

GRANTEE STORIES - DIGITAL PROMISE

**Learner
Variability
Project**



Accelerate innovation and promote equitable access to learning technology.

Angela Arias and Ben Grimley each want to help students with learning differences succeed academically. They both found the same tool to improve that work. The similarities start to end there. Arias is a 20-year teacher in a 21,000-student American school district. Grimley is the CEO of a five-year-old education technology platform picked by four of the 50 largest U.S. school systems to improve students' mastery of the unfamiliar language used in classrooms, which differs from the language students draw on in everyday life.

Arias and Grimley consulted the Learner Variability Navigator, a web application developed by Digital Promise, an independent non-profit tasked by Congress to accelerate innovation in and promote equitable access to learning technology. Digital Promise chose the term "learner variability" to describe the differences students exhibit in four attributes that researchers found critical to learning – content knowledge, cognition, student background and social-emotional learning.

Learner Variability Project (LVP)

Duration: 5 years

Budget: USD 1,000,000

Year awarded: 2017

- Build educator understanding of teaching and learning practices that meet the needs of diverse students through the curation and dissemination of culturally-responsive and evidence-based tools and resources
- Connect research on the science of learning with the needs of students with learning differences, particularly to ensure the science of reading informs teacher professional learning and practice in literacy instruction.

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“The first step is broadening the lens through which they think about learners,” said Vic Vuchic, executive director of Digital Promise’s Learner Variability Project (LVP), which created the Navigator. Whether it’s educational technology developers or teachers, “they focus on the academic. So, if you’re teaching someone to read, it’s about phonics; they may not be considering that this third grader freezes up with anxiety even when she knows the answer.”

Arias’ school district suggested she explore the Navigator as a professional development opportunity. She decided to search for better approaches to teach a native Spanish speaker in her 4th grade class at a bilingual immersion elementary school. She knew the girl’s processing speed in English affected her ability to solve math word problems – a challenge for many children. “Sometimes it’s the structure of the language, sometimes it’s the instruction we can provide her in terms of the student’s need to break content into chunks” Arias explained.

“It’s difficult to know the best strategy to use. There are lots of skills to consider,” Arias said. The Navigator is “a huge bank of strategy, samples and tools.” In addition, the Navigator provides on-demand videos “that really allowed me to understand the strategies.”

She picked three approaches to adapt her teaching to the student’s needs-- error analysis to understand her errors, direct instruction of problem-solving strategies and untimed tests when possible. Arias has documented her student’s progress for her school district. “She is using these strategies not only for math, but for other content as well. It’s like a routine for her now,” Arias said. “It’s making an impact on her motivation and her confidence.”

A former Baltimore elementary school teacher, Grimley knows all the troubling statistics about reading proficiency among U.S. students generally, and how they worsen when poverty, race, English language learners, or learning differences are considered. “They don’t have command of that academic language in any form – reading, writing, listening and speaking,” he said of students who struggle to become proficient readers. “They can’t take part in classrooms; they can’t demonstrate their knowledge.”

Grimley and his colleagues designed Speak Agent to support teachers in helping students master academic language – the vocabulary, syntax, conventions and context of instruction, classroom discussion, texts and tests. Through a partnership with the LVP, Speak Agent is using the Navigator to boost the strategies teachers can access through the platform that are based on current learning science research. That menu is critical given Speak Agent’s belief that responses to the diversity of learners in a classroom must be teacher driven. “We were looking for better research-based strategies that could work in real classrooms,” Grimley said. “The LVP distilled all of that research down in a way that we could access. There was evidence behind the strategies offered.” The Navigator validated elements already in Speak Agent’s platform. It also allowed its developers to improve vocabulary development features specifically.

One example is strengthening Speak Agent’s use of dialogic reading – when an adult and student read together and talk about what they read. To promote that strategy, Speak Agent added “Read Along” with mini e-books that feature text and pictures, space for teachers to add questions and students to answer them, and portfolio storage that teachers and students can access to track progress.

“We actually were doing some dialogic reading, but we didn’t know what to call it,” said Grimley, who like Arias taught English language learners in elementary schools. “Even having the nomenclature in common allows us to serve more teachers who are serving more and more diverse students.” Speak Agent and Arias fit into Digital Promise’s plan for the Navigator. “There’s almost no research going into product development, so that was a pretty low floor with the most potential for scale,” he said, adding the Navigator has played a role in improving about 20 products. “We did take a broad-based approach so that we could move toward more direct use by teachers.” Oak Foundation sees the slow translation of learning science insights into practical classroom applications as a significant obstacle to unlocking the creativity and power of every student. The Learning Differences Programme supports partners such as the Learner Variability Project and

others working to bring tools built on research and evidence to classrooms that improve learning for all students, particularly those marginalised due to their learning difference or other background factors.

Ownership by the partner is the single most important factor determining the success or otherwise of any capacity building initiative. Partner ownership was a key success factor in every one of the nine Oak case studies. It is hard to overestimate the importance of ownership (for more details on the ingredients of ownership URL link to paper on Oak CB and Ownership).

The case studies proved that the leaders, in particular, needed to believe in and drive the change process. Acceptance or acquiescence is not enough. It takes leaders to be open, not just to change in their organisation, but change in themselves. Oak has found that change happens when “leaders are willing to put egos aside and ask themselves difficult questions”.

Unless the partner is genuinely open and ready to change, there is little point in spending time and money imposing capacity building on partners. As one Oak staff acknowledged: “It was really stupid of us to propose this to the partner knowing the leadership situation”. I don’t blame them, I blame ourselves”.

Would you like to know more about Digital Promise?

Over 40% of students in a typical classroom have some learner variability that makes their learning path a significant challenge in our current system.

70% of the 180 most popular literacy apps did not make any reference to research or learning expertise in the design of their products.

Read more about Digital Promise on their website digitalpromise.org

Find out more about Oak Foundation.

Read more about us on our website oakfnd.org.