Volume 2, Issue 4

Innovation Series Quarterly

https://journal.academicapress.org/aps/index.php/isq

Research Article

Beyond AI-Generated Text: StorySteps as an Innovative Scaffolded Approach to Narrative Writing for ESL Beginners

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Keywords:
Narrative writing
CEFR A1
Scaffolded instruction
Cognitive load
Self-regulated learning
ChatGPT
Learner autonomy

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Abstract: *The majority of English as a second language (ESL) beginners — especially those working at the CEFR A1 level — find it difficult to come up with ideas, write sentences that make sense, put events in order, and create stories that are easy to follow. In fact, Che Awang et al. (2021) found that 65% of the narrative essays analyzed showed poor writing ability. They also noted that 71.3% of the errors made were related to sentence structure and grammar. This suggests there are some basic problems with writing for beginner ESL learners, even though Che Awang et al. did not look specifically at A1 learners. StorySteps was created as an AI-based program to assist learners with their writing, particularly their ability to tell stories, by providing structured assistance and personalized feedback. StorySteps was designed based on Scaffolding Theory, Cognitive Load Theory, and Self-Regulated Learning, and includes 15 chapters that build on one another; 150 guided AI prompts; 150 pairs of weaker vs. stronger examples of writing; self-assessment checklists; visual learning aids; and a 1,500-word glossary. Using ChatGPT as an interactive guide, StorySteps guides learners through a process of planning-drafting-revising-independent practice. While many other types of generative AI software will write an entire text for learners, StorySteps asks learners to think about their own thoughts and improve their writing through questioning and targeted feedback. StorySteps was designed to support narrative writing skills, increase vocabulary, build confidence, and foster independence in learning. Because StorySteps is structured and flexible, it has potential for use in classrooms, as a resource for independent learners, and in other educational contexts. However, the success of StorySteps needs to be demonstrated through research.*

1. INTRODUCTION

Narrative writing is more than just putting together grammatically correct sentences for beginners in ESL. In addition to creating their own ideas, introducing the main characters and setting, organizing the problem(s) and accompanying event(s), maintaining the appropriate tense, choosing the correct vocabulary, connecting each paragraph, and reviewing the finished piece; learners are simultaneously managing multiple aspects of their writing that may exceed their ability due to limited linguistic resources. Studies on narrative-structure have demonstrated that children's organizational skills in writing have been enhanced (Fitzgerald & Teasley, 1986). On the other hand, studies focusing on the use of oral-narrative instruction have shown that it supports initial attempts at generating written texts (Kirby et al., 2021). Although no studies to date have established a causal relationship between these findings and CEFR A1 diploma students, they do provide evidence for the benefits of making components of a story explicit and teachable.

The established literature on writing research also strongly advocates for the use of explicitly planned activities, modeling, strategic teaching and revisions of written works, as opposed to assuming that novice writers can create a coherent written narrative on their own (Graham & Perin, 2007). Cognitive Load Theory provides an explanation for how novice writers may have difficulty when there are many interconnected parts of a process that need to be processed simultaneously; the limited capacity of their working memory may be consumed with completing the task at hand rather than developing generalizable patterns (Sweller, 1988). To address these issues, StorySteps divides the process of writing narratives into a series of short, observable steps. The first step involves creating simple sentences. The second step involves practicing the creation of four-sentence paragraphs. Finally, the third step involves writing full stories. While StorySteps has internal target lengths for each of its activities (approximately 50-80 words per paragraph, and approximately 100-150 words per story), these targets are used as teaching objectives and are not officially recognized as CEFR writing threshold levels.

In contrast to conventional, static resources, generative conversational artificial intelligence provides an avenue for immediate explanation, practice, and formative assessment. Specifically, Mahapatra (2024) studied how ChatGPT-based formative assessments can support undergraduate ESL academic writing; Han and Li (2024) evaluated how teachers mediate ChatGPT assessments; and Teng (2024) documented what EFL learners felt about their experience using ChatGPT. However, there are numerous other studies indicating varying levels of student participation, potential for uncritical correction by the student, and potential for the student to use AI-generated text as a substitute for practicing writing (Yan, 2023; Zhang & Hyland, 2018). Therefore, StorySteps was developed with a different focus: How can ChatGPT provide limited support to the student while allowing the student to be the creator of the story?.

