"CATERing" to Readers' Needs with AI: Innovation in Text Design and Instruction

Samuel DeJulio, Catherine Lammert, Elfrieda Hiebert, Andrea Avalos, Beverly Cagle, Jasmin Dean, Shannon Good, Rashanna Tice

In this article, the authors describe an innovation that uses artificial intelligence (AI) to create texts tailored to the interests, strengths, and learning needs of individual readers.

Introduction

I shared with Matt that we would be creating a book specifically for him. To write the book, I started by prompting AI to generate a six-sentence story about a soccer game with one-syllable CVC words that focus on short /i/ sounds and the first 100 Dolch words…. During a cold read of the text, Matt brought it to my attention that the images were more of a distraction than an added feature. He was excited, to say the least, to share ways of improving the book we made. After corrections, Matt focused more and we were able to engage with vocabulary and story structure. ChatGPT is a great resource to enhance your ideas, check for accuracy, and modify suggestions to suit unique needs.

(Beverly, Matt's mentor)

As the opening vignette suggests, in this Teaching and Learning in Action report, we describe the initial phase in a design/development study on supporting teachers in using Artificial Intelligence (AI) to write developmentally appropriate high-interest texts for students who need additional support in reading. Our broad goal is to enhance literacy teacher preparation by deepening teachers' understanding of text features such as vocabulary load and decodability, their practices for choosing from existing texts, and their ability to adapt or write new texts to fit their students' needs and interests. Toward this end, we have developed an innovation we call CATER (Computer-Assisted Texts for Early Reading) that expands teachers' knowledge through the use of AI. CATER is designed for preservice and experienced teachers alike who aim to move beyond the constraints of the texts they have been provided by their school or district toward catering instructional texts to meet their students' needs and interests.

During the summer of 2023, we piloted CATER in a graduate course. Our goals were to: 1. Develop a process for creating instructional books for children with AI; 2. Pilot instruments to assess teacher learning and self-efficacy before and after the experience; and 3. Understand what benefits the books had for the children for whom they were designed. As we completed this pilot, we realized that the

Samuel DeJulio is an assistant professor in the Department of Interdisciplinary Learning and Teaching, University of Texas at San Antonio, San Antonio, TX, USA; email samuel.dejulio@utsa.edu.

Catherine Lammert is an assistant professor in the Department of Teacher Education, Texas Tech University, Lubbock, TX, USA; email catherinelammert@gmail.com.

Elfrieda Hiebert is founder, president, and CEO of TEXTProject, Inc., Santa Cruz, CA, USA; email hiebert@textproject.org.

Andrea Avalos is a graduate student in the Department of Interdisciplinary Learning and Teaching, University of Texas at San Antonio, San Antonio, TX, USA; email andrea.avalos3@my.utsa.edu.

Beverly Cagle is a graduate student in the Department of Interdisciplinary Learning and Teaching, University of Texas at San Antonio, San Antonio, TX, USA; email beverly.cagle@my.utsa.edu.

Jasmin Dean is a doctoral student in the Department of Interdisciplinary Learning and Teaching, University of Texas at San Antonio, San Antonio, TX, USA; email jasmindean@celebratedyslexia.org.

Shannon Good is a graduate student in the Department of Interdisciplinary Learning and Teaching, University of Texas at San Antonio, San Antonio, TX, USA; email shannon.good@my.utsa.edu.

Rashanna Tice is a doctoral candidate in the Department of Interdisciplinary Learning and Teaching, University of Texas at San Antonio, San Antonio, TX, USA; email rashanna.tice@my.utsa.edu.

graduate students who participated in this research were teaching us things we had not anticipated about the potential for AI-supported text writing. Thus, they join us in this piece as co-authors and co-explorers of our new digital world underpinned by machine learning technologies. The aim of this article is to support beginning readers by sharing CATER and encouraging teachers to use AI to create books tailor-made for their students.

