edmentum™

COVID-19 Response Plan to Learning Disruption

Providing Continuous Learning in Unprecedented Times with Edmentum Exact Path

Edmentum Research and Design
April 10, 2020

Michelle Frost, Ph.D., Research Scientist
Audra Kosh, Ph.D., Research Scientist

Introduction

Coronavirus (COVID-19) has disrupted learning for millions of students as schools face unprecedented closures. As of April 15, twenty-five states have recommended or ordered their physical schools to remain closed for the remainder of the academic year, and more states are likely to follow suit in the coming weeks ("Map: Coronavirus and Closures School," 2020). Although districts are using virtual tools to continue teaching and interacting with students, there is wide variation in the capability of districts to execute distance learning in a way that meets all students' needs. Many families are struggling with the health and economic impacts of coronavirus, which has resulted in high proportions of students that have not been able to access district distance learning resources (Goldstein, Popsescu, & Hannah-Jones, 2020). Schools and educators are bracing for widespread learning loss and are simultaneously strategizing how to support all students both now and once the period of social distancing has ended.

The Impacts of Learning Loss

The education research community can draw on other circumstances where there are gaps in learning schedules, namely summer, to forecast how additional lost learning time from COVID-19 might negatively affect students. Research shows that students lose a significant amount of mathematics and reading knowledge during the summer, a phenomenon known as summer slide (Cooper, Nye, Charlton, Lindsay, & Greathouse, 1996). Although estimates of the amount of summer learning loss vary by subject, grade, and academic measure, certain patterns are clear. Achievement declines during the summer, and declines are steeper in mathematics than reading (Quinn & Polikoff, 2017). Moreover, research shows that students with low socioeconomic status experience greater setbacks over the summer relative to their wealthier peers, as they typically don't have the summer opportunities that are provided by higher income parents to their children (Alexander, Entwisle, & Olson, 2007; Mccombs et al., 2019).

In a recently released analysis, NWEA researchers used student longitudinal data that showed summer learning loss to estimate the academic setbacks from COVID-19. They found that these setbacks will be larger than would typically be expected after a summer away, with mathematics deficits projected to be more severe than those in reading. In some grades, students may return to school in fall 2020 *nearly a full year behind* what would be expected in normal circumstances (Kuhfeld & Tarasawa, 2020). Additionally, Paul Von Hippel, a leading researcher on summer learning loss, predicts that almost all students will return to school behind where they would have been (Von Hippel, 2020). He also notes the parental economic stress and insecurity caused by the pandemic will more negatively impact the academic support of students from low-income families than higher income peers, which suggests a widening of already-existing achievement gaps.

Kuhfield & Tarasawa (2020) recommend responding to the pandemic's impact on students with any measure that will help students recoup instructional time, including summer school and other summer learning programs. In a review of best practices and research of specific summer learning programs,

there is evidence that better learning outcomes occur when the details of at-home summer programs were introduced by teachers prior to the beginning of the official summer program with supports put in place before the school year was completed (McCombs et al., 2019). An additional recent study of a summer reading program for elementary school students found that better student outcomes resulted when teachers were able to personalize the program for individual students (Kim et al., 2017). However, manually personalizing curriculum for individual students can be challenging and time consuming for teachers.

Personalized Approaches to Target Achievement

Exact Path is a personalized learning program that promotes academic growth for K–12 students in reading, language arts, and mathematics. The program utilizes assessment data and/or teacher recommendations to automatically provide students with an individualized playlist of competency-based curriculum at the discrete skill level. Each learner, ranging from struggling to accelerated students, is then able to access a unique learning path made up of instruction, practice, and short quizzes precisely targeted to their achievement level. Over time, students can advance within the learning path to encounter more challenging material, all of which is designed to promote student achievement and academic growth.

A Learning Program Grounded in Research

Research shows that Exact Path is an effective learning tool (Randel, 2018b, 2018a, 2019). A third-party research organization, Century Analytics, conducted rigorous quasi-experimental evaluations of Exact Path to reveal statistically significant positive achievement gains related to student usage of Exact Path across all three of the available subjects—reading, language arts, and mathematics. The studies evaluated the impact of Exact Path usage on the winter diagnostic assessment of student achievement by separating students nationwide into two groups: students who completed at least eight Exact Path lessons between the fall and winter diagnostic and students who completed no lessons. Ensuring comparable groups at baseline with the fall diagnostic assessment, results revealed that students who completed Exact Path lessons in the learning path assigned to them made statistically significant positive gains in achievement compared to students who do not complete any lessons.

Results also suggest that Exact Path targets the specific skills that students need to develop in order to improve their reading, language arts, and mathematics achievement. The studies were designed to meet the What Works Clearinghouse™ (WWC) 4.0 standards needed to achieve a rating of "WWC Group Design Standards with Reservations" and the Every Student Succeeds Act (ESSA) level of evidence-based intervention requirements for "Moderate Evidence."

Implementing Exact Path to Support Continuous Learning

To get students started in Exact Path, there are three ways for students to receive an individualized learning path.

1. **Complete the Exact Path Diagnostic**
   Students can complete a diagnostic test in Exact Path that adapts in real-time to adjust the difficulty level of the questions that students receive. This allows each student to receive an efficient assessment that pinpoints both what a student knows and where they are ready to learn. The Exact Path diagnostic has high reliability and strong predictive validity evidence. Correlations between scores on the Exact Path diagnostic and scores on state tests in three separate states are approximately .75 to .85 for each of the content areas in mathematics, reading, and language arts. These high correlations provide evidence that scores on the Exact Path diagnostic are strongly related to scores on state tests.