1.1 Problem Statement and Innovation Gap

StorySteps attempts to resolve three related instructional issues. First, beginning ESL writers are sometimes required to write stories before they have developed sufficient proficiency in writing sentences, organizing events in chronological order, or using cohesive devices. Second, lecture notes, slides and other instructional materials can demonstrate how to write; however, these materials cannot give individualized feedback to students who become stuck while working on their own. Finally, free-form text-generating software can quickly create a well-written story for a user. In doing so, the user does not learn the process of planning, drafting and revising. This latter issue is especially damaging since the resulting product appears to be high quality writing, which can lead the user to believe that his/her writing has improved as a result of using the software (Yan, 2023).

The research on how ChatGPT can help in second language writing (L2 writing) has focused primarily on university-level students writing in academic settings or using ChatGPT for feedback purposes, and not on developing an entire self-guided writing process for beginners (Mahapatra, 2024; Han & Li, 2024; Zhang & Saeed, 2026). As such, the innovation gap is in finding ways to integrate these types of writing activities into a beginner-oriented curriculum that provides clear examples of narrative writing, realistic expectations for the student, step-by-step guidance from ChatGPT, assistance with vocabulary, and gradual progression to individual authorship. StorySteps addresses this need by providing instructions for both the student and the AI at each step of the writing process. This provides evidence of the development of a documented design contribution, but does not provide evidence of a new category of products or of measurable improvements in student learning.

1.2 Objectives of the Innovation

The main goal is to create a self-guided, AI assisted module for CEFR A1 (or equivalent) ESL students to provide manageable writing task for students and provide feedback on their writing without taking away student's ownership of their work. The modules five specific design goals include:

1. To help students progress on a continuum from developing simple ideas into sentences, then onto developing coherent paragraphs, and finally to creating full-length stories by using a series of 15 connected units.
2. ChatGPT will be constrained to provide assistance first in its role as a tutor, with steps, questions, and specific feedback on each student's work as opposed to generating complete stories for students.
3. To decrease the amount of work required for a particular job and to increase understanding by using pictures as examples, there are 150 weak–strong comparisons, guided examples, and a 1,500-word glossary.
4. To promote self-directed learning by having students set goals, plan, draft, use checklists, track their revisions, reflect upon what they did, and then complete an individual writing assignment.

This is an adaptable resource that can be used for classroom demonstrations as well as self-paced practice. It has a clearly defined future validation process by experts, testing of its usability, and evaluation of what students have learned from using the resource.

2. LITERATURE REVIEW AND THEORETICAL FOUNDATION

2.1 Explicit instruction in narrative structure and strategic writing

The elements of a story are identifiable. They include: the situation; the characters; the location; the beginning problem; the events leading up to the end; and the resolution. Fitzgerald & Teasley (1986) demonstrated the effectiveness of teaching narrative structure to students. Kirby et al. (2021) found that teaching oral narratives in Kindergarten led to improvements in writing skills. Graham & Perin (2007) found that many different types of structured writing programs had positive effects on adolescent writing. Therefore, it appears that StorySteps will also have a positive effect on A1 tertiary learners, even though we do not know if these results can be directly applied to them due to differences in age, language background, and task.

2.2 Scaffolding and gradual transfer of responsibility

The Scaffolding Theory defines the support that enables a person who cannot complete a task alone to attempt it (Wood et al., 1976). StorySteps provides graduated support. The student selects an idea, writes a sentence, is asked a question or given a small amount of assistance, and then revises the initial writing. As the student progresses through each chapter, they will need to write longer paragraphs, develop continuous events, and make decisions on their own. By the end of Chapter 15, students must have produced a new story prior to receiving permission for machine-generated feedback. The goal of the instruction is to gradually withdraw support as students gain confidence and ability to work independently, as opposed to replacing their decision-making with automated text generation.

2.3 Cognitive Load Theory and visual learning support

StorySteps was designed to reduce the "cognitive load" (Sweller, 1988) on beginning writers. Sweller's cognitive load theory states that novice writers may have difficulty because they need to focus simultaneously on many aspects of the writing process including structure, vocabulary selection, and evaluation criteria. StorySteps addresses these difficulties by providing step-by-step instructions, worked examples of each step, visual representations of the writing process, and comparative examples of weak vs. strong writing. The use of color, arrows, and labeled illustrations are used as tools for highlighting connections between components of the writing process rather than as decorations on the page. Çeken and Taşkın (2022) provide additional support for combining both verbal and visual instructional approaches. However, while the cognitive load theory supports the idea that visual aids can assist with instruction, it does not suggest that any form of visual aid is always helpful. For instance, too much unnecessary detail in a visual aid or an overly long list of definitions could increase cognitive load. Therefore, both understanding of instructional content and ease of use must be evaluated through testing with target audiences.

