

# **USING SEL, CCR, AND EARLY WARNING DATA TO SUPPORT THE WHOLE CHILD**



# INTRODUCTION: WHY WE CARE

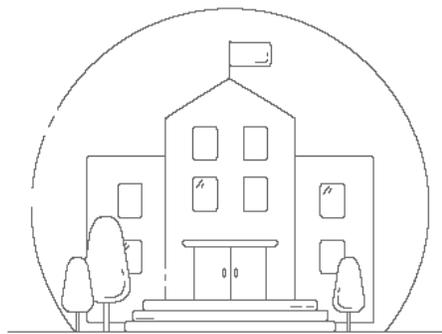
Imagine that a student in your school (let's call her Joy) is struggling with issues at home — her parents are absent, she frequently has trouble getting a ride to class, and, unbeknownst to her teachers, she secretly feels like she isn't smart enough to succeed in high school and thinks college is for people who are smarter than she is.

As a result, she's often late for school or doesn't show up at all, which in turn causes her performance to slip. When she is at school, she tends to sell herself short, and she doesn't feel like she has friends that she can study or discuss content with. Before long, her grades have dropped dangerously low, and she's well on her way to becoming one of the million or more students who drop out of high school each year. Her teachers knew she was missing a lot of school, but they didn't know why, and they were completely unaware that she doesn't have much confidence in her ability to learn.

Imagine what Joy's teachers are experiencing. They know Joy is struggling; it's obvious. A few teachers even know that her family

situation isn't ideal and is a causal factor in her attendance. They probably don't know about her lack of confidence or her belief that she can't succeed. They've tried a few strategies, but none had much of an impact.

Unfortunately, Joy isn't the only student they are concerned about, and many students appear to be in even deeper crisis than Joy. It's challenging enough to focus on the near term — daily attendance and weekly homework — and long-term outcomes like the ACT test and Joy's post-secondary readiness understandably take a back seat. Her teachers care deeply, but sometimes caring isn't enough. Joy's situation gives little reason to be hopeful that positive change can still happen.



# ADOPTING A SYSTEMS VIEW OF THE WHOLE CHILD

Educators (and the reporting systems they use) need to adopt a systems view of Joy, a shift in perspective that requires four types of information:

## **Current and Past Academic Behavior and Outcomes**

1

Educators need to have comprehensive and longitudinal information about Joy's academic behaviors (e.g., attendance and course outcomes). For example, they need to know about her attendance, whether or not she is getting into trouble, and her course outcomes. It would also be beneficial if they also had access to her historical academic practices and her demographic and family factors (e.g., mobility or homelessness).

## **Long-Term Outcomes**

2

They also need to know about Joy's predicted long-term prospects. For example, is she on-track to graduate or is she at-risk of dropping out of school? Will she be able to successfully enroll in and complete a post-secondary degree program? Will she be career ready? Educators need to have some notion of how current and past academic behaviors and outcomes contribute to Joy's long-term prospects, including both K-12 and post-secondary outcomes like college completion and workforce readiness.