Background: Text Complexity & Difficulty, Engagement, and Local Texts

We realize that typically teachers already have some access to texts for teaching reading. Often, districts provide teachers with texts designed to match a scope and sequence or text levels (Vaughn et al., 2021). However, teachers may not have information about why a particular text is designated for a particular purpose, leaving them with many questions (Barkhorn, 2013). Since teachers still regularly choose which of the provided texts they will use in different lessons, it is crucial that they understand the features of text that contribute to their complexity and difficulty for particular students. It is worth noting the distinction between these two terms. In research, text complexity "refers to how text features such as vocabulary load or sentence length compare to those in a large sample of texts," (Lammert et al., 2023, p. 2) while text difficulty refers to the challenge a text poses for a particular reader and task. In practice, distinctions between text complexity and text difficulty blur as teachers choose texts for particular readers (Hiebert, 2017) and see firsthand how features of complexity influence the reading experience for their students.

Texts provided in a core reading series are written to include features that support early literacy development; however, core series vary in the features that they consider (Mesmer, 2008). Reading success for those who are still developing proficiency depends on considerations such as the vocabulary used, the presence of orthographically irregular words, the number of words per text, and the novelty of those words (Hiebert & Fisher, 2007). Given that text features matter in early reading instruction, of particular utility can be decodable texts (Jenkins et al., 2004). Decodable texts are those controlled to include letter-sound patterns that have been previously taught, which encourages students to apply their phonetic skills to decoding connected text (Mesmer, 2008). One drawback of using decodable texts is that it can be difficult for teachers to find a text

> ### PAUSE AND PONDER
>
> - What texts best support readers in gaining skills and confidence in early reading?
> - What challenges do teachers face in finding texts that are engaging and fit the needs of beginning readers in their classrooms?
> - How can generative AI be used to help teachers compose the perfect text for beginning readers?

that matches a students' unique interests and matches the letter-sound patterns on which instruction has focused. In the current study, we solve this problem by supporting teachers in developing their own engaging texts catered to each students' needs.

Some studies have explored what types of texts students find engaging since engagement is linked to the amount of time students spend reading, and relatedly, their reading achievement (Allington & McGill-Franzen, 2021; Worthy et al., 1999). Differences in engagement have been noted based on whether a text is fiction, nonfiction, or hybrid (Bintz & Ciecierski, 2017). In our own research, we have identified features related to images and book design with the potential to enhance engagement (DeJulio et al., 2022). Other researchers studying text enjoyment have focused on the difference between texts produced by commercial publishers and local texts, a term coined by Hoffman and Schallert (2004) to refer to texts made by elementary students, for elementary students, in classroom spaces. Their work suggested that students enjoy and benefit from reading local texts because they are often focused on topics, themes, and characters that students find interesting (Hoffman & Schallert, 2004). As a result, the practice of including texts produced by students and teachers in classroom libraries and instruction has grown in popularity (Sailors & Manning, 2019; Zoch et al., 2018).

Local texts can be personalized to meet the needs and interests of individual readers, although certainly not all books should be personalized. In particular, books read aloud for the purpose of developing students' print awareness, phonological awareness, and oral vocabulary do not necessarily need to fit the same parameters of text complexity as those read by students to improve their decoding, fluency, and comprehension (Hiebert & Fisher, 2007). Authors such as Jacqueline Woodson, Mo Willems, and Matt de la Peña who have penned and illustrated the award-winning books that line many classroom bookshelves are obviously better authors than AI, but AI can be used by teachers to write supplemental materials that correspond to these beloved read-aloud titles. AI can also support teachers in adjusting published texts' complexity to ensure a level of difficulty that suits a particular lesson and student.

In sum, the selection of ideal texts is a difficult practice to learn since it requires examining existing options, adjusting or rewriting them as needed, and matching readers,

tasks, and texts to one another (Lammert et al., 2023; Snow, 2002). In the section that follows, we explain how we supported teacher learning toward this difficult task using AI tools.

