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My Reading Academy™ Helps Prekindergarten and Kindergarten Students Strengthen Early Reading Skills and Become More Interested in Learning to Read: A Case Study of Implementation During the Pandemic

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Key Findings

- In a school year disrupted by the pandemic, prekindergarten students nearly tripled and kindergarten students more than doubled their reading skills in *My Reading Academy* by using the program for 6 hours over 10–12 weeks.

- Using *My Reading Academy* helped prekindergarten and kindergarten students perform better on their end-of-year literacy assessments.

- Teachers reported that students using *My Reading Academy* were excited about reading and became more confident, interested, and focused on learning to read.

- Teachers found *My Reading Academy* easy to use for students and easy to implement in classrooms; they expressed their desire to continue using the program.

- Teachers found *My Reading Academy* to be a resource that allowed them to provide individualized, differentiated instruction.

Overview

In spring 2021, two southern Texas school districts implemented *My Reading Academy*, a new digital learning program designed to help young children develop foundational reading skills.

Age of Learning, Inc., conducted a study to understand the implementation of *My Reading Academy* in prekindergarten and kindergarten classrooms. For this study, Age of Learning partnered with WestEd, a nonprofit research, development, and service agency with deep expertise in evaluating educational programs.

My Reading Academy Program

My Reading Academy is an adaptive game-based curriculum designed to help young children in prekindergarten–first grade develop strong foundational reading skills. It operates on a patented Personalized Mastery Learning System™ and aims to build essential skills in reading: phonemic awareness, phonics, vocabulary, fluency, and comprehension.[1]

Grounded in the science of reading and cognitive development research, the program delivers explicit

and systematic phonemic awareness and phonics instruction, paired with rich reading and language experiences. *My Reading Academy* uses initial diagnostic assessments to measure each child's prior knowledge and determine where they are placed within the program, based on what they know and are ready to learn next.[2]

The program emphasizes phonological awareness and phonemic awareness. With playful characters, songs, rhythms, movement, and repetition, children learn to attend to small changes in sound. Learners can play by mixing up a phoneme in a word or by predicting the last words of a rhyming verse, and the games sustain engagement and motivation by providing interactivity, adaptive challenges, and ongoing feedback. Each learner is presented with a sequence of problems, and they receive just-in-time feedback that corresponds to their level, which promotes perseverance and cultivates long-term engagement.[3] **Figure 1** and **Figure 2** show examples of child-facing games in *My Reading Academy*.

Design and Procedure

The study took place in 11 classrooms (5 pre-K, 6 kindergarten) at 8 schools in two Texas districts over approximately 12 weeks between March and June of 2021. A total of 193 students (92 pre-K students and 101 kindergarten students) had the opportunity to use *My Reading Academy*, and 157 of them used the program. All teachers participated in a webinar and a self-paced training on *My Reading Academy* prior to using the program in their classrooms. They were asked to use *My Reading Academy* for at least 60 minutes per week, and each teacher received a weekly report summarizing their students' usage and progress baseline in the program. Teachers also completed a pre-survey and an end-of-study survey, and participated in a 45- to 60-minute interview at the end of the study. In fall 2021, one of the districts involved where 10 of the 11 classrooms were located (144 *My Reading Academy* users) provided assessment data (CIRCLE Progress Monitoring System for pre-K and iStation for kindergarten) for students who used *My Reading Academy*.

Figure 1. The game Bumper Tiles teaches the learner how to recognize all the letters of the alphabet by tapping the letter tiles driving the bumper cars.

Figure 2. In the game The Sentence Show, the learner practices building sentences out of scrambled words shown on the tiles by dragging the tile one by one up to the stage.

Results

Usage Summary

Teachers were invited to start using *My Reading Academy* in late March 2021. One teacher began using the program immediately, while others began using the program in subsequent weeks, with the latest start date in mid-April. The implementation ranged from 8 to 12 weeks; and on average, students used *My Reading Academy* for 49 minutes per week (SD = 16.3) for 8 weeks (SD = 2.5), mastering 11.8 skills (SD = 7.0).

2 Betts, A. (2019). Mastery learning in early childhood mathematics through adaptive technologies. In IAFOR (Ed.). *The IAFOR International Conference on Education–Hawaii 2019 Official Conference Proceedings (pp.* 51–63). Japan: The International Academic Forum.

3 Gee, J. P. (2007). Pleasure, learning, video games, and life: The projective stance. In M. Knobel & C. Lankshear (Eds.), A new literacies sampler (pp. 95–113). New York: Peter Lang.; Shute, V. J., & Kim, Y. J. (2014). Formative and stealth assessment. In J. M. Spector, M. D. Merrill, J. Elen, & M. J. Bishop (Eds.), *Handbook of Research on Educational Communications and Technology.*

Finding 1: Prekindergarten students nearly tripled and kindergarten students more than doubled their reading skills in *My Reading Academy* by using the program for 6 hours over 10–12 weeks.

