Education-to-Workforce Indicator Framework

Assessing indicators' readiness for implementation

What is the Education-to-Workforce (E-W) Indicator Framework?

The E-W Framework is a public resource that recommends 99 indicators to measure along the pre-K-to-workforce continuum and offers guidance on collecting and using data to advance educational and economic opportunity for all. The framework's primary goal is to encourage cross-sector collaboration and alignment across local, state, and national data systems by promoting a common set of metrics and principles to comprehensively assess and address disparities across the pre-K, K–12, postsecondary, and workforce sectors.

In early conversations with potential framework users, we heard a desire for more guidance on where to start with the framework's measurement recommendations. Some of the framework's 99 recommended indicators are already collected regularly and consistently (that is, there is general agreement in the field about what to measure and how), whereas others are not yet collected systematically because they require securely linking individual-level records from multiple sectors and/or require a new assessment or survey tool. For a small number of indicators, measurement is still being refined and tested in the field.

The indicator framework is great, but where do I start?

This resource is designed to help users identify which indicators and metrics are likely to be ready for adoption and which need further development. We have categorized indicators into three levels of readiness for adoption: **well-established** (high readiness), **evolving** (medium readiness), and **emerging** (low readiness). Categorization is based on whether the indicator is *feasible* to measure, *comparable* across states and localities, and the *level of consensus* in the field around whether and how it should be measured.

Different audiences may have different uses for indicators based on levels of readiness for adoption. For example, funders and researchers may be most interested in advancing the evidence base for indicators that require further R&D, whereas state and local leaders may be interested in understanding which indicators are currently well-established and identifying any that are not already being measured by their state or district.

Well-established indicators

The underlying data needed to measure the indicator are available, and measuring and reporting the indicator would be highly feasible. The indicator may not be currently widely or consistently reported, and some additional work may be needed to improve data quality or calculate the measure from available data (though measurement would not require new data collection or linkages across data systems).

Example user: A state decisionmaker who wants to ensure their agencies track and report standardized metrics on education and workforce systems comparably with other states.

Evolving indicators

Additional data collection or linkages across data systems are needed to measure the indicator. In cases where an instrument is needed to measure the indicator, validated instruments exist and there is general consensus on the underlying construct that should be measured. New research is not required, though additional work may be needed to refine or choose between potential instruments or metrics.

Example user: An advocacy group that wants to support data linkage to enable new calculations and data reporting that gives local agencies the information they need.

Emerging indicators

Additional research and development (R&D) are needed for the field to reach a consensus on how to define and measure this indicator. R&D may include building evidence connecting the indicator with later outcomes, developing a valid instrument/metric to measure the indicator, and/or testing available instruments/metrics to identify which are reliable across diverse settings and groups.

Example user: A funder who wants to support development of new or improved measures to capture education and workforce experiences and system conditions.

Considerations

State, local, or organizational context may influence readiness for adoption. While this analysis offers a broad frame for thinking about indicators' readiness for adoption, there is no "one-size-fits-all" readiness label that applies across all contexts. For example, although we refer to the *early grades on track* indicator as "emerging" because the field lacks a common definition of this indicator and we are not aware of any examples of it being collected at the state level, some districts (such as Chicago Public Schools and Montgomery County Public Schools) have piloted this indicator locally and are making important strides in building evidence for why and how to measure it more widely. States may also *go beyond* the E-W Framework's recommendations by measuring more advanced indicators or dimensions of quality. The framework's 99 indicators are not meant to be exhaustive; rather, they represent a finite set of measures that matter most.

The E-W Framework recommends both indicators (what to measure) and metrics (how to measure them), and this analysis generally focuses on indicators rather than specific metrics. That is, if an indicator is already widely collected using any metric, we generally considered it to be "well-established" because of the observed feasibility of measuring that construct (for example, all states are required under ESSA to measure *math and reading proficiency in high school*, but the tested grade levels and assessments used vary). In some cases, states and districts would need to make decisions about which instruments to use. While there may be room for improvement on instruments already in use, the widespread measurement of the indicator generally suggests a high level of readiness for adoption.

