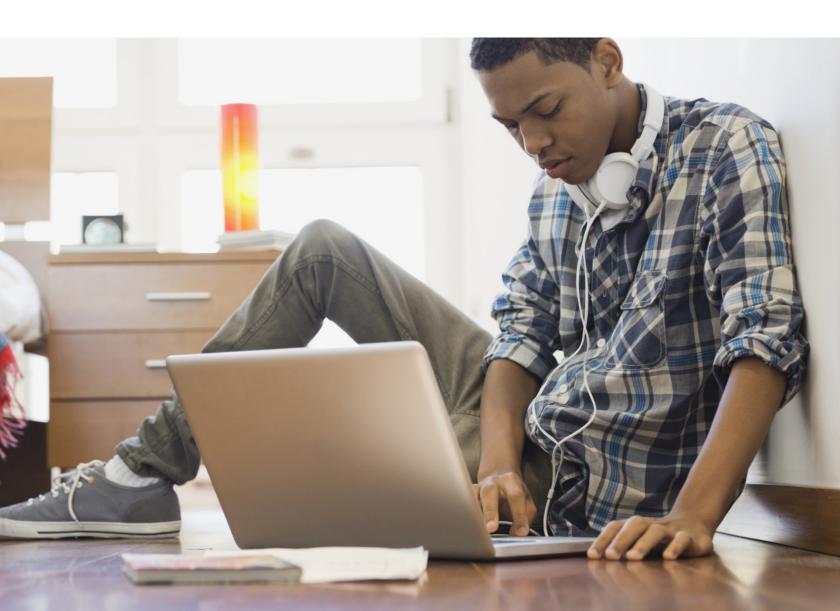


Special Report

Unlocking Success for Struggling Students

October 2018





The Challenge

Students who start below grade level in 8th grade have just a 1 in 4 chance of catching up by 12th grade. Eighth graders who score **significantly** below grade level have just a 1 in 10 chance of catching up in reading and a 1 in 30 chance of catching up in math.¹

Today, these odds impact a large population of students. Nationally, 2 in 3 8th graders score below grade level in reading and another 2 in 3 score below grade level in math.²

Struggling students face considerable and diverse barriers to success. Students struggle with grade-level instruction for a wide range of reasons, but particularly because they are below-proficient readers, English language learners, and/or students with learning gaps. With these challenges, it can become easy to lose hope. 70% of high school dropouts said they left in part because they weren't sure they could make it to graduation—because the barriers felt too high.³

Students who face literacy or language obstacles can face extreme barriers to understanding grade-level material across every subject.

Despite the best efforts of teachers and administrators, it remains a challenge to address the wide range of needs struggling students face. For a variety of reasons, students often arrive at school significantly below grade level.⁴ Meanwhile, teachers and staff are stretched thin, making it difficult to address the individual needs particular students have—especially when those needs go beyond the scope of their content area.⁵



The Opportunity

Struggling students have an enormous impact on districts' critical performance indicators like graduation rates, high-stakes exam scores, and chronic absenteeism.

Failing just one core class in 9th grade—or even as early as 6th grade—can lead a student to drop out.6 80% of high school dropouts cited their inability to pass Algebra I as a primary reason for leaving school.7 Reading and language proficiency levels within a school can strongly influence its outcomes on high-stakes exams.8 Additionally, there is a strong two-way connection between academic performance and chronic absenteeism.9

Struggling students' impact on a district's performance has implications for its finances. Each dropout can cost a district thousands per year in state and federal funding. In states where funding formulas consider attendance rates, even the smallest districts can lose thousands per day due to chronically absent students. Perhaps most significantly, district property values rise and fall with test scores. Among suburban districts,

a 5% increase in test scores corresponds with a 2.1% increase in property values.¹¹ In states with an A-F school rating system, moving from a B to an A can increase property values by 8.7%.¹²

Four Takeaways to Help Struggling Students Find Grade-Level Success

The challenges in helping struggling students achieve success in grade-level instruction have become increasingly urgent and complex. To meet these challenges, districts and teachers need highly effective, easy-to-implement strategies and resources. This report outlines four takeaways curriculum needs to address to unlock success for struggling students.

