A MULTISENSORY APPROACH TO K-5 READING

How multisensory design helps students learn to read — and read to learn — online

Kindergarten through fifth grade is a foundational time of growth in the educational journey for children. Literacy boosts self-esteem, improves concentration, helps with critical and analytic thinking skills, builds stronger memory skills and expands vocabulary.

Research shows, however, that many children arrive at kindergarten without the skills, including literacy basics, necessary for lifetime learning. Without a strong foundation in reading, children are at risk of being left behind at the beginning of their educational journey, because literacy is so integral to the understanding of other subject areas, such as math, science and social studies.

So how exactly can teachers, parents and the community work together to develop K-5 students from nonreaders into students who read to learn?

And how can they do this successfully online in remote and virtual learning environments?

BUILDING A READING FOUNDATION

From the time students enter the doors of kindergarten as nonreaders — and, for some, who barely know their alphabet or basic phonics — to the time they become fifth-graders, there is much work to be done to reach the level of independence, self-reliance and self-confidence that they'll need to take with them to middle school, high school and beyond.

The shift to teaching students to read is successful when taught using a multisensory approach that uses technology. When combined with structured, explicit instruction, multisensory literacy learning can lay a foundation for reading proficiency that lasts a lifetime.

Here is why a multisensory teaching technique is so successful:

STUDENTS EXPERIENCE ACCELERATED COGNITIVE DEVELOPMENT.

A recent study by Frontiers in Psychology used technology to measure brain activity and found that children with the strongest literacy skills had greater interaction between the different regions in the brain. This finding suggests that reading is a whole-brain skill, and that literacy instruction is most effective when taught using a multisensory approach. When students hear information and can link it to another sense, it gives them a greater ability to conceptualize and apply the information. Multisensory teaching techniques can stimulate the brain in various ways, so that every sensory system becomes more developed and consequently higher functioning.

The technology of online learning can facilitate multisensory opportunities through design. For example, a lesson could include audio and visual cues, paired with encouragement to move to music and participate in hands-on activities, allowing students access to a multisensory experience.

Dr. Kristen Kinney-Haines, reading specialist and ELA director at Stride Learning Solutions, describes the multisensory design of their K-5 online curriculum.

"In the K-1 space, the visual of what's on the screen and what they're hearing is a good start. However, beyond the visual and auditory, there's a lot more room for integrating movement through music and songs. We've incorporated a thoughtful and research-based support of music to help with memorization."

Kinney-Haines also says she believes in incorporating modeling through think-aloud activities. As students tap into yet another sense and repeat the modeling aloud, they begin to create neural pathways that will help them implement the strategies of good readers.

"Not all students understand that good readers are constantly asking themselves questions — why did the main character do that? What is going to happen next? By modeling these behaviors and having students repeat and practice these behaviors, we're setting them up to use these skills on their own, thereby improving the quality of their reading comprehension."

ASYNCHRONOUS LEARNING BENEFITS

Asynchronous learning — learning that offers students the flexibility to study in a self-paced schedule through various forms of online learning — once was a term that was seldom mentioned by anyone other than professionals in the fields of education and corporate learning and development. However, widespread changes to teaching and learning in the past year have pushed asynchronous learning into the spotlight.

Asynchronous learning boasts benefits, including that it helps alleviate "Zoom fatigue" often felt by remote students — fatigue that can lead them to disengage. Instead, asynchronous learning offers flexibility to personalize learning to suit their specific needs and enhance the online learning experience. Students can benefit from asynchronous learning because it allows them to:

- **Learn at any pace**
- **Revisit lessons as needed to improve comprehension and retention**
- **Take extra time to process and practice**
- **Adapt learning for students with a disability**

"Most asynchronous learning components in the market, even traditional 'homework,' largely depend on written communication to direct the learning activity. Stride flips that on its head by having a careful progression of audio, visual and interactive supports that empower students to work more independently and asynchronously, even while learning to read," says Kelly Engel, Stride's senior director of curriculum, K-5. ■

STUDENTS LEARN IN DIFFERENT WAYS AND NEED DIFFERENT STIMULI.

