
CSAI Report

# Key Considerations for Inclusion of School Quality/Student Success Indicators in State Accountability Systems as Required by the *Every Student Succeeds Act*

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# Including School Quality/Student Success Indicators in State Accountability Systems

Over the course of developing Consolidated State Plans, states have spent time evaluating their accountability systems. Many of the accountability requirements of the No Child Left Behind Act of 2001, such as the inclusion of academic measures of students' proficiency on annual assessments, graduation rates, and English learners' progress toward attaining English proficiency, are maintained under the *Every Student Succeeds Act* (ESSA). As a new requirement, states must adopt at least one additional indicator of school quality or student success in addition to other required accountability indicators. While this indicator should not be given significant weight, it does play an important role in accountability systems to signal what the state considers important in school performance (ESSA, section 1111(c)(4)(C)).

Many states already include one or more indicators (e.g., dropout rate, student attendance, credit accumulation, Advanced Placement [AP] and International Baccalaureate [IB] participation and performance, and dual enrollment [where students enroll in postsecondary coursework while also enrolled in high school]) in their accountability systems and may not need to make revisions based on this requirement. However, some states are considering adding or modifying indicators in this category under ESSA requirements. The purpose of this report is to analyze the key factors that states will need or want to consider in determining which school quality or student success measures to include in their accountability systems. There are numerous factors to consider, including, but not limited to, stakeholder feedback, available research, cost of implementation, and ability to disaggregate by student population. Design and implementation considerations are discussed in the subsequent sections of this report.

Finally, it is important to note that some of the measures examined in this report may not be ready for inclusion in the formal school accountability system (due to challenges related to data collection, cost, validity, etc.), but they may still be worthwhile to report publicly to parents and educators to provide additional data and information about schools. These measures may evolve to be formal accountability measures over time, or may remain important data points to share but not include in accountability systems.

## ESSA Requirements

According to section 1111(c)(4)(B) of ESSA, statewide accountability systems must annually measure, for all students and for each state-identified subgroup in all public schools, the following indicators:

- Academic achievement in mathematics and reading/English language arts (ELA) on statewide tests; this indicator must include a measure[1] of grade-level proficiency and, for the purposes of calculating proficiency, must include the greater of:
  - the number of students participating in the assessments, or
  - ninety-five percent of all students or of students in a subgroup (whichever is greater).
- Four-year adjusted cohort graduation rate, with the option of also including an extended-year graduation rate (for high schools)
- Student growth or another academic indicator (for elementary and middle schools)
- Percentage of students making progress in attaining proficiency on a statewide English language proficiency (ELP) assessment within a state-determined timeline, in each of grades 3–8 and once in high school (measure for English learner [EL] subgroup only)
- *An additional indicator of school quality or student success that is valid and reliable, is comparable statewide (by grade span), and allows for meaningful differentiation in school performance*

Each of the required indicators must be valid, reliable, and comparable across all local education agencies (LEAs) in the state, and calculated the same way in all schools (except that the growth indicator or other academic indicator and the additional indicator of school quality or success may vary by grade span). In addition, all indicators except ELP progress must be disaggregated by subgroup. The four required academic indicators and the additional indicator of school quality or student success must also:

- be supported by research indicating that performance on the measure is likely to increase student learning (e.g., grade point average (GPA), credit accumulation, performance in advanced coursework) or, for high schools, increase graduation rate, postsecondary enrollment, postsecondary persistence, or career readiness; and
- aid in the meaningful differentiation of schools by demonstrating varied results across schools.

Finally, "substantial weight" is required to be given to the academic indicators, and these four academic indicators must, in the aggregate, be given "much greater weight" in the differentiation process than any measures of school quality or student success.

[1]Under ESSA, each state accountability system is required to use, at minimum, five overall "indicators," and each indicator may include one or more "measures," where applicable.

## Key Questions for States to Consider When Selecting Accountability Indicators

The driver of any state accountability system should be the state's vision or goal for its educational system. Selected indicators, and the data that they generate, can then be used to guide state and district policies, supports, interventions, and resources. By building additional indicators into an accountability system, states can broaden the construct of school quality or student success. Ideally, accountability systems will connect contextual factors, educational processes, and desired outcomes into causal chains. To achieve these connections, states will need to spend time considering all the various options available for inclusion. Table 1 provides some key questions for states to consider as they are deciding on accountability indicators.