## Social and Emotional

3

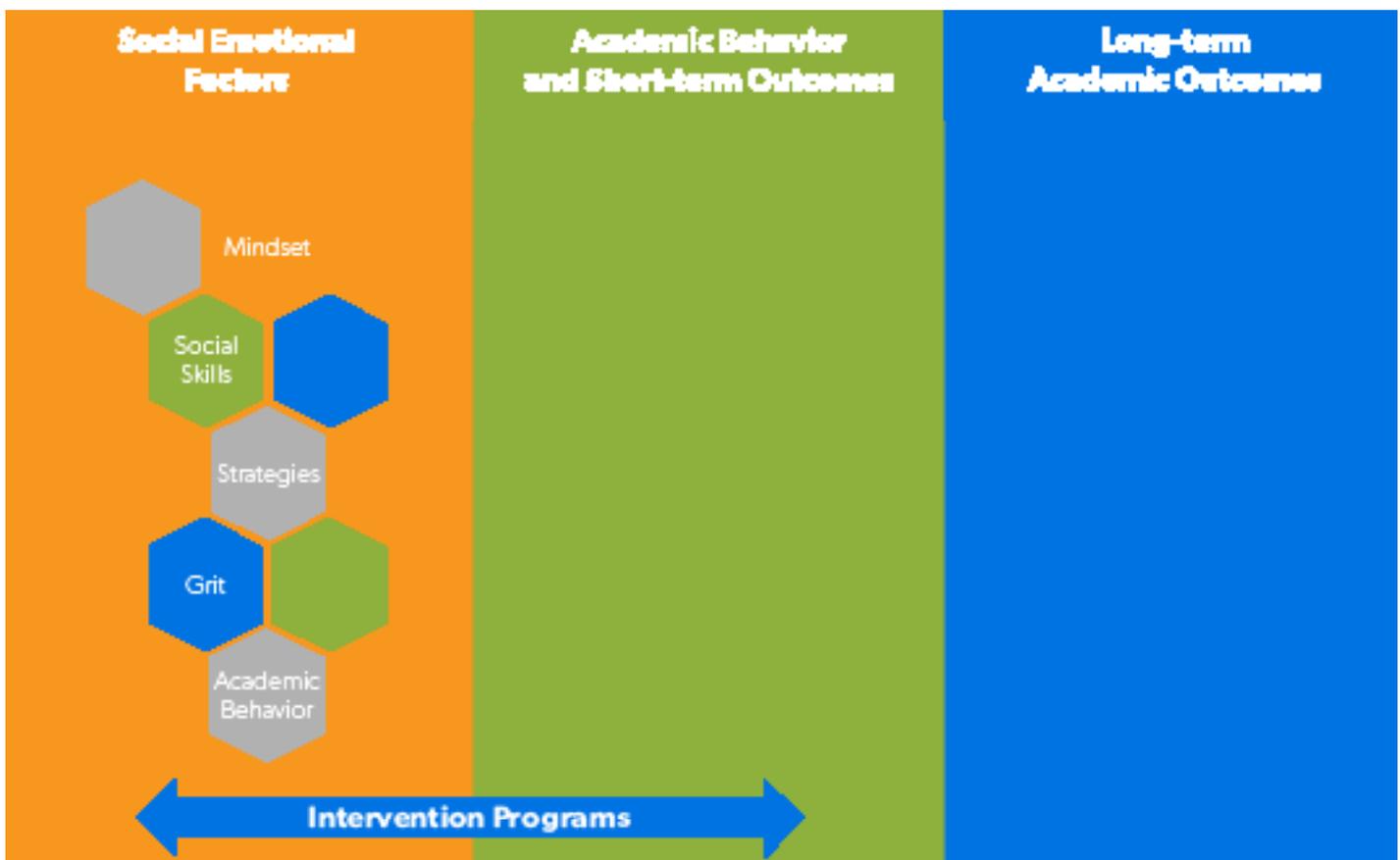
Educators need to know about Joy's social and emotional skill sets. These skills are thought to determine Joy's attitudes towards school and her ability to be successful, and whether or not she believes she can overcome challenges and continue to grow her academic abilities over time. These skills should impact her short-term outcomes which in turn will impact her long-term prospects.

## Intervention Participation and Impacts

4

Educators need information about Joy's participation in intervention programs. Furthermore, educators would benefit from knowing if her participation was associated with any changes in the other three components. They may also benefit from knowing about interventions in case Joy needs additional support.

In this paper, we will look take a close look at each of these four types of data and identify strategies for improvement.





## THE NEW KID ON THE BLOCK: INCORPORATING SEL

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Most schools are already commonly using student data systems to evaluate academic performance and many have access to early warning and intervention information to better support students like Joy. But these systems can be made even more beneficial by adding context from social and emotional learning (SEL). For example, say you have a student who is missing classes 2-3 times a month and has Ds and Fs in some core classes. That student would be flagged by your school's early warning system, signaling to educators that an intervention is needed. What SEL can do is offer some perspective on the student's psychological and emotional capacity and skills, empowering educators to think beyond just academic and behavioral factors when intervening.

