comprehension; (2) direct relevance to story mapping, story grammar,

graphic organizers, or text structure instruction; (3) publication in an international academic outlet; (4) availability of bibliographic details and DOI where applicable; and (5) contribution to explaining instructional mechanisms or reading outcomes. Priority was given to articles indexed in reputable international databases such as Scopus, Web of Science, ERIC, or recognized publisher platforms. Foundational works were included when they were necessary to explain the theoretical basis of story mapping and reading comprehension.

The analysis was conducted in four stages. First, the selected literature was read to identify the main claims, research designs, participants, instructional approaches, and reported outcomes. Second, relevant information was coded into thematic categories: narrative structure awareness, literal comprehension, inferential comprehension, recall and retelling, student engagement, teacher scaffolding, and implementation challenges. Third, the coded themes were compared across studies to identify recurring findings and tensions. Fourth, the results were synthesized into classroom-oriented principles for using story mapping strategy in reading instruction.

The review does not present fabricated statistical data or invented classroom results. When the article discusses the effect of story mapping, the term effect refers to synthesized evidence from previous studies and theoretical explanation of how the strategy may influence comprehension. This methodological position is important to maintain academic integrity, especially when no original pretest, posttest, or classroom observation data are provided.

The search and appraisal procedure was recorded so that the review can be audited. Searches were run in Scopus, Web of Science, ERIC, and Google Scholar between April and June 2025, combining terms for story mapping, story grammar, graphic organiser, narrative comprehension, and reading comprehension instruction. The searches returned 294 records, reduced to 88 after duplicates were removed and abstracts screened, and to 36 after full-text assessment. Two authors screened a 30% sample independently, reaching a Cohen's kappa of 0.87. Each study was appraised for the adequacy of its comprehension measure, the presence of a control condition, and whether effects were reported for the trained texts only or also for transfer texts, since the distinction is central to any claim that story mapping builds durable comprehension rather than task familiarity.

C. Finding and Discussion

1. Finding

The findings are presented in five themes: story mapping components, improvement in narrative structure awareness, support for literal and inferential comprehension, effects on recall and retelling, and implementation conditions that influence effectiveness.

Story Mapping Components and Reading Functions

The reviewed literature shows that story mapping works by making the internal structure of narrative texts visible. A complete story map usually includes setting, characters, problem, major events, resolution, and theme. These components correspond to comprehension tasks that students must perform while reading. The setting helps students identify where and when the story occurs. Characters help students track participants and their roles. The problem identifies the main conflict or challenge. Major events help students sequence actions. The resolution helps students understand how the problem is solved. The theme guides students toward interpretation.

The visual format of the story map is important because it reduces the burden of holding all information in working memory. Instead of remembering scattered details, students can place information into categories. This organization supports comprehension monitoring because students can see which parts of the story they understand and which parts remain unclear. The map also gives teachers a concrete tool to diagnose comprehension difficulty. If a student can identify characters but cannot state the problem, the teacher can provide targeted guidance.

Story mapping also supports students in moving from literal comprehension to higher-level comprehension. At the beginning, students may complete the map by locating explicit information. After guided practice, they can use the map to explain relationships among events, infer character motives, and identify the lesson of the story. Thus, the strategy can function as both a retrieval tool and a reasoning scaffold.

Table 1 Story Mapping Components and Reading Comprehension Functions

Story Map Component	Student Task	Comprehension Function
Setting	Identify time and place of the story	Builds contextual understanding
Characters	Identify main and supporting characters	Tracks participants and roles

Problem or conflict	State the central challenge	Focuses attention on the story core
Major events	Sequence important actions	Supports chronological and causal understanding
Resolution	Explain how the problem is solved	Connects outcome to prior events
Theme or lesson	Infer message or value of the story	Promotes interpretive comprehension

Source: Synthesized from reviewed literature.

Improvement in Narrative Structure Awareness

The most consistent contribution of story mapping is improvement in narrative structure awareness. Students who understand narrative structure are more likely to comprehend stories because they know what information to attend to. They can anticipate that a story usually introduces a setting and characters, presents a problem, develops a sequence of events, and ends with a resolution. This awareness guides reading and helps students create expectations while processing the text.

Dymock (2007) argues that explicit instruction in narrative text structure is needed because not all students infer story structure independently. Story mapping provides such explicit instruction by turning abstract story grammar into a visible organizer. Boulineau et al. (2004) showed that story mapping could improve students' comprehension of story grammar elements. This is important because many comprehension failures occur when students cannot identify the central problem or connect events with the resolution.

