Apex Learning®

Special Report

Close Learning Gaps to Accelerate Learning

October 2020

The Challenge

In school districts across the country, far too many students arrive at middle school and high school with significant learning gaps that prevent them from mastering grade-level content.

In a survey of students who dropped out of high school, 45 percent of respondents said they were not prepared by the time they started high school.[1]

Research shows that when these struggling students embark on their secondary education with significant learning gaps, they progress more slowly than their peers, further widening the gap with each passing semester.[2] Without filling these gaps in subject-area knowledge and skills, these students are at risk of increased frustration in coursework and ultimately dropping out of school before graduation. When students struggle with prerequisite and grade-level content, they often spend more time trying to catch up and less time on building the critical thinking and problem-solving skills they will need for college and career.

Each individual student's learning gaps are unique, and the challenge for educators is to identify them, understand the causes, and determine the best plan to address them. Some learning gaps are periodic and isolated to a specific skill or concept. These can be addressed with targeted remediation that enables students to grasp concepts and skills required to move forward in grade-level content.

Other learning gaps are cumulative and chronic. Some of these stem from gaps in preparation, defined by the range of vocabulary, amount of knowledge, and breadth of life experiences that students bring to school. These gaps cause students to enter the classroom behind, without the prerequisite skills and knowledge necessary for grade-level success. Chronic absenteeism, high mobility, and life factors such as poverty, trauma, and social isolation cause or deepen gaps in knowledge or experience. When struggling students have significant learning gaps, whatever the cause, they are unprepared for the next step, whether that's the next test, the next grade, or their postsecondary career.

Without immediate intervention, isolated learning gaps can grow to become chronic. By the time they reach middle school and high school, students with substantial gaps in their skills and knowledge base struggle with grade-level content. At these grade levels, providing individualized instruction can be particularly challenging. On average, students who start below grade level have only a 1 in 4 chance of catching up.[3] And, for students with learning gaps, the cumulative and repeated lack of success results in disengagement from school. Studies have shown that, on average, 40 percent or more of high school students report feeling unmotivated in school.[4] These feelings of disengagement are often rooted in negative prior experience of low achievement.[5] But with the right supports and resources, students with learning gaps can surmount this challenge and succeed in school.[6]

The Opportunity

It is fundamental for schools and districts to identify and close learning gaps effectively, with immediate intervention to help students reach grade-level mastery.

With the right tools and resources, schools and districts have the opportunity to take a strategic approach to supporting struggling learners. High-quality digital curriculum can be a key component that gives administrators and educators the ability to personalize learning at scale and meet the diverse needs of their students.

Administrators and educators who are evaluating digital curriculum options should pay careful attention to the instructional design and learner experience. Research suggests that learning improves when instruction takes learners' prior knowledge into account, that students engage when tasks are meaningful, and that students benefit from differentiated instruction tailored to their readiness.[7]

Scaffolding built into the instructional design gives students access to rigorous content and avoids the frustration of continually trying to catch up with watered-down content. Active learning is powerful scaffolding that engages students and helps build connections to new ideas and concepts. When digital curriculum encompasses all of these components, struggling students have a better chance of reaching grade-level mastery and setting themselves up for success as they move through their academic careers and into the workforce.

Promoting High Achievement and Success for Struggling Students

Districts need highly effective and easy-to-implement solutions and resources to immediately identify and remediate learning gaps. This report outlines three approaches for supporting struggling students with learning gaps:

1. **Identify learning gaps and provide immediate remediation that's directly tied to on-grade instruction.**
2. **Establish sufficient support for struggling students to access grade-level curriculum.**
3. **Provide active learning opportunities that keep students engaged and develop critical thinking skills.**

1. Identify gaps and provide immediate remediation that's directly tied to on-grade instruction.

Students with learning gaps need to feel like they aren't perpetually behind. If they get stuck, they need immediate support to get back on track. They benefit most from targeted remediation to prepare them for grade-level material, carefully chunked instruction with multiple ways to learn each new idea, and calibrated scaffolding for grade-level assignments.

In a study conducted by The New Teacher Project , a research, teacher-training, and advocacy organization, when students who were starting the school year behind had access to content that was appropriate for their grade, they rose to the challenge and gained nearly two months of additional learning. Students who had access to stronger instruction closed gaps with their peers by six months.[8]

The Apex Approach

With Apex Learning digital curriculum, students with learning gaps can immediately access built-in, remedial instruction to close gaps in prerequisite content for the grade-level concepts they're trying to learn. These come in the form of supporting topics or embedded remediation through on-page review or rediscover cards. Once they've mastered a concept or skill, students progress through carefully paced and scaffolded instruction. The instruction builds on prior knowledge, introducing each new idea one step at a time and offering a wide range of supports and representations for students as they take each step. As understanding of grade-level content increases, so does student control and engagement, leading to improved learning.

Personalized learning enables students to shift between paths based on their increasing readiness in each subject area. Instructional content provides structured remediation in math, reading, and writing to meet the needs of both high school students and transitioning middle school students who are not prepared for grade-level academic challenges.

