

Active Learning: more important than ever.

The COVID-19 pandemic accelerated the shift toward blended learning and put active learning in the spotlight. It's long been known that active learning engages students. It's also a well-established fact that engaged students learn better. The pandemic has emphasized the need to incorporate active learning into our instruction across a range of learning environments from virtual to hybrid to socially distanced classroom settings.

Active learning is what its name implies. It is an active process that engages students in the ideas being taught and the process of learning those ideas. It is student-centred learning that gives learners a voice. They can drive the process. That's the key to creating engaged students.

How valuable is active learning? Research identifies several benefits for students:

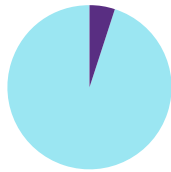
- Improves critical thinking
- Increases retention of new information
- Improves transfer of new information
- Promotes higher-order thinking skills

The impact for educators is just as clear. The shift to online learning has many teachers concerned about student performance in social emotional learning (SEL), math and literacy. Adopting active learning strategies can help students grow and thrive in these subject areas.

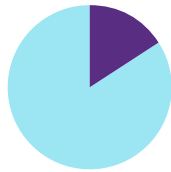
This white paper highlights research and surveys that examine issues for students in the areas of math, literacy and social emotional learning. It also offers practical strategies (based in active learning) for school leadership teams.

The literacy challenge.

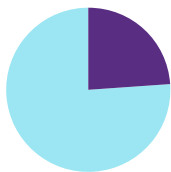
■ Graduate on time
■ Drop out or fail to graduate on time



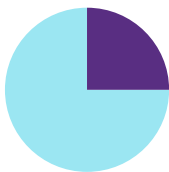
General population



Children not reading proficiently by 3rd grade



Children not mastering basic reading by 3rd grade



Poor children not reading proficiently by 3rd grade



Poor children from poor neighborhoods not reading proficiently by 3rd grade

Improving students' literacy skills is a top priority around the world, but districts and schools face enormous challenges. According to NAEP's 2019 reading assessments, 33% of American 4th graders are not reading at the basic level.

And we're not trending in the right direction. According to the 2018 PISA results, reading scores in the US, Canada and many other countries have remained flat for nearly two decades. The unprecedented interruptions caused by 2020's global pandemic resulted in additional learning loss, increasing the need for educators to focus on literacy skill development in their students.

Students' ability to read sets the course of their lives. Students not reading at grade level by the end of the third grade are four times less likely to graduate high school on time, and six times less likely if they are from low-income neighborhoods.

Today's students need to develop more sophisticated literacy skills than ever, but gaps in digital and media literacy may be even wider. PISA 2018 showed that fewer than 1 in 10 students can discern fact from fiction based on contextual clues.

Active Learning Strategies to Support Literacy Skills Development.

Schools focused on increasing literacy skills in students have seen good results after emphasizing active learning approaches. These include:

Peer-to-peer and small group work: Studies have shown that young children benefit more from being taught in small groups than as a whole class. Creating an environment where students can collaborate in small groups to share ideas, connect with prior knowledge, and think critically about their reading helps develop the skills they need to succeed.

Student-directed learning: Research shows that letting students drive their own learning and giving them time for self-reflection can boost reading skills, stamina and fluency. One example would be letting students choose a variety of texts and mediums to understand more about what they're reading. This range of choice would also apply to how students share their findings.



Math skills a top priority.



In schools across the USA, improving students' math skills is a critical area of focus. U.S. students consistently score in the middle or bottom tiers in international math evaluations, and the nation's lowest-performing students have gained no ground in math on the NAEP for nearly 30 years.

School closures due to COVID-19 risk compounding the issue. A May, 2020 poll found that 90% of educators are concerned about students falling behind in Math - more than in any other subject.

This is especially alarming, as research has shown that children's early mathematical knowledge is the strongest predictor of later success, not only in math, but in other academic domains. The consequences of math skills gaps are also far-reaching, as there is some evidence that numeracy is as important as literacy for predicting productivity, wages, and employment outcomes.

Active Learning Strategies for Enhancing Math Instruction.