2.4 Self-Regulated Learning and learner autonomy

The Self-Regulated Learning framework describes writing as a recurring process of identifying objectives, carrying out tasks, observing yourself as you carry out the tasks, and reflecting on the outcomes of the tasks (Zimmerman, 2002). Research in the field of writing studies has examined the ways in which revision objectives and sources of feedback affect the self-regulated revision practices of learners (Li & Zhang, 2021). StorySteps applies these concepts to a series of repetitive learner behaviors: select a goal, outline the story, create a first version, use an AI tutor selectively, determine if the suggested changes should be made, document the rationale for revisions and then independently perform a final task. Checklists are used to promote monitoring of one's own performance rather than simply completing them passively. While this approach can potentially enhance learner independence, the development of greater self-regulatory behaviors and learner confidence will ultimately depend upon independent evaluations.

2.5 Feedback engagement and AI-assisted writing

The research shows that when students receive AI feedback on their writing, they need to actively interpret it and decide whether or not to use it as opposed to just accepting it without thinking. Zhang and Hyland (2018) identified behavioral, cognitive, and affective student engagement with teacher and automated feedback on writing. Barrot (2023) looked at the role of automated corrective feedback. Mahapatra (2024) studied the use of ChatGPT for formative feedback in undergraduate English-as-a-SecondLanguage (ESL) writing classes. Han and Li (2024) examined the role of teachers mediating the use of ChatGPT feedback. Guo and Li (2024) explored student-built personalized writing chatbots. Finally, Teng (2024) investigated EFL students' experiences with receiving feedback.

Similarly, a Malaysian case study conducted by Zhang and Saeed (2026) demonstrates how different students have varied responses to AI generated suggestions. This body of evidence supports StorySteps' short, focused feedback and mandatory explanations for revisions. However, this does not mean that the specific prompts provided by StorySteps will necessarily result in better performance by beginners in narrative writing.

3. METHODOLOGY: INNOVATION DEVELOPMENT AND DESCRIPTIVE ANALYSIS

Based upon an audit of the completed StorySteps instructional manuscript, this paper will utilize a descriptive educational innovation approach. The unit of analysis is the 175-page developed module; it does not measure student performance. The module's characteristics were analyzed against the beginner writing problems and three theoretical foundations as described in the abstract: Scaffolding Theory (Wood et al., 1976), Cognitive Load Theory (Sweller, 1988), and Self-Regulated Learning (Zimmerman, 2002). A design alignment matrix was employed to document each intended teaching function, module characteristic, and observable indicator for subsequent evaluation. No participants were recruited, and no experimental learning outcomes data, validated satisfaction scores, or inferential statistics are reported here.

StorySteps' development process consisted of 6 steps: (1) identification of the needs of A1-oriented narrative writing instruction and the associated learning objectives; (2) sequencing of the instruction from initial ideas/simple sentences through to the creation of a story/paragraphing/independent writing; (3) preparation of brief explanations/labeled illustrations/contrastive examples; (4) development of 150 sequentially ordered ChatGPT activities which will provide opportunities for students to attempt each activity independently prior to receiving help; (5) inclusion of chapter checklists/vocabulary reference entries/reflection and revision records; and (6) establishment of a tutor protocol that discourages the generation of complete stories and/or disclosure of sensitive information. StorySteps can be purchased as either a printed or digital workbook with access to ChatGPT provided separately; however, StorySteps is not an off-line AI system nor is it a specially trained language model. No testing was conducted regarding whether the prompts would produce consistent results when used with other models.