2. Establish sufficient support for all students to access grade-level curriculum.

Supports and scaffolds give students a bridge to the rigor of grade-level instruction, enabling them to build on their existing foundation of subject-area knowledge and skills.

Research indicates that student learning improves with the use of certain types of instructional strategies and supports. Specifically, scaffolding in computer-based environments and in classrooms has been found to be highly effective in addressing learning gaps.[9] A common theme in research on scaffolding, formative assessment, and formative feedback is that students need assistance every step of the way throughout instruction. When learning a new concept or skill, more frequent and intensive scaffolding, assessment, and feedback are needed than when applying knowledge already comprehended. As gaps are filled and competence develops, these supports can be gradually reduced.

Scaffolds such as structured overviews, repeated exercises, active reading strategies, and reviewing and constructing models are strategies for students with learning gaps.[7] Multiple modes of media can be used in activities to deepen understanding of complex information and challenging concepts. Furthermore, to make content even more accessible, information can be segmented to support students' processing of information. When extraneous processing is minimized, students are better able to digest complex information.[10] Well-designed digital curriculum provides a variety of scaffolds to support different learning styles and levels of comprehension.

Providing students with immediate and targeted feedback allows learning to flow seamlessly— students do not get stuck if they don't understand a concept or academic vocabulary. Students' learning improves when instruction involves cycles of formative assessment, feedback, and revision.[11] Through scaffolded feedback cycles, students can engage in increasingly independent practice and self-monitoring that lead to deeper understanding.

The Apex Approach

Embedded scaffolding delivers instruction in manageable chunks—learner-paced segments with limited content on one page of instruction—rather one continuous stream. Within these small segments, prompts and interactive exercises give students frequent opportunities to check their understanding and apply what they learn in order to gradually build knowledge.

Apex Learning digital curriculum includes both strategic scaffolds (e.g., online help with vocabulary and text-to-speech support) aimed at increasing the comprehension capacity of learners and adaptive scaffolds (e.g., predicting, questioning, and summarizing) that students opt into, as well as digital, interactive versions of common offline tools and manipulatives.

3. Provide active learning opportunities that keep students engaged and develop critical thinking skills.

Learning requires students to be present and engaged. When students are actively engaged in educational experiences, learning feels effortless and exciting. And these moments of clarity increase student motivation.

In an active learning environment, students learn by doing, activating the brain's perception-action cycle (MIND Research Institute), a continuous flow of information and action between the brain and the world around it. This results in deeper learning which students can identify connections between new material and what they already know. They begin to use new learning to fill gaps in their existing knowledge and understanding. And, as gaps are filled, engaged learning experiences propel students onto a path of continued success. In short, engaged students are more able to approach learning with an eagerness for mastery, even for challenging content that requires another layer of effort to fill learning gaps. As John Hattie says, "Few educational interventions can match the power of active learning strategies in improving student academic outcomes."

The Apex Approach

Apex Learning actively engages students in every moment of their learning experience. Throughout their instruction, students progress through a series of activities featuring controlled and free production. Critical thinking, problem solving, and questioning are integrated into all courses to support engagement and active learning. In Apex Learning digital curriculum students observe, inquire, confirm, connect, and create as they organize information and build knowledge. There are frequent opportunities to check one's understanding, empowering learners to look back or ahead and control their own progress. These activities increase in rigor to match students' level of mastery, building from simple identification and classification activities to creative and analytical activities.

Apex Learning provides feedback-rich instruction through an interactive learning environment. Students validate their understanding on virtually every page of instruction, engaging in at least one new interactive exploration, simulation, or exercise after every few sentences of instruction. These activities allow students to confirm their understanding. This is especially helpful to students with learning gaps as it helps them identify areas where they need more instruction and provides immediate, actionable, instructive feedback that reinforces what they are learning or corrects misconceptions.

Conclusion

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With the cumulative nature of learning, students with learning gaps—whether periodic or more chronic—fall increasingly behind when their deficits in knowledge or skills are not addressed. Rather than building on their knowledge base as they progress through their courses and gaining more confidence in their academic abilities, these students experience cumulative frustrations that lead to below grade-level proficiency, lower high-stakes test scores, and decreased on-time high school graduation rates. Ultimately, it prevents students from reaching their full potential. And this lower achievement results in reduced college and career readiness—whether students plan to enroll in post-secondary schooling, enter the workforce, or pursue industry certifications.

When struggling students receive immediate support to close learning gaps, they are better able to strengthen academic foundations and reach grade-level mastery. Apex Learning digital curriculum gives struggling students the opportunity to access the same rigorous content as their peers, with a deeply engaging learning experience that builds academic proficiency, along with the persistence and resilience needed for their future success.

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An industry leader with deep expertise in digital curriculum, Apex Learning works closely with school districts across the country to implement proven solutions that increase on-time graduation rates and create opportunities for student success in school and beyond. The company is driven by the understanding that supporting the needs of all students—from struggling to accelerated—strengthens schools and creates stronger communities, brighter futures and a more equitable world. Apex Learning is accredited by Cognia and its courses are approved for National Collegiate Athletic Association eligibility. Apex Learning, where opportunity thrives. For more information, visit http://www.apexlearning.com.

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