Some indicators have different levels of readiness for adoption across sectors. In some cases, an indicator is associated with multiple pre-K-to-workforce sectors and has different recommended metrics for different sectors. For example, the framework recommends measuring *access to college and career advising* as the ratio of students to counselors in the K–12 sector, but the percentage of students using counseling services in the postsecondary sector. The recommended K–12 metric is based on existing administrative data and is therefore classified as "well-established" (high readiness) in the K–12 sector. However, the recommended postsecondary metric is based on data that are not currently collected or reported systematically and would require additional data collection, and is therefore classified as "evolving" (medium readiness) in that sector.

Key terms

Indicator: Information data systems should measure along the pre-K-to-workforce continuum to assess inequities and track progress. The E-W Framework contains three types of indicators:

- **Outcomes & Milestones:** Key outcomes and milestones along the E-W continuum strongly related to achieving economic mobility and security (for example, *high school graduation*).
- **E-W System Conditions:** Key institutional or systemic environments, policies, and practices that help or hinder an individual's ability to achieve positive E-W outcomes (for example, *access to early college coursework*).
- **Adjacent System Conditions:** Key experiences, situations, and circumstances outside of E-W systems that help or hinder positive E-W outcomes (for example, *food security*).

Metric: A specific way to measure an E-W Framework indicator, often expressed as the percentage of students or systems meeting a certain threshold or set of criteria.

Instrument: A specific tool, such as a questionnaire or performance assessment, used to collect data.

Sector: One of four specific segments of the pre-K-to-workforce continuum: Pre-K, K–12, postsecondary, or workforce.

Comparability: Data for the indicator are commonly measured using a consistent approach across contexts, such as states, localities, or districts.

Feasibility: Data for the indicator are widely available or feasible to collect at reasonable cost in relation to the indicator's value for addressing equity gaps.

R&D: Research and development aimed to generate new knowledge or improve products/services. Relevant R&D activities for E-W Framework indicators and metric include developing evidence connecting an indicator with outcomes, developing a valid instrument/metric for measurement, and/or testing instruments/metrics to identify which are reliable across settings.

Well-established indicators

The underlying data needed to measure these indicators are available, and measuring and reporting the indicators would be highly feasible. However, an indicator may not be currently widely or consistently reported, and some additional work may be needed to improve data quality or calculate the measure from available data (though measurement would not require new data collection or linkages across data systems). Indicators in the *well-established* category range from being ready for "off the shelf" implementation, where the field is already unified around a specific metric (and instrument, if applicable), to indicators that are already widely reported in some capacity but are often calculated or reported differently across institutions, districts, or states; and/or for which data quality improvements are needed.

You may be interested in these indicators if...

- You are a **state or local official** looking to understand what indicators can and should be tracked and reported in your agency's data system. For example, you may wish to identify well-established indicators that are not already in your state longitudinal data system or your local school performance data system and consider them for adoption.
- You work for a **funder, community-based organization, or researcher** looking to identify indicators that can be used to feasibly track the progress or evaluate the success of an initiative. For example, if you are funding, implementing, or evaluating an initiative aimed at early learning and resources for new data collection are limited, you may wish to begin by collecting well-established indicators related to this topic.
- You work for or partner with an **advocacy organization** that can help promote consistency in how measures are tracked and reported, therefore supporting comparability of well-established indicators across states and districts. For example, you may wish to identify well-established indicators that being reported differently across states (such as on-track indicators) to promote more consistent measurement.

Examples of well-established indicators

High school graduation: High school completion is regularly reported in administrative data systems, and the metric definition (adjusted cohort graduation rate) has been adopted across the country. Graduation in four years is most commonly reported, as it is the time to graduation that most students should aim to achieve. As such, it is important to assess and address inequities in four-year rates. However, looking at four-year rates alone can mask the achievements of students who may need more time to graduate, so we also recommend measuring five- and six-year graduation rates. Five- and six-year graduation rates are less widely reported than four-year rates, although the necessary data are also part of districts' administrative data systems. California offers an example of a state that reports a five-year cohort graduation rate through its DataQuest system.

First-year credit accumulation: Data on first-year credit accumulation by postsecondary students currently are not widely available to the public because they are not included in the Integrated Postsecondary Education Data System (IPEDS). However, colleges calculate these measures using data that are regularly part of their administrative data systems. Using these same administrative data, the National Student Clearinghouse (NSC) offers the Postsecondary Data Partnership service to help colleges track and analyze first-year credit accumulation data, including benchmarking against other institutions. On-track credit accumulation is positively associated with degree completion, so making these data more widely available could help systems and institutions identify opportunities to better support students in staying on track to college graduation.

