

The Engagement Guidebook

Based on Lessons Learned through the Increasing Diverse Learner Engagement & Achievement (IDLEA) Project

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 - o Four focus groups
 - o 7 staff interviews
 - o Across three schools
- More than 3,000 students who took part of in the IDLEA project between Spring 2021 and Spring 2022.

Background on IDLEA Guidebook

Background on RISE IDLEA Funding

In March 2020, Coronavirus disease 2019 (COVID-19) forced schools and school districts across the world to close their doors to slow the spread of the extremely contagious virus, immediately placing teachers, students, and caretakers into new and uncertain roles. Teachers were required to entirely shift to teaching online with limited direction and resources, while students and caretakers found themselves in a similar scramble to find new ways to continue in their educational endeavors as best as possible.

While the world continued to change in response to COVID-19, the need for students to be engaged and motivated in their academic pursuits as well as socially connected to classmates and teachers remained critical. Recognizing this need, states across the country mobilized additional funding opportunities. In October 2020, the State of Colorado issued a funding opportunity for a Response, Innovation, and Student Equity (RISE) Education Fund which sought applications that address the learning challenges related to the economic, social, and health impacts of COVID-19. Specifically, the funding was to support high-needs school districts, charter schools, and public institutions of higher education to address impacts of COVID-19 in a manner that creates lasting, sustainable innovations that improve student learning, close equity gaps, and enhance operational efficiency for PK-12 through higher education.

In response to the funding opportunity, the Colorado League of Charter Schools, in partnership with external research and evaluation partners, formed a cohort of 12 schools to particularly focus on increasing student engagement for diverse learner populations, defined as students who fall into at least one of four categories: students with disabilities, English Language Learners (ELL), gifted and talented students, and students who qualify for free or reduced-price lunch (FRPL). The FRPL category is widely viewed as a proxy indicator for both poverty and trauma.

Titled “Increasing Diverse Learner Engagement and Achievement” (IDLEA), the project utilized innovative and practical approaches to help to make sense of the challenges of engagement and better serve diverse learners in cohort schools across Colorado. The project was a response to both the immediate effects on engagement because of the COVID-19 pandemic, but it recognized concerns for student engagement cannot be entirely blamed on the immediate switch to remote delivery model of schooling. IDLEA acknowledges engagement is about more than attendance, time on task, or having your camera on in a Zoom session. A narrow focus on remote learning as the culprit of student disengagement ignores the larger conditions that contribute to successful engagement, especially for diverse learners.

IDLEA Guidebook Research Basis

The idea for the IDLEA Guidebook originated from IDLEA Project Leadership’s interest in sustaining current engagement efforts as well as disseminating project learnings across Colorado. While IDLEA cohort schools (13) indicated their interest through their participation, it became evident other schools might also want to explore

how to focus on student engagement as a school-wide effort but would need to do so **without the funding connected to IDLEA**. Thus, this guidebook offers lessons learned from the funded IDLEA project and incorporates additional focus groups, interviews, and classroom observations after the 2021-2022 school year. While additional funding for professional development or instructional materials is often supportive of school-wide engagement efforts, this guidebook does not suggest is a pre-requisite.

What is student engagement?

The IDLEA project broadly defined the term “engagement” as a student’s active investment in a task or learning environment, and this guidebook assumes the same definition. This guidebook is founded on current research¹ and an effort to further understand and contextualize engagement through three engagement domains—behavioral, cognitive, and emotional. Using three engagement domains allows schools to better identify and address the root causes of specific engagement challenges schools are facing. Considering student engagement as multi-dimensional aligns with current research, which has attracted increased attention in response to the COVID-19 pandemic.

Behavioral engagement refers to observable qualities of how students look and actively participate in their learning environment, to even include participation in school-related activities such as athletics or afterschool clubs. Often times, behavioral engagement looks like “following the rules” or adhering to classroom norms such as raising one’s hand, sitting quietly, and making eye contact with the teacher. When students follow these classroom norms, educators often assume students are “on-task” and are demonstrating effort and concentration related to their learning tasks.

Of the two other domains, cognitive engagement most directly focuses on the learning task or a student’s actual intellectual commitment to comprehension of materials or concepts presented to them. Cognitive engagement is most often referred to as investment in learning, where students might demonstrate an eagerness to learn new materials or willingness to do challenging classwork. Students who are cognitively engagement are likely to persist despite failure, and continue to invest their effort toward mastery of skills or knowledge, creating connections among ideas as well. In schools, students who are cognitively engagement are often referred to as “highly motivated” or “hard workers” that demonstrate the mental effort required to academically succeed.

While attention toward emotional engagement was growing prior to the COVID-19 pandemic, the effects of isolation and societal upheaval have pushed schools to center how students emotionally attend to their learning environments.^{2,3} Emotional engagement is distinct in its emphasis on how students feel and are valued in classroom and school settings. This includes how students emotionally react to teachers and being in a

¹ Fredericks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of the Research*. 74(1), 59-109.