**Table 1. Key Questions for States to Consider When Selecting Accountability Indicator**

| Topic | Questions |
|---|---|
| **State context** | • What current indicator provides meaningful, valid, reliable, and comparable statewide data?<br>• What additional indicator would reflect the needs of our state?<br>• How might this indicator help guide state and district policies, supports, and resources?<br>• What data are available for the indicator that we are considering? How available are those data?<br>• Are systems and processes in place to collect the data that we are seeking?<br>• What capacity do we have to assist districts in using these data for planning and improvement?<br>• How would the combined set of indicators inform our work?<br>• Will collecting these data be a burden to schools and districts?<br>• Can the indicator be incorporated into the system on a phased implementation timeline? |

| Topic | Questions |
|---|---|
| **Technical quality** | • What evidence supports the effectiveness of this indicator for achieving the intended outcomes in a high-stakes accountability system?<br>• What is the relationship between the indicator and school quality or student success?<br>• How sensitive is the indicator to changes in school quality or student success? Does the indicator have a stable definition that supports measurement of trends?<br>• Is the indicator of school quality or student success equally representative for all schools in the state? Are the school quality and student success constructs being measured in the same way across all schools?<br>• Are comparisons among schools that are based on the indicator appropriate and fair?<br>• Are comparisons across student subgroups that are based on the indicator appropriate and fair?<br>• Should we conduct a pilot of the indicator in a few local districts prior to statewide rollout?<br>• Are there other states that have a proven history with this indicator? |
| **Stakeholder relevance** | • Is the indicator actionable, and does it have value for our educators, students, and parents?<br>• Does the indicator have widespread support across the stakeholder groups? If not, how would we propose to increase understanding and support?<br>• Will both educators and noneducators understand the indicator(s) and its purpose?<br>• Is the indicator inclusive, allowing for the potential of all schools to succeed while emphasizing improved outcomes for all students? |

As states select indicators to include in their revised accountability systems, they should consider how the indicators, both individually and collectively, would allow for meaningful differentiation in school performance. These indicators will ultimately inform how states and districts support schools; consequently, states should consider how well these data would guide support efforts and inform the community about school quality and progress.

## Accountability Indicator Benefits and Challenges

Along with the previously described considerations and requirements for school quality or student success indicators under ESSA, states should carefully consider the potential benefits and challenges of adding a specific school quality or student success indicator to their accountability system. This section provides an overview of benefits and challenges for some of the categories of school quality or student success indicators that are either currently included in state accountability systems or are under consideration for adoption by states.

## School Climate and Engagement

School climate is based on patterns of people's experiences of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures. A sustainable, positive school climate fosters the youth development and learning necessary for a productive, contributive, and satisfying life in a democratic society. Such a climate includes norms, values, and expectations that support people in feeling socially, emotionally, and physically safe (National School Climate Council, 2007). Twenty-six states[2] currently administer their own school climate surveys to students, educators, and/or parents. Such surveys are intended to measure perceptions of school safety and climate, relationships, health and risk behaviors, support, and engagement, and to help schools improve learning environments for all students.

BENEFITS:

- A positive school climate is associated with improved student achievement, lower dropout rates, fewer student discipline problems (e.g., absences, suspensions, and expulsions), decreased incidences of violence, and increased teacher retention (O'Brennan & Bradshaw, 2013).
- A positive school climate can promote engaged teaching and learning. When educators and students feel safe, they can effectively teach and effectively learn, respectively. Additionally, when teachers support and interact positively with students, students are more likely to be engaged and to behave appropriately in the classroom.
- A positive school climate can be a way for states and districts to capture data that accurately reflect norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures in schools.
- Research suggests that positive school climates improve academic achievement and outcomes for students from low-socioeconomic status backgrounds (American Educational Research Association, 2016).

CHALLENGES:

- It can be difficult to guarantee the validity of survey data in high-stakes settings, as there is potential for respondents to provide answers that are inaccurate. Therefore, states should be cautious and diligent when using these measures to compare schools.
- There is difficulty in ensuring the reliability of data collection methods across different schools.
- Collecting school climate data can be costly and time-intensive.