Access to in-demand CTE pathways: High schools and community colleges record program offerings as part of regular operations, but to identify whether these offerings are aligned to occupations in demand by employers in the region, programs must be connected to labor market projections data reported by state and federal agencies. What counts as an in-demand occupation or CTE pathway can vary across localities. The framework recommends standardizing this definition by using criteria established by the U.S. Department of Labor's Occupational Information Network (O*NET). Texas offers an example of a state that publishes transparent information about its statewide CTE programs of study, including related postsecondary and work-based learning opportunities, industry-based certifications, and aligned occupations with median wages and projected growth.

All well-established indicators

Tip! Click on the hyperlinked indicator title for details on why it matters, how to measure it, and more.

PK	K12	PS	WF	Well-established indicators	Definition
Outcomes & Milestones					
✓				Enrollment in quality public pre-K	Eligible children are enrolled in a publicly funded pre-K program, which can be administered through mixed delivery systems that include Head Start, pre-K classrooms in public schools, and licensed family-based child care programs and community-based organizations.
✓				Developmental progress: language and literacy[1]	Children develop and demonstrate foundational language and literacy skills.
✓				Developmental progress: cognition[2]	Children develop and demonstrate foundational math and scientific reasoning skills.
✓	✓	✓		Consistent attendance	Students are present for more than 90 percent of enrolled days.
✓	✓			Positive behavior	Students are not suspended or expelled from school and do not experience other types of exclusionary discipline, such as restraint and seclusion.
	✓			Math and reading proficiency in grade 3	Students demonstrate proficiency in math and reading/English language arts according to high-quality state standards.
	✓			6th grade on track	Grade 6 students are on track to graduate high school on time.
	✓			8th grade on track	Grade 8 students are prepared to transition to high school and are on track to graduate on time.
	✓			Math and reading proficiency in grade 8	Students demonstrate proficiency in math and reading/English language arts according to high-quality state standards.
	✓			Successful completion of Algebra 1 by 9th grade	Students successfully complete Algebra I or an equivalent course before or during grade 9.
	✓			9th grade on track	Grade 9 students are on track to graduate high school in four years, enroll in postsecondary education, and succeed in their first year of postsecondary education.
	✓	✓		Grade point average	Middle school students earn course grades that demonstrate high school readiness; high school students earn course grades necessary to gain admission to college; and college students earn grades high enough to graduate and obtain jobs.
	✓			Math and reading proficiency in high school	Students demonstrate proficiency in math and reading/English language arts according to high-quality state standards.
	✓			College preparatory coursework completion	High school students meet typical coursework requirements for admission to a four-year college.
	✓	✓		Early college coursework completion	High school students successfully complete early college coursework (Advanced Placement [AP], International Baccalaureate [IB], or dual credit).
	✓			SAT and ACT participation and performance	High school students take and earn a "college-ready" score on the ACT or SAT before graduating high school.
	✓	✓		FAFSA completion	Grade 12 students eligible for federal financial aid complete the Free Application for Federal Student Aid (FAFSA) by June 30.
	✓			High school graduation	Students graduate from high school with a regular diploma within four, five, and six years of entering high school.

[1] This indicator was formerly called *Kindergarten readiness: language and literacy.*
[2] This indicator was formerly called *Kindergarten readiness: cognition.*