This challenge that has prompted schools across the country to implement surveys and

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// track SEL data, is hoping to capture and address the social factors contributing to students' academic mindsets. Studies like [Supporting the Whole Teacher](#) from the Aspen Institute explore the need to train teachers in assessing students' social and emotional competencies through SEL to tailor educational approaches to fit their needs. What we need is to successfully

integrate these measurements with intervention systems so as to place the development of each student into its social-emotional context. We need to be able to address the learning needs of the whole student — not just the version we see on a transcript.

Other research, like that commissioned by the [Everybody Graduates Center](#) and the [Wallace Foundation](#), is demonstrating how these four kinds of student data can be combined into a single, comprehensive system like the one shown above, designed to optimize both graduation and college and career success. By studying the ways that college and career readiness (CCR), early warning and intervention (EWI), and SEL work together, educators can use data not only to flag potential problems, but to uncover all the potential causes of that problem — from academic performance to behavior to social and emotional competencies — and put students on the path to improved performance.



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## WHAT IS SOCIAL AND EMOTIONAL LEARNING?

SEL provides insight into students' beliefs and attitudes about their own intelligence, interpersonal skills, and academic skills. SEL constructs are thought to contribute to the behaviors that are often measured in early-warning systems. They are thought to mediate short-term outcomes like attendance and behavior, which in turn impact longer-term learning outcomes like grades, assessment performance, graduation and beyond.

The Collaborative for Academic, Social, and Emotional Learning (CASEL) defines SEL as having **five core competencies**: self-awareness, self-management, responsible decision-making, relationship skills, and social awareness.

### **Self-awareness**

refers to the student's ability to recognize his emotions and respond to them in a healthy way. A student who scores highly on self-awareness has a degree of optimism and self-confidence that is anchored by a strong sense of his own strengths and weaknesses in the classroom.

### **Self-management**

is a student's aptitude at controlling her thoughts, emotions, and behaviors in order to complete assignments and participate in class. Students who are able to self-manage can set and achieve academic goals, not allowing their impulses to get in the way of their performance.

## Social awareness

is the ability of a student to recognize and respect the opinions and feelings of others. It encompasses both awareness on an interpersonal level, such as taking interest in and appreciating another student's differing cultural background, or on a more general level, such as following social behavioral norms.

## Relationship skills

enable students to make strong, cooperative friendships and/or teams in the classroom that enable all involved parties to succeed. Students with relationship skills are not only able to create positive relationships, but avoid negative ones, resisting social pressure and negotiating conflicts respectfully.

## Responsible decision-making

is a student's ability to make choices that are beneficial to their lives both in and outside the classroom. Students who are able to consistently base their choices in social norms and ethical standards and realistically evaluate their consequences are responsible decision-makers.

In addition to CASEL's five competencies, we also commonly see constructs like Duckworth's grit and Dweck's mindset. Angela Duckworth, an Associate Professor of Psychology at the University of Pennsylvania, is one of the country's [foremost experts](#) on "grit," or the "disposition to pursue very long-term goals with



passion and perseverance." According to her research, it's possible for educators to help their students develop grit and other non-cognitive, "personal quality" measures that lead to an improved likelihood of both academic and non-academic success. Similarly, Stanford psychology professor Carol Dweck has pioneered the concept of a "[growth mindset](#)" — as opposed to a "fixed mindset" — or a deeply-held belief that one's "most basic abilities can be developed through dedication and hard work — brains and talent are just the starting point." She notes that mindset impacts the development of learning strategies, academic grit/perseverance, and social skills, all of which play a role in determining academic behavior.

Just as academic behavior plays a large role in determining academic performance, the more we can formally understand and foster students' social and emotional skills, then, the better prepared we are to help them succeed in school and beyond.



## THE GROWING IMPORTANCE OF SEL

The role of social and emotional learning in driving success in the classroom has always been tacitly understood by educators, but only recently has there been a research-driven effort to formalize and incorporate it into instructional and teaching strategies. Here are a few takeaways from empirically supported work:

- High social and emotional competence increases high school graduation rates, postsecondary enrollment, postsecondary completion, employment rates, and average wages.
- It also decreases dropout rates, school and classroom behavior issues, drug use, teen pregnancy, and mental health problems.
- 90 percent of teachers believe social and emotional skills can be taught and that they benefit students.
- Social and emotional competency is at least as predictive of academic and career achievement as IQ.
- 80 percent of employers say social and emotional skills are the most critical to professional success, and are also the hardest skills to find.