² Jackson, C. K., Porter, S. C., Easton, J. Q., Blanchard, A., & Kiguel, S. (2020). School effects on socio-emotional development, school-based arrests, and educational attainment. National Bureau of Economic Research, Working Paper No. 26759. Retrieved: https://www.nber.org/system/files/working_papers/w26759/w26759.pdf

³ Aucejo, E. M., French, J. F., Ugalde Araya, M. P., Zafar, B. (2020). The impact of Covid-19 on student experiences and expectations: Evidence from a survey. National Bureau of Economic Research, Working Paper 27392. Retrieved: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7451187/>

classroom or in school overall. Often, emotional engagement indicates the degree to which students feel they belong in their classroom or school environment. This includes their connection with peers and adults alike as well as their reaction to assignments, activities, and other areas of their academic lives. Students who report feeling respected and valued in their learning spaces are considered to be emotionally engaged.

As described previously, examining engagement through behavioral, cognitive, and emotional domains helps to further understand and encapsulate the qualities related to engagement. However, it is critical to understand engagement beyond single components. In reality, student engagement is the result of a dynamic interplay across all three domains. It is impossible to separate a student's behavior, emotion, and cognition, and this consideration is integral to the overall integrity and utilization of the IDLEA Guidebook.

Why is student engagement important?

Decades of research demonstrate that higher engagement leads to higher achievement, holding true across all subject areas and grade levels^{4,5,6}. Researchers broadly agree student engagement is key to student's overall student success and predictive of short-term learning and achievement and longer term patterns of attendance, retention, graduation, and academic resilience. Ultimately, "students who are engaged in school are both more successful academically and more likely to avoid the pitfalls of adolescence," referring to engagement as a protective factor against risky behaviors such as substance abuse, delinquency, and even risky sexual behavior.⁷

Engagement is undoubtedly critical for all students at every point of their academic and professional journey. Today, the continued impact of COVID-19 presents new and devastating hurdles to student engagement for students across the world, and yet, research had documented a steady decline in students' engagement with schooling well before the pandemic. This decline includes a loss in "interest, enthusiasm, and intrinsic motivation for learning in school, beginning in kindergarten and continuing until they complete high school (or drop out)."⁸

For students in ethnic and racial minority and low socioeconomic status groups, this decline is even more dramatic, and as technology demands for teachers and students has created barriers to student engagement, the pandemic has exacerbated well-documented opportunity gaps between low-income students and their economically better-off peers.^{9,10} In 2020, a survey from Arizona State University found lower-income students were 55% more likely to have

⁴ Lahaderne, H. M. (1968). Attitudinal and intellectual correlates of attention: A study of four sixth-grade classrooms. *Journal of Educational Psychology*, 59(5), 320-324.

⁵ Cobb, J. A. (1972). Relationship of discrete classroom behaviors to fourth-grade academic achievement. *Journal of Educational Psychology*, 63(1), 74-80.

⁶ Skinner, E. A., Zimmer-Gembeck, M. J., Connell, J. P. (1998). Individual differences and the development of perceived control. *Monographs of the society for research in child development*, 254 (63).

⁷ Skinner, E., Furrer, C., Marchand, G., & Kindermann, T. (2008). Engagement and disaffection in the classroom: Part of a larger motivational dynamic? *Journal of Educational Psychology*, 100(4) 765-781.

⁸ Ibid.

⁹ Ibid.

¹⁰ Garcia, E. & Weiss, E. (2020). Covid-19 and student performance, equity, and U.S. education policy. Economic Policy Institute, Washington, D.C.

delayed graduation compared to higher-income peers as a result from the pandemic.¹¹ With a focus on diverse learners, the IDLEA Guidebooks can help schools better define and understand these challenges and support them in creating successful engagement conditions for their students, including diverse learners.

Finally, using this guidebook holds promise to begin supporting students *immediately* as well as setting a profound trajectory for their *future* experiences in schools. Research indicates children’s initial behavioral engagement actually influences their relationship with their teacher (Ladd, 1999), and even more extensive literature suggests teachers also prefer students who present as competent, responsible and “conform to school rules over students who are disruptive...” (Kedar-Voivodas, 1983). Because of this phenomenon, it is likely that teachers might offer different opportunities to students they deem to be behaviorally engaged as opposed to those they determine to be disengaged.

Phase I – Laying the Foundation

Shared Definition, Targets, and Goals

When beginning a targeted engagement effort, it might be alluring to consider *what* schools want implement before spending time to share a common understanding, or a mental model, about engagement. All strategies for engagement really hinge on a school’s understanding and definition of engagement as well as the accompanying targets, goals, and beneficiaries of engagement strategies. The IDLEA Project offered a simple definition on engagement, but schools are strongly encouraged to further this definition on their own. One starting place includes the Mental Model Survey, an instrument developed as part of the IDLEA Project.

