

Integrating Novel Effect During Read-Alouds: Preliminary Evidence for a Balanced Approach

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Abstract

This action research study explores the impact of Novel Effect, an app that adds interactive sound effects to read-alouds, on student engagement and comprehension in primary classrooms. Conducted with first and third graders, the study involved read-aloud sessions using Novel Effect and compared them to sessions without it. The findings indicate that while Novel Effect significantly increased student engagement, particularly among younger students, it did not lead to notable improvements in comprehension. First graders favored the app, showing heightened enthusiasm and engagement, but some third graders found the sound effects distracting. The study concludes that Novel Effect can enhance engagement but should be integrated alongside traditional teaching strategies to ensure comprehension and balanced learning outcomes. This research emphasizes the importance of thoughtful technology integration in educational settings tailored to student age and learning needs.

Keywords: educational technology, action research, read-aloud, Novel Effect, primary classroom

Introduction

Engaging read-alouds play a crucial role in literacy development and overall cognitive and social-emotional growth. According to Anderson (1985), reading aloud to students is the single most important activity for building the knowledge required for eventual success in reading. By researching the advantages and disadvantages of a new educational technology product, Novel Effect, a subscription-based app that responds to your voice with interactive music and sound effects, we can provide insights into effective strategies, tools, and approaches that can be used to optimize this essential time within primary classrooms. This action research studied how the integration of the Novel Effect app impacts engagement and content retention of read-alouds in the primary classroom.

Participants

The study was conducted at a public research school affiliated with a university, which is one of a few developmental research (lab) schools in the state. The school admits students through a lottery process to create a student body that is representative of the state's population.

The participants included two classrooms: one with 22 younger students and another with 21 older students during the 2023–2024 school year. The younger students were six to seven years old, with a gender distribution of 13 females and 9 males, while the older students were eight to nine years old. The demographics of the 43 students reflected the diversity of the school population, with 12% identifying as African American, 16% as Hispanic, 9% as Asian, 54% as Caucasian, and 9% as multiracial. Additionally, 30% of the students qualified for free or reduced lunch. Five students spoke a language other than English at home, with one officially designated as an English Language Learner (ELL). Four students participated in the Exceptional Student Education program. At the beginning of the school year, diagnostic reading data indicated that 13 students were performing below grade level, 21 were at grade level, and 9 were above grade level.

The study also involved two experienced teachers. One was a veteran teacher with over 20 years of experience and a Master of Arts in Reading, while the other had 11 years of teaching experience.

Both had spent their careers teaching at the primary level and were skilled in using read-aloud strategies to engage their students.

Context

At the beginning of the school year, diagnostic reading assessments revealed that 13 students were performing below grade level, 21 were at grade level, and 19 were above grade level. Both classrooms were led by experienced educators with extensive teaching backgrounds, each having spent their careers in primary education.

Literature Review

Introduction. Reading aloud to children in elementary education, a practice highlighted in “Becoming a Nation of Readers,” plays an essential role in cultivating a love for reading and enhancing literacy skills (Anderson, 1985). Since the initial publication of *Becoming a Nation of Readers*, reading aloud to students has served as an essential educational tool, vital for developing comprehension and engagement among students. This literature review highlights the importance of this practice, exploring its impact on student comprehension and engagement, the effectiveness of read-aloud strategies, and the integration of digital tools to enhance these educational methods.

Importance of Quality Read-Alouds in Primary Classrooms. Fisher et al. (2004) emphasize the positive impacts of quality read-alouds in primary classrooms, particularly in nurturing students’ enthusiasm for reading. Read-alouds are not only for enjoyment; they play a critical role in developing literacy skills, as noted by Wiseman (2011), who points out the significant boost in student engagement, comprehension, and overall literacy development that read-alouds can provide. Wiseman’s work focuses on the critical link between read-aloud sessions and overall literacy outcomes in students. Tanya S. Wright (2019) reinforces the importance of read-alouds, specifically focusing on the interaction between teachers and students, which is critical to maximizing literacy development. Teachers are advised to thoughtfully integrate read-alouds into their curriculum, as they serve as a key tool in building vocabulary and comprehension, and cultivating a lifelong love for reading among students.

