



VIRTUAL STUDENT ENGAGEMENT TOOLKIT

INTRODUCTION

Brick-and-mortar schools abruptly closed in spring 2020 due to COVID-19, resulting in a disruption to in-person instruction for more than 1.2 billion students. The ongoing pandemic and extended school closures forced teachers, many with no prior experience teaching online, to transition from face-to-face instruction to alternative virtual formats throughout the spring and into the fall. The impact of long-term closures also extend beyond the classroom, forcing schools to consider how to best support their communities and families. Therefore, districts seek to equip their teachers and staff with research-based tools and resources to provide the best possible educational experience to all students.

To support virtual and hybrid re-opening efforts, Hanover Research created this **Virtual Student Engagement Toolkit** to assist classroom teachers as they prepare for the continuation of virtual learning for the 2020-2021 school year. It provides teachers with tools and methods to support the three types of learner engagement (e.g., behavioral, cognitive, and affective) and various pedagogical approaches based on students' age and grade levels. It also offers actionable guidance and practical resources for teachers in elementary, middle, and high school with varying degrees of experience and comfortability teaching in a virtual environment. Lastly, it outlines strategies and techniques for meeting social-emotional needs and teaching relationship-building skills virtually.

THIS TOOLKIT:

- ✓ Describes promising practices for maximizing student engagement in virtual learning environments
- ✓ Identifies specific strategies to support behavioral, cognitive, and affective engagement
- ✓ Reviews effective pedagogies and instructional practices that are essential for maintaining relationships in a virtual learning format for elementary and secondary students

BEST PRACTICES FOR STUDENT ENGAGEMENT

Student engagement represents the sum total of their investment in learning, commitment to academic success, ongoing curiosity, expressive creativity, and development of positive relationships with others. Engagement also encompasses students' sense of awareness and belonging in their school and classroom community.

THE ABCS OF STUDENT ENGAGEMENT

To address students' overall engagement in virtual learning, teachers and other instructional staff should consider how to support the three interconnected dimensions of engagement:



COGNITIVE ENGAGEMENT

This dimension encompasses students' levels of investment in learning tasks. Specifically, it represents students' mental interest in and ownership over learning tasks. It also represents their self-efficacy and sufficiency when applying strategies to support their own learning. In a virtual setting, students display cognitive engagement by making thoughtful posts on discussion forums, using all available features of digital applications to complete projects, and harnessing the full capabilities of web-based research to solve problems and find answers.



BEHAVIORAL ENGAGEMENT




During virtual learning, this dimension is observed through students' participation rates during learning activities, time spent on tasks, and the volume and length of social interactions they have with peers and teachers. A student who posts frequently on discussion forums or who routinely attends a teacher's virtual office hours can be said to be behaviorally engaged in virtual learning.



AFFECTIVE ENGAGEMENT

In a virtual learning format, this dimension encompasses students' feelings and perceptions of learning, particularly how they relate to elements of the virtual environment. Additionally, this dimension identifies students' positive and negative reactions to the prominent elements of the learning environment, such as teachers, peer behaviors, and the demands of instruction.

HOW TO ADDRESS EACH STUDENT ENGAGEMENT DIMENSION

DIMENSION	ACTION STEPS
 <p>COGNITIVE ENGAGEMENT</p>	<ul style="list-style-type: none"> • Design and implement tasks using a variety of online pedagogies to help students access content and display their understanding • Consider students' curiosity and intellectual interest in course content and academic activities • Create discussion boards with prompts for students to share their thoughts and reflections
 <p>BEHAVIORAL ENGAGEMENT</p>	<ul style="list-style-type: none"> • Identify students' behavioral patterns, social interactions, and general participation during virtual opportunities • Track completeness of activities such as fully watching assigned videos or answering all questions before advancing to the next module • Model and communicate expected learning behaviors before and during assigned tasks
 <p>AFFECTIVE ENGAGEMENT</p>	<ul style="list-style-type: none"> • Reflect on students' emotional reactions and positive or negative associations with virtual learning • Consider the user-friendliness of learning management systems, the availability of live contact with teachers and peers, and the selected means of appealing activities (e.g., videos, blogging) • Reduce student frustration by setting clear expectations and selecting applications that are age-appropriate and easy to use



IDENTIFYING CORE DOMAINS OF ENGAGEMENT

Varying factors impact engagement, and these can begin at school, at home, or from students' innate personalities. The following table presents three domains that affect student engagement and provides insight into how both teachers and students can address disengagement.