Mental Model Survey (MMS)

Research indicates a focus on student engagement is at the heart of a successful school culture and indicative of effective teaching approaches. While schools that focus on student engagement and commit to measuring student engagement are not necessarily novel in this approach, the IDLEA Project goes further to explore how schools might actually ***distinguish between a student’s willingness to comply with school routines versus an actual investment in mastering and comprehending academic content and skills.***

The IDLEA Project made this distinction through a Mental Model Survey (MMS), with adaptations for adults and students based on unique needs. Mental models are a universal term that describes how we bound an idea or perceive the world around us. Mental models are an approximation of reality. Drs. Derek and Laura Cabrera, experts in systems theory and systems thinking with Cornell University, further describe the role of mental model as well caution how we evaluate mental models in the context of organizations. Our mental models can never fully capture the complexities of the world, and given our mental models are informed by our unique

¹¹ Aucejo, E. M., French, J. F., Ugalde Araya, M. P., Zafar, B. (2020). The impact of Covid-19 on student experiences and expectations: Evidence from a survey. National Bureau of Economic Research, Working Paper 27392. Retrieved: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7451187/>

experiences based on the environment in which we work, we often do not share mental models, individually or across organizations.¹²

With over a decade of experiences in schools and large school districts across the country, Apex often witnessed the implications when students, teachers, and administrators do not share mental models related to a multitude of educational initiatives. This includes divergent mental models regarding student engagement, including what it is, how it looks, and how to influence students' levels of engagement.

In partnership with schools and IDLEA Project Leadership, Apex proposed the following questions and encourages schools to begin with the following questions when seeking to implement school-wide engagement efforts:

- If engagement is an inner quality only students employ, how can adults in schools better understand students' reality?
 - Do students, teachers, and administrators share mental models on observable indicators of engagement? Meaning, do students demonstrate (show) their engagement in a manner that teachers perceive such demonstrations as engagement?
 - If engagement can only be understood in reference to specific activities and social contexts, how can students and adults share a mental model regarding these activities and contexts?
- What are the consequences to the IDLEA Project if adults and students do not share mental models on student engagement and how it is assessed for the project?
 - Are administrative and teacher decisions based on correct assumptions of student learning and engagement?

The MMS was developed based on potential answers (or in some cases, more question) derived from the questions above. The questions also further illuminate the need for schools overall to share a mental model about student engagement as well as the engagement effort's intent. It is critical to also recognize school staff, including teachers, administrators and other staff members such as intervention specialists and counselors, are the "unit of change." For engagement efforts to maintain their integrity, schools must be willing to provide direct supports to school staff in order to broaden their skills and understanding of student engagement so that students are able to deepen their own engagement in their learning environments. This is the heart of the design for the MMS—to provide critical feedback to school staff in their continued understanding of their own students, reveal how their students invest in their learning (or want to), and expose opportunities for school staff to further their own learning on how to support diverse learners specifically.

The guidebook strongly recommends utilizing the MMS as a means to both gauge initial buy-in and set the foundation for future decisions surrounding student engagement. Schools that authentically implement school-wide engagement efforts **recognize learning is a joint proposition, in which school staff must provide students with the conditions and opportunities for engagement, and students must see themselves as the agents of engagement, putting forth the necessary effort and investment in their learning.** The MMS for adults and students can be found in Appendix X.

¹² Cabrera, D. & Cabrera, L. (2015). Systems thinking made simple: New hope for solving wicked problems. Plectica Publishing.

Finally, schools might review this guidebook, and through conversation, land on the very likely assumption that engagement is not an “issue” in your school. It is a critical reminder that students who find it “easy” to engage are likely to share the values and approaches to learning that their teachers employ. This ease likely has more to do with their choice to fulfill behavioral expectations as opposed to their depth of understanding and mastery of content. The extent of students’ overall engagement as well as their intensity is always worth exploring beyond observable indications of high behavioral engagement.

Phase I Discussion Questions:

- How do I define student engagement? Alternatively, how do I define student disengagement?
 - o What do I look for? What is present in my classroom when I consider my students are engaged? What is absent?
- What are my contributions to the learning environment?
 - o How do I personally support student engagement?
- What is my personal level of engagement at my school?
- What would be a positive, recognizable outcome of increasing student engagement in my classroom? In my school?
- What is my willingness to reflect on my practices as a teacher, staff member, or administrator?
 - o What do I anticipate doing with information or feedback that is not affirming of my teaching/leading?
 - o Am I willing to consider my classroom/school is not inviting or potentially alienating to certain students?
- My students appear to be behaving, but how do I know more about their quality of effort and depth of thinking?
- My student seems to not be engaged in my classroom. Can I find other areas in the school where they are engaged?
 - o What might influence this engagement?
- We have decided to move forward with student engagement as a school-wide effort. What resources do we have (personnel, time, financial) to support this work with fidelity?

Phase I Resources:

Table I: Examples of positive and negative engagement

	Positive engagement	Non-engagement	Negative engagement
Behavioural	Attends lectures, participates with enthusiasm	Skips lectures without excuse	Boycotts, pickets or disrupts lectures
Emotional	Interest	Boredom	Rejection
Cognitive	Meets or exceeds assignment requirements	Assignments late, rushed or absent	Redefines parameters for assignments

Table I used to enrich conversation on how to share a mental model on student engagement.