On average, pre-K students used *My Reading Academy* for 7.8 weeks (SD = 2.4) during spring 2021. They spent, on average, 6.4 hours (SD = 2.6) and completed an average of 93.2 Learning Activities (SD = 39.7).

Kindergarten students used *My Reading Academy* for 8.5 weeks (SD = 2.5) during the same period. They spent, on average, 6.9 hours (SD = 2.7) and completed an average of 101.4 Learning Activities (SD = 44.2).

Figure 3 shows comparisons of students' prior knowledge (as measured by in-game placement tests) and the knowledge they gained through *My Reading Academy*. When they began using the program, pre-K students demonstrated mastery of 6.3 skills (SD = 12.2), but after using *My Reading Academy* in the spring of 2021, their in-game progress indicated mastery of 17.3 skills on average (SD = 14.6). Similarly, kindergarten students started with an average of 9.4 skills (SD = 13.6), and by the end of the spring semester, they achieved mastery of 21.6 skills on average (SD = 14.8). In sum, skills increased by 177% and 131% for pre-K and kindergarten students, respectively.
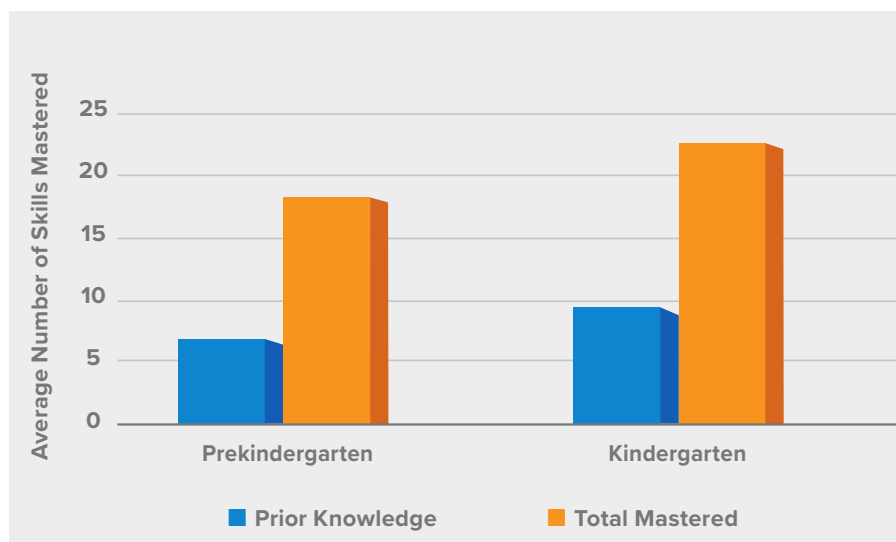

Figure 3. Average number of skills mastered by pre-K and kindergarten students as demonstrated by in-game placement tests (prior knowledge) and by in-game progress at the end of the spring semester (total mastered)

Finding 2: Using *My Reading Academy* for 10–12 weeks helped prekindergarten and kindergarten students perform better on their end-of-year literacy assessment.

As shown in the scatterplots (**Figure 4** and **Figure 5**), students' end-of-year literacy assessment scores were significantly correlated with using *My Reading Academy*. Prekindergarten students who mastered more skills in the program tended to achieve higher scores on the district-administered CIRCLE (Center for Improving the Readiness of Children for Learning and Education) Progress Monitoring Assessment at the end of the school year (r = .59, p < .001). This correlation remained significant even after controlling for the age and gender of students. Similarly, kindergarten students who mastered more skills in the program tended to achieve higher scores on the district-administered iStation literacy assessment at the end of the school year (r = .36, p < .05).[4]