Many students have an ideal way of learning — an optimal way to receive information that works best with their cognition and personality type. Research from Rasmussen University shows that there are four types of learning styles: visual, auditory, kinesthetic and reading/writing learners. A blended or full-time online learning platform for K-5 students can stimulate multiple senses at the same time, from sight to hearing and movement, through technology.

Online learning also gives students flexibility regarding when and where they study. A student who cannot take part in a live lesson can participate in it later through asynchronous learning options.

Will Plump, curriculum product owner at Stride, has seen success when students can access live recorded teaching sessions. This is a viable option for students who miss live sessions or for students who want to review what was taught during the live session they attended. In both cases, the students have the flexibility to access instructional content in their own time and at their own pace.

"Having that flexibility is key to reaching all students and building their ability to persevere and be more independent at a developmentally appropriate pace," Plump says. It also accommodates a variety of use cases for online and blended learning in K-5 education.

Stride Senior Vice President of Products Doug McCollum says that varying instruction delivery to meet the learning preferences and needs of all students is paramount.

"We have 30-plus different interactivity types that we build into all of our course developments to drive engagement. We provide immediate instructional feedback as students are working so they get that immediate corrective feedback or encouraging feedback," McCollum notes.

"We have content that has adaptive branching built into it, so that if the student answers one way, it takes them forward. If they answer incorrectly, it provides reteaching and reinforcement."

An example of this is Stride's Big Universe — a library of more than 20,000 digital books that are searchable. These are available to students to access and are integrated into courses. Another is Stride Skills Arcade that provides independent, game-based, adaptive practice for learners that is constantly adjusted within the system based on how individual students are performing.

Cross-curriculum opportunities are also important to connecting reading learning between disciplines.

"There are reading opportunities in ELA courses, but we're building those in science and social studies as well. As they are working through that content, there are texts they're encountering, so while they're learning science and social studies concepts, they're learning reading at the same time," McCollum says.

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— **DOUG MCCOLLUM,**
SENIOR VICE PRESIDENT OF PRODUCTS, STRIDE

STUDENTS HONE INDEPENDENCE IN LEARNING SKILLS.

When students can tap into multisensory engagement, they experience more ownership of their literacy journey. Students who feel empowered by learning to read develop independence in other subject areas.

"One of the biggest challenges we've seen from the pandemic is the huge burden of trying to teach children to read. We are first and foremost trying to drive independent learning at the youngest of ages," McCollum states.

Striking a balance between moving students forward with what they can do independently, while feeling supported, is vital to independent learning skills that last a lifetime. Access to recorded lessons, a library of related resources and learning coaches gives students opportunities to strengthen their skills — and move through lessons at their own pace.

"The zone of proximal development is to always keep the child moving forward with what they're able to do independently, but to provide that guiding approach to keep them in their sweet spot of learning and engagement," McCollum says.
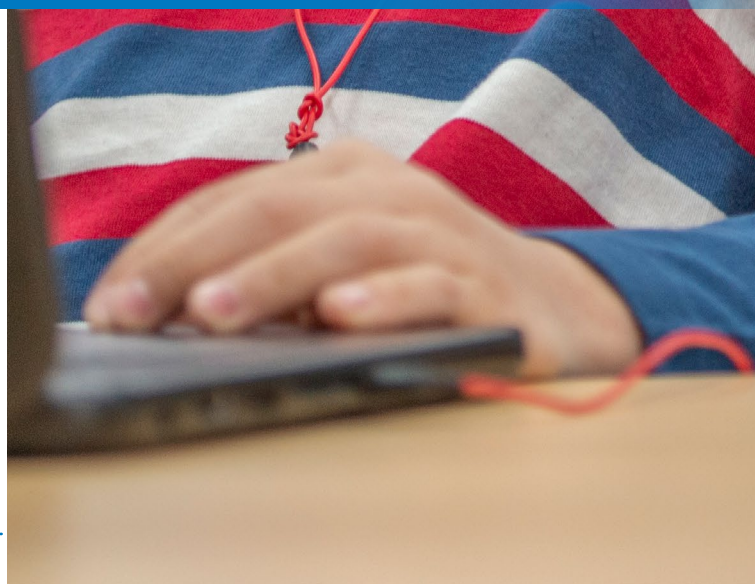
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Stride's tools allow students and parents to see their progress and performance each day as they move through the curriculum. This built-in gradebook helps parents and students visualize progress and make decisions on what comes next — or what needs to be reviewed.