Phase II – Student Engagement Baseline and SEA Deployment

While the importance of student engagement is well researched and even agreed upon, how best to measure or assess student engagement is less widely accepted. Engagement is defined by a student’s active investment in a task or learning environment, yet this investment or mental effort is not readily observable. Engagement is an inner quality that students employ.

So, how can, or rather, **should** your school measure or assess student engagement that maintains the integrity of what engagement truly entails? This question was held at the center of Apex’s efforts in the development of the Student Engagement Assessments (SEA), though the question is not necessarily novel. Many small to very large, corporate companies and organizations have developed and offer a large suite of assessments that intended to contextualize student engagement and overall experiences in the learning environment.

Given the much smaller scale of the IDLEA Project, Apex studied the assessment landscape and overall scientific literature on student engagement measures.^{13,14,15} Assessments that explored engagement by domain—behavioral, cognitive, and emotional—were not readily available or discovered as part of Apex’s early research. Thus, it was imperative to understand general engagement questions that also tied specifically to each engagement domain. As suggested in the research, the Student Engagement Assessment combined general

¹³ Fredericks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of the Research*. 74(1), 59-109.

¹⁴ Fred M. Newmann, Introduction to *Student Engagement and Achievement in American Secondary Schools*, ed. by F. M. Newmann (Teachers College Press, 1992)

¹⁵ “Engagement and Disaffection in the Classroom,” *Journal of Educational Psychology* 100 (2008): 765-81.

scales to produce an overall engagement score, yet the assessment produced a domain-specific engagement score that allowed for distinctions among types of engagement.¹⁶

In addition to the literature, Apex consulted with IDLEA project leadership and school-based leadership teams. Early in the planning process, it was stated that student engagement assessments cannot be punitive, for students and their teachers alike. While research on student engagement measures suggests ensuring measures distinguish a target or source of engagement, such as a subject area, specific classrooms, or even specific tasks or situations, doing so could unintentionally target or “call out” individuals. This was a limitation of the IDLEA Project, but does not have to limit future, school-based efforts. This guidebook poses questions and considerations as to how schools can utilize the SEA to better understand or discern between these inner qualities of engage and factors in the learning environment that influence engagement.

In general, the SEA was developed with the following considerations:

- Use of a continuum from less to more engagement as opposed to binary measures such as engaged or not engaged
- Estimated engagement based on indirect indicators across three engagement domains, such as participation in academic work, including attendance, completion of tasks, and time spent on work
- Estimated engagement based on student reported feelings of enthusiasm, interest, belonging, and intensity of concentration
- Wording questions and formatting the survey to be understandable to students and developmentally appropriate for different grade levels
- Ensuring the survey length was minimally burdensome for students and teachers

Student Engagement Assessment questions are detailed in Appendix X.

School Level Factors that Effect Engagement:

Suggestions here based on school feedback about which SEA questions are most important

Structural questions – deployed at classroom level or across school

- Anonymity versus understanding which students are in diverse learner categories
- Resources schools have around data collection and aggregation
- Timing among other testing or major curricular milestones
- Format of SEA
 - o Explorations of quick SCAs weekly/monthly (reduced version)
 - o Implications of no longer having data across engagement domains

School-Level Factors:

- School model or educational philosophies and degree to which schools offer the following:

¹⁶ It must be noted that scores that offer a conceptual distinction from other forms of engagement are not perfect. Distinctions are blurred because similar items are used to assess different types of engagement, meaning several questions on the SEA are used as indicators across one of more engagement domains.

- Choice
- Clear and consistent goals
- Small class sizes
- Student participation in school wide decisions such as school policy and management
- Opportunities for staff and students to be involved in cooperative endeavors
- Academic work that leads to meaningful products or testaments of learning
- Structures that are communal in organization

Phase II Discussion Questions:

- In reviewing the SEA, ask the following:
 - Which questions are most important to me as a teacher/administrator/school staff member? In other words, which questions do I believe will influence my teaching/leading most?
 - What questions are missing?
 - Which questions are more relevant to my school model?
 - Are there questions I should add based on my school model?
 - In what ways might my school model constrain engagement?
 - In what ways does my school model support student engagement?
- Aside from the SEA, what other opportunities am I committed to offering for students to demonstrate their engagement?
- Am I committed to sharing SEA results with my students? With my peers?
 - How will I structure these conversations so that students can offer more detail about their engagement?
- Timing:
 - How often am I as a teacher or school leader able to use the SEA? Are there shorter versions or modifications I can utilize?
- Targets:
 - Based on baseline results, what are reasonable changes in student engagement that I can influence? Do my students see these changes as worthwhile, too?