4 Correlation coefficients (r values) range from -1 to 1: Coefficients between .7 and .9 indicate strong relationship between variables, coefficients between .5 and .7 indicate moderate relationship, and coefficients lower than .3 indicate weak relationship. Students who used the program for longer typically demonstrated higher assessment scores and greater gains in their scores between the fall and spring assessments.
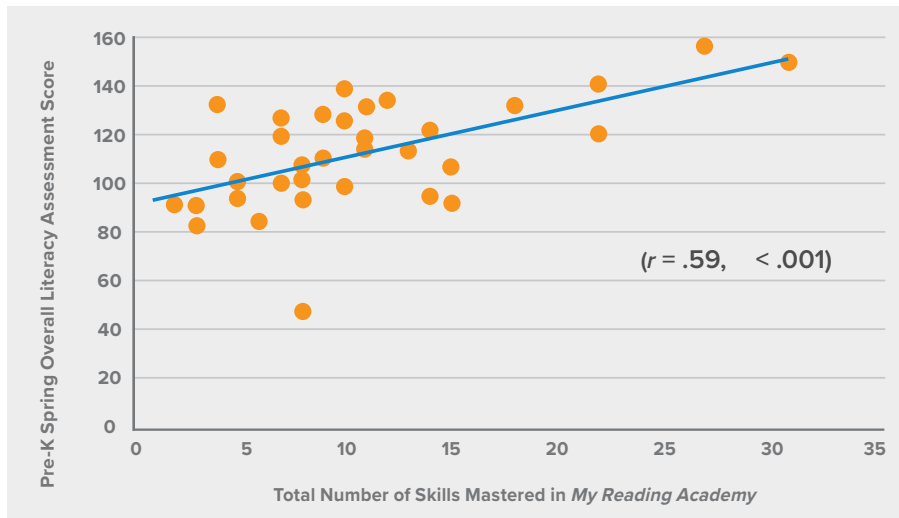
Figure 4. Relationship between total skills mastered in *My Reading Academy* and performance on a standardized literacy assessment for prekindergarten students (N = 47 prekindergarten students who took the spring assessment)
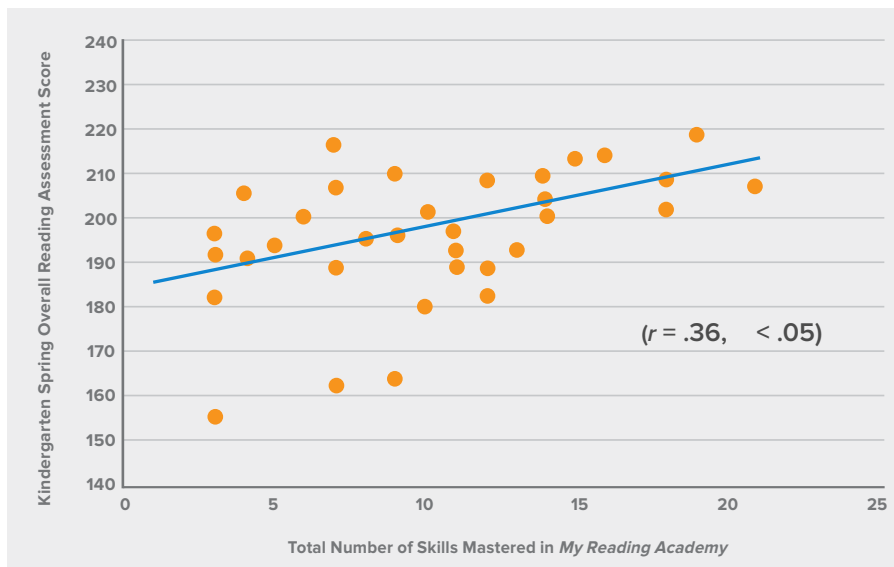
Figure 5. Relationship between total skills mastered in *My Reading Academy* and performance on a standardized literacy assessment for kindergarten students (N = 36 kindergarten students who took the spring assessment)

Teacher survey results corroborated the findings from the standardized assessments. All nine teachers who completed the end-of-study survey indicated that *My Reading Academy* had a positive or very positive impact on their students' overall ability to learn, accelerating in literacy learning, catching up in literacy, and enjoyment in learning to read. All teachers also indicated positive or very positive impact of *My Reading Academy* on early literacy skills, specifically decoding (alphabetic principle, spelling-sound correspondences) and sight recognition of familiar words. All except one teacher also reported positive or very positive impact of *My Reading Academy* on background knowledge (facts, concepts), vocabulary (breadth, precision, links), literacy knowledge (print concept, genres), and phonological awareness (syllables, phonemes).

Teacher interviews also highlighted *My Reading Academy's* impact on children's reading skills:

> "*Prior to starting* My Reading Academy, *I still had about four children who…were not connecting sounds in their reading. They were not bridging everything together. I've noticed after we started using it more, I have my four lowest students that can now blend and segment and do everything.*"

> **❝***The effectiveness in the classroom, I saw it. It was effective in engaging them, and it was effective in actually placing them properly. I know I have some higher, nearly second-grade level kiddos, and there was still some activities that he could do that were engaging for him, while I had my other ones still on letter names. I could walk around the class and see that everybody was really doing their own activities.***❞**

Finding 3: Teachers reported students' excitement in using *My Reading Academy* and observed growth in their confidence, interest, focus and attention in learning to read.