Our Study

The teachers participating in this pilot study were enrolled in a graduate course focused on supporting children and youth who experience difficulty learning to read. The summer course met for 2 h daily across 5 weeks. Additionally, the graduate students mentored (i.e., tutored; see Hoffman et al., 2019 for a discussion of the interchangeability and differences of these terms) a child in reading and writing for approximately 1 h a day for 10 days. In order to avoid coercing graduate students to participate in the research, the researcher recruited from the course in which he was also the instructor of record, but he was not made aware of which graduate students consented to participate until final grades were submitted. Further, all of the activities in this course were part of the regular course experience, so regardless of study participation, graduate students completed the task of writing an AI-supported text and sharing it with a student. One required component of the course was working with an elementary or middle-grade mentee who needed additional support in reading. Since the graduate students were experienced teachers with ties to the local community, they identified a mentee through professional and personal networks.

Overview of CATER Process

Our process of designing, sharing, and learning from the CATER books occurred in ten steps (see Table 1). Teachers were administered curriculum-based measures of phonics knowledge prior to and at the end of the CATER experience. The items were based on the LETRS scope and sequence for word study, reading, and spelling (Tolman & Moats, 2019). Teachers were also given pre- and post-assessments of literacy teacher self-efficacy (Lammert et al., 2022). Between these pre- and post-assessments, the teachers learned about text complexity and book features, explored using AI to create text, and worked one-on-one with the children. The process we followed is described in detail in this section.

On the first day of class, the instructor explained to teachers that they would be creating customized books for the children they were mentoring. During the first week of class, the class discussed topics related to text complexity and text selection. The graduate students explored features of different books used with young readers, including little books, decodable books, and trade books designed for children. Additionally, the class explored a particular collection of books designed for beginning readers so teachers could see examples of high-interest, thematically linked books used for beginning reading instruction (Textproject, n.d.).

During the second week of class, the graduate students began working with young children in the mentoring program. The mentors began by getting to know the children, learning about their interests, experiences, backgrounds, and reading skills. The mentors paid particular attention to the words and word patterns the children knew and which ones they needed support with. As part of this process, each teacher wrote an instructional plan for their sessions with their students. An example of Jasmin's instructional plan is below.

The Instructional Plan:

1. Confidence: I am including daily poems or reading passages that are based on my student's areas of interest. I am strategically increasing the length of the texts to build my student's confidence and provide more opportunities for practice. I am introducing and teaching specific Tier 2 and Tier 3 words ahead of reading the poem or passage so that he gains confidence in reading fluently.

2. Independent Reading: The student independently chose a book he would like to read. Every 10 pages or so, I check in with him to make sure he is still interested in the activity and wants to continue. He reads 30 pages per mentoring session. The subject matter is his choice, so this validates his interest and competencies with background knowledge.

3. Foundational Skills: I am using AI to build sentences that include areas of weakness, such as "ea" sounds, so that we can learn the vowel digraph. We practice reading the sentences together and talk about the decoding strategies we used to read them.

Back in the graduate class, the instructor introduced the graduate students to ChatGPT, a free and publicly available OpenAI-powered language model. They began by exploring commands to generate a variety of text types. For example, the instructor showed students that AI could generate a condolence letter for a friend who lost their pet lizard. At the end of the first day of exploring ChatGPT, teachers discussed what commands they used, what was successful, and how commands or sentences could be changed to create texts that were accessible for students during mentoring. During the following days, teachers utilized commands to generate word lists, sentences, paragraphs, and stories (e.g., 1. Write sentences at a first-grade

Table 1
CATER Process

Step	Activity	Description
1	Pre-assessments of teacher knowledge	On the first day of class, teachers took two assessments: 1. Teacher Knowledge of Phonics assessment and 2. Literacy Teacher Self-efficacy (Lammert et al., 2022)
2	In-class discussion of text complexity	In class, the teachers learned about text complexity, text leveling systems, and different books designed for beginning readers
3	Experimenting with AI	In class, the teachers experimented with AI to learn how to word commands to generate texts and word lists for different purposes
4	Getting to know (assessing) the mentee	Over the first few days of working with the children, the teachers learned about their interests and experiences from conversations with the children and their caregivers. They conducted a variety of assessments related to word reading and phonics knowledge
5	Composing connected text	After learning about the child's interests, experiences, strengths, and needs, each teacher used AI to create a story for her mentoring student
6	Learning about images and book features	In class, the teachers learned about how images and design features can connect to the text and enhance the text in ways that can make the story more engaging. The teachers included images and design features in their books to accompany the AI-generated texts they had created
7	Revising the books	Once the teachers had created their books, they exchanged the books with peers to consider revisions that might be helpful
8	Sharing the books	The teachers shared the books with the children in mentoring. Afterward, the teachers talked with the children about what they liked about the book and what suggestions they would make to improve the books
9	Reflecting on the books and the CATER process	In class, the teachers discussed what they learned from the CATER process
10	Post-assessments	On the last day of class, teachers retook the two assessments they took on the first day of class