[2]These states are Alaska, Arizona, California, Colorado, Connecticut, Delaware, Georgia, Hawaii, Illinois, Iowa, Kansas, Kentucky, Maryland, Massachusetts, Minnesota, Montana, Nevada, New Jersey, New Mexico, Pennsylvania, Rhode Island, South Carolina, Virginia, Washington, West Virginia, and Wisconsin.

## Social and Emotional Learning

The Collaborative for Academic, Social, and Emotional Learning (CASEL) (2012) defines the goals of social emotional learning (SEL) as the development of five competencies: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. An approach that uses multiple methods and sources to collect information on a student's social and emotional development is recommended for measuring SEL because the behavior of young students can vary over time and across contexts (McCabe & Altamura, 2011) and because different respondents (e.g., students, peers, teachers, parents) offer different perspectives (Humphrey, 2013). The eight California CORE districts[3] conducted a system-wide field test of its SEL measures in 2015 with more than 450,000 students and 2,700 teachers. The results were found to be significantly predictive of student academic and behavioral outcomes, including GPA, state test scores, suspension rates, and absenteeism. Four individual skills — growth mindset, self-efficacy, self-management, and social awareness — were found to separately be more predictive of student outcomes than a composite social-emotional measure was (Batel et al., 2016).

BENEFITS:

- Quality SEL programs have been shown to improve academic performance, reduce disruptive behavior and emotional distress, and decrease the likelihood of receiving public assistance.
- SEL interventions also yield, on average, $11 for every $1 invested (CASEL, 2016).
- Separate meta-analyses of school-based and after-school SEL programs found that:
    - Participation improved elementary and middle school students' test scores by an average of 11 to 17 percentile points, decreased conduct problems, and increased students' problem-solving skills (Payton et al., 2008).
    - School-based SEL programs for students in kindergarten through grade 12 found that participation improved students' academic performance by 11 percentile points, reduced their anxiety and stress, and increased their prosocial behavior (Durlak et al., 2011).

CHALLENGES:

- There are no commonly defined measures of SEL, and there is little to no research on how using it as an indicator in school classification systems would affect its validity as a measure.
- There are concerns about the potential unintended consequences of using survey data to hold schools accountable for these competencies.
- Social and emotional competence measurement is influenced by multiple factors (e.g., reference bias or personal factors) and tends to vary across ages and genders.

[3]CORE is a nonprofit organization that intends to improve student achievement by fostering collaboration and learning between California's largest eight school districts: Fresno, Garden Grove, Long Beach, Los Angeles, Oakland, Sacramento, San Francisco, and Santa Ana Unified, which serve more than one million students. For more information, visit the CORE Districts website: http://coredistricts.org/.

- Teachers may misinterpret behavior, erroneously rely on first impressions, or incorrectly attribute a student's social-emotional skills to their opinion of the student (Duckworth & Yeager, 2015).
- Communication of results to parents, community, and policy makers can be challenging in terms of ensuring all stakeholders fully understand SEL and its implications.
- Students' attitudes and beliefs over time may be inconsistent, and their ability to perceive their own skills may be limited (Grossman, 2016).
- Collecting data on SEL can be expensive and time-consuming.

### Resource Equity

Indicators of resource equity pertain to resource-related measures that contribute to student success within and outside of school, including access to highly effective teachers, adequate school funding, a well-rounded education, and student health and wellness. Equitable and effective distribution of funds is an "essential precondition" that is necessary to ensure high-quality schooling for all students, especially those whose needs are more complex and who require more supports, which should trigger additional resources (Baker et al., 2010). Although these measures are important indicators of school quality and student success, they are often not under a school's control and have more implications for district and state resources. Due to all the funding opportunities within ESSA that are tied to promoting equity (e.g., direct student services, school improvement funds), it is particularly important to align the new school quality indicator for accountability with state/district spending policies so that Title I funds will be used to support the state's vision in ensuring equity, access, and improvement for all learners.

BENEFITS:

- Students' access to resources (e.g., funding, instructional supports) that impact their classroom experience has a significant effect on factors ranging from achievement and persistence to future earnings (Batel et al., 2016).
- This type of indicator could be used to demonstrate the equal and equitable distribution of teachers, so that schools receiving Title I-A funding do not have inexperienced, unqualified, or out-of-field teachers disproportionately teaching poor and minority students.
- The collection of resource equity data can encourage support for and expansion of ongoing professional development opportunities for teachers by highlighting areas where teachers' professional development opportunities are lacking.
- Analysis of resource equity data may identify inequities, which can lead to increased program spending resulting in positive student outcomes such as:
    - Providing equal access to effective teachers for one year has been shown to reduce the student achievement gap between disadvantaged and nondisadvantaged students by two percentage points (Isenberg et al., 2013).
    - Participation in state-funded preschool programs has been shown to improve children's language, literacy, and mathematical skills (Barnett et al., 2005).