Effective Components of Read-Alouds. The integration of read-aloud sessions has been recognized for its consistent impact on student learning and engagement. Fisher et al. (2004) highlight seven critical components that are pivotal for the success of these sessions:

1. Selecting texts that resonate with students’ interests and developmental levels
2. Thorough preparation by the teacher
3. Establishing clear objectives for the read-aloud
4. Modeling fluent reading
5. Delivering the text expressively
6. Engaging students interactively throughout the session
7. Making connections to broader literacy activities

These strategies collectively work to not only enhance the read-aloud experience but also significantly contribute to improved literacy outcomes. According to the research of Lane and Wright (2019), effective read-aloud strategies do more than just improve reading skills; they cultivate a passion for reading, advance language development, and underpin academic success. This supports the idea that read-aloud sessions are a fundamental aspect of literacy education, promoting both a love for reading and deeper comprehension among students.

Role of Engagement in Student Learning. Researchers indicate that motivation is a top predictor of whether students will engage with texts in meaningful ways. This perspective is supported by Helbig (2001), who emphasizes the link between motivation and meaningful engagement with texts.

Similarly, the Institute of Educational Sciences (2016) states that engagement is a critical component for developing skills such as inference, storytelling, and vocabulary acquisition during read-aloud sessions. Research agrees that student engagement is an essential component of student success, not only aiding in retention but also a genuine interest in reading.

Researchers collectively emphasize the transformative potential of read-aloud sessions when they are made to be engaging and meaningful (Cole et al., 2017; Fisher et al., 2004; Lane & Wright, 2019). Fisher et al. (2004) specifically point out the effectiveness of expert teachers in engaging students through fluency practices and the integration of read-alouds with other content areas, which significantly boosts students' language exposure, vocabulary, and enjoyment of reading.

Technology Integration in Read-Alouds. The effectiveness of digital tools like Novel Effect in read-aloud sessions varies with the age and developmental stage of students. While younger students often benefit from sensory enhancements such as sound effects, which boost focus and engagement (Cole et al., 2017), older students may find these enhancements distracting as they require deeper comprehension and critical analysis (Helbig & Piazza, 2020).

Similar studies highlight the importance of balancing traditional and technology-enhanced read-alouds. Fisher et al. (2004) emphasize that teacher-led interactions should remain central, with digital tools serving to complement rather than replace these fundamental practices. Action research methodologies, like those used by Siriwatchana et al. (2018), allow educators to assess and refine the use of technology in real-world settings, ensuring that it supports rather than undermines student literacy.

Conclusion. The literature supports traditional read-aloud sessions as an essential component of elementary education, vital for nurturing literacy, and a passion for reading. The research shows that the integration of digital tools like Novel Effect offer students an opportunity to enhance engagement and multisensory learning. However, their success depends on thoughtful implementation so educators can ensure that it serves as a meaningful component of literacy instruction.

Methodology

Participants

The study involved 43 students at a public developmental laboratory school in South Florida. Twenty-two first graders were ages six to seven, while 21 third graders were eight to nine years old. The classrooms' racial distribution was 12% African American, 16% Hispanic, 9% Asian, and 54% Caucasian, with an additional 9% multiracial—moreover, 30% of students qualified for free or reduced lunch. While five students spoke other languages, only one was an English Language Learner (ELL). Lastly, four students were part of the Exceptional Student Education program. Diagnostic reading data revealed thirteen below grade level, twenty-one at grade level, and nine above grade level. Finally, each classroom had an experienced female teacher. The first-grade teacher was a 22-year veteran teacher with a Master of Arts in Reading. The third-grade teacher had 11 years of teaching experience. Both taught at the primary level for their careers and considered themselves read-aloud experts where engagement was not a concern in the classroom.