DOMAIN	PROCESS	ACTION
Teacher	Adjust to a modified instructional role	<ul style="list-style-type: none"> Complete administrative tasks such as digital communication with families and frequently check email Be willing to provide technical support to students and families
	Use technology in relevant ways	<ul style="list-style-type: none"> Experiment and investigate features of available applications Seek guidance from school support teams in this area
	Account for diverse student needs	<ul style="list-style-type: none"> Consider learning objectives and the supports required to reach them Know how students learn and how technology supports their learning
Content	Present and access in multiple ways	<ul style="list-style-type: none"> Diversify the options for how students practice skills and gain exposure Provide multiple presentations and access points
	Plan active and rigorous learning tasks	<ul style="list-style-type: none"> Allow time for students to explore concepts with peers and independently Ensure tasks challenge students appropriately
	Link goals to objectives	<ul style="list-style-type: none"> Link direct instruction, student practice, and assessments to objectives Organize content in a logical sequence that scaffolds learning
Students	Access and navigate technologies	<ul style="list-style-type: none"> Identify available technologies before beginning instruction Seek tutorials and clear directions when using unfamiliar applications
	Participate alongside peers and teachers	<ul style="list-style-type: none"> Communicate in real-time with a community of learners Seek opportunities to forge relationships with peers on scheduled basis
	Appreciate the value of tasks	<ul style="list-style-type: none"> Understand why completing tasks results in knowledge of relevant skills Understand the expectations for attentiveness and full completion

Source: WBT Systems

ASSESSING PROFICIENCY IN IMPLEMENTING VIRTUAL LEARNING STRATEGIES

It is important for teachers to self-assess their competence and readiness to plan and monitor the delivery of instructional modules that foster student engagement in virtual settings. Depending on digital literacy and technical knowledge, technology adoption can be a source of frustration for many teachers. Therefore, teachers should explore the wide range of technology applications that are available and take advantage of available trainings and tutorials to address any gaps. In a virtual learning environment, teachers must be prepared to effectively use technology in their virtual classrooms to facilitate student-centered learning opportunities while sustaining student engagement.



CASE STUDY: ALPINE SCHOOL DISTRICT (UT)

Number of Schools: 91

Total Enrollment: 81,715

Free and Reduced-Price Eligible Students: 16.3%

English Learners: 3.9%

Students with Disabilities: 11%

Non-White Students: 6.8%

In response to COVID-19 in spring 2020, Alpine School District (Alpine) shifted all academics to virtual platforms. The district focused on its most time-sensitive needs to ensure learning continuity. Alpine's fall 2020 reopening proposal included the continuation of virtual learning in some capacity, and the district wanted enhance its virtual learning to maximize student engagement and provide more support to its students.

Alpine partnered with Hanover Research to gather best practices in virtual student engagement through secondary literature. Specifically, this research identified strategies for staff to facilitate behavioral, cognitive, and affective learner engagement in a virtual environment and support Alpine teachers foster student engagement in their virtual classrooms. Alpine's Virtual Student Engagement Toolkit was used by three groups in the district: instructional coaches who are writing online curriculum, full-time online teachers, and principals who share implications with classroom teachers and are supporting a small number of students learning remotely this year.

Source: National Center for Education Statistics

The **Checklist to Support Student Engagement** presented on the next page can be used by teachers to self-assess their current level of proficiency in implementing virtual learning strategies that promote student engagement. Areas that are rated ineffective should be identified, and teachers should seek assistance from colleagues and administrators to address those gaps.

CHECKLIST TO SUPPORT STUDENT ENGAGEMENT IN VIRTUAL LEARNING

Directions: Rate each item according to the scale option that best describes your current skills and knowledge.

STRATEGY	HIGHLY INEFFECTIVE	INEFFECTIVE	NEITHER INEFFECTIVE NOR EFFECTIVE	EFFECTIVE	HIGHLY EFFECTIVE
Establishing routines and procedures for students to access content and complete assignments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Encouraging students to take risks in completing tasks and to experiment with the functionality of digital applications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scheduling regular opportunities for students to reflect on their learning and skills development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using multiple means of content presentation and task completion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Differentiating support to address students' individual needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Creating alternative tasks for students requiring modifications due to a specialized learning plan or technology access issues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Providing clear directions for synchronous and asynchronous learning tasks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Selecting relevant digital applications and materials that support objective attainment in the target content area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Giving students multiple opportunities to collaborate and communicate with their peers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Giving students multiple opportunities to receive feedback from and ask questions of myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Varying the ways in which students can practice using new skills or applying new knowledge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scaffolding students from lower to higher levels of cognition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Source: Adapted from Great Schools Partnership

MONITORING AND ASSESSING STUDENT ENGAGEMENT

Meaningful learning happens when students are genuinely engaged in virtual instruction throughout each task and content area. Engagement increases as students think, ask questions, investigate problems, develop solutions, and take ownership of the virtual learning process. Teachers should utilize tools and processes for monitoring these actions and measuring students' levels of engagement, which will allow them to evaluate strengths and address gaps and areas for improvement.