- Increased spending improves important student outcomes, such as student achievement and graduation rates, and resources are especially valuable for students from disadvantaged backgrounds (Baker, 2016).
- Participation in extracurricular activities such as academic clubs and athletics reduces the likelihood of negative outcomes, such as dropping out of school (Holloway, 1999–2000).

CHALLENGES:

- These measures are often outside of a school's control.
- For any student- or teacher-collected data measure, there must be an effort to account for and mitigate possible inaccuracies in the data.
- Any measure related to observation must be fair and reliable.
- There are challenges in establishing a measure that can be comparable across grade spans and schools, given variations in resources across schools.
- Any resource equity indicator must demonstrate reliability and validity as a measure of school quality.
- An agreed-upon definition of "qualified" and/or "effective" teachers and school staff must be developed and applied consistently.

### Postsecondary Readiness

Nearly all states have their own definitions or visions of what postsecondary readiness means for their students. These definitions, for the most part, are actionable and provide for measurable outcomes. Using their definitions, states can identify and use discrete criteria to select indicators or measures to include in their accountability systems to support their vision of postsecondary readiness. Through careful selection of postsecondary readiness indicator(s), states can connect their education goals and accountability while incorporating in their accountability systems measures that are meaningful to parents and students and actionable for educators and for monitoring alignment between high school and postsecondary education and training.

BENEFITS:

- A postsecondary readiness measure can provide useful data to parents, educators, and policymakers regarding student progress toward college and career readiness.
- A postsecondary readiness measure can contribute to a broader definition of student success.
- Collecting this data can support school leaders as they monitor the alignment between high school and postsecondary education training.
- A postsecondary readiness measure can signal expectations regarding college and career to stakeholders.

CHALLENGES:

- Data collection and validation can be difficult.
- When calculating measures, there may be varying denominators, which will impact outcome assessment. For example, career and technical education definition and participation is likely to differ across districts and schools.
- Variation in a school's access to postsecondary preparation may be related to factors outside the school's control (e.g., geographic location, school size, funding disparity).
- There may be communication challenges regarding college versus career readiness.

## Evidence Within ESSA – Indicators and Measures

ESSA incentivizes states to utilize evidence-based programs and interventions in districts and schools. ESSA's evidence-based provisions are included to offer states an opportunity to work with districts to select and implement research-based interventions. However, these same definitions of evidence can be applied to the measures that states select for their accountability systems. By selecting measures that have a research base that is comparable to the level of methodological rigor of the intervention expected to (eventually) improve outcomes from these measures, states can ensure that they have selected measures that are not only supported by sound research but are also actionable, and that the actions taken will likely (depending on the level of evidence) result in the desired outcomes.

ESSA groups research across four standards that embody varying degrees of methodological rigor, with Tier 1 representing the strongest and Tier 4 representing the weakest level of research:

- Tier 1 includes randomized control trials (RCTs). RCTs assign students to an intervention or a control group randomly. The only expected difference between the control and intervention groups in an RCT is the outcome of the variable being studied. There are drawbacks to RCTs. RCTs are costly and time-consuming, and they raise ethical questions about assigning children to less-favorable educational conditions.
- Tier 2 includes "moderate," or quasi-experimental, studies. Tier 2 research still compares control and treatment groups, but the two groups are not randomly distributed. Rather, researchers match the groups as well as possible, such as by demographics, age, gender, and other factors that might otherwise explain different results.
- Tier 3 includes "promising," or correlational, studies involving researchers trying to determine whether two variables are related, and if they are, not being able to establish whether one causes the other.
- Tier 4 includes programs that "demonstrate" a rationale but have not yet been scientifically researched. This standard requires states to include a logic model and reference a positive evaluation of some kind in relationship to a chosen intervention, and to track its effects in the field.