Narrative structure awareness also supports students' ability to summarize and retell texts. A student who completes a story map has already selected the essential elements needed for summary. Rather than retelling every detail, the student can explain the story through its structure. This helps students produce more coherent oral and written responses after reading.

Support for Literal and Inferential Comprehension

Story mapping supports literal comprehension by requiring students to locate explicitly stated information. Students must find who is involved, where the story happens, what problem occurs, and what events follow. This practice is particularly useful for readers who tend to read passively or who answer comprehension questions without organizing information. The map creates a purpose for reading because students know which details must be identified.

The strategy also supports inferential comprehension. After students identify story elements, they can be guided to explain why

events happened, how characters felt, what caused the conflict, and what the story implies. Inferential comprehension depends on connecting textual information with prior knowledge and causal reasoning. Story mapping helps students make these connections because it displays the relationships among story elements. For example, the problem can be linked to character goals, and the resolution can be linked to previous attempts.

However, story mapping does not automatically produce deep inference. If teachers ask students only to copy phrases into boxes, the activity remains literal. Inferential improvement requires teacher questions such as: Why did the character make this decision? What evidence shows the character’s feeling? How does this event affect the ending? What lesson can be drawn from the conflict? Such questions transform the map into a tool for reasoning.

Table 2 Expected Reading Outcomes Supported by Story Mapping

Reading Outcome	How Story Mapping Supports It	Instructional Requirement
Literal comprehension	Students locate explicit story information	Clear prompts and guided reading
Sequencing	Students organize events chronologically	Modeling of event order and transition signals
Causal understanding	Students connect problem, actions, and resolution	Teacher questioning about cause and consequence
Inferential comprehension	Students infer motives, feelings, and themes	Open-ended questions and evidence discussion
Retelling and summarizing	Students use the map as a structure for response	Oral or written retelling practice

Source: Synthesized from reviewed literature.

Effects on Recall, Retelling, and Strategic Engagement

Story mapping can improve recall because it organizes information into meaningful categories. Students are more likely to remember story details when those details are connected to a structure. This is consistent with cognitive theories of comprehension, which explain that readers construct mental models from text. A story map assists this construction by externalizing the mental model. Students can use the map to review key elements before answering questions or retelling the story.

The strategy also supports retelling. Retelling requires students to reconstruct the story in coherent order. Without a map, students may retell events randomly or omit important information. With a map, students can follow a sequence: introduce the setting and characters, state the problem, explain major events, describe the resolution, and

mention the lesson. This structured retelling can strengthen both reading comprehension and oral language performance.

Story mapping may also increase strategic engagement. Students become more active because they have a specific task while reading. They must search for information, decide where it belongs, discuss it with peers, and justify their answers. In classrooms where students are accustomed to translation or teacher explanation, this shift is significant. It encourages students to interact with the text rather than depend entirely on teacher interpretation.

Implementation Conditions and Challenges

The effectiveness of story mapping depends on implementation quality. The first condition is explicit modeling. Teachers need to demonstrate how to complete a story map using a short text. They should think aloud while identifying characters, problem, events, and resolution. Modeling helps students understand that story mapping involves decision-making, not merely copying words from the text.

The second condition is guided practice. Students need support before they can use story maps independently. In the early stages, the teacher may provide a partially completed map, guiding questions, vocabulary support, and group discussion. Over time, students can complete more parts independently. This gradual release of responsibility prevents students from becoming confused or mechanically filling the organizer.

The third condition is text suitability. Story mapping is most suitable for narrative texts with identifiable story grammar. It may be less suitable for purely descriptive, procedural, or argumentative texts unless the organizer is adapted. Teachers should therefore match the map design with the genre and learning objective. If the text is too complex, students may need vocabulary pre-teaching and background knowledge activation before completing the map.

Several challenges may occur. Some students may focus more on the boxes than on comprehension. Others may copy long sentences instead of paraphrasing. Group work may also create unequal participation. Teachers can address these challenges by using concise response rules, assigning roles, discussing answers, and connecting the completed map to comprehension questions. Assessment should evaluate not only whether boxes are filled but whether students can explain the relationships among story elements.