   Following completion of the diagnostic, Exact Path automatically generates individualized learning paths for every student based on the assessment results. Educators also receive full diagnostic score reports with scale scores, national percentile ranks, growth, and details of the diagnostic administration including the skill statements of questions that students answered correctly and incorrectly. For more technical information, see the Exact Path Technical Report (Edmentum Research and Design, 2019).

2. **Import assessment results from NWEA MAP or Renaissance STAR results**
   For schools and districts that are already using these assessments from NWEA or Renaissance, Edmentum offers an integration with these partners that allows educators to leverage results to drive learning path creation. Scores from either assessment can be used in place of the Exact Path adaptive diagnostic assessment in order to avoid additional testing.

3. **Generate a learning path based on teacher knowledge of students**
   When integrated diagnostic results are not available and a district does not want to do additional diagnostic testing, educators can assign students a learning path based on their knowledge of student learning needs.

Exact Path

Implementation Support

To begin implementation of Exact Path, Edmentum Professional Services, an expert team of education consultants, guides district educators through the onboarding process. This team is experienced in working remotely to customize the program to fit district needs using detailed virtual teacher trainings. The onboarding process includes the following:

Creation of Rosters

Depending on the district preferences, a variety of possible methods can be used to seamlessly roster teachers, students, and classes. This process is typically completed within 48 hours of a technical set-up meeting with the Professional Services team.

Determination of District Objectives and Implementation Plan

In order to ensure that program implementation supports both educators and students, Edmentum's Professional Services team works directly with district educators to first determine specific goals and objectives for student outcomes that align to the district's strategic plan. Under the guidance and consultation of the Professional Services team, educators build capacity to scale and sustain the program implementation over time. The Professional Services team also provides guidance for district communication to student and families to successfully login and begin the program.

Implementation Training

Designed to rapidly help scale the implementation, Professional Learning Sessions allow educators to immediately take advantage of resources available, such as on-demand professional learning webinars focused on program support and online instruction. In addition, synchronous, instructor-led online professional learning is available. This collaborative and interactive learning environment allows participants to see tasks demonstrated in real time and offer opportunities to ask questions specific to their own instructional planning practices.

edmentum™

References

Alexander, K. L., Entwisle, D. R., & Olson, L. S. (2007). Lasting consequences of the summer learning gap. American Sociological Review, 72(2), 167–180. https://doi.org/10.1177/000312240707200202

Cooper, H., Nye, B., Charlton, K., Lindsay, J., & Greathouse, S. (1996). The Effects of Summer Vacation on Achievement Test Scores: A Narrative and Meta-Analytic Review. Review of Educational Research, 66(3), 227–268. https://doi.org/10.3102/00346543066003227

Edmentum Research and Design. (2019). Technical Report: Exact Path Screener Diagnostic Computer Adaptive Test. Bloomington, MN.

Goldstein, D., Popsescu, A., & Hannah-Jones, N. (2020, April 6). As School Moves Online, Many Students Stay Logged Out - The New York Times. New York Times. Retrieved from https://www.nytimes.com/2020/04/06/us/coronavirus-schools-attendance-absent.html

Kim, J. S., Burkhauser, M. A., Quinn, D. M., Guryan, J., Kingston, H. C., & Aleman, K. (2017). Effectiveness of structured teacher adaptations to an evidence-based summer literacy program. Reading Research Quarterly, 52(4), 443–467. Retrieved from http://psycnet.apa.org/index.cfm?fa=buy.optionToBuy&id=2016-59626-001

Kuhfeld, M., & Tarasawa, B. (2020). *The COVID-19 slide: What summer learning loss can tell us about the potential impact of school closures on student academic achievement*. Retrieved from https://www.nwea.org/content/uploads/2020/04/KAP5122-Collaborative-Brief_Covid19-Slide-APR20_FW.pdf

Map: Coronavirus and School Closures. (2020, March 6). Education Week. Retrieved April 15, 2020, from https://www.edweek.org/ew/section/multimedia/map-coronavirus-and-school-closures.html

Mccombs, J. S., Augustine, C. H., Unlu, F., Ziol-Guest, K. M., Naftel, S., Gomez, C. J., … Todd, I. (2019). Investing in Successful Summer Programs: A Review of Evidence Under the Every Student Succeeds Act. Retrieved from www.rand.org/giving/contribute

Quinn, D. M., & Polikoff, M. (2017). *Summer Learning Loss: What is It and What Can We Do About It?* Retrieved from https://www.brookings.edu/research/summer-learning-loss-what-is-it-and-what-can-we-do-about-it/

Randel, B. (2018a). Impacts of Edmentum's Exact Path on Student Mathematics Achievement. Retrieved from https://www.edmentum.com/sites/edmentum.com/files/resource/media/Exact Path Math Impact Tech Report December 2018.pdf

Randel, B. (2018b). Impacts of Edmentum's Exact Path on Student Reading Achievement. Retrieved from https://www.edmentum.com/sites/edmentum.com/files/resource/media/Exact Path Reading Impact Tech Report December 2018.pdf

Randel, B. (2019). Impacts of Edmentum's Exact Path on Student Language Arts Achievement. Retrieved from https://www.edmentum.com/sites/edmentum.com/files/resource/media/Exact Path Language Arts Impact Tech Report January 2019_0.pdf

Thum, Y. M., & Hauser, C. H. (2015). NWEA 2015 MAP Norms for Student and School Achievement Status and Growth. Portland, OR. Retrieved from https://solutions.nwea.org/research/2015-map-norms-for-student-and-school-achievement-status-and-growth

edmentum™