When considering an indicator or measure, states should remember that while a stronger impact is preferable, there is a much greater risk that a measure supported by weaker evidence will achieve much less. The farther down the tiers one goes, the more likely that the positive findings of a research study will not be replicated. In summary, when selecting a measure, states should aim as high on the evidentiary scale as possible. Table 2 includes potential indicator options, rationale for their use, possible measures, and research to support the indicators.

**Table 2. Potential Indicator Options**

| Indicator/ Measure | Rationale for Use | Grade-Level Data Collected | Summary of Research Findings | ESSA Level of Research Evidence | Possible Measure |
|---|---|---|---|---|---|
| **Student attendance rate** | Student attendance is identified as a factor in positive learning outcomes. | K–12 | Prior research has found that attendance is positively correlated with student academic outcomes, including grade point average and standardized test performance (Gottfried, 2010). | 2 (Moderate):<br>Gottfried's (2010) study utilized a quasi-experimental design to estimate the causal impact of attendance on student achievement. This study found a statistically significant relationship between student attendance and academic achievement. | • Average daily student attendance<br>• Average number of student absences |
| **Teacher attendance rate** | This measure is related to educator quality and teacher quality. | K–12 | Teacher absenteeism is related to decrease in student achievement, and it represents an increase in personnel expenses related to substitute teachers (Joseph et al., 2014). | 3 (Promising):<br>Joseph et al. (2014) examined data on teacher attendance from 40 of the largest public school districts in the United States. Based on their analysis of how often teachers were chronically absent in these districts, NCTQ recommends reevaluation of policies and incentives designed to encourage teacher attendance. | • Rates of teacher attendance<br>• Percentage of time students are instructed by a substitute teacher |

| Indicator/ Measure | Rationale for Use | Grade-Level Data Collected | Summary of Research Findings | ESSA Level of Research Evidence | Possible Measure |
|---|---|---|---|---|---|
| **Student suspension rate** | As part of evaluating school climate, collecting data on student discipline can be informative. | K–12 | Suspensions are associated with negative student outcomes (e.g., lower academic performance, higher rates of dropout, failure to graduate on time, decreased academic engagement, and future disciplinary exclusion) (United States Department of Education, 2017). | 2 (Moderate):<br>Rausch and Skiba (2005) examined 2002–2003 public elementary and secondary school data from a Midwestern state, focusing on rates of student out-of-school suspension and expulsion. When analyzed with variables for achievement and socio-demographic identifiers through ordinary least squares regression models, Rausch and Skiba found a negative relationship between discipline and academic achievement. In this study, the use of out-of-school suspensions and expulsion were found to be negatively related to achievement. | • Disaggregated rate of student suspensions<br>• Student suspension rate compared to other schools within a district<br>• Student suspension rate compared to other districts |
| **School climate** | This measure is related to positive school climate associated with student development and academic achievement. | K–12 | Positive school climate is associated with improved student achievement, lower dropout rates, fewer student discipline problems (e.g., absences, suspensions, and expulsions), decreased incidences of violence, and increased teacher retention (O'Brennan & Bradshaw, 2013). | 2 (Moderate):<br>Jones and Shindler (2016) administered the Alliance for the Study of School Climate's School Climate Assessment Instrument to a sample of 30 urban public schools. Jones and Shindler collected data from observed school practices and focus groups, as well as data from the California State Academic Performance Index and Similar School Rating scores. Analysis found a strong relationship between the quality of school climate and students' academic achievement levels. | • Survey of student perception of school climate<br>• Data on student harassment and bullying |

| Indicator/ Measure | Rationale for Use | Grade-Level Data Collected | Summary of Research Findings | ESSA Level of Research Evidence | Possible Measure |
|---|---|---|---|---|---|
| **Student engagement** | High level of student engagement is indicative of a positive school culture. | K–12 | Prior research has found that higher levels of student engagement are associated with improved student learning outcomes (Reyes et al., 2012). | 3 (Promising):<br>Reyes et al. (2012) conducted multilevel mediation analyses on data collected from 63 fifth- and sixth-grade classrooms on student engagement in classrooms. Data was collected from student surveys and observations. Analyses found that the positive relationship between classroom emotional climate and grades was mediated by student engagement. | • Teacher observations/ratings of student engagement<br>• Student participation in extracurricular activities |