level about animals, or 2. Include one and two syllable words that contain the digraphs /th/ and /ch/).

Once the teachers were familiar with generating text with AI, they began to generate text for the children they were mentoring. Using what they had learned about the children in their first few meetings, teachers generated text they believed to be (1.) high interest, (2.) relevant, and (3.) accessible for their students. As mentors began to get to know the students with whom they were working, they developed an understanding of their interests, strengths, and areas for growth. Mentors were encouraged to use these components to begin crafting the customized book for students. As sentences, stories, and paragraphs were generated by ChatGPT, teachers modified some of the words and altered the sentences and stories to meet the interests and needs of the students.

Next, the class discussed features related to images and book design that can enhance engagement. In addition to the images themselves, the teachers were asked to consider the use of framing, line, color, font, layout, and even the use of page turns (see DeJulio et al., 2022 for more details). Again, the teachers explored different books that served as mentor texts to consider how they might be able to include some of these elements in the books they were creating. The instructor had explained that they could find open-source images online to accompany the texts, but the teachers immediately began to consider alternative ways of including images in their books. This sparked a discussion about incorporating student-created images, such as illustrations and photographs, into the books, or the use of AI Image Generators.

Once the teachers finished illustrating and designing their books, they shared them with their mentees. Some of the mentors printed the books out for the students and crafted the books into physical books the readers could hold. Other mentors shared them as electronic books with their readers. Afterward, each of the teachers reflected on their observations of the child engaging with the book and the child's feedback after reading the book. The teachers discussed their experiences in class after everyone had shared their book with the child in mentoring.

Following the conclusion of the course, the researchers invited all the mentors (i.e., graduate students) to join them in writing and reflecting on the learning that occurred; four agreed to participate: Andrea (Alex's mentor), Beverly (Matt's mentor), Jasmin (Zander's mentor), and Shannon (Isabella's mentor). All children's names used in this article are pseudonyms. Each mentor wrote an individual case profile focused on (A) what they learned about their students' strengths and needs, (B) what they learned about reading pedagogy, and (C) what they learned about text complexity and text difficulty throughout the course. Case profiles averaged 1108 words in length and were multimodal, including photos of the mentor-generated texts that were especially important. Then, to ensure that the conclusions we drew were trustworthy (Creswell, 2013) the case reports were refined through consultation with the instructor and teacher educators. While our findings are preliminary and our sample is small, our study provides evidence for the potential of AI-supported text writing for students in reading intervention settings. Now we elaborate on how to apply this practice through two case profiles.

Two Classroom Examples

Two mentor-mentee cases are presented by highlighting the following: (A) the reader's strengths and needs, (B) book design, (C) sharing of the book with the student, and (D) opportunities for growth.

Andrea & Alex's Story: "Just Like My Dad"

Introduction to the Reader. Alex is an energetic 10-year-old boy. He comes from a Hispanic family who predominantly speak English. He attends a school where 95% of students receive free and reduced lunch, and he entered 5th grade in the fall of 2023. When he grows up, Alex wants to be an auto mechanic just like his father. Andrea, Alex's mentor, explained that to support Alex she "learned about [him] both as a reader and as an individual." After learning about his interests and conducting several reading assessments, Andrea identified that Alex has many strengths including knowledge of how to decode one and two syllable words, reading simple sentences, and ability to decode vowel teams. Andrea also identified that Alex needed support with segmenting words, decoding multisyllabic words, reading compound and complex sentences, final syllable patterns & inflected endings, and consonant blends and consonant clusters. Andrea made an instructional plan for Alex focused on some of these areas.