Phase III – Student Engagement Strategy Selection

Lessons to Consider from IDLEA

Based on Spring 2021 SEA and MMS results, IDLEA Cohort Schools worked closely with Project Leadership to select research-based student engagement strategies with particular success in furthering the engagement of diverse learners. Selected strategies include Cooperative Learning, Increasing the Cognitive Lift, and Universal Design for Learning. Those using this guidebook are certainly encouraged to consider these three interventions as to whether or not they are a good fit for your school.

For each strategy, “strategy-specific” questions were included on the Student Engagement Assessment. Including such questions served as an alternative measure of implementation fidelity. In addition to administrators, teachers, and/or project consultants visiting classrooms to observe how student engagement strategies are being utilized, strategy-specific questions allowed for students to describe the resources and activities in their own learning environment.

This addition embodies the questions posed in the development of the MMS survey and intends to move adults and students alike toward shared mental models. Most educational initiatives measure fidelity of implementation using observation protocols conducted by external consultants or school staff self-reporting. While important data is collected using these methods, the data leaves out a critical perspective—students’. By asking strategy-specific questions on the SEA, students are provided the opportunity to report on the use of certain strategies, resources, and activities that they recognize in their learning environments.

This data is intended to be paired with data from observations or school staff self-reporting and might reveal critical gaps in implementation. For example, if school staff report high fidelity of implementation strategies, but students report not utilizing the resources or responding to particular strategies, how might that inform implementation moving forward? Often times, teachers rely on students’ academic performance to determine the quality of the new strategy, and if data does not reveal any improvement, either the strategy or the teacher’s implementation (or both) are called to question. Without student perspective on implementation, teachers and administrators risk assuming students recognize and participate in the very strategies they are both being assessed on, directly and indirectly. Such questions continue to situate adults in schools as the “unit of change” and exemplify the intent of this guidebook to support school staff in furthering their skills to increase student engagement.

Intervention-specific questions from the IDLEA Project for the SEA are detailed in Appendix X (p. X). IDLEA Project supported interventions are briefly described below.

Selected IDLEA Project Strategies/Interventions

Cooperative Learning is an educational approach that organizes classroom activities into cooperative, interdependent learning experiences for students so that they can benefit from one another’s resources and skills. Cooperative learning experiences collectively further their academic goals. Cooperative Learning intends to increase student engagement by specifically attending to students emotional engagement in the classroom. By increasing opportunities for students to work collaboratively, they can benefit from positive social relationships among peers and might be more open to thinking creatively in the group dynamic. Individual learning, considered at times to be competitive in nature, might actually constrain students’ ability to think open-mindedly as well as take intellectual risks given their fear of being “wrong.” This is particularly relevant for diverse learners who might experience even greater discomfort and hesitate to engage in their learning environments. In a group among peers, diverse learners are more likely to try out new ideas as well as relate new ideas to their experiences.

Cooperative Learning traces its origins to social interdependence theory, and includes significant educational theorists such as John Dewey. David and Roger Johnson are considered the latest researchers to give further definition to cooperative learning theory, and, based on their research, cooperative learning can promote better communication, increase mutual student support, and higher-order social and cognitive skills. Johnson and Johnson also published the five elements that allow successful, small-group learning:

1. Positive interdependence: Students have clearly defined roles and tasks and feel responsible for their own learning as well as the group's
2. Face-to-face interaction: Students explain to one another the nature of their learning as well as assist one another with understanding and completion of tasks
3. Individual and group accountability: Students are responsible for meeting their goal as well as the goal of the group, which includes mastery of content being studied
4. Social skills: Students are directly instructed on interpersonal, social, and collaborative skills needed to work in small groups
5. Group processing: Students reflect on actions that were helpful or harmful to their learning endeavors, analyzing their own and the group's ability to work together

The role of the teacher shifts in their efforts to structure more opportunities for students to work collectively. No longer centrally responsible as the source of information, the teacher acts as a facilitator of student learning, with an equal focus on how to support students social development in order to make small groups more successful. Common activities indicative of cooperative learning include "think, pair, share," jigsaw, and inside-outside learning circles.

Increasing the Cognitive Lift is an approach in which educators offer planned activities and pose questions that lead to higher order thinking. Student activities that are grounded in tenets of Increasing the Cognitive Lift also offer opportunities for students to demonstrate their knowledge through discourse and task completion that require higher depths of knowledge.

Increasing the Cognitive Lift is strongly references and utilizes Bloom's Taxonomy as well as Webb's Depths of Knowledge. Bloom's Taxonomy is a framework created by Benjamin Bloom (1965) that consists of six major categories: Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation. Knowledge is considered the necessary precondition for putting the skills, the categories after knowledge, into practice.