Different students have different needs.

A wide range of barriers make it challenging for struggling students to access their grade-level instruction. To make it possible, curriculum needs to respond to the unique needs of each student.

Below proficient readers need help understanding individual words and, most importantly, with broader reading comprehension. They benefit from carefully selected vocabulary that introduces grade-level ideas and terms in readily accessible language. They also benefit from explicit instruction of the active reading strategies needed to understand texts and assignments across subject areas, ¹³ as well as carefully scaffolded resources for reading, writing, and note-taking. ¹⁴

English language learners can simultaneously develop language and subject-area mastery when the content

is comprehensible—when they understand what they're seeing, hearing, or reading.¹⁵ Students with a developing or higher level of English language proficiency benefit tremendously from simple definitions for unfamiliar words, read aloud for text, relevant examples, and rich visualizations and interactive learning experiences that offer alternative representations to make meaning of new ideas.¹⁶ Students with emerging English language proficiency may also require native language support to access grade-level instruction.¹⁷

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, 18 carefully chunked instruction with multiple ways to learn each new idea, 19 and calibrated scaffolding for grade-level assignments. 20

The Apex Approach

Apex Learning embeds extensive literacy, language development, and academic supports directly into grade-level instruction. Literacy supports include accessible text, layered assistance for academic vocabulary, and carefully guided reading, writing, and notetaking experiences, in addition to options for read aloud. Language development supports begin with rich, non-text representations of key academic ideas (through simulations, images, and videos), as well as the use of simple language, vocabulary assistance, and options for read aloud and translation. For students with learning gaps, the learning experience integrates targeted remediation into the direct instruction. It also introduces new ideas through chunked, scaffolded instruction that builds on students' prior knowledge and stays grounded through connections to simple, relevant examples. With literacy, language development, and academic supports built directly into the curriculum, struggling students can overcome the precise barriers they face to access arade-level instruction.

Students succeed when learning sticks.

Even when struggling students access gradelevel material, they can only catch up if they retain what they learn.

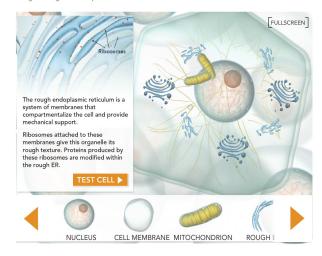
On average, students forget 50-80% of what they learn overnight and 95% within one week.²¹ The risk of forgetting is especially high for struggling students, for whom new material can feel disconnected and abstract.

Learning sticks when students actively participate in their education, learning by doing and building connections as they practice and apply their knowledge in a variety of contexts.²² This practice and application cements students' learning by activating the experiential portion of their brains, rather than just the listening and observing portion of their brains.²³ For this to be effective, two things need to happen. First, students need to practice frequently rather than in a single, summative activity. Students need the opportunity to practice step by step throughout a lesson as they

progress through carefully chunked, guided instruction.²⁴ Second, this practice needs to facilitate critical thinking through guided discovery so that students can reach a deeper, foundational understanding of each concept. Practice that encourages simple repetition or memorization isn't enough.²⁵

Can you build a functional animal cell?

Drag the organelles up and click test cell to see if it's functional



The Apex Approach

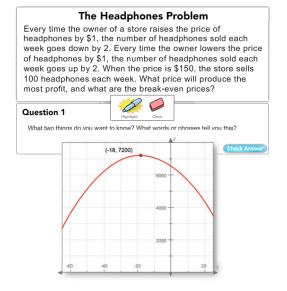
Active learning is a centerpiece of Apex Learning instruction. Students participate in their learning regularly and through a wide variety of hands-on exercises, steadily building from exploration, identification, and classification to creative and analytical activities. Students typically engage with one to two dozen such activities per topic. The frequency, variety, and supportive design of these activities allows students to learn by doing, which significantly enhances their retention. Because students retain what they learn, they can excel on high-stakes exams and move on prepared for future coursework.²⁶

Students' day-to-day engagement hinges on positive momentum.