Book Design. Because Alex expressed a great interest in mechanics, and because, luckily, Andrea also happened to know a lot about the topic, she decided to generate a text for him about becoming an auto mechanic. Before getting started with AI, she created a list of components she wanted to include in the text such as auto mechanic vocabulary, multisyllabic words, consonant blends and clusters, and compound and complex sentences. In this way, she matched the text to both his interests and the decoding skills he needed to build. Using ChatGPT, she gave several commands and revision commands to create the perfect literary nonfiction book for Alex. She reported, "I was flexible knowing that I was going to need to make my own revisions to give the text a more personal aspect, and to include the vocabulary I wanted Alex to practice." The text included vocabulary such as engines, hood, ratchet, wrench, lug nuts, and spark plug. It also included consonant blends and clusters. She chose suffixes of -ed, -ful, -ly, -ion, and -er as well as a variety of sentence complexity to include simple, compound, and complex sentences. Finally, she used real photographs of Alex and his dad working on a vehicle. Figure 1 shows an example of this text (Alex and his family enthusiastically consented to having their image included in this article).

Sharing the Text. Andrea explained,

> I first shared the book with Alex during a face-to-face meeting because I wanted to see his reaction in person. He was so thrilled to see pictures of himself and his dad doing what he loves most: mechanics, and spending time with his father. He was grinning from ear to ear.

Alex read the book to Andrea several times. Andrea noted that he struggled to read the words "lug nuts," not

Figure 1
A Page from the Text "Just Like My Dad" Showing the Vocabulary Word "Lug Nuts"
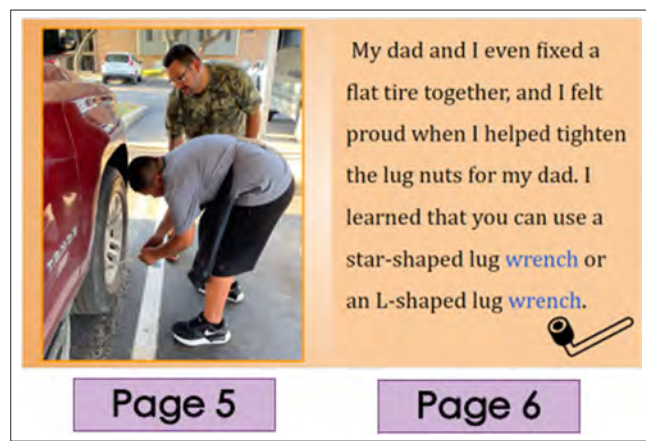
because the words were difficult to decode, but because he did not yet have the vocabulary knowledge of what lug nuts were. Andrea and Alex talked about the book together and she explained how she created it specially for him.

Opportunities for Growth. Andrea plans to create "many, many books" in the near future to impact her students just as this process did for Alex. In reflecting on the experience, Andrea encourages teachers to be brave when embracing new technology, explaining, "It was not difficult to use at all, and there are so many different routes you can go with using AI." Her advice is to have a very specific plan, and to know your reader(s). According to Andrea, a good plan should include the text's topic, which should come from the reader(s)' interests, the instructional focus, and the components the text needs to include.

Shannon & Isabella: "Isabella's Fashion Show"

Introduction to the Reader. Isabella is a 7-year-old girl who entered second grade in the fall of 2023. She lives with her parents, six siblings, and three pets, and she speaks both Spanish and English at home. Isabella spends her time playing with friends, drawing, and creating fashion designs, and being with her family. When working with Isabella, her mentor Shannon realized that Isabella is an avid reader who enjoys reading independently at school, out loud in class, at home in her room, and with her parents. She reads grade level texts with the expected fluency and comprehension for her age and has a developmentally appropriate grasp on individual letter sounds, blends, and digraphs. However, she can sometimes struggle to decode words with blends and digraphs.

Book Design. Shannon explained,

> When prompted to create a book for Isabella using an AI program, I was admittedly intimidated at first. Prior to this assignment I had zero experience communicating with AI and was unsure as to how this process would unfold. However, I knew that I wanted to make a meaningful book for Isabella and decided to draw from her love of fashion and design.