Webb's Depths of Knowledge (1997) offers a framework for identifying levels of cognitive complexity of information students are expected to know as well as how they should be able to transfer this knowledge to different contexts. Four content areas describe how depth of knowledge can be addressed:

1. Recall and reproduce data, definitions, details, facts, information, and procedures (knowledge acquisition)
2. Use academic concepts and cognitive skills to answer questions, address problems, accomplish tasks, and analyze texts and topics (knowledge application)
3. Think strategically and reasonably about how and why concepts, ideas, operations, and procedures can be used to attain and explain answers, conclusions, decisions, outcomes, reasons, and results (knowledge analysis)

4. Think extensively about what else can be done, how else learning can be used, and how could the student personally use what they have learned in different academic and real-world contexts (knowledge augmentation)

Where Bloom's Taxonomy details the type of thinking or kind of knowledge students are expected to demonstrate, Webb's Depths of Knowledge establish the context in which students share the depth and extent of their learning. Used together, educators successfully employ Increasing the Cognitive Lift Strategy. The strategy's name alludes to how it might support student engagement, with a clearer focus on cognitive engagement. Educators who employ strategies aimed to further students' cognitive engagement often remind their students that struggle is productive, and rather than teachers immediately offering answers to student questions, they encourage students to go deeper into their own inquiry and investigation.

Further, as part of this approach, educators take time to learn what sparks student curiosities. When learning is meaningful to students, they are more likely to work harder and commit more mental effort toward the learning or task at hand. This is particularly critical for diverse learners as well as students with different racial or ethnic backgrounds.

Defined by the Center for Applied Special Technology (CAST), Universal Design for Learning is grounded on a simple yet powerful premise—curriculum, from the outset, should be designed to accommodate all learners. This is achieved through three principles (underlined) that support educators in creating curriculum that provides multiple means of:

1. Engagement by providing options for recruiting interest, sustaining effort and persistence, and self-regulation;
2. Representation by providing options for perception, language and symbols, and comprehension;
3. Action and expression by providing options for physical action, expression and communication, and executive functions¹⁷

The ultimate goal of UDL is to “develop ‘expert learners’ who are, each in their own way, resourceful and knowledgeable, strategic and goal-directed, purposeful and motivated.”¹⁸ Educators who practice UDL structure curriculum in four parts—instructional goals, methods, materials, and assessments. UDL is specifically supportive of increasing student engagement for diverse learners by increasing access to learning through the reduction of physical, cognitive, intellectual, and organizational barriers to learning.

IDLEA School Models

School models were briefly mentioned earlier in this guidebook because of their influence on how student engagement is perceived as well as how they set expectations on student behaviors. School models must also be considered in the context of selected engagement strategies. To continue lessons from IDLEA, 12 public charter schools from across Colorado took part in the entirety of the project. Six schools were located in the Denver

¹⁷ CAST (2018). Universal Design for Learning Guidelines version 2.2. Retrieved from <http://udlguidelines.cast.org>

¹⁸ Ibid.

area, and two schools were located in Colorado Springs. Additional schools were located in Steamboat Springs, Carbondale, Pagosa Springs, and Durango.

IDLEA cohort schools span a wide range of school models with different educational philosophies. The diversity of educational models offers a rich backdrop for IDLEA Project implementation as well as requires schools to interpret and employ selected student engagement strategies that are contextualize to their school setting and student population.

Four schools offer a college preparatory model, meaning they offer a curriculum that supports students in developing the skills necessary to succeed in college. College preparatory programs offer traditional high school courses while also offering coursework that establishes a solid foundation for students' future college careers. College preparatory courses often include time management, good study habits, organization, and self-discipline/motivation. Two of the cohort schools are unique in their college preparatory design in that they are also a single gender school. Single gender schools positively report the elimination of gender stereotypes, and classroom environments can be specifically adapted based on single gender needs. Further, gender distractions in the classroom are prevented.

One of the four college preparatory schools also offers a project-based model as does one other cohort school. Project-based learning models offer teaching methods in which “students gain knowledge and skills by working for an extended period of time to investigate and respond to an authentic, engaging, and complex question, problem, or challenge.”¹⁹ Project-based learning engages students in real-world problems, and they demonstrate their knowledge by creating a public product or presentation for real audiences. Two schools offer expeditionary learning models, a model very similar to project-based learning. Expeditionary learning includes elements of self-discovery and ownership of individual learning. Like project-based learning, expeditionary learning is based on student interest and connections to the real world. Expeditionary learning typically has a focus on nature with physical activity and real-world exploration.

Two schools offer a classical school model in which students are expected to master a variety of subjects, often including history, mathematics, science, literature, Latin and English, as well as gain familiarity with at least one other language and fine arts. Classic schools emphasize the importance of dialogue and reasoning, and often utilize a curriculum that is very sequenced, based on knowledge and experiences from previous grades. This specificity helps to ensure consistency within grade levels and that students are building a knowledge base that is shared and can assist with future learning.

Three cohort schools offer school models unlike any other cohort school. One school offers a Montessori education, which is distinct for its five core components—trained Montessori teachers who have the skills and expertise to implement high-fidelity Montessori programs; Multi-age classrooms with three year age spans; Use of Montessori materials that provide a hands-on approach to learning; Child-directed work in which students

¹⁹ Buck Institute for Education, PBL Works, retrieved: <https://www.pblworks.org/what-is-pbl>

self-select work, leading to intrinsic motivation and sustained attention; and uninterrupted work periods that enables students to work at their own pace and without interruption.²⁰

Another schools offers a language immersion model in which students learn core content in English and their second language. Students spend their school day immersed in a second language as they employ their natural ability to learn the new language. Finally, one school reports using an alternative education model, which is designed to educate students who have not been successful in regular schools for a variety reasons—behavior, disciplinary, or safety concerns. Alternative schools tend to be more flexible in their scheduling and offer specialized courses such as social and emotional learning support.