Table 1. *Timeline*

Before Sessions Begin	<ul style="list-style-type: none"> ● Create Student Survey ● Create Engagement Survey ● Familiarize students with AR
Session 1	<ul style="list-style-type: none"> ● 2 read-alouds that are compatible with Accelerated Reader <ul style="list-style-type: none"> ○ 1 using Novel Effect ○ 1 without using Novel Effect ● Engagement Survey ● Conduct focus groups based on feedback from survey
Session 2	<ul style="list-style-type: none"> ● 2 read-alouds that are compatible with Accelerated Reader <ul style="list-style-type: none"> ○ 1 using Novel Effect ○ 1 without using Novel Effect ● Engagement Survey ● Conduct focus groups based on feedback from survey
Session 3	<ul style="list-style-type: none"> ● 2 read-alouds that are compatible with Accelerated Reader <ul style="list-style-type: none"> ○ 1 using Novel Effect ○ 1 without using Novel Effect ● Engagement Survey ● Conduct focus groups based on feedback from survey
Session 4	<ul style="list-style-type: none"> ● 2 read-alouds that are compatible with Accelerated Reader <ul style="list-style-type: none"> ○ 1 using Novel Effect ○ 1 without using Novel Effect ● Engagement Survey ● Conduct focus groups based on feedback from survey
Session 5	<ul style="list-style-type: none"> ● 2 read-alouds that are compatible with Accelerated Reader <ul style="list-style-type: none"> ○ 1 using Novel Effect ○ 1 without using Novel Effect ● Engagement Survey ● Conduct focus groups based on feedback from survey
Session 6	<ul style="list-style-type: none"> ● 2 read-alouds that are compatible with Accelerated Reader <ul style="list-style-type: none"> ○ 1 using Novel Effect ○ 1 without using Novel Effect ● Engagement Survey ● Conduct focus groups based on feedback from survey

Data Collection

To gather insights into students' experiences, we kept detailed teacher research journals. These journals chronicled student comments, body language, and other observational data before, during, and after the read-aloud sessions. By documenting these subtle cues and verbal expressions, we aimed to capture the immediate and reflective responses of the students to the reading material and the Novel Effect application.

Both teachers facilitated focus groups to dig deeper into students' thoughts and feelings about the read-aloud process. Focus groups were formed by analyzing student survey data. These discussions

provided a platform for students to convey their experiences and preferences in a group setting. The discussions focused on the use of Novel Effect in read-aloud sessions and analyzed what aspects students liked versus those they did not.

Additionally, individual interviews were conducted with students who exhibited notable reactions—those who were particularly enthusiastic or noticeably disengaged. These one-on-one conversations aimed to uncover the reasons behind their behaviors and to understand the personal impact of the read-aloud sessions.

To objectively measure comprehension, we utilized Accelerated Reader (AR) quizzes. These are standardized tests designed to evaluate a student's understanding of the material read. Students took these quizzes after each read-aloud session. To ensure consistency and the ability to compare results, we carefully selected books that were available both in the Novel Effect library and the AR database.

Over the course of five months, both teachers were about to complete at least five read-aloud sessions using Novel Effect and five without. Students completed a survey and an AR quiz for each read-aloud session. This strategy helped us provide a balanced comparison of the student's comprehension with and without the use of audio enhancements.

Data Analysis

All of the collected data was imported or manually transferred into Google Sheets for analysis. The systematic approach to data collection and analysis ensured that the impact of Novel Effect on student comprehension could be effectively evaluated. Data analysis was conducted using a combination of quantitative and qualitative methods facilitated through Google Sheets.

Every student present during the read-aloud sessions was obligated to complete a student survey and an AR quiz. Each student's AR quiz score is listed next to their name for each read-aloud session, with 100% indicating perfect comprehension. Each read-aloud session is marked as either using Novel Effect or not. This distinction allows for a direct comparison of student comprehension with the auditory enhancement against sessions without it.