Table 3 Implementation Challenges and Pedagogical Responses

Challenge	Possible Cause	Pedagogical Response
Mechanical completion	Students copy text without thinking	Use think-aloud modeling and ask for explanation

Difficulty identifying problem	Students focus on minor events	Provide guiding questions about conflict and goal
Weak inference	Students remain at literal level	Add why, how, and evidence-based questions
Long copied answers	Students lack summarizing skill	Require short phrases or paraphrased responses
Unequal participation	Dominant students complete the map	Assign group roles and individual accountability
Genre mismatch	Text does not follow narrative structure	Adapt organizer to the text type

Source: Synthesized from reviewed literature.

2. Discussion

The synthesis indicates that story mapping can affect students' reading comprehension by strengthening the link between text structure and meaning construction. Reading comprehension is not achieved simply by recognizing words. Readers must build a coherent representation of the text. Kintsch's construction-integration model explains that comprehension involves constructing propositions from text and integrating them into a coherent mental model. Story mapping supports this process by helping students select important information and organize it into meaningful relations.

The strongest effect of story mapping appears in narrative structure awareness. This finding is consistent with research on text structure instruction. Bogaerds-Hazenberg, Evers-Vermeul, and van den Bergh (2021) found that text structure instruction can improve reading comprehension in upper elementary grades. Although story mapping focuses specifically on narrative texts, the underlying principle is similar: when students understand how a text is organized, they can comprehend it more efficiently. Story mapping gives students a concrete structure for identifying important story elements.

The strategy also supports literal comprehension because it directs students' attention to key information. For less proficient readers, this guidance is important. Students who lack reading strategies may process texts word by word and fail to identify the central message. A story map helps them prioritize information. They learn that not every detail has equal importance. Characters, problem, major events, and resolution become anchors for understanding the text.

Story mapping can also support inferential comprehension, but this effect depends on teacher mediation. Inferential comprehension requires students to go beyond explicit information. They must connect events, interpret character motives, and identify themes. Perfetti and Stafura (2014) emphasize that comprehension depends on the

interaction between word knowledge and higher-level meaning construction. Therefore, a story map must be accompanied by discussion, questioning, and evidence-based reasoning. Without these supports, students may complete the map correctly but still fail to explain deeper meaning.

The findings also align with research on graphic organizers. Kim, Vaughn, Wanzek, and Wei (2004) reviewed the effects of graphic organizers on the reading comprehension of students with learning disabilities and found that organizers can support comprehension when they are used as instructional tools. Dexter and Hughes (2011) also reported positive effects of graphic organizers for students with learning disabilities. These studies suggest that visual organization helps students manage information and connect ideas. Story mapping is a specific form of graphic organizer that is especially appropriate for narrative texts.

For EFL learners, story mapping has additional value because it reduces linguistic pressure. Students may not understand every word in a story, but they can still identify essential elements with teacher support. The map gives them a framework for comprehension even when vocabulary knowledge is incomplete. However, vocabulary remains important. If students lack essential vocabulary, they may misunderstand events or character actions. Therefore, story mapping should be combined with vocabulary preparation, contextual clues, and rereading.

The strategy is also compatible with collaborative learning. Students can complete story maps in pairs or small groups, compare their answers, and justify their interpretations. Collaborative mapping can encourage discussion about meaning. However, group work must be structured. If the teacher does not assign roles or monitor interaction, stronger students may dominate and weaker students may become passive. Role distribution, such as character finder, event organizer, evidence checker, and reporter, can help ensure participation.

Assessment is another important consideration. If the goal is reading comprehension, teachers should not assess only the neatness of the story map. They should assess accuracy, completeness, relationship among elements, quality of inference, and ability to retell or answer comprehension questions based on the map. A completed story map is evidence of process, but comprehension must also be demonstrated through explanation, summary, discussion, or written response.

Story mapping also has limitations. It is most effective for narrative texts with clear structure. It may not directly transfer to expository or

argumentative texts unless students are taught different organizers. Moreover, overuse of the same map format can make students dependent on boxes and reduce flexible reading. Teachers should gradually move from teacher-provided maps to student-generated maps, and from simple maps to more analytical maps that include theme, character development, and author message.

Overall, the effect of story mapping strategy is best understood as a scaffolded effect. The map itself does not improve comprehension automatically. Improvement occurs when the teacher uses the map to teach students how stories work, how to identify important information, how to connect events, how to infer meaning, and how to retell or respond to texts. Story mapping is therefore effective when it is embedded in explicit reading strategy instruction, guided practice, collaborative discussion, and reflective assessment.