## CONNECTING SEL TO CCR AND EWI

Analyzed alone, SEL can be used to facilitate the development of the whole student — that is, integrate lessons that develop their non-academic skills, including teamwork and collaboration, self-discipline, and respectful treatment of instructors and peers alongside traditional curricula. Analyzed with CCR/EWI, however, SEL can be used to identify factors potentially related to students' academic problems that other systems might miss, highlighting problems that might be addressed and skills that might be developed through intervention. Because SEL skills are malleable and contribute to academic behaviors and outcomes, they provide an important focal point to educators. Designing interventions around SEL needs promises to be more effective and longer lasting than just focusing interventions at the behavioral level. Thus far, student data systems have largely been

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used to answer the “when” of intervention — as we’ll see, CCR and EWI track the development of students’ academic behaviors to tell educators when an intervention will be most needed and most effective. SEL’s contribution to these systems is to offer the “how” of intervention, identifying the precise behavioral and emotional issues that are causing a decline in academic performance and suggesting a course of action that is likely to have an impact on the student’s behavior.

## WHAT INSIGHTS DO CCR AND EWI DATA PROVIDE?

Identifying factors that predict long-term outcomes is complicated, but — reassuringly — isn't impossible. Lagging grades, poor behavior, and spotty attendance are all indicators that a student is at risk of not graduating from high school or being unprepared for college. A large body of research shows that attendance, grades, and behavior are all predictive of dropout risk. Additionally, college readiness also depends greatly on academic success and is mediated by many of the same factors. In this sense, early warning and college and career readiness are different sides of the same coin. Overall risk increases when factors coexist and compound one another. Statistical modelling (including machine learning methods) can more precisely estimate risk as well as provide information about the weight of each individual factor and the thresholds for those factors.

Educators commonly struggle to identify dropout risk before the student is in crisis mode. For that reason, dropout risk factors need to be measured in ways that illustrate both long and short-term trends. For example, if a system only measures attendance annually, a student who is averaging 95 percent daily attendance can miss a full 10 days of school before their average drops to 90 percent (the standard definition for chronic absenteeism and a common threshold for attendance risk factors). Alternatively, a system that measures attendance over the previous 30 days will create an indicator that is much more sensitive. With a 30 day attendance factor, the student can only miss 1-2 days before they get flagged for attendance! Earlier notice will facilitate quicker interventions.

College and career readiness benchmarks student performance against a series of standards that the [U.S. Department of Education](#) feels are strong enough to “help ensure that students receive coherent preparation aligned with the demands of the real world.” Early warning data is designed to measure factors known to be related to dropping out of high school. Both systems alert educators to the possible need for intervention, but the interventions triggered by each one have slightly different purposes. Thus we see why college and



career readiness and early warning can be said to represent two sides of the same coin: Early warning is most effective in targeting students struggling to graduate high school, while CCR is often used to help those who are likely to graduate on time.

It is very important to note that the statistical models used to predict dropout risk and college readiness should be distinct because the underlying factors correspond differently for the different outcomes being predicted. For example, while attendance, course outcomes, and behavior are all strong indicators for early warning, course outcomes and test performance are stronger indicators for CCR. Interestingly, every large district will have a few students who are considered to be college and career ready but also at risk of not graduating on time. These students are likely to be testing well and have sufficient GPAs but may be missing school and/or getting into trouble.



# INTERVENING TO MAKE A DIFFERENCE

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If CCR/EWIS serve as indicators that a student is not on-track for academic success, and if SEL provides some context for what non-academic issues may be holding them back, response to intervention (RTI) strategies guide the instructors' efforts to address students' needs. In addition, RTI is a source for information about what programs students have been exposed to, and information about the extent of that exposure. RTI is sometimes a trial-and-error process in which the teacher experiments with different intervention approaches to identify the concepts or skills students struggle with most while also looking for the intervention that will work with a specific child. While [the process requires patience](#), it's in the best interest of both educator and student if there is an accurate system that can help to pinpoint the problem areas as quickly and accurately as possible.