The final step in the analysis is comparing the overall average scores between the Novel Effect and no Novel Effect conditions. This comparison is used to determine if there is a notable difference in comprehension attributable to the use of Novel Effect.

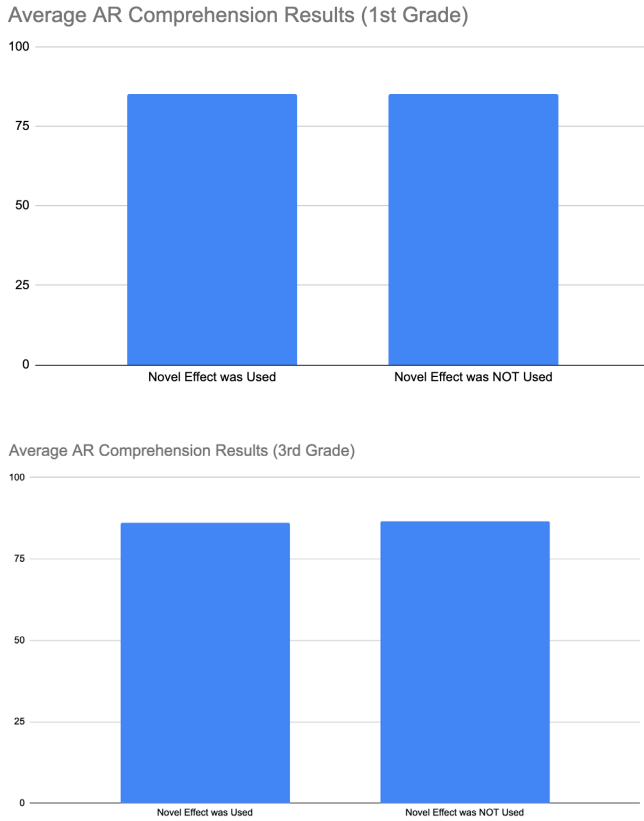
The engagement scores were analyzed to assess student engagement during read-aloud sessions with and without Novel Effect. The spreadsheet tracks the number of engaged students at multiple intervals during each read-aloud session (at 3, 6, 9, 12, and 15 minutes). For each interval, the number of engaged students was recorded. The final engagement rate for a session was calculated by comparing the number of engaged students at the last interval with the initial number of students present. This provided a percentage reflecting the proportion of students who remained engaged throughout the session.

Student survey results were analyzed for each category and then analyzed by grade level. Open-ended questions were coded into thematic categories (positive, negative, indifferent) and analyzed to obtain insights into students' experiences and opinions about the read-aloud sessions.

Results

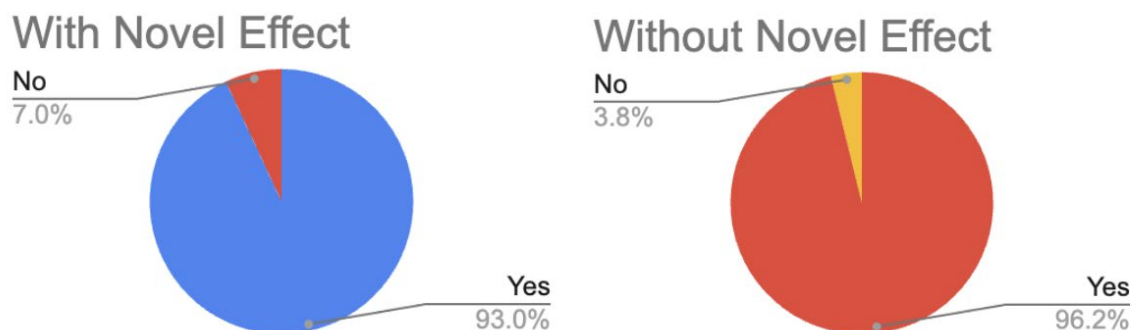
The figures show the impact of “Novel Effect,” a sensory enhancement tool, on students’ scores in AR comprehension quizzes for first and third graders.