Table 1. Theory-to-feature alignment

Theory or Evidence Base	Storysteps Design Feature	Future Evaluation Indicator
Scaffolding Theory (Wood et al., 1976)	Stepwise tasks; attempt-first prompts; hints faded towards Chapter 15	Ratio of original attempts; independent narrative scores
Cognitive Load Theory (Sweller, 1988)	Small instructional steps, short worked examples, visual story maps	Task comprehension and perceived cognitive difficulty
Self-Regulated Learning (Zimmerman, 2002; Li & Zhang, 2021)	Goals, story plans, checklists, revision logs and reflection	Planning, self-monitoring and justified feedback uptake
Narrative instruction (Fitzgerald & Teasley, 1986; Graham & Perin, 2007)	Story elements, sequencing, transitions and contrastive models	Analytic scores for structure, coherence and language
AI feedback engagement (Zhang & Hyland, 2018; Mahapatra, 2024)	One or two feedback targets; learner checks AI suggestions	Revision decisions, authorship and transfer to new story

4. RESULTS: DOCUMENTED PRODUCT OUTPUTS

Document audit has verified that the planned outputs stated in the abstract were produced: a 175-page, 15-chapter module; 150 AI guided prompts; 150 pairs of weaker and stronger examples of writing; visual explanations and story organizers; chapter learning objectives, practice exercises and self-assessment checklists; and a 1,500-entry vocabulary glossary. The glossary includes 450 verbs, 550 nouns, 350 adjectives and 150 adverbs with simple definitions. The sequence of chapters' progresses from basic sentence level tasks to characterization, setting, plotting, chronological order, coherence, dialogue, and revision. Chapter 15 contains an independent narrative task to determine if learners are able to use the taught processes without being provided with AI hints at first. This is a verified description of the manuscript, not a measurement of learner achievement.

This module provides a five-step, iterative learning process: PLAN (select concept, context and event), DRAFT (generate new content), CONSULT AI (obtain a specific suggestion or comment), REVISE (identify modifications required to make the text better and explain the rationale for making those modifications), and TRANSFER (create a new story independently). The five stages represent the use of scaffolding to provide assistance at varying levels of support; attempting to limit cognitive demands by dividing the task into smaller parts; and encouraging students to engage in self-regulation through planning, monitoring and reflecting on their work. It is anticipated that the students will produce more structured narratives, utilize more relevant vocabulary, develop greater confidence in their abilities, and gain greater independence as learners. Since there has been no assessment of whether the students achieved the anticipated results, the results are presented as evaluation hypotheses rather than as empirical findings.

Table 2. Conceptual innovation pathway

BEGINNER WRITING NEEDS	STORYSTEPS LEARNING CYCLE	INTENDED OUTCOMES— NOT YET MEASURED
Difficulty choosing ideas and organising events	PLAN → use examples and story map → identify sequence	Clearer narrative structure and coherence
Limited sentence control and vocabulary	DRAFT → consult glossary and simple models	More accurate sentences and purposeful vocabulary
Uncertainty about revising errors	CONSULT AI → request one hint → REVISE → explain change	Greater feedback literacy and self-monitoring
Risk of dependence on complete AI texts	TRANSFER → new, unaided story before optional feedback	Confidence, autonomy and learner authorship

5. DISCUSSION

5.1 Pedagogical Value and Innovation Potential

StorySteps' main contribution is its pedagogical approach to developing a chatbot that can be used as a tool to support student learning. Scaffolding theory provides a theoretical framework for understanding how students can start by working with some level of support or guidance from an instructor or peer, and then slowly assume greater responsibility for the complexity of the tasks they perform (Wood et al., 1976). Cognitive Load Theory provides a theoretical basis for separating the steps involved in planning ideas, constructing sentences, and revising the final product. Additionally, visual supports such as short examples can assist students in focusing on the specific skill that is currently being taught (Sweller, 1988; Çeken & Taşkın, 2022). Finally, Self-Regulated Learning provides a theoretical basis for the repetitive cycle of setting a writing goal, creating text, assessing progress toward achieving that goal, receiving feedback regarding performance on the task, and determining

whether additional revisions need to occur (Zimmerman, 2002; Li & Zhang, 2021). Therefore, each of these theories serves as a functional design principle for the development of StorySteps rather than as a label that was applied after the product had been developed.

The workbook's design also reflects documented opportunities and risks associated with AI-supported second language writing. Instead of requiring a polished story from ChatGPT, StorySteps allows the learner to produce their own initial writing attempt while allowing them to selectively use ChatGPT as a resource for tutor-like feedback on their work. As such, AI is positioned as a tutor/feedback provider, not as a replacement author, consistent with research that has emphasized learner engagement in feedback and learner agency (Zhang & Hyland, 2018; Yan, 2023). Lecturers could utilize the workbook to demonstrate how to construct a narrative in-class, or learners could use it during independent practice. The reusable prompts and diagrammatic structures contained within the workbook may allow for individualized learning, however, the degree to which these elements provide individualization depends upon several factors, including the quality of ChatGPT responses, learner comprehension of the material, accessibility to resources, and institutional policy regarding AI usage.