PK	K12	PS	WF	Well-established indicators	Definition
	✓	✓		Postsecondary enrollment directly after high school graduation	High school graduates enroll in a postsecondary institution by October 31 following their high school graduation.
		✓		First-year credit accumulation	Students attempt and complete sufficient credits during their first undergraduate year to be on track for on-time degree completion.
		✓		First-year program of study concentration	Postsecondary students demonstrate selection of a program of study by completing nine credits or three courses in a meta-major during their first year.
		✓		Gateway course completion	Completion of college-level introductory math and English courses, as defined by each postsecondary institution, during the first year of college.
		✓		Postsecondary persistence	Students continue enrolling in college in subsequent years, including transfers to other colleges.
		✓		Transfer (if applicable)	Postsecondary students transfer to a longer program (from certificate to associate's degree, or from associate's to bachelor's degree).
		✓		Postsecondary certificate or degree completion	Students complete a certificate, associate's, or bachelor's degree within a specified time frame after entering college.
		✓		Enrollment in graduate education	Students enroll in a graduate education program after completing an undergraduate degree.
		✓		Graduate degree completion	Students complete a graduate degree (master's degree or higher) within a specified time frame after entering graduate school.
✓				Developmental progress: social-emotional development[3]	Children develop and demonstrate the skills to form positive relationships with adults and peers, emotional functioning, and a sense of identity and belonging.
✓				Developmental progress: approaches to learning[4]	Children develop and demonstrate emotional and behavioral self-regulation, cognitive self-regulation (executive functioning), initiative and curiosity, and creativity.
✓				Developmental progress: perceptual, motor, and physical development[5]	Children develop and demonstrate gross and fine motor skills, and an understanding of health, safety, and nutrition.
	✓	✓		CTE pathway concentration	Students participating in career and technical education (CTE) concentrate in a single chosen pathway or program of study.
		✓	✓	Student loan repayment	Individuals pay student loans on time and make progress toward paying down their debt.
E-W System Conditions					
✓				Access to quality public pre-K	Children have access to a high-quality public pre-K program.
✓				Access to full-day pre-K	Children have access to full-day, publicly funded pre-K programs.
✓	✓	✓	✓	Access to child care subsidies	Eligible families have access to child care by using subsidies to pay for care.
✓	✓			Equitable discipline practices	Schools treat students similarly and appropriately for disciplinary infractions.
	✓			Access to full-day kindergarten	Children have access to full-day kindergarten programs taught by the same certificated staff member in a day.

[3] This indicator was formerly called *Kindergarten readiness: social-emotional development.*
[4] This indicator was formerly called *Kindergarten readiness: approaches to learning.*
[5] This indicator was formerly called *Kindergarten readiness: perceptual, motor, and physical development.*

PK	K12	PS	WF	Well-established indicators	Definition
	✓			English learner progress	Emerging multilingual students achieve English proficiency within five years of being classified as English learners.
✓	✓			Teacher credentials	Students have access to teachers who have earned credentials demonstrating their knowledge and preparation for teaching.
✓	✓			Teacher experience	Students have equitable access to experienced teachers.
✓	✓			Educator retention	Teachers and school leaders return to the same school in consecutive years.
✓	✓	✓		Classroom observations of instructional practice	Teachers demonstrate high-quality instructional practices and interactions with students.
	✓			Access to college preparatory coursework	Students have access to the full set of courses needed to meet the requirements for admission at most colleges.
	✓	✓		Access to early college coursework	Students have access to Advanced Placement (AP), International Baccalaureate (IB), and dual enrollment courses.
	✓			Equitable placement in rigorous coursework	Students from various demographic subgroups are proportionally represented in rigorous courses and programs.
✓	✓	✓		Expenditures per student	The amount of education and related expenditures per student.
✓	✓	✓		Representational racial and ethnic diversity of educators	Educators reflect the racial and ethnic diversity of the student body.
✓	✓	✓	✓	School and workplace racial and ethnic diversity	Individuals are exposed to racial and ethnic diversity within their schools, postsecondary institutions, and workplaces.
✓	✓	✓	✓	Access to health, mental health, and social supports	Individuals have access to health, mental health, and social services provided by educational institutions and employers.
	✓	✓		Access to college and career advising	College and career counseling services are available in high schools and college campuses.
	✓	✓		Access to in-demand CTE pathways	Career and technical education (CTE) pathway offerings are aligned to in-demand occupations, as defined by regional labor market data.
		✓		Unmet financial need	The cost of college attendance students must pay out of pocket or finance through loans.
		✓	✓	Cumulative student debt	The total amount of student loans individuals take out while enrolled in college.
			✓	Expenditures on workforce development programs	The amount of government funding dedicated to workforce development programs, including apprenticeships and job training programs, in a state.
Adjacent System Conditions					
✓	✓	✓	✓	Health insurance coverage	Individuals have health insurance coverage for preventative and emergency care.
✓	✓	✓	✓	Exposure to neighborhood crime	The rate of violent and property crimes in a city or county.
✓	✓	✓	✓	Neighborhood economic diversity	The concentration of poverty within a city or county.
✓	✓	✓	✓	Neighborhood racial diversity	The share of an individual's neighbors who are people of other races and ethnicities
✓	✓	✓	✓	Neighborhood juvenile arrests	The rate of juveniles arrested in a city or county.