Figure 1. *Accelerated Reader (AR) Comprehension Quiz Averages*



First Graders Favored Novel Effect

The study shows a significant preference among first graders for the use of Novel Effect during read-aloud sessions, with 93.8% expressing a desire for its continued implementation in future sessions. Despite Figure 2 suggesting a slight preference for read-aloud sessions without Novel Effect, classroom anecdotes reveal a different dynamic, with students frequently expressing eagerness for the app’s sound enhancements. The first-grade teacher noted that students actively requested the sound effects, signaling their initial excitement about the app. Questions like “Are you using the sounds today? Can you use the sounds for this story?” were common. Moreover, the observation of a student trying to shake a book to produce sounds and expressing frustration when it didn’t happen—“I want it to make the sounds. Why isn’t it making the sounds like it does for you?”—exemplifies the students’ anticipation and perhaps reliance on the sensory experience provided by Novel Effect.

Figure 2. *First Grade Responses to “Are you excited for the next read-aloud?”*

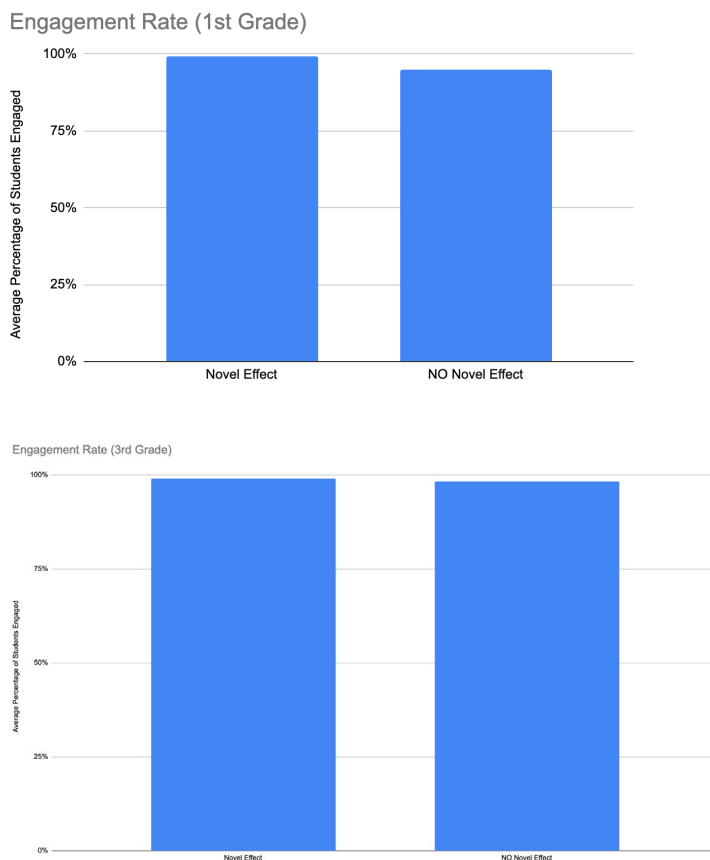
Conversely, the responses from third graders suggest that older students may be less influenced by the additional audio effects of Novel Effect. While a significant majority, 81.3%, expressed excitement for the next read-aloud session after using Novel Effect. These numbers are much lower than in first grade. The feedback from third-grade students regarding the use of Novel Effect, an app that adds sound effects to reading, indicates some potential drawbacks. The students' responses support the teacher's concern about sensory overload. One student articulated, "I don't like using the sounds because then I kinda get distracted on the sounds then the book." Another echoed this sentiment: "I do not like it with Novel Effect because it distracts me when my teacher reads. I like it better, normal." These statements highlight that the additional sounds made students focus more on the auditory elements than the book's content. This distraction could undermine the educational benefits of reading, as the students might struggle to absorb and understand the text. It suggests that while the app could enhance the experience for some, it might lead to a decrease in focus and comprehension for others, highlighting the need for a balanced approach to its use in educational settings. This balance might involve limiting the use of such auditory enhancements to specific contexts or ensuring they are not too overwhelming or frequent.