The potential for enhanced learning, as represented by the abstract, will be greater accuracy and organization in the narrative; wider use of vocabulary; increased confidence in writing skills; and greater independence in producing written work. However, while these advantages represent reasonable possibilities, they are not guaranteed. Some students may continue to rely upon clues or to accept incorrect guidance from the artificial intelligence (AI). To determine whether the program has been successful, an assessment of the student's ability to create a new, independently created narrative should be made, rather than merely evaluating the quality of their AI-assisted writing or how well they viewed the program. There may be a market for a combination workbook/digital toolkit, a teacher's guide and the licensing of the program to educational institutions. However, the extent to which there is a demand for such products, the amount of money that could be saved through implementation of the program, and whether it can be scaled up to meet the needs of large numbers of people have not been assessed.

5.2 Proposed Validation and Evaluation

First, the suitability of the A1 level, learning progression, narrative content, theoretical alignment, language clarity, visual accessibility, feedback safeguards and rubric adequacy should be evaluated by content experts in ESL writing, instructional design and AI-supported pedagogy. After this, a subsequent usability pilot with learners should record task completion, understanding of visual instructions, glossary navigation, time spent on each task, requests for AI assistance, incorrect answers and barriers to accessing information. Revisions to the module and any deviations from the intended learner-first prompt behavior should also be recorded.

In addition to the previous point, a research project on classroom effectiveness should include a comparison between StorySteps based instructional strategies and another strategy that has similar instructional goals and teacher interaction. In addition, there should be independent pre- and post-intervention narrative-writing tasks (and if possible, a delayed transfer task), which will be evaluated blindly by raters for content, organization and cohesion, vocabulary usage, grammar usage, and mechanics. It is also recommended that the raters' reliability be reported in conjunction with effect sizes and confidence intervals as well as differences at the beginning of the study (baseline), and the level of implementation fidelity. To evaluate students' planning processes, monitoring processes, and how much they used the feedback they received, process data can be collected through student plans, drafts, chatbot conversations, and revision logs. While a short, previously tested self-assessment instrument could potentially be developed to measure students' self-confidence in their writing abilities and/or their perceptions of autonomy in the writing process; however, this type of assessment cannot replace direct observation of student's independent writing performance.

5.3 Limitations

A major limitation is that no information has been collected on students' use or results of this program; therefore, we do not know if students improved in their ability to write narratives, or became more confident and autonomous. Most AI-assisted writing research focuses on other levels, countries, and types of writing, making it difficult to generalize findings to CEFR A1 narrative writers. There are many ways ChatGPT can provide inaccurate, overly advanced, or inconsistent feedback. Even with a clearly written prompt, it is impossible to predict whether or not ChatGPT will comply. Many factors such as learners' access to technology, their first languages, their willingness to challenge AI, and their professors' institutional policies could affect how learners actually utilize AI. Also, the 175-page workbook and large glossary could create difficulty for learners to navigate and understand, which would go against what the developers had planned as a way to simplify the process. Lastly, there has been no independent assessment of learners' motivation or the visual appeal of the program.

6. CONCLUSION

StorySteps provides a structured module that addresses the challenges of beginning English as a Second Language (ESL) writers when they attempt to write narratives. This structured module includes fifteen sequentially organized chapters, visual instruction, 150 limited ChatGPT questions and feedback, 150 contrasting examples of each prompt, self-check activities, and a glossary with 1500 terms. It also uses Scaffolding Theory, Cognitive Load Theory, and Self-Regulated Learning to progression from sentence-level writing to full stories. What sets StorySteps apart from other products is that it uses AI as a limited resource for questioning and providing feedback as the learner plans, drafts, revises and eventually writes on their own. Currently, StorySteps is a fully developed and theoretically grounded instructional product—not a validated intervention. To evaluate whether or not it enhances narrative quality, self-confidence and independence, further research is needed including expert review, learner usability testing and independent scoring of written assignments. Therefore, this article defines a logically consistent and empirically testable design for AI-supported writing which will foster the development of the writer rather than replacing the writing process.

Acknowledgments: The authors thank Universiti Teknologi MARA (UiTM) Sabah Branch for its support in the development of this project.

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