All teachers responded on the end-of-study survey that their students enjoyed using *My Reading Academy*, and eight of the nine teachers also indicated that *My Reading Academy* had a positive or very positive impact on their students' interest and confidence in learning to read as well as focus and attention during literacy lessons.

Teachers also shared in their interviews their observations of student behaviors when using *My Reading Academy*:

> **❝***There's one student in particular that's come out of his shell;* [My Reading Academy *has*] *helped him with that. He'd get nervous in the beginning when something was too challenging, but you could see his confidence now towards the end of the year.***❞**

> **❝***He used to fall asleep on me in class, but then we started* My Reading Academy.…*He really likes the read alouds.…He enjoys and he comes back and talks to me about what the book was about.…I think he also gained the confidence. It feels like he's having a conversation with somebody.…The little girl [in the game] asks, 'did you like the book?'…They feel like their opinion matters. They're learning, they're taking more ownership.***❞**

Finding 4: Teachers found *My Reading Academy* engaging for students and easy to implement in classrooms; they expressed their desire to continue using the program.

All teacher respondents on the end-of-study survey indicated that *My Reading Academy* was easy for them to use as a teacher and that it was very user-friendly for the students. All of them reported wanting to continue using *My Reading Academy* in their classes.

In interviews, teachers further explained that *My Reading Academy* can be flexibly integrated into their classes in a variety of ways, such as in centers (i.e., students working in small groups on a specific activity and rotating after 15–20 minutes) or as secondary activity (while the teacher works with a group of students on another skill). They reported that students had no difficulty logging into the program, and teachers could easily assist any student learning remotely who experienced some initial difficulty navigating the program. Moreover, in comparison to other programs that they have used, teachers found *My Reading Academy* much more engaging for students.

> **❝***Usually when I introduce something new, it's cool for about a week or two…but this one, they're like, 'Oh! It's* My Reading Academy!'…*They are on the schedule. I have a timer for each activity, and even before the bell has rung, they are ready. They beat the timer because they know it's time for* My Reading Academy.***❞**

> **"** *They are definitely more confident. They'd participate more in my morning phonological awareness slot where we'd be practicing.…In the beginning, I felt like they didn't really understand. And then once they see throughout the day that it's something they use, they are like, 'Oh, this is why I need to know these sounds or rhyming.…' So, it was relevant to them, and they can make those connections. And when they were first introduced to it in* My Reading Academy*, they were very excited. And that was really good to see, because they hadn't been excited about something like that all year.* **"**

Finding 5: Teachers found *My Reading Academy* to be a resource that allowed them to provide individualized, differentiated instruction.

In interviews, teachers shared that they saw *My Reading Academy* as a tool that is tailored to individual students' learning needs, noting its benefits for their English Language Learners (ELL) who needed additional practice opportunities and exposure to letter sounds.

> **"** *This program, it's targeting what she needs. It's allowing them to work at their level—Whether it's my student who's at level I or my student who's at level A. It's targeting what they need and it's building on. As far as my speech student, it's all audio, so that's great. He needs to hear the consonant sounds. It has the visuals and other supports that he needs. Perfect. They need the multiple modalities.…If you have an ELL student, it's beneficial to them too. It's the constant examples and the delivery of print awareness.* **"**

> **"** *In addition to my data, this is another form of data. It's not an assessment, but I could see what they were lacking on and what maybe they weren't as actively engaged in.…I would dig a little bit further and compare to my other data and say, okay. Yes. This kid's struggling here and there. This is why. Then I would plan accordingly.* **"**

Conclusion

This study provides preliminary evidence that *My Reading Academy* improves students' reading skills. Evidence from literacy assessment data as well as teacher surveys and interviews indicate students' engagement with *My Reading Academy* and growth in early reading skills. The strong correlation between the number of skills completed in *My Reading Academy* and performance on the end-of-the-year literacy assessment suggests that even a limited amount of time in the program (49 average minutes a week for 10–12 weeks) can help students improve their reading skills. Teacher observations of increased student engagement, confidence, and interest in reading are also noteworthy since these are antecedents to achievement. In addition, this study has been reviewed by a third-party educational research company, LearnPlatform, as meeting ESSA Level III standards for "Promising Evidence." Finally, the teachers' reports of *My Reading Academy* providing targeted instruction for individual students demonstrates the program's capacity to support the wide range of learning needs in classrooms.

About Age of Learning School Solutions

At Age of Learning School Solutions, we aim to reimagine education, joining educators to deliver equitable solutions that accelerate learning for all students. Our student-first, standards-aligned digital education programs are proven to support students in achieving mastery and collectively accelerate learning gains. By providing personalized, easy-to-implement solutions, we support educators in delivering targeted instruction to address individual student needs, giving each child an engaging, customized path to learning success.

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