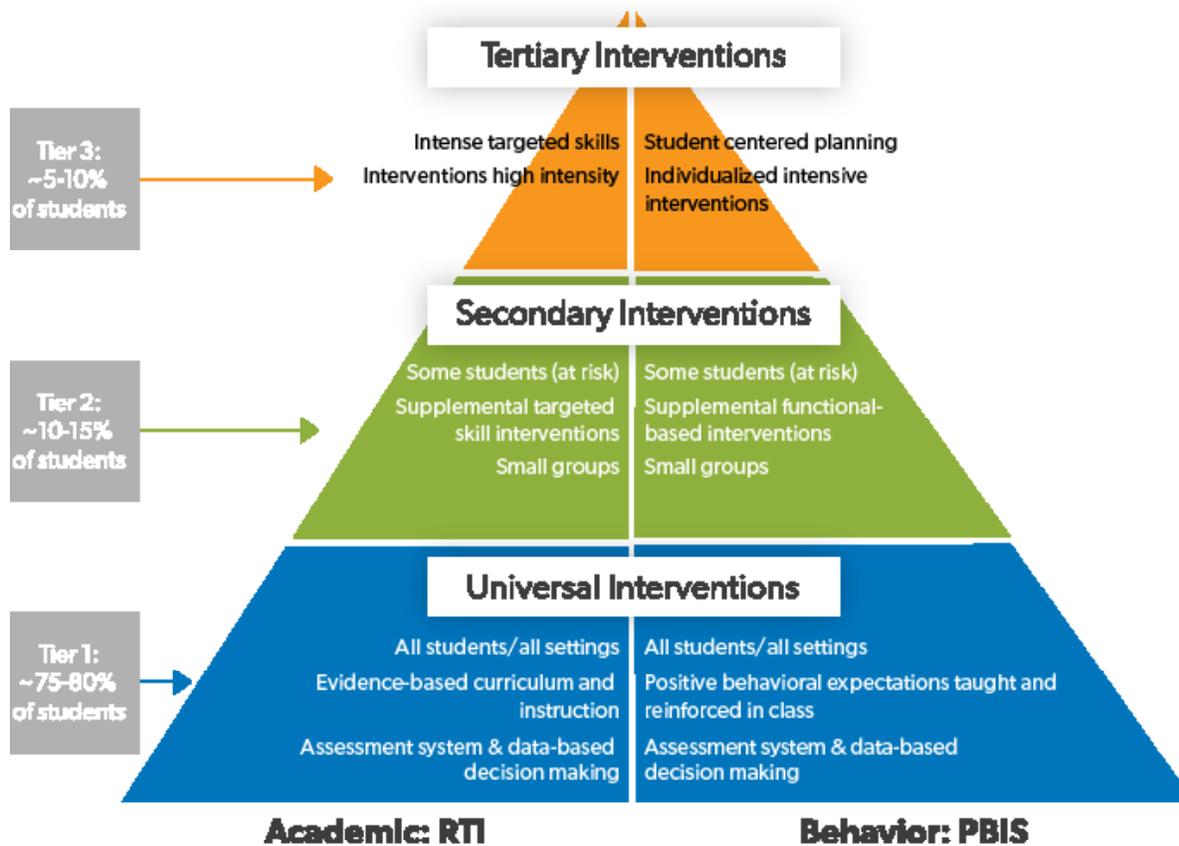
**The need, then, is to create a single view that can reliably indicate both the need for intervention and the extent to which the intervention was enacted.**