Following her student's needs despite her own hesitation, Shannon prompted ChatGPT to create a fictional story about a 7-year-old girl named Isabella who loved fashion and would one day become a famous designer. The AI program generated a touching story of Isabella's journey and spoke to her eventual fame and success. Since Isabella had a strength in fashion design and drawing, Shannon invited her to make the fashion design images that would become the illustrations for her text. Figure 2 provides an example of these illustrations. These images accompanied the text,

"Every day, [Isabella] would draw designs in her notebook. She loved to draw dresses the most. [Isabella's] mom and dad loved her drawings too!"

In addition to Isabella's drawings, Shannon also included AI-generated images from Stable Diffusion Prompt Generator and stock images from Google Slides that were representative of Isabella.

Sharing the Text. Isabella's excitement to read her book increased as the duo progressed through the mentoring sessions. Isabella read her story in the final week of the program, and Shannon noticed "her bubbly expression and prosody" as she did so. Shannon detected that, compared to Isabella's other favorite stories such as *Pete the Cat* or the *Stranger Things* series, she showed more interest and focus when reading the text designed just for her. Isabella requested more texts be created and asked Shannon if she could write a series of books about the fictional Isabella's journey to become a famous designer.

Opportunities for Growth. Shannon and Isabella's experiences show how their inquiry into fashion design and mentor-designed texts can complement one another. Outside of creating the book, Shannon worked with

Figure 2
Images from the Text "Isabella's Fashion Show" Showing Student-Made Drawings

Isabella on a project focused on fashion design using the book *How to Design Your Own Clothes* as a mentor text. Through co-inquiry, they created a poster in Canva of the required steps needed to successfully design an article of clothing, as well as a list of important fashion related vocabulary words. Shannon knows this related project deepened Isabella's understanding of fashion design, and it may have aided her as she created the designs included in her story.

Conclusion

In conversations with literacy scholars, we have heard it stated that "a teacher is only as good as the curriculum she is given." While it is crucial that every reading teacher has access to a research-aligned core series, in the AI age, we are even more skeptical of this adage than ever. Today, infinite possibilities exist for teachers to construct their own texts for teaching reading. Writing a unique text is not feasible for every lesson or every student. However, we see this process as being particularly useful in intervention settings, when students' needs are highest, as well as for teachers in remote areas such as rural schools where physical access to texts may be lower. By strategically using AI to support text composition, teachers can go beyond the limitations of existing materials to create reading intervention experiences that support students' interests while building their essential reading knowledge.

Through the process of composing AI-supported local texts (Hoffman & Schallert, 2004) we also examined what knowledge was built by the teachers in the CATER pilot using a variety of survey measures. Given the small sample size, analyzing the results using descriptive statistics was appropriate (Fowler, 2014). This analysis showed that teachers in the CATER project grew in their knowledge of consistent phoneme-grapheme correspondences, variable phoneme-grapheme correspondences, and syllable types. Following CATER, teachers' knowledge of phonics did not decrease in any area, but their knowledge of the orthographic principles governing high-frequency words (i.e., change y to i for suffix addition) was stable from pre-assessment to post-assessment. Analysis of descriptive statistics of the literacy teacher self-efficacy assessment results suggest small but potentially significant gains in self-efficacy for teaching literacy for CATER teacher participants. Furthermore, the teachers remarked that they understood texts better after having designed one, particularly in terms of the features of texts that make them more or less difficult for students. Thus, CATER is a process that can support professional learning that leads to a valuable product- a customized text for a student. Further, we were relieved to learn that a teacher does not need to be an expert on text complexity to take on AI-supported text composition; new understandings are bound to unfold throughout the process. In spite of these findings, we feel it is important to note that this article reports on the first iteration of a multi-phase design/development study. In our subsequent work, we have adapted CATER for use with preservice teacher participants. This has also enabled us to explore findings related to teacher learning at a larger scale. At the initial phase of CATER, our biggest goal was to ensure that the mentees received responsive and effective literacy instruction, and we relied on the anecdotal reports from mentees and their families as our most valuable source of data.