Active learning can help students improve their math skills. Schools have achieved success with several approaches, including:

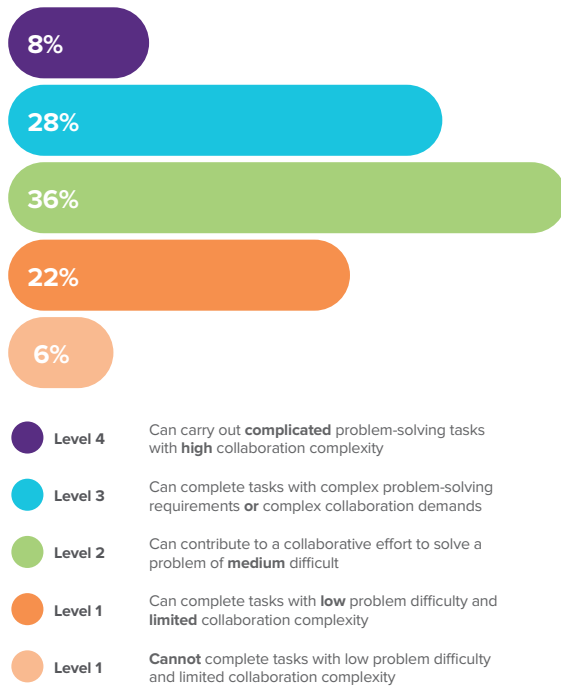
Hands-on learning: Research shows that the use of digital manipulatives such as geoboards, tangrams, pattern blocks, and money improves students' understanding of place value, addition, subtraction, and other areas of basic math.

Real-time checks for understanding: Teachers who use real-time checks to gauge student understanding and then adjust instructional practice accordingly have seen impressive results. Studies have shown that students in such an environment consistently score higher in math than those in traditional settings.

Repeated practice: Encouraging students to actively engage with content improves their acquisition of basic math skills and their reported confidence in the subject. It's important to combine choice with opportunities for repeated practice by offering a range of games, puzzles and playful experiences.



Opportunity and challenges in social emotional learning.



Levels of student proficiency in collaborative problem solving across OECD countries according to PISA 2015

As recognition of the importance of social and emotional skills grows, more teachers, schools and districts are looking for effective and feasible ways to foster SEL

There is a growing body of research demonstrating the benefits of social and emotional skills development in students. A CASEL study found that students with better-developed social emotional skills showed at least an 11% gain in overall achievement. Research also shows that as technology shifts the way work is done, well-developed social emotional skills are increasingly important to graduates' employability.

In the wake of the COVID-19 pandemic, the importance of developing social and emotional skills has only increased. CASEL's President and CEO observes that "in a world where physical distancing is deemed necessary, social and emotional connectedness is even more critical." Students are working and learning in a wide variety of learning environments. Integrating SEL into instruction helps students develop the competencies they need to learn and succeed in a rapidly changing world.

Active Learning Strategies to Support Social and Emotional Skills Development.

Supporting social and emotional skills development in students is just as important as nurturing their academic abilities. But this is not an either/or proposition. Incorporating active learning into your instructional practice allows you to wrap SEL development around academic content.

Student choice: Students given choices in how they learn and show what they know report higher levels of self-efficacy and positive autonomy.

Physical and virtual learning stations: Students who interact with content in small groups have been shown to develop a deeper understanding of the content than those learning independently.

Relationship-building activities: Games and activities that build relationships and ease classroom tensions support the development of advanced social skills and resiliency.



The benefits of active learning in all environments.

Active learning places students at the centre of their education. It's a simple shift that can produce dramatic results. Giving students choice gives them autonomy and boosts their self-confidence. As we've seen in this white paper, active learning:

- increases student engagement
- increases retention
- improves critical-thinking skills
- sparks creative thinking

These benefits are seen in everything from face-to-face classroom instruction to remote and blended learning. In all these learning environments, technology can deliver active learning and amplify its benefits in literacy, math and social and emotional learning.



For Literacy

- Bridge print and digital reading
- Enable peer-to-peer and small group work
- Empower student-directed learning



For Math

- Help students learn hands-on, even at a distance
- Check for understanding
- Provide opportunities for repeated practice



For SEL

- Incorporate relationship-building in lesson delivery
- Create learning stations, in class and online
- Offer students choice

To learn more about active learning and instructional strategies, join our webinar series on the SMART 360 virtual platform.

Talk to us about how SMART Learning Suite supports active learning with interactive content, tools and activities. Learn more at [SMART Learning Suite](#)