REFLECTIVE QUESTIONS TO MONITOR AND ASSESS ENGAGEMENT IN VIRTUAL INSTRUCTION

- **Do students have multiple opportunities to share their thoughts through oral, visual, and written communication?**
- **Do students fully participate when prompted without constant reminders to remain on task?**
- **Can students demonstrate relevancy in the content objectives and independently restate the relevancy of lessons?**
- **Can students accurately answer higher-order-thinking questions (with and without scaffolding)?**
- **Do students utilize given opportunities to solve problems collaboratively with their peers?**
- **Do students feel safe and encouraged to share unpopular opinions and take risks?**
- **Do students respond favorably to assignments that have been differentiated based on their learning modalities and individual needs?**
- **Do students follow established routines and procedures?**

Source: Adapted from Classcraft

SUPPLEMENTAL RESOURCES

The tables below provide links to additional resources that teachers can reference to support the planning and delivery of engaging virtual instruction. The first table includes hub pages for digital and open educational resources that teachers can use to support teaching and learning in an online environment, while the second table offers supplemental materials that delve further into best practices for virtual instruction.

OPEN EDUCATIONAL RESOURCE REFERENCE PAGES

RESOURCE	PUBLISHER
<u>"Updated: 339 Free K-12 Resources During Coronavirus Pandemic"</u>	District Administration
<u>"Free Online Resources for Schools Shifting Online During Coronavirus"</u>	National School Choice Week
<u>"350+ Amazing Online Learning Resources"</u>	We Are Teachers
<u>"COVID-19 Remote Learning Resources"</u>	Indiana Department of Education
<u>"Online Resources for Teachers"</u>	Kentucky Department of Education
<u>"Online Teaching Tools and Resources"</u>	Center for Language Study, Yale University

ADDITIONAL GUIDANCE ON PLANNING AND DELIVERING ONLINE INSTRUCTION

RESOURCE	PUBLISHER	DESCRIPTION
<u>"A National Primer on K-12 Online Learning"</u>	International Association for K-12 Online Learning	This resource addresses the basics of teaching and learning online and covers topics such as the role of the teacher, socialization between students and teachers, and student assessment.
<u>"Best Practices in Teaching K-12 Online: Lessons Learned from Michigan Virtual School Teachers"</u>	Journal of Interactive Online Learning	This study highlights best practices used by virtual school teachers to support students.
<u>"Guide to Teaching Online Courses"</u>	National Education Association	This guide discusses administrative considerations for developing a high-quality online learning system and describes skills and strategies to help individual teachers achieve success in online teaching formats.

ADDITIONAL RESOURCES

INTRODUCTION

Li, C. and F. Lalani. "The COVID-19 pandemic has changed education forever. This is how." World Economic Forum, April 29, 2020. <https://www.weforum.org/agenda/2020/04/coronavirus-education-global-covid19-online-digital-learning/>

Easley, K. "I've Been Teaching Online for Years. Here's How to Prevent Burnout During a School Closure." Education Week, March 17, 2020. <https://mobile.edweek.org/c.jsp?cid=25919951&bcid=&rssid=25919141&item=http%3a%2f%2fapi.edweek.org%2fv1%2few%2f%3fuuid%3d6E2B9C5E-6862-11EA-B628-8AF258D98AAA>

"Moving to Online Teaching: Issues and Resources for Educators." Online Learning Consortium, April 28, 2014. https://onlinelearningconsortium.org/news_item/moving-to-online-teaching-issues-and-resources-for-educators/

BEST PRACTICES FOR STUDENT ENGAGEMENT

Nuland, L. "The ABCs of Student Engagement." Phi Delta Kappan, May 1, 2014. <https://kappanonline.org/abcs-student-engagement-parsons-nuland/>

Checklist to Support Student Engagement in Virtual Learning adapted from: "Elements of Effective Instruction: Self-Assessment Tool." Great Schools Partnership, 2018. pp. 4–8. https://www.greatschoolspartnership.org/wp-content/uploads/2018/10/Elements-of-Effective-Instruction_Self-Assessment.pdf