Additionally, in spite of the exciting potential for AI in literacy teaching learning, education scholars have noted drawbacks. For example, Canaday and Lammert (2023) have raised concerns about the environmental impact of using highly energy-dependent tools in place of simpler alternatives. These impacts on the environment should be considered along with the impact on teaching and learning.

As we have discussed the process of creating texts with one another, we have arrived at two recommendations to others who might adopt this approach: (1) Let the student be the content expert, and (2) Let the student be the hero. First, we found that students enjoyed correcting their mentors when they wrote incorrect content in their stories, such as providing the wrong name of a city in a video game. While AI is trained to produce language that matches particular types of text, it is prone to incorrectly identifying facts such as names and locations. Although presenting flawed texts could have led to uncomfortable moments for us as teachers, we used these opportunities to show the students that they were truly the experts on the content of these stories. This acknowledged their vocabulary knowledge and boosted their confidence, which is important to support their reading growth. Second, and relatedly, we found that this process was most successful when the students were not just *in* the story, but were the heroes, protagonists, and winners in these narratives. From Isabella the fashion designer sending beautiful dresses down the runway, to Alex the auto mechanic successfully fixing a vehicle, we found that our students thrived in real life when they were positioned as successful on the page. The impact of texts aligned with these recommendations is perhaps best stated not by us, but by the mother of one of the mentees in this study. She explained,

> In the short amount of time you have worked with Zander, we cannot thank you enough! The fact that my oldest son is telling me he is ready to go to mentoring earlier than your scheduled session times speaks volumes! Zander is bright and loves to ask questions, but just needs the courage and right tools to power through reading/writing to a higher level.

TAKE ACTION!

1. Identify a student who would benefit from having a text created just for them. This could be a reader who needs support with reading engagement and/or reading skills.

2. Assess the students' strengths and needs as a reader with particular attention to their orthographic knowledge, vocabulary, and interests. Be sure to engage the student's family/ caregivers in this process.

3. Use AI to draft a text. Include: (A) words with orthographic structures the student is learning, (B) high-frequency words, and (C) words in the student's vocabulary. Be sure to position the student as the hero/ protagonist of the story. Adjust the AI-generated text as needed to match the student's orthographic knowledge, vocabulary, and interests.

4. Use AI to add images to the text. Decide whether you will share the text digitally or print, fold, and create a hard copy. Add images accordingly.

5. Share the text with the student. Consider reading it chorally with the student and/or letting the student read it themself.

6. Ask the student for feedback. Adjust the text again. Be sure to position the student as the context expert on the story.

7. Send or digitally share a finalized copy of the text home with the student.

I'm not a fan of Demon Slayer [a Japanese manga series] or Anime in general. All of my boys will tell you that, but the book is phenomenal! Not to mention the pictures you found. This is definitely something I would encourage him to read over and over. (Mother of Jasmin's student.)

Because of the positive impact this work has had on the mentees in this study, we are glad that we undertook this study with a spirit of shared exploration and co-inquiry. In part because we see the value of this stance, we wish we had included the mentees more directly in data collection. While we know anecdotally that the texts positively impacted them as readers, future research will systematically explore the impact of these AI-supported teacher-written texts on readers' attitudes toward reading and their reading achievement. We invite others to join us on the AI journey.

REFERENCES

Allington, R. L., & McGill-Franzen, A. M. (2021). Reading volume and reading achievement: A review of recent research. *Reading Research Quarterly*, *56*(S1), S231–S238.

Barkhorn, E. (2013). *Teachers are supposed to assign harder books, but they aren't doing it yet*. The Atlantic. https://www.theatlantic.com/education/archive/2013/10/teachers-are-supposed-to-assign-harder-books-but-theyarent-doing-it-yet/280760/

Bintz, W. P., & Ciecierski, L. M. (2017). Hybrid text: An engaging genre to teach content area material across the curriculum. *The Reading Teacher*, *71*(1), 61–69.

Canaday, F., & Lammert, C. (2023). Artificial intelligence, climate change, and English language arts education: Finding connectedness in a time of urgency. *English Education*, *55*(3), 200–233. https://doi.org/10.58680/ee202332555

Creswell, J. W. (2013). *Qualitative inquiry & research design*. SAGE Publications.