Note: Light gray check marks indicate that the indicator should be measured in the check-marked sector, but the indicator is not considered well-established *in that sector*. For instance, *Consistent attendance* is classified as "evolving" for the postsecondary sector but "well-established" for the pre-K and K–12 sectors because attendance data are more widely collected there.

Evolving indicators

Additional data collection or linkages across data systems are needed to measure these indicators. In cases where an instrument is needed to measure an indicator, validated instruments exist and there is general consensus on the underlying construct that should be measured. New research is not required, though additional work may be needed to refine or choose between potential instruments or metrics.

You may be interested in these indicators if...

- You are a **state or local official** looking to enable measurement and reporting on an expanded set of indicators. For example, state officials looking to modernize their state longitudinal data systems may identify indicators that can be adopted by linking data across sectors. Similarly, local officials may identify indicators that support local goals but require implementing or systematizing data collection practices.
- You are a **funder** interested in supporting policymakers in advancing measurement and use of these indicators in the field. For example, funders may support state or local agencies interested in piloting new data collection practices or linking data across systems to enable measurement of evolving indicators. Funders may also encourage grantees to measure evolving indicators related to their initiatives, providing the necessary support.
- You are a **researcher** interested in conducting research to strengthen the evidence base about how best to measure an indicator at scale. For example, researchers studying effective school leadership could conduct research to validate methods or tools to measure principal effectiveness.
- You work for or partner with a **community-based organization** or an **advocacy organization** that can help generate evidence or build consensus in the field about how to measure critical indicators (that is, which instruments or metrics should be used). For example, an organization could spotlight indicators of social-emotional learning to promote the use of specific instruments across contexts.

Examples of evolving indicators

School-family engagement: Several tools exist to measure this indicator, including family surveys and teacher or staff surveys. The E-W Framework recommends surveying families to measure their perceptions of school-family engagement and selecting tools with an evidence base, though others may also be appropriate. Family engagement can also be measured with teacher surveys, but the framework emphasizes the importance of elevating families' voices in measuring this indicator. Additional work is needed to build consensus around which instrument to use and how to report data on this indicator at scale (that is, at district, state, and national levels).

Successful career transition after high school: Measuring this indicator requires either collecting self-reported data from students after they graduate high school or linking individual-level data across multiple systems, including K–12 graduation records, noncredit CTE enrollment records from postsecondary and vocational institutions, employment and earnings records, records of participation in state apprenticeship programs from labor and workforce development departments, and national military enlistment records. Without these linkages, schools may have to rely on students' self-reports, which may be burdensome to collect and less accurate than data from administrative records.

Participation in work-based learning: While there is broad consensus on the value of opportunities such as internships, apprenticeships, and work study, the field lacks a common definition for "work-based learning." Perkins V defines work-based learning as "Sustained interactions with industry or community professionals in real workplace settings, to the extent practicable, or simulated environments at an educational institution that foster in-depth, firsthand engagement with the tasks required in a given career field, that are aligned to curriculum and instruction." However, it is not clear from this definition which experiences should be tracked and how. Data on internships, unregistered apprenticeships, and other work-based learning opportunities are not currently reported systematically. Some schools may track participation in for-credit work-based learning in their administrative and course data systems, but others rely on student surveys to track participation. Additional work is needed to agree on which experiences qualify as work-based learning and how to systematically measure and report them.

All evolving indicators

Tip! Click on the hyperlinked indicator title for details on why it matters, how to measure it, and more.