| Indicator/ Measure | Rationale for Use | Grade-Level Data Collected | Summary of Research Findings | ESSA Level of Research Evidence | Possible Measure |
|---|---|---|---|---|---|
| **Non-cognitive skills/SEL** | Social and emotional learning skills support development of academic and lifelong learning skills. | K–12 | Separate meta-analyses of school-based and after-school SEL programs found that:<br>• Participation improved elementary and middle school students' test scores by an average of 11 to 17 percentile points, decreased conduct problems, and increased students' problem-solving skills (Payton et al., 2008).<br>• School-based SEL programs for students in kindergarten through 12th grade found that participation improved students' academic performance by 11 percentile points, reduced their anxiety and stress, and increased their prosocial behavior (Durlak et al., 2011). | 4 (Demonstrates):<br>Durlak et al. (2011) conducted a meta-analysis of SEL interventions. Forty-seven percent of the studies included in this analysis used randomized designs. Overall, the authors note the positive effects observed in studies of SEL programs and their impact on students' behaviors and attitudes about self, others, and school. | • Social emotional assessments<br>• Student self-reported measures of SEL core competencies<br>• Student access to SEL instruction |

| Indicator/ Measure | Rationale for Use | Grade-Level Data Collected | Summary of Research Findings | ESSA Level of Research Evidence | Possible Measure |
|---|---|---|---|---|---|
| **Early dropout indicators** | This measure can be included to track student progress and identify students that may need extra support or intervention. | K–12 | By identifying students who may drop out of school, schools can implement appropriate interventions to encourage student retention. These interventions may have a personal/affective focus, an academic focus, a family outreach focus, a school structure focus, or a work-related focus (Lehr et al., 2004). | 3 (Promising):<br>The National Center on Secondary Education and Transition has identified key components of dropout prevention programs based on studies of interventions design to decrease dropout and increase school completion. | • Student rate of chronic absenteeism<br>• Low standardized test composite scores<br>• Rates of disciplinary action |
| **On-track status** | This measure can be used to track student progress and ensure students are meeting benchmarks for graduation. | 9–12 | A metric to track the progress of grade 9 students can be used to assessment how many students are on track to graduate high school. One study found that students who are on track for graduation at the end of grade 9 are more than three-and-a-half times likely to graduate in four years than peers who are not on track (Allensworth & Easton, 2005). | 2 (Moderate):<br>Allensworth and Easton (2005) developed a metric for on-track status, based on the number of credits a grade 9 student has accumulated and the grades obtained in those courses. Applied to data from students of the Chicago Public Schools, analysis found that students who were on track by the end of grade 9 were more likely to graduate in four years. | • Number of credits a grade 9 student has completed at the end of the school year<br>• Number of grade 9 students that have earned the established number of credits during the school year |

| Indicator/ Measure | Rationale for Use | Grade-Level Data Collected | Summary of Research Findings | ESSA Level of Research Evidence | Possible Measure |
|---|---|---|---|---|---|
| **High school GPA** | Collecting students' high school GPA supports efforts to track students' progress toward graduation, as well as college and career readiness. | 9–12 | At the high school level, indicators that have been found to be predictive of postsecondary readiness include: attendance, GPA, and test scores (College and Career Readiness and Success Center, 2013). | 2 (Moderate):<br>Hiss and Franks (2014) examined longitudinal student data from 33 higher education institutions to evaluate the impact of testing optional policies on college admissions. Hiss and Franks found a minimal relationship between students who had submitted standardized test scores and those who did not in terms of academic performance. However, the authors did find that students' college GPAs were highly similar to their high school GPAs. | • Disaggregated data on students' high school GPA, collected over multiple semesters and years |
| **Postsecondary Readiness** | This measure can provide data on student progress toward college and career readiness, as well as monitor the alignment between high school and postsecondary training. | 9–12 | Performance on Advanced Placement and/or International Baccalaureate exams, college entrance exams (e.g., SAT, ACT), and completion of workforce certificates can also be predictive of postsecondary readiness (College and Career Readiness and Success Center, 2013). | 2 (Moderate):<br>The College and Career Readiness and Success Center (2013) conducted a review of studies identifying indicators for academic achievement. For high school students, their review found several indicators for postsecondary readiness, including those related to grades, enrollment in rigorous coursework, and performance on college entrance assessments. | • Number of students enrolled in AP/IB courses<br>• Number of students enrolled in dual-credit college coursework<br>• Number of students enrolled in CTE program |

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