DeJulio, S., Martinez, M., & Leija, M. (2022). Exploring books for beginning readers: Comparing leveled readers and Geisel award books. *Early Childhood Education Journal*, 1–14. https://doi.org/10.1007/s10643-022-01422-2

Fowler, F. (2014). *Survey research methods*. Sage.

Hiebert, E. H. (2017). The texts of literacy instruction: Obstacles to or opportunities for educational equity? *Literacy Research: Theory, Method, and Practice*, *66*(1), 117–134. https://doi.org/10.1177/2381336917718521

Hiebert, E. H., & Fisher, C. W. (2007). The critical word factor in texts for beginning readers. *Journal of Educational Research*, *101*(1), 3–11. https://doi.org/10.3200/JOER.101.1.3-11

Hoffman, J. V., & Schallert, D. L. (2004). *The texts in elementary classrooms*. Erlbaum Associates.

Hoffman, J. V., Svrcek, N., Lammert, C., Daly-Lesch, A., Steinitz, E., Greeter, E., & DeJulio, S. (2019). A research review of literacy tutoring and mentoring in initial teacher preparation: Toward practices that can transform teaching. *Journal of Literacy Research*, *51*(2), 233–251. https://doi.org/10.1177/1086296X19833292

Jenkins, J. R., Peyton, J. A., Sanders, E. A., & Vadasy, P. F. (2004). Effects of reading decodable texts in supplemental first-grade tutoring. *Scientific Studies of Reading*, *8*(1), 53–85.

Lammert, C., Allen, K., Van Wig, A., & Worthen, B. (2022). Teacher educator and in-service teachers' self-efficacy and professional literacy knowledge in the context of the science of reading era. *The Teacher Educator*, *57*(4), 343–364.

Lammert, C., DeJulio, S. R., & Hiebert, E. H. (2023). "Batting" around ideas: A design/development study of preservice Teachers' knowledge of text difficulty and text complexity. *Reading Psychology*, *44*(5), 484–513.

Mesmer, H. A. (2008). *Tools for matching readers to texts: Research-based practices*. Guilford.

Sailors, M., & Manning, L. (2019). *Justice-oriented literacy coaching: Toward transformative teaching*. Routledge.

Snow, C. (2002). *Reading for understanding: Toward an R&D program in reading comprehension*. The RAND Corporation.

Textproject. (n.d.). *TopicReads™—Primary*. Retrieved 31 October 2023 from https://textproject.org/teachers/free-texts/topicreads-primary/

Tolman, L. C., & Moats, C. A. (2019). *LETRS* (3rd ed.). Voyager Sopris Learning.

Vaughn, M., Scales, R. Q., Stevens, E. Y., Kline, S., Barrett-Tatum, J., Va Wig, A., Yoder, K. K., & Wellman, D. (2021). Understanding literacy adoption policies across contexts: A multi-state examination of literacy curriculum decision-making. *Journal of Curriculum Studies*, *53*(3), 333–352. https://doi.org/10.1080/00220272.2019.1683233

Worthy, J., Moorman, M., & Turner, M. (1999). What Johnny likes to read is hard to find in school. *Reading Research Quarterly*, *34*(1), 12–27.

Zoch, M., Davis, S., & Gray, E. S. (2018). If these walls could talk: The communication of literacy through teacher-created charts. *Language Arts*, *95*(6), 370–382.

MORE TO EXPLORE

- Education Workers Group LLC. (2023). *Lessonplans.AI* Retrieved from: https://www.lessonplans.ai/

- Langreo, L. (2023, August 15). *Beyond ChatGPT: The other AI tools teachers are using.* Education Week. Retrieved from: https://www.edweek.org/technology/beyond-chatgpt-the-other-ai-tools-teachers-are-using/2023/08

- Staake, J. (2023, March 13). *20 ways teachers can use ChatGPT to make their lives easier.* We are Teachers. Retrieved from: https://www.weareteachers.com/chatgpt-for-teachers/

- TextProject. (2023). **Free student texts**. Retrieved from: https://textproject.org/teachers/freetexts/