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Making Early Literacy Ed Tech Work in K–2 Classrooms

Lessons from the implementation of Magpie Literacy's Reading Foundations tool

AUTHORS
Michelle Bennett, Tareena Musaddiq, and Kate Place

About Magpie

Magpie Literacy

Magpie Literacy's Reading Foundations Tool (Magpie) is an interactive online program that teaches literacy skills to students in grades K–2. Magpie launched with kindergarten in the 2024–2025 school year and expanded to grades 1 and 2 in the 2025–2026 school year.

How does it work? Magpie uses research-based instructional videos and educational games to teach literacy skills. Students using the tool receive direct instruction, isolated practice, and applied practice. Student skills in targeted areas are measured using a digital reading assessment (Rapid Online Assessment of Reading [ROAR™]).

What skills does it teach? Magpie teaches essential components of early literacy, grounded in the science of reading, including phonemic awareness, decoding and encoding, letter formation, and vocabulary.



Student use

30 – 45 minutes a week via tablets or computers



Educator use

- One hour of training
- Access to a dashboard that displays students' progress

The study

- Mathematica conducted an implementation study to explore the use of Magpie in K-2 classrooms in 14 schools across two large U.S. school districts during the spring semester of the 2025-2026 school year. It examined how educators and students interacted with the tool and factors that supported or limited its use.
- In Spring 2026, the study team conducted three focus groups with educators implementing Magpie in two districts and 14 observations of K-2 classrooms in one district. The team conducted descriptive analyses on observational data about student engagement in Magpie and thematically coded qualitative data from observations and focus groups.

This brief highlights implementation lessons for educators using educational technology (ed tech) and ed tech developers, based on findings from the implementation study.

Key takeaways: Successful implementation of early literacy ed tech depends on both tool design and classroom use. **Educators** can support implementation through consistent routines, sessions tailored to students' needs, and assistance with technology and other challenges. **Ed tech developers** can support implementation through engaging, research-based content, actionable student progress data, and clear guidance for integrating the tool into instruction.

Implementation lessons for educators using ed tech

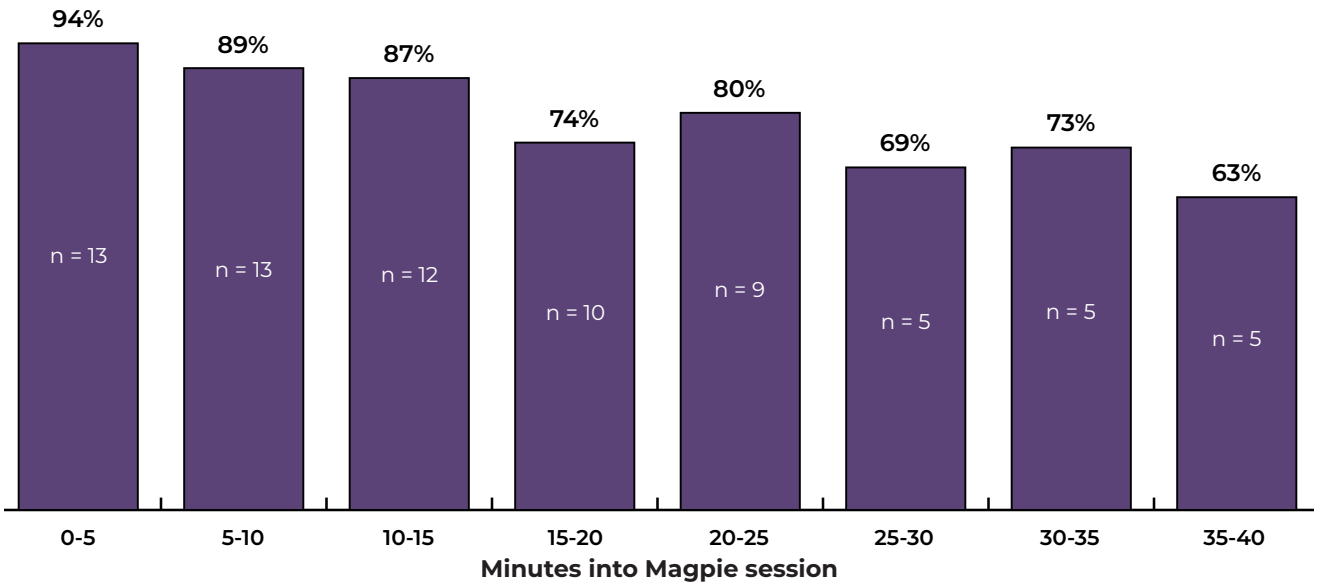


Plan the length of each ed tech session based on students' ages, needs, and ability to remain engaged; use multiple shorter sessions when appropriate

In focus groups, most teachers reported using Magpie at a consistent time in their daily schedule, such as immediately before the literacy block or after students returned from recess. One educator who used Magpie in an ad hoc way reported difficulty fitting it into the daily schedule, noting that Magpie also competed with other district priorities.