Engagement Rates

The use of Novel Effect revealed positive responses in terms of student engagement and excitement. First graders displayed a high level of engagement, with an average of 99% engagement during read-alouds with Novel Effect compared to 95% without it. Third graders reported an average of 99% engagement during read-alouds with Novel Effect compared to 98% without it (see Figure 3). This pattern suggests that while Novel Effect can increase engagement, especially among younger students, its impact may decrease with age. Additionally, Novel Effect positively impacted engagement by re-engaging first graders who had lost focus during the read-aloud session. According to the data, first graders re-engaged after losing focus on the read-aloud 100% of the time when Novel Effect was used.

In contrast, when the sound effects were not used, students did not re-engage by the end of the session. However, third-grade data shows that Novel Effect did not have the same effect on older students. Most students remained engaged during the teacher's read-aloud with or without the sound effects application, and students did not re-engage the few times engagement dropped, even with Novel Effect in use.

Figure 3. *Engagement Rate with and without Novel Effect*



Implications

The study into Novel Effect’s integration within read-aloud sessions suggests that, while the tool increases student engagement, particularly among younger students, it does not significantly aid in comprehension. Additionally, while engagement data implies Novel Effect enhances the read-aloud experience for students, it is not a standalone solution for read-aloud effectiveness. Teachers found it challenging to integrate traditional pedagogical techniques during sessions with Novel Effect, which are essential for comprehension. Stopping to facilitate discussion, asking questions, and interacting with the students are essential teaching strategies that support comprehension and engagement. The role of the teacher remains crucial. Novel Effect is a useful tool when integrated into a comprehensive read-aloud approach, complementing traditional teaching methods rather than replacing them.

In summary, these insights highlight the importance of a balanced approach to integrating Novel Effect technology in educational settings. The varying responses across different ages also suggest that the effectiveness of such technologies is age-dependent, which could influence how they are implemented. While this product can make sessions more engaging and dynamic, Novel Effect is not a substitute for interactive and methodical teaching practices. The results of this study ultimately suggest that Novel Effect is best used as a support, not a replacement, to interactive learning and comprehension-building strategies.

Reflection

Moving forward, we plan to continue incorporating the Novel Effect app into our reading sessions, always with careful planning and clear educational objectives in mind. When our goal is to enhance engagement and enjoyment, Novel Effect offers a valuable tool to make our reading sessions more lively and interactive. However, for sessions aimed at developing deeper meaning and comprehension, we will refrain from using the app to minimize distractions and maximize focus on the text itself. Additionally, we are interested in exploring how our students might use Novel Effect independently. Further research could investigate the impact of the app on our students' reading habits outside the classroom, particularly in fostering intrinsic motivation to read. This could provide valuable insights into how digital tools like Novel Effect can support autonomous learning and enhance our students' overall reading experiences.

Throughout this journey, we have gained several insights about the research process. It has been an evolving practice, revealing that as our own expertise and understanding deepen, so too does the caliber and scope of our research. As we have developed and honed our expertise, we have witnessed firsthand the transformation of our research. The journey of inquiry is dynamic, a reflection of our expanding knowledge, sharpening analytical skills, and deepening understanding of the educational field

Action Research should be an integral component in the field of education. It allows us to test theories and tools in real classroom settings and gather data that can inform our teaching practices. The nature of action research helps refine our methods and strategies, ultimately leading to improved educational outcomes. It bridges the gap between theory and practice, ensuring that our educational strategies are evidence-based and effective.

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