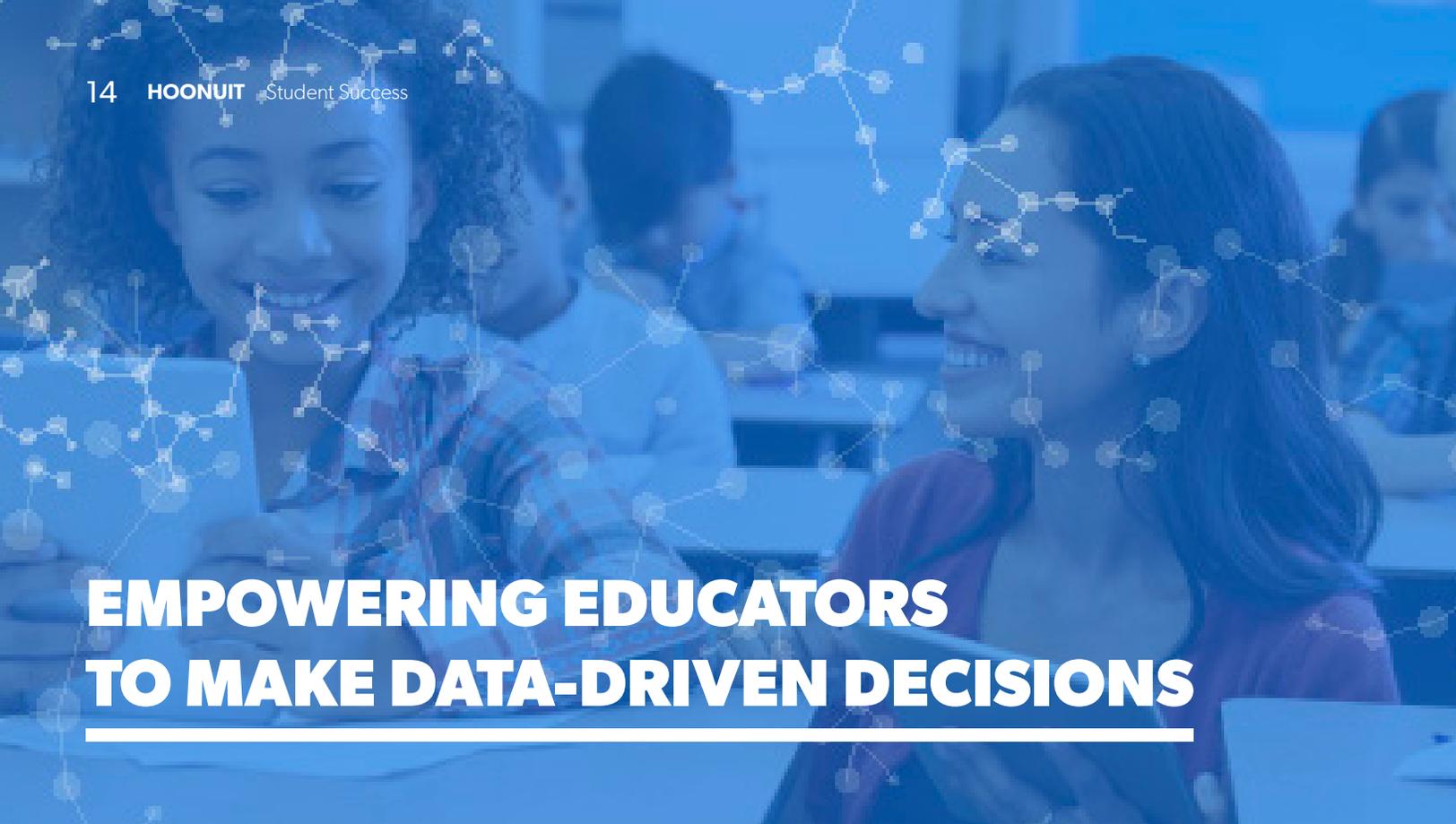
The need, then, is to create a single view that can reliably indicate both the need for intervention and the extent to which the intervention was enacted. By integrating RTI with SEL, EW and CCR, educators can better understand how well specific intervention programs have performed in the past for students. Disparate views into SEL, CCR, and EW are not enough — educators need an infrastructure that can support many different functions and views of the problem.

What does a single view need to do? First, we need know which children need additional support and the level of that support. Most frameworks will target about 5 percent of students for the most intensive interventions and about another 15-20 percent for moderately intensive interventions. The remaining students will receive school-wide interventions.

## TIERED SUPPORT MODEL



In addition, educators also need to know something about the domain of intervention. With the advent of SEL frameworks and the research behind them, some interventions may be designed to impact social and emotional skills directly. Otherwise, most interventions will target specific aspects of academic behaviors, domain-specific content knowledge, or student engagement. Finally, we need to know about the intervention dose as measured by day-to-day schedules, number of minutes per day, and whether or not the student attended and participated. Often, the lift isn't about implementing a program per se; it is more about ensuring consistent and sustained student participation.