Conversation on SEA and MMS as an intervention of itself

Phase III Discussion Questions:

- What engagement strategies have worked in the past? For me individually or school wide?
- What resources (time, personnel, financial) do we have that we can direct toward these strategies for a full school year (or beyond)?
- What strategies align with my school model?
- What strategies align with my personal educational philosophy?

Phase III Resources

Ten Working Principles for Enhancing Student Engagement

Derived from Krause, K. and Coates, H. (2008) Students' Engagement in First-Year University. Assessment and Evaluation in Higher Education. 33 (5), pp. 493–505.

- 1. Create and maintain a stimulating intellectual environment**
 - a. Give students good reasons to be part of the learning community.
 - b. Provide coherent and current course structures.
 - c. Stimulate discussion and debate, exploration and discovery.
- 2. Value academic work and high standards**
 - a. Actively encourage commitment to study by attaching importance to studying and spending time on academic work.
 - b. This may need to be modelled for students in first year so that they learn how to balance the different dimensions of their lives.
- 3. Monitor and respond to demographic subgroup differences and their impact on engagement**
 - a. Make it a priority to get to know your students, their needs, aspirations and motivations.
 - b. Monitor the subgroup differences and develop targeted strategies for engaging students according to their needs and background experiences.

²⁰ American Montessori Society, 5 Core Components of Montessori Education, Retrieved: <https://amshq.org/About-Montessori/What-Is-Montessori/Core-Components-of-Montessori>

- c. This provides a powerful platform for supporting and teaching students in a responsive way so as to maximize the possibilities for engagement.
- 4. Ensure expectations are explicit and responsive**
- a. Communicate expectations clearly and consistently across the institution and within faculties and departments.
 - b. Reiterate expectations at appropriate times through the semester and in different settings – before semester begins, and before and during peak stress times in the semester.
 - c. Include students in the expectation-building exercise. Listen to their expectations. Be responsive where appropriate. Ensure that they know you have listened to their views, but be sure to shape expectations so that the highest standards of learning and teaching are maintained. Do not be driven by unrealistic expectations.
- 5. Foster social connections**
- a. In small groups: When students have many off-campus commitments, the value of in-class time should be maximized. Opportunities for active and collaborative learning are particularly important. Encourage problem-solving activities, small group discussion of reading and class materials, and provide intellectual stimulation and challenge.
 - b. In large lectures: Even here, student interaction can be fostered through question-answer sessions and a range of interactive activities which help to break down the potentially alienating barriers created by the large group anonymity syndrome.
 - c. Online: Provide for online discussion, collaboration and interaction.
 - d. Create opportunities for civic engagement with communities beyond the campus.
- 6. Acknowledge the challenge**
- a. Let students know that you/ your department/ unit/ institution understand and are aware of some of the pressures they face.
 - b. Acknowledge that a large proportion of students will be juggling work and study commitments throughout the semester. This may be done in reading guides, lectures or tutorials.
 - c. Be explicit and proactive in dealing with issues and challenges which potentially jeopardize student engagement.
- 7. Provide targeted self-management strategies**
- a. Seek to develop self-regulated learners who drive their own engagement behaviors.
 - b. Discuss strategies for time management and maintaining motivation, particularly during stressful times of semester.
 - c. Identify the various sources of help early in the semester and at key moments through semester so that students are prepared ahead of time. They need to know that they are not alone in facing the challenges and they also need to know where to go for help.
- 8. Use assessment to shape the student experience and encourage engagement**
- a. Provide feedback and continuous assessment tasks early and often.
 - b. Use assessment in creative ways to bring peers together both in and out of the classroom
 - c. Engage students in self-assessment and peer assessment so that the focus is increasingly on their responsibility for becoming and remaining engaged in the learning process.
- 9. Manage online learning experiences with care**

- a. Online resources: Placing lecture notes or audio streaming on the web is not a substitute for effective lecturing. Students indicate that even when all lecture notes are on the web, they will attend lectures if the lecture is interesting and presented well. Contact with academics and their peers is crucial.
- b. Student involvement: When lecture material is presented online, academics need to develop strategies for encouraging student involvement during lectures. For example, integrate activities into the lecture timeslot.
- c. In online learning environments, capitalize on the community-building capacities of online discussion forums to connect students to each other and to the learning community

10. Recognize the complex nature of engagement in your policy and practice

- a. Engagement is a binding of students to each other, to meaningful learning activities, and to the institution.
- b. Engagement is also a battle for some students which creates conflict and turmoil.
- c. Engagement is an appointment for some who see university as one of many engagements in their daily calendar of activities.
- d. It should be a promise and a pledge which brings with it reciprocal rights and responsibilities.
- e. Engagement should be an interlocking and a 'fastening' of students to learning and university learning communities in an engagement relationship which is mutually beneficial and continues well beyond graduation.
- f. The nature of students' engagement changes over time – monitor the changes from one year level to the next in transitions to and through the institution.