PK	K12	PS	WF	Evolving indicators	Definition
Outcomes & Milestones					
✓	✓	✓		Consistent attendance	Students are present for more than 90 percent of enrolled days.
✓	✓			Positive behavior	Students are not suspended or expelled from school and do not experience other types of exclusionary discipline, such as restraint and seclusion.
	✓			College applications	Grade 12 students submit a well-balanced portfolio of at least three college applications.
	✓	✓		Selection of a well-matched postsecondary institution	High school graduates select the best "match" college among the institutions to which they were admitted, based on the institutional graduation rate of similar students.
	✓	✓		Senior summer on track	High school graduates intending to enroll in postsecondary education in the fall after high school graduation complete the registration, financial, and logistic deadlines over the summer necessary to successfully enroll in the fall.
	✓	✓	✓	Self-management	Students are able to regulate their emotions, thoughts, and behaviors effectively in different situations.
	✓	✓	✓	Growth mindset	Students believe that their abilities can grow with effort.
	✓	✓	✓	Self-efficacy	Students believe in their ability to achieve an outcome or reach a goal.
	✓	✓	✓	Social awareness	Students are able understand others' perspectives; understand social and ethical norms for behavior; and recognize family, school, and community resources and supports.
✓	✓	✓	✓	Mental and emotional well-being	Individuals possess mental and emotional well-being.
	✓	✓	✓	Physical development and well-being	Children develop and demonstrate gross and fine motor skills, and an understanding of health, safety, and nutrition.
	✓			Successful career transition after high school	High school graduates transition to training, military service, or employment in the fall after graduating high school (if they do not matriculate to credit-bearing postsecondary education programs).
	✓	✓	✓	Industry-recognized credential	Individuals complete at least one industry-recognized credential, as defined by each state.
	✓	✓	✓	Participation in work-based learning	Credential seekers participate in an internship, work study, cooperative education, apprenticeship program, or other work-based learning opportunities.
		✓	✓	Minimum economic return	Individuals earn enough after completing their education to recover the costs of their investment.
			✓	Economic mobility	Individuals reach the level of earnings needed to enter the fourth income quintile or above, regardless of field of study.
			✓	Economic security	Individuals reach median levels of wealth (net worth).
E-W System Conditions					
✓	✓			School-family engagement	There are effective partnerships between schools and families, such that parents have access to school systems and are meaningfully included in school processes and student learning.

PK	K12	PS	WF	Evolving indicators	Definition
✓	✓			Equitable discipline practices	Schools treat students similarly and appropriately for disciplinary infractions.
✓	✓			Educator retention	Teachers and school leaders return to the same school in consecutive years.
	✓	✓		Student perceptions of teaching	Students report having a supportive, engaging teacher who sets clear, fair, and high expectations, and helps them learn.
	✓	✓		Teachers' contributions to student learning growth	Teachers contribute to students' learning growth.
✓	✓			Effective program and school leadership	Schools are led by effective principals and school leaders.
	✓	✓		Institutions' contributions to student outcomes	Schools and colleges contribute to students' short- and long-term outcomes.
✓				Access to early intervention screening	Children receive early intervention screening for any developmental, sensory, and behavioral concerns to determine whether services are needed.
	✓	✓		School safety	Students feel physically, mentally, and emotionally safe at school or campus (that is, safe from both physical threats and violence, as well as bullying and cyberbullying).
✓	✓	✓	✓	Inclusive environments	Individuals feel they belong and feel connected to their peers in their schools, postsecondary institutions, and workplaces.
✓	✓	✓	✓	School and workplace socioeconomic diversity	Individuals are exposed to socioeconomic diversity within their schools, postsecondary institutions, and workplaces.
✓	✓	✓	✓	Access to health, mental health, and social supports	Individuals have access to health, mental health, and social services provided by educational institutions and employers.
	✓	✓		Access to college and career advising	College and career counseling services are available in high schools and college campuses.
			✓	Access to jobs paying a living wage	Jobs that pay enough to meet basic family needs are available in a community.
			✓	Access to ongoing career skills development	Workers are employed in jobs that provide on-the-job training or a professional learning and development path.
Adjacent System Conditions					
✓	✓	✓	✓	Childhood experiences	Individuals have not experienced repeated traumatic events within home environments.
✓	✓	✓	✓	Food security	Individuals have access to enough affordable, nutritious food.
✓	✓	✓	✓	Access to affordable housing	There is sufficient availability of affordable housing for the number of families with low incomes in an area (city or county).
✓	✓	✓	✓	Access to technology	Individuals have access to a reliable Internet connection and a personal desktop or laptop computer.
✓	✓	✓	✓	Access to transportation	Individuals have access to low-cost and timely transportation to commute to school or work.

Note: Light gray check marks indicate that the indicator should be measured in the check-marked sector, but the indicator is not considered evolving *in that sector*. For instance, *Consistent attendance* is classified as "evolving" for the postsecondary sector but "well-established" for the pre-K and K–12 sectors because attendance data are more widely collected there.

Emerging indicators

Additional research and development (R&D) are needed for the field to reach a consensus on how to define and measure these indicators. Measurement R&D may include developing evidence connecting an indicator with later outcomes, developing a valid instrument/metric to measure the indicator, and/or testing available instruments/metrics to identify which are reliable across diverse settings, such as when used with different subgroups of students. As noted above, the term R&D encompasses a variety of research, development, and validation activities.