# EMPOWERING EDUCATORS TO MAKE DATA-DRIVEN DECISIONS

For a solution like this to work at scale, schools need to foster a data-driven culture that encourages teachers and administrators to incorporate analytics into their daily routines, using it as a resource in identifying issues in the data before they become noticeable in the classroom. The first step in establishing such a culture is creating a platform that staff can easily access, use, and draw conclusions from.

Data is great for informing decisions, but it's useless if it can't be applied through actions that actually influence learning outcomes — and that can only happen if the educators who perform those actions have data that is:

## **Centralized**

Again, dealing with many charts or platforms that feature many different data fields from many disparate sources only creates more work for educators, rather than creating solutions. SEL, CCR, EWI, and other student data should all live in one place.

## **Easy to Use**

Even if your data is all housed in the same place, that doesn't mean that drawing actionable conclusions is going to be easy. Educators need to be supported by analytics that present and visualize their data in an engaging way, and arrange it into a clear narrative that makes the decisions they face clearer and more approachable.

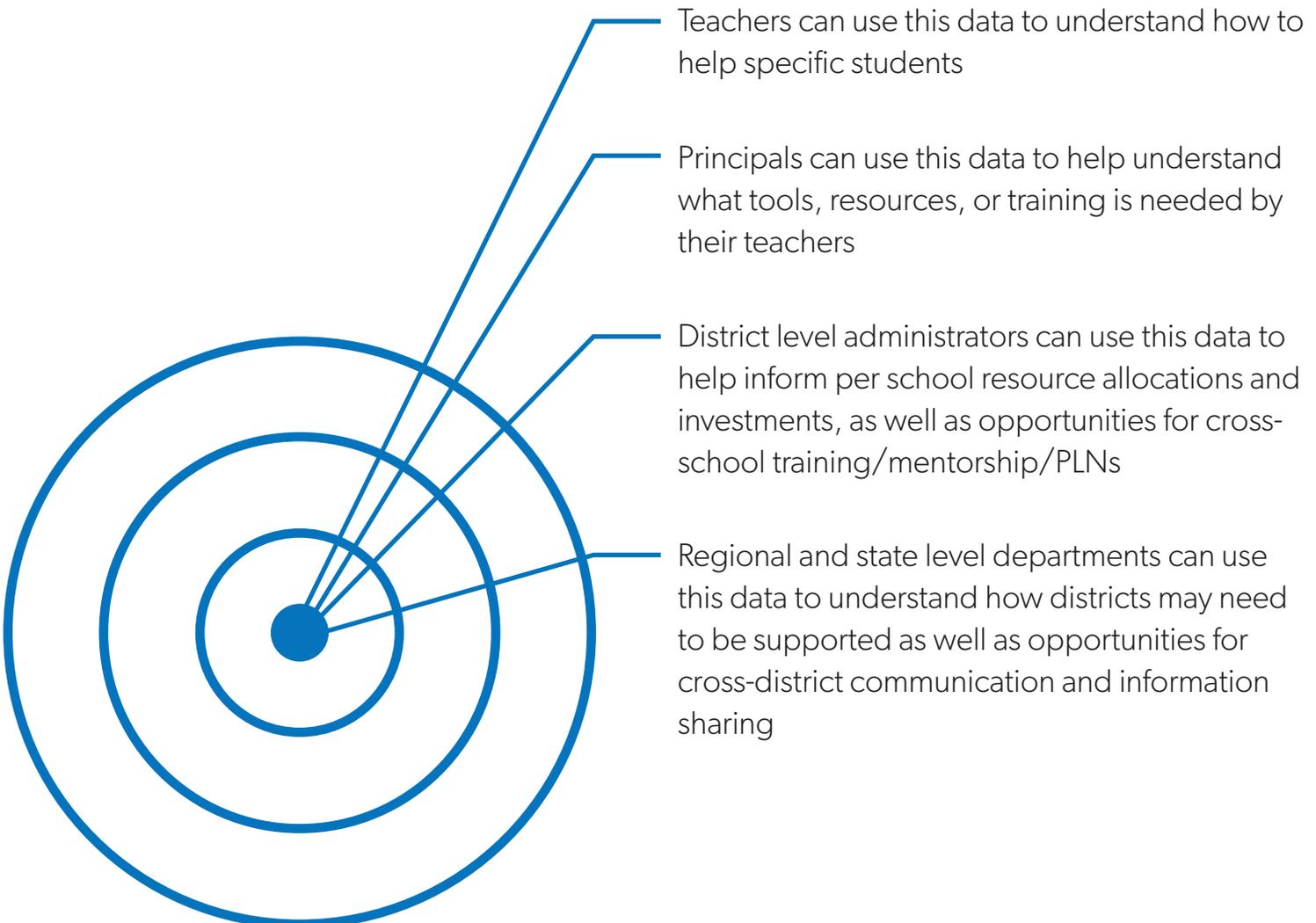
## Alignment with Standards

Your analytics won't be helpful if they're not guiding you toward the standards to which your school is held by state and federal governments. Your school should handle data in a way that is aligned with requirements like those set by ESSA every step of the reporting process.

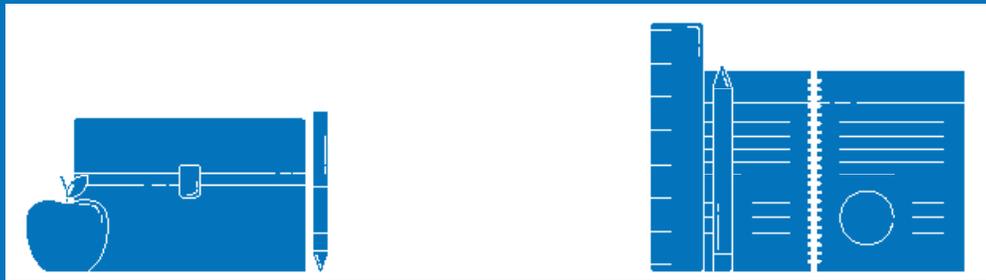
## Professional Development

Your teachers don't just need the right tools, but the skills needed to put them to good use. Make sure your educators have access to professional development materials and on-demand content that empowers them to glean insights from the data and take action based on what they see.

# DATA-DRIVEN DECISION MAKING



# CREATING A STRONGER SAFETY NET FOR STUDENTS



Supporting students who are close to falling through the cracks, whether it's due to trouble at home, a learning disability, or other personal circumstances, can seem impossible at times. Keeping every student engaged and focused on learning can seem overwhelming to an educator. However, through collaboration and collective insight, educators have the resources to help all students.