Phase IV – SEA Results-based Decision-Making

- How to use SEA and MMS to discern if students are trying to get work done quickly or using a variety of deeper level thinking and learning strategies to master content
- To what degree do students agree with the results and how to build in time for students and teacher to discuss engagement indicators at the same time
- How do the results reveal structures and conditions that schools employ to increase engagement
- Do the results reveal the selected intervention strategy led students to previously defined learning outcomes?

Phase IV Resources

Framing Questions for IDLEA Student Engagement Assessments (SEA) Surveys

When reviewing your SEA data, consider the following prompts/questions:

General Notes:

1. Consider what the Student Engagement Assessment is intended to measure/assess. Students are reporting on their perceived levels of personal engagement as they generally reflect on their school experiences. While reviewing the data, additional influences should be considered, including a shift from virtual or hybrid learning to in-person learning from Spring 2021 to Fall 2021. Further, it should be noted

that students are likely in new classrooms with different teachers in the Fall 2021 SEA deployment compared to Spring 2021, and new students are part of the Fall 2021 dataset.

2. N/A indicates data is not available for that category. This means data might not have been collected for a multitude of reasons:
 - a. The question/category is not applicable to your school (e.g. SEA question only for upper or lower grade)
 - b. Data collection was not completed in previous iteration
 - c. SIS data was not shared for the analysis
 - d. Too few students in sample size and/or no students were reported in sample size
 - e. No students responded to the question

All Grades – Graphs

1. Examine the cohort engagement averages (represented by line on chart) and your school engagement averages (represented by colored bar graph). How does your school compare to the cohort average?
 - a. Considering Spring 2021 results, has your school’s student engagement across the three different domains improved, remained the same, or declined?
 - i. What might contribute to these changes?
2. Examine the three engagement domains – behavioral, cognitive, and emotional. Does your school exhibit higher engagement in one domain compared to the others? If so, what might contribute to these differences?

Lower & Upper Grades Tables

1. The column, “difference from cohort,” indicates how your school compares to the cohort average. Numbers in red indicate the domain and/or student response to the specific SEA question is lower than the cohort average. Numbers in green indicate the domain and/or student response to the specific SEA question is higher than the cohort average. How does your school compare to the cohort average?
2. Examine specific SEA questions in each domain, giving particular attention to questions that report students report engaging most of the time or more often. What questions arise? Are there any points of surprise?
3. Examine specific SEA questions in each domain, giving particular attention to questions that report students report engaging sometimes or less often. What questions arise? Are there any points of surprise?
4. Consider Spring 2021 data and compare to Fall 2021 data. Are there any changes? What might have contributed to these changes? Be mindful of these changes by specific question as well.

Learner Groups

1. Examine the cohort engagement averages by diverse learner category (represented by line on chart) and student engagement averages by diverse learner categories at your school (represented by colored bar graph). How do diverse learners at your school compare to the cohort averages?
2. Consider Spring 2021 data and compare to Fall 2021 data. Are there any changes? What might have contributed to these changes? Be mindful of these changes by specific question as well.
3. Select one of the three engagement domains. Consider how engaged students are your selected domain across diverse learner categories. What questions arise? Are there any points of surprise?
 - a. Complete this exercise across all three domains.

Intervention Implementation

1. Intervention implementation data intends to assess the degree to which students are recognizing or utilizing specific engagement strategies. When reviewing the data, what questions arise? Are there any points of surprise? What might the data suggest considering the nature of implementation for your selected engagement strategy?

Further Considerations

Schools that decide to administer MMSs and SEAs will benefit from results that offer a rich understanding or student engagement within their schools. Yet, it is important to recognize the limitations of these instruments and their results and offer additional context in which to interpret these results. Research on student engagement helps situate some of these limitations by reminding us that engagement is always impacted by the following factors including:²¹

- Students' personal and social backgrounds;
- The district and community context, whose norms and policies affect many aspects of life in school;
- School culture, reflected in beliefs and values of staff and students;
- School organization (size, structure, division of labor);
- Curriculum;
- Teachers' background and competence; and
- Teacher-student interaction, in and out of class.

Domain-specific measures help determine to what extent engagement represents a general tendency in a domain, and their inclusion in this guidebook is well-informed by research. However, these results do not discern to what extent engagement might be *content specific* unless the SEA was administered in a manner that would support this. By not relating engagement results to content areas or specific skills, results are limited. Thus, results speak to engagement as a general tendency, combining questions about classrooms, the school in general, academics, and peer/adult relationships.

²¹ Fred M. Newmann, Introduction to *Student Engagement and Achievement in American Secondary Schools*, ed. by F. M. Newmann (Teachers College Press, 1992)