Motivation is critical for struggling students to reach grade level. To be motivated to complete any task, they need to believe they can do it.²⁷

This begins with having the supports and scaffolding necessary to access the curriculum, so they never feel stuck. However, it isn't enough for students to feel they've learned the material. To be motivated, they need to feel they can apply the material.²⁸ This is particularly important for students who have struggled for many years and see classroom struggles as part of their personal identity. By frequently and successfully applying their knowledge in a variety of learning experiences, students can build the positive momentum they need to unlock their motivation. For this to happen, students need instructive feedback when they struggle²⁹ and immediate feedback when they succeed so they never wonder whether they've mastered the concept.³⁰





The Apex Approach

Apex Learning gives struggling students the real-time support, engagement, and feedback they need to be motivated. Carefully scaffolded instruction coupled with literacy, language development, and academic supports ensure students always see a path to learning each concept. Frequent simulations and other interactive activities keep students engaged as they move through the curriculum. Each active learning opportunity offers students immediate, instructive feedback, which is essential to giving students the clarity, guidance, and momentum they need to build confidence in their knowledge as they take on grade-level material.

Students' long-term engagement hinges on credible hope for the future.

For struggling students to stay motivated day after day and year after year, they need credible hope for the future.

They need to believe not just that they can do the task at hand, but that the task at hand helps bring them closer to their goals. For this to be true, they need to believe the meaningfulness of tasks and their own skills are both high and in balance.³¹ If struggling students only feel successful doing remedial work ("kid work" to many students), they may lose motivation because they don't see a path to becoming successful at grade-level work. For this reason, students are most likely to reach grade level when remedial work is "tightly aligned" with core, grade-level instruction.³² If high school students find themselves trapped in a cycle of credit recovery (failing in the traditional classroom, recovering the credit, going on to fail the next class, having to recover another credit, and so on), they may lose faith that they can make it to graduation. For these reasons, shortterm success—passing a quiz or getting a credit—isn't

enough to sustain students' motivation. Students' long-term engagement depends upon the belief that the work they're doing today is meaningful—that it's immediately interesting or that it will help them achieve their long-term goals.³³



The Apex Approach

Apex Learning gives struggling students credible hope for the future in two ways. First, it makes it easy for students and teachers to remediate the precise gaps they need to close for students to understand their grade-level classwork. This lets students feel successful alongside their peers, rather than trapped in remedial coursework. Second, by creating a learning experience that allows struggling students to learn and retain grade-level material, Apex Learning gives students the confidence they need to believe their efforts will lead to the outcomes they care about. When they believe they can pass their next tests, classes, and exams, the path to success in school can, at last, feel clear and within reach.



Conclusion

More Success for More Students

These takeaways outline a path to help struggling find success in gradelevel instruction. By giving students the precise support they need to access grade-level instruction, helping them retain what they learn, elevating their confidence through momentum-building feedback, and ensuring they believe their work will lead to long-term success, districts can provide their struggling students the learning experience they need to get and stay on track. This can be a challenging, time-consuming task for districts or teachers to accomplish alone, but it can be made far simpler and more efficient by joining forces with a partner committed to and experienced in helping build that path to success for struggling students.

References:

- Dougherty, Chrys and Steve Fleming. "Getting Students on Track to College and Career Readiness; How Many Catch up from Far behind?" ACT Research Report Series, November 2012 (9). eric.ed.gov/?id=ED542022.
- ² "2017 NAEP Mathematics and Reading Assessments: Highlighted Results at Grades 4 and 8 for the Nation, States, and Districts." NCES, April 2018. bit.ly/2NZCh50.
- ³ Bridgeland, John M., John J. Dilulio, Jr., and Karen Burke Morison. "The Silent Epidemic: Perspectives of High School Dropouts." Civic Enterprises, March 2006. gates.ly/1b9f7gW. See also: Schachter, Ron. "Getting all students through Algebra I to improve graduation rates." District Administration, April 12, 2013. bit.ly/2x/WoiZh.4 Heitin, Liana. "Quality Learning Materials Are Scarce for English-Language Learners." Education Week, May 11, 2016. bit.ly/1VThuNm.
- ⁴Quint, Janet: "Meeting Five Critical Challenges of High School Reform. Lessons from Research on Three Reform Methods." MRDC, May 2006. eric.ed.gov/?id=ED491634.
- ⁵ ibid
- 6 Gillespie, Katie. "Ninth-grade failure rates reveal much to state, local educators." The Columbian, May 14, 2018. bit.ly/2zN2PxK.
- ⁷ Schachter, Ron. "Getting all students through Algebra I to improve graduation rates." District Administration, April 12, 2013. bit.ly/2xW6iZh.
- ⁸ Shapiro, Edward S., Emily Solari, and Yaacov Petscher. "Use of a Measure of Reading Comprehension to Enhance Prediction on the State High Stakes Assessment." Learning and Individual Differences 18.3 (2008): 316–328. PMC. bit.ly/2zLC4tt; Bronwyn, Coltrane. "English Language Learners and High-Stakes Tests: An Overview of the Issues." ERIC Digest, November 2002. eric.ed.gov/?id=ED470981.
- ^oJacob, Brian A. and Kelly Lovett. "Chronic absenteeism: An old problem in search of new answers." Brookings, July 27, 2017. brook.gs/2vdkegW; Lara, Julia et al. "Chronic Absenteeism: NEA Research Brief." NEA, NBI No 57 (2018). bit.ly/2QpBAhZ; Bridgeland, John M., John J. Dilulio, Jr., and Karen Burke Morison. "The Silent Epidemic: Perspectives of High School Dropouts." Civic Enterprises, March 2006. gates.ly/1b9f7gW.
- 10 Ciurczak, Ellen. "School districts reveal price tag of average daily attendance." Hattiesburg American, May 6, 2017. hatne.ws/2y5vNXr.
- 11 Black, Sandra E. "Do Better Schools Matter? Parental Valuation of Elementary Education." The Quarterly Journal of Economics 114(2), May 1999: 577-599. doi. org/10.1162/003355399556070; Beracha, Eli and William G. Hardin III. "The Capitalization of School Quality into Renter and Owner Housing." Real Estate Economics 46(1), March 23, 2017: 7-58. doi.org/10.1111/1540-6229.12195.
- ¹² Figlio, David N, and Maurice E Lucas. "What's in a Grade? School Report Cards and the Housing Market." American Economic Review 94(3), June 2004: 591-604. doi. org/10.1257/0002828041464489.
- ¹³ Gambrell, Linda B., Lesley Mandel Morrow, and Michael Pressley, eds. 2007. Best Practices in Literacy Instruction. New York: The Guilford Press, 3rd ed.; Strickland, Dorothy, Kathy Gnaske, and Joanne Monroe. 2002. Supporting Struggling Readers and Writers. Portland, ME: Stenhouse.
- ¹⁴ Clark, Ruth C. and Richard E. Mayer. 2016. e-Learning and the Science of Instruction: Proven Guidelines for Consumers and Designers of Multimedia Learning, 3rd ed. Hoboken, NJ: Wiley; Kamil, Michael L. et al. "Improving Adolescent Literacy: Effective Classroom and Intervention Practices." Institute of Education Sciences, NCEE #2008-4027. bit.ly/2lxNYty.
- ¹⁵ Ellis, Rod. "Principles of Instructed Language Learning." System 33(2005): 209-224. bit.ly/2wjLGcW.
- ¹⁶ Ellis, Rod. "Principles of Instructed Language Learning." System 33(2005): 209-224. bit.ly/2wjLGcW.
- ¹⁷ Graves, Michael F., Diane August, and Jeannette Mancilla-Martinez. 2012. Teaching Vocabulary to English Language Learners. New York: Teachers College Press. bit.ly/2ilY9lH. Also: Ellis, Rod. "Principles of Instructed Language Learning." System 33(2005): 209-224. bit.ly/2wjLGcW.