Districts must not only combine data from disparate systems, but use a strong analytics platform that makes that data easily accessible. That platform must support your teachers and educators by using a blend of analytics that are simultaneously historical, current, and forward-thinking. Additionally, behind-the-scenes statistics and data science can help boil down oceans of data into a few key long-term outcomes. By creating a data-driven culture that can reliably detect and diagnose bad academic outcomes, you create a sort of safety net for your students that ensures you'll be there when they need you most. There is no way to guarantee that every student will overcome his or her challenges, but with the right data and the right context, you can give yourself the power to intervene in a meaningful way.

# HOW HOONUIT CAN HELP

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Hoonuit is the only provider of analytics solutions for educators with the experience and expertise to empower your teachers and improve the academic outcomes of your students. Our solutions work with nearly any other software and technology, ensuring that you'll be able to combine data from disparate sources into single, cohesive visualizations of academic progress at the district, school, or even student level.

Hoonuit has everything districts need to start better leveraging their data. We lead the education industry in precision, accuracy, and performance because we're able to combine any disparate source of data into a single, coherent view. Furthermore, our tools will ensure that educators are working with the most up-to-date data as possible. Using Hoonuit, educators can

easily identify students who need additional support, understand what kind of support is needed, manage the delivery of those supports, and understand when students are back on track.

We want to help you create the best possible framework for positive learning environments. To learn more about how Hoonuit can help your district create a productive, data-driven culture, [click here](#).

## Address

210 West College Avenue  
Appleton, WI 54911 USA

## Phone

+1 920 830 0102  
800 610 1313 (Toll-free US)

## Website

[www.hoonuit.com/data-analytics-solutions](http://www.hoonuit.com/data-analytics-solutions)