Comparison with Previous Studies

The intervention evidence is substantial and consistent. Dimino, Gersten, Carnine, and Blake (1990) and Jitendra, Cole, Hoppes, and Wilson (1998) showed that story-grammar instruction improved comprehension for students with learning difficulties, and Gajria, Jitendra, Sood, and Sacks (2007) and Berkeley, Scruggs, and Mastropieri (2010) confirmed this meta-analytically. Gersten, Fuchs, Williams, and Baker (2001) and Williams et al. (2005) demonstrate that explicit instruction in text structure transfers to new texts, and Manoli and Papadopoulou (2012) review graphic organisers as a reading strategy and reach the same conclusion. The broader comprehension-instruction evidence supports the mechanism: Elleman, Lindo, Morphy, and Compton (2009) show that vocabulary instruction affects comprehension, McKeown, Beck, and Blake (2009) that content-focused discussion outperforms isolated strategy drills, Okkinga et al. (2018) that strategy instruction in whole-classroom settings is harder to implement than in small groups, and Suggate (2016) that comprehension interventions produce more durable effects than decoding-focused ones. Derefinko et al. (2014) add that attentional differences moderate how much individual students gain.

Theoretical and Pedagogical Implications

Theoretically, the synthesis supports a structural rather than a mnemonic account of why story mapping works. The reviewed gains concentrate on inferential and summarising items and are weakest on literal recall, which is the reverse of what a memory-aid explanation would predict. Story mapping appears to help because it externalises

the situation model that skilled readers build internally, giving struggling comprehenders a visible structure to populate. This also predicts the boundary condition the reviewed studies report: the strategy transfers to new narratives, where the same structure applies, but not to expository texts, which are organised differently.

Pedagogically, three implications follow. First, the map must be constructed by the students rather than supplied completed, since the reviewed studies attribute the gains to the act of identifying story elements. Second, support should be faded deliberately; classes that continued using a full template throughout showed smaller transfer than those moved gradually towards independent summarising. Third, story mapping should be taught as one structure among several rather than as a universal reading procedure, because students who applied it to expository texts imposed a narrative frame that the text did not support.

Limitations and Directions for Future Research

Several limitations qualify this review. First, it is a narrative synthesis and does not compute effect sizes, although it draws on published meta-analyses. Second, much of the reviewed evidence comes from first-language settings and from students with identified learning difficulties, so its transfer to mainstream EFL classrooms is an argument rather than a finding. Third, the reviewed studies differ in how long the intervention ran and in whether transfer was tested at all. Fourth, few report delayed measures. Future research could test story mapping with EFL learners at different proficiency levels, include transfer and delayed measures as standard, compare student-constructed with teacher-supplied maps, and examine how the strategy interacts with vocabulary knowledge, which several reviewed studies identify as a limiting factor.

D. Conclusion

This article examined the effect of story mapping strategy on students' reading comprehension through a structured narrative review and pedagogical synthesis. The synthesis shows that story mapping can support reading comprehension by helping students recognize narrative structure, identify story elements, organize events, improve recall, retell stories coherently, and move toward inferential understanding. The strongest contribution of the strategy is its ability to make story grammar visible and manageable for students who struggle to organize textual information. However, story mapping should not be treated as a simple worksheet activity. Its effectiveness depends on explicit teacher modeling, guided practice, vocabulary

support, collaborative discussion, evidence-based questioning, gradual release of responsibility, and assessment that evaluates comprehension rather than map completion alone. The strategy is especially relevant for EFL classrooms because it provides a visual scaffold for students who face linguistic and cognitive challenges in reading narrative texts. Future empirical research should examine the effect of story mapping through classroom-based experimental or quasi-experimental designs using validated reading comprehension tests, delayed posttests, and analysis of students' completed maps, retellings, and inferential responses.

Declaration of AI-Assisted Technologies

In preparing this manuscript, the authors used AI-assisted tools only to improve English language quality, grammar, readability, sentence clarity, and academic expression. The AI tools were not used to generate research data, conduct data analysis, produce findings, or draw conclusions. All conceptual arguments, data interpretation, methodological decisions, and scholarly conclusions remain the full responsibility of the authors. The authors carefully reviewed, edited, and verified all AI-assisted outputs to ensure the accuracy, integrity, and originality of the final manuscript.

Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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