Plump adds, "The more we can build student independence, the more we reduce the burden on families for instructional leadership but also allow students to persevere."

STUDENTS BECOME MORE INVOLVED IN LEARNING.

The shift from learning to read to reading to learn typically occurs toward the end of third grade based on expected reading fluency at that time. By the end of third grade, 74% of readers who are struggling will not be able to catch up, according to The Children's Reading Foundation. An important predictor of graduating from high school is having the ability to read proficiently by the end of that third-grade year, the organization reports.

Third grade is also the first year that students face high-stakes testing that assesses the literacy skills accumulated until that point.

"If they're struggling and they're reading way below level, they're simply not going to do well on those assessments. So, we're supporting kids and preparing them, getting them to a point where they can succeed on the high-stakes tests, not only in language arts, but in other subject areas," McCollum asserts.

Stride Learning Solutions' elementary curriculum, designed especially for K-5 students, engages today's youngest learners with interactive digital content, independent design and multisensory learning modalities in math, English, language arts, science, social studies, PE/health and art.
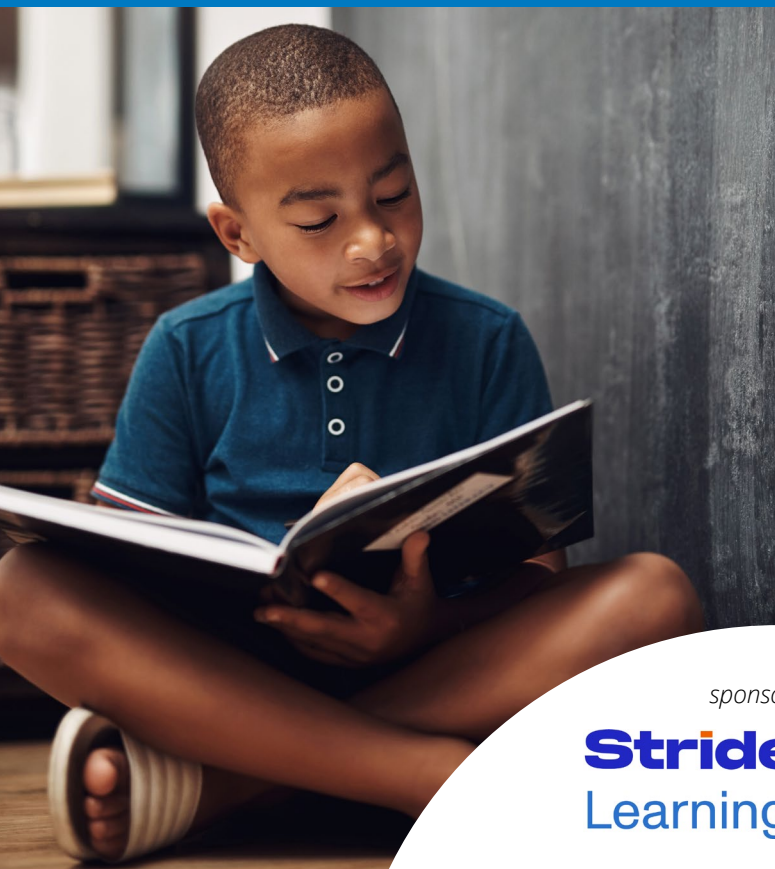
"We're looking at our courses across K-5 as a consistent and cohesive collection of courses that tie together and are designed to work together," McCollum explains.

Stride's K-5 courses provide the support students need to transition from nonreaders to avid readers who read to learn.

To learn more about implementing a research-based online K-5 solution in your district or to request a demo, visit Stride Learning Solutions' website. ■

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ABOUT STRIDE LEARNING SOLUTIONS

Since 2000, Stride Learning Solutions has been a leader in strategic solutions to solve district challenges. Stride's flexible and highly engaging online and blended learning options are designed specifically for virtual learning and supported by professional learning for educators — led by experienced Stride virtual instructors. With an innovative platform, comprehensive digital courseware, adaptable technology, and extensive support, Stride will help your school or district empower a brighter future for learners.

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