- 18 Newman-Gonchar, Rebecca, Benjamin Clarke, and Russell Gersten. "A Summary of Nine Key Studies: Multi-Tier Intervention and Response to Interventions for Students Struggling in Mathematics." Center on Instruction. 2009. eric.ed.gov/?id=ED521567.
- 19 Mayer, Richard E. "Applying the science of learning: evidence-based principles for the design of multimedia instruction." American Psychologist 63(8), 2008: 760-769.
- ²⁰ Marzano, Robert J., Debra J. Pickering, and Jane E. Pollock. 2001. Classroom Instruction That Works: Research-Based Strategies for Increasing Student Achievement. Alexandria, VA: Association for Supervision and Curriculum Development.
- ²¹ "The Curve of Forgetting." University of Waterloo. 2005. bit.ly/2OvShuX; Murre, Jaap M. J. "Replication and Analysis of Ebbinghaus' Forgetting Curve." PLOS ONE 10(7), July 2015. doi. org/10.1371/journal.pone.0120644.
- ²² Rosenshine, Barak. "Principles of Instruction: Research-Based Strategies That All Teachers Should Know." American Educator, Spring 2012. eric.ed.gov/?id=EJ971753; National Research Council. 2000. How People Learn: Brain, Mind, Experience, and School: Expanded Edition. Washington, DC: The National Academies Press. doi.org/10.17226/9853.
- 23 Kontra, Carly et al. "Physical Experience Enhances Science Learning." Psychological Science 26(6), June 1, 2015: 737-749. doi.org/10.1177/0956797615569355.
- ²⁴ Rosenshine, Barak. "Principles of Instruction: Research-Based Strategies That All Teachers Should Know." American Educator 36(1) Spring 2012: 12-19. eric.ed.gov/?id=EJ971753.
- ²⁵ Prince, Michael. "Does Active Learning Work? A Review of the Research." Journal of Engineering Education, 93(3), July 2004: 223-231. bit.ly/1d00mgN; Baloyi, Vonani Michael. "Influence of guided inquiry-based laboratory activities on outcomes achieved in first-year physics." University of Pretoria, June 2017. bit.ly/2E7gSCo.
- ²⁶ See, e.g. "A Study of the Impact of Apex Learning Tutorials on Student Achievement." bit.ly/2P1OMcM; "Students Using Apex Learning Pass State EOC Exam at Higher Rates in Houston ISD." bit.ly/2zMdfgl; "A Study of the Efficacy of Apex Learning Adaptive Tutorials on Middle School Achievement Year 1." bit.ly/2HbQbtF.
- ²⁷ Bandura, Albert. "The Explanatory and Predictive Scope of Self-Efficacy Theory." Journal of Social & Clinical Psychology 4(Special Issue: Self-Efficacy Theory in Contemporary Psychology), 1986: 359-373. doi.org/10.1521/jscp.1986.4.3.359; Shernoff, David J. et al. "Student Engagement in High School Classrooms from the Perspective of Flow Theory." School Psychology Quarterly 18(2), Summer 2003: 158-176. eric.ed.gov/?id=EJ672635.
- 28 Stiggins, Richard J. "Assessment, Student Confidence, and School Success." The Phi Delta Kappan 81(3), November 1999: 191-198. jstor.org/stable/20439619.
- ²⁹ Nicol, David J. and Debra Macfarlane-Dick. "Formative assessment and self-regulated learning: a model and seven principles of good feedback practice." Studies in Higher Education 31(2), 2006: 199-218. doi.org/10.1080/03075070600572090.
- 30 Evans, Carol. "Making Sense of Assessment Feedback in Higher Education." Review of Educational Research 83(1), March 2013: 70-120. doi.org/10.3102/0034654312474350.
- ³¹ Shernoff, David J. et al. "Student Engagement in High School Classrooms from the Perspective of Flow Theory." School Psychology Quarterly 18(2), Summer 2003: 158-176. eric. ed.gov/?id=EJ672635; Brandt, Ronald S. 1998. Powerful Learning. Alexandria, VA: Association for Supervision & Curriculum Development.
- ³² Newman-Gonchar, Rebecca, Benjamin Clarke, and Russell Gersten. "A Summary of Nine Key Studies: Multi-Tier Intervention and Response to Interventions for Students Struggling in Mathematics." Center on Instruction. 2009. eric.ed.gov/?id=ED521567.
- 33 Brandt, Ronald S. 1998. Powerful Learning. Alexandria, VA: Association for Supervision & Curriculum Development.



1215 Fourth Ave., Suite 1500, Seattle, WA 98161 Phone: 1 (206) 381-5600 | Fax: 1 (206) 381-5601