Most observed classes used Magpie for about 25 minutes per session, though session lengths ranged from as little as 10 minutes to as long as one hour. Student engagement was typically highest at the beginning of the Magpie sessions and generally declined over the course of a session.

Percentage of students engaged at various intervals during a Magpie session, on average across classes



n = number of classrooms



Build routines that promote independent ed tech use, with expectations and educator support tailored to students' ages and level of independence

Observations revealed that educators typically relied on established routines to help students transition into Magpie, log in, and remain engaged. Some strategies included distributing devices in groups, using timers or countdowns, recognizing or rewarding on-task students (especially in younger classrooms), assigning student technology-helper jobs (more common in older classrooms), and establishing a consistent log-in process using QR codes so that students did not need to memorize usernames and passwords.

Even with these routines, students occasionally needed assistance with technical issues, such as scanning QR codes, adjusting microphone settings, or refreshing the browsers. Magpie use appeared to run more smoothly when an adult was available to troubleshoot technical problems and redirect students who became distracted. In contrast, educators who were simultaneously leading individual or small-group interventions appeared less able to provide that support.

Implementation lessons for ed tech developers



Design ed tech that is research-based and fun, to provide value for educators and keep students engaged

Educators said the use of real people and close-up views of lip movements in Magpie's video lessons and activities helped students learn letter sounds, while practicing aloud seemed to increase students' confidence in reading. Students were most engaged in learning when literacy instruction was presented through fun, interactive experiences, such as a kitchen-based game that asked students to "cook" a word for animated character to "eat," or a whale animation that made words bounce across a splash of water. By including engaging, playful elements while prioritizing research-based literacy instruction over gamification, Magpie struck a balance that kept students motivated without compromising learning outcomes.

> *After using Magpie, I see students become more engaged when we are reading aloud in class. Students who would never raise their hands before are now more confident about reading out loud. They are able to use strategies like sounding out words and sticking with it, instead of getting frustrated and saying, "I can't do this" or "I need help." It has definitely improved their fluency. I can see it filling in the gaps.*
>
> **— Focus group participant**



Design educator-facing data systems, such as a dashboard, to provide educators with reliable and relevant information on student progress they can use to personalize instruction

Educators valued the information available through Magpie's educator dashboard. One reported using it to plan targeted support for students.

However, most educators noted that limited details and the timing of dashboard updates reduced the dashboard's usefulness for monitoring student progress and responding to students' needs in real time. For example, educators wanted to know when students completed the platform's reading assessment and advanced to lessons, and how long students spent on each lesson. They also wanted access to real-time progress data, so they could determine whether students were on task or needed additional support. Educators also said they would benefit from additional resources and support to help them interpret the platform data and use it to inform their ongoing instruction.

> *I use the data from Magpie to inform what I'm going to work on during small-group and intervention time with students who are struggling with fluency. I revisit what they worked on in Magpie and give them a second opportunity to practice.*
>
> **— Focus group participant**

> *Being able to see what lessons they struggled with would help me—especially with my small groups—so I could assist them a little more. And then, just the live tracker, please. My students are very eager to know if they've completed their lessons.*
>
> **— Focus group participant**



Help districts and educators connect ed tech with classroom instruction by clearly communicating the tool's scope and sequence and providing practical guidance on how to reinforce related skills

Educators described Magpie's alignment with their literacy curriculum as a key strength. They said the tool gave students additional opportunities to practice skills introduced during classroom instruction, which they believed contributed to student learning growth. However, educators also expressed a need for additional training and clearer information about Magpie's scope and sequence so they could anticipate upcoming content and make more intentional connections between Magpie activities and classroom instruction. They also valued practical guidance and coherent expectations between the tool's content, existing curricula, and district expectations.

> *Magpie is hitting the same lessons or curriculum that we're doing as far as CVC [consonant-vowel-consonant] words and phonics. My students are getting extra practice and showing how they can build upon those skills. Some of my higher students are showing me that they can read words and "tap it out." With an aligned curriculum, students know that they're going to get this content again.... They need to make sure that they're paying attention, so they know how to do it when it comes up again. Because it's a game, they're excited to complete the work and show me what they've done.*
>
> **— Focus group participant**

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