Nicholas, N. "The Ultimate Student Engagement Observation Checklist." Classcraft, January 17, 2019. <https://www.classcraft.com/blog/features/student-engagement-observation-checklist/>

Boykin, A.W. and P. Noguera. "Creating the Opportunity to Learn, Chapter 3. Engagement." ASCD, September 2011. <http://www.ascd.org/publications/books/107016/chapters/Engagement.aspx>

Bulleted text adapted from: "What Does It Mean for Students to Be Engaged?" Corwin. pp. 22-25. https://www.corwin.com/sites/default/files/upm-binaries/50258_Davis__An_Interpersonal_Approach_to_Classroom_Management_CH1.pdf

Martin, J. and A. Torres. "I. What Is Student Engagement and Why Is It Important?" National Association of Independent Schools. p. 2. <https://www.nais.org/Articles/Documents/Member/2016%20HSSSE%20Chapter-1.pdf>

Parsi, A. "Student Engagement's Three Variables: Emotion, Behavior, Cognition." Getting Smart, March 21, 2015. <https://www.gettingsmart.com/2015/03/student-engagements-three-variables-emotion-behavior-cognition/>

"What Does It Mean for Students to Be Engaged?" Corwin. pp. 22-24 https://www.corwin.com/sites/default/files/upm-binaries/50258_Davis__An_Interpersonal_Approach_to_Classroom_Management_CH1.pdf

"Student Engagement." Glossary of Education Reform | Great Schools Partnership, February 18, 2016. <https://www.edglossary.org/student-engagement/>

Voight, A., G. Austin, and T. Hanson. "A Climate for Academic Success: How School Climate Distinguishes Schools That Are Beating the Achievement Odds." American Institutes for Research and WestEd, 2013. https://www.wested.org/online_pubs/hd-13-10.pdf

"Faculty Self-Assessment: Preparing for Online Teaching." Hybrid Initiative, City University of New York. <https://hybrid.commonsc.gc.cuny.edu/teaching/getting-started/faculty-self-assessment-preparing-for-online-teaching/>

Ralhan, B. "5 Ways to Engage Students in Online Teaching." Entrepreneur, June 18, 2020. <https://www.entrepreneur.com/article/352051>

Checklist to Support Student Engagement in Virtual Learning adapted from: "Elements of Effective Instruction: Self-Assessment Tool." Great Schools Partnership, 2018. pp. 4–8. https://www.greatschoolspartnership.org/wp-content/uploads/2018/10/Elements-of-Effective-Instruction_Self-Assessment.pdf

ABOUT HANOVER RESEARCH

Hanover Research provides high-quality, custom research and analytics through a cost effective model that helps clients make informed decisions, identify and seize opportunities, and heighten their effectiveness.

HANOVER'S K-12 EDUCATION SOLUTIONS

Hanover guides K-12 leaders in tackling academic and administrative challenges to ensure that students, parents, and staff have the tools they need to ensure all students succeed. Our comprehensive solutions use a multi-methodological approach including data analytics, survey research, benchmarking, best practice identification, and in-depth interviews and focus groups to help K-12 leaders in every department manage their toughest challenges.

OUR SOLUTIONS

- District Operations**
 Understand where your district operations need to improve to keep up with the changing environment
- Strategic Planning**
 Achieve organizational alignment, connect stakeholders to a purpose, and address areas for improvement
- Program Evaluation**
 Develop evaluation frameworks and conduct comprehensive evaluations that are tailored to your district's unique context.
- School Climate**
 Assess every area of your school climate—from schools and buildings to stakeholder inclusiveness
- Student Success**
 Insights to identify at-risk students—and the support they need most
- Teacher Engagement**
 Facilitate your staff's growth by offering the professional development they want—and need most
- Grants**
 Insights to identify, craft, and submit the most competitive proposals

OUR BENEFITS



EXPERT

200+ analysts with multiple methodology research expertise



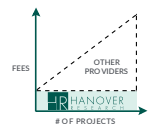
FLEXIBLE

Ongoing custom research agenda adapts with organizations' needs



DEDICATED

Exclusive account and research teams ensure strategic partnership



EFFICIENT

Annual, fixed-fee model shares costs and benefits



LEVELING THE
INFORMATION PLAYING FIELD

CONTACT

www.hanoverresearch.com

P 202.559.0050

E info@hanoverresearch.com

**Headquarters**

4401 Wilson
Boulevard
9th Floor
Arlington, VA 22203

Charlottesville

609 E Market Street,
Suite 302
Charlottesville, VA 22902

New York City

42 Greene Street
4th Floor
New York, NY 10013