You may be interested in these indicators if...

- You are a **researcher** interested in conducting new research to build the evidence base about the predictive power of a particular indicator and/or developing and validating tools to measure an indicator at scale. For example, researchers studying instructional curricula may wish to consider developing and validating tools to measure their quality and cultural responsiveness, making their tools and findings available to the public.
- You are a **community-based organization** interested in piloting innovative measures to demonstrate your program or initiative's impact beyond the "usual" outcomes. For example, an organization focused on advancing employment outcomes may wish to pilot how to measure employment in a quality job rather than just any job.
- You are a **funder or advocacy organization** interested in supporting and/or promoting researchers and community-based organizations advancing the evidence base for framework indicators, metrics, and/or measurement tools. For example, this can include funding or disseminating research on emerging indicators.

Examples of emerging indicators

Early grades on track: Although the data elements (attendance, behavior, and assessment performance) needed to calculate the metric are generally available, the E-W Framework's recommendations for this indicator are based on research in only one school district and have not been validated in diverse contexts. Furthermore, benchmark tests in early grades are not universally administered and can vary across states and districts. Therefore, there is little consensus in the field on how to measure this indicator and in which grades. More research is needed to validate and refine the measure and understand its relationship with later education and workforce outcomes.

Employment in a quality job: Despite agreement on the value of higher wages and other job characteristics, there is no field-wide consensus definition of a "quality job." There are a variety of definitions and frameworks related to job quality. Dimensions of job quality may include wages and earnings, hours and scheduling, benefits and leave, working conditions, job design, nonmonetary value (that is, meaningfulness or social value), forward prospects or upward mobility, safety, security, company performance, and more. More research is needed to determine which aspects of job quality are most closely linked with positive outcomes, such as economic mobility and security; additionally, advocacy is needed to build consensus about how to systematically collect the data needed to measure job quality.

Access to quality, culturally responsive curricula: The field currently lacks a standardized approach to measuring this indicator, although there are ongoing advances in the field. Notably, EdReports rates K–12 curricula based on coherence, standards alignment, and usability, and the Louisiana Department of Education offers publicly available curriculum review rubrics. However, these tools do not assess cultural responsiveness or relevance. The Culturally Responsive Curriculum Scorecards developed in New York City offer a starting point for defining cultural responsiveness in curricula, though more work is needed to integrate measures of curricular quality *and* cultural responsiveness into a single tool, validate the tool, and promote its use at scale.

All emerging indicators

Tip! Click on the hyperlinked indicator title for details on why it matters, how to measure it, and more.

PK	K12	PS	WF	Emerging indicators	Definition
Outcomes & Milestones					
	✓			Early grades on track	Students in grades 1 and 2 are on track to achieve academic proficiency in grade 3.
	✓	✓	✓	Cultural competency	Individuals are able to understand the perspectives of and empathize with others from diverse backgrounds and cultures.
	✓	✓	✓	Civic engagement	Individuals exhibit the knowledge, skills, values, motivation, and activities that promote quality of life within a community and society at large through political and nonpolitical processes.
	✓	✓	✓	Social capital	Individuals have access to and are able to mobilize relationships that help them further their goals.
	✓	✓	✓	Digital skills	Students and workers can use digital technology tools effectively to access, manage, evaluate, and communicate information.
	✓	✓	✓	Communication skills	Individuals have the oral, written, nonverbal, and listening skills required for success in school and at work.
	✓	✓	✓	Higher-order thinking skills	Individuals have the problem solving, critical thinking, and decision-making skills needed in the workplace.
			✓	Employment in a quality job	Individuals are employed in a position that offers a living wage, benefits, stable and predictable schedules, clear and fair advancement to higher pay, safe conditions, and job security.
E-W System Conditions					
✓	✓	✓		Classroom observations of instructional practice	Teachers demonstrate high-quality instructional practices and interactions with students.
	✓	✓		Student perceptions of teaching	Students report having a supportive, engaging teacher who sets clear, fair, and high expectations, and helps them learn.
	✓	✓		Teachers' contributions to student learning growth	Teachers contribute to students' learning growth.
	✓	✓		Institutions' contributions to student outcomes	Schools and colleges contribute to students' short- and long-term outcomes.
✓	✓	✓		Access to quality, culturally responsive curricula	Schools and instructors use a standards-aligned core course curriculum that meets quality standards (as defined by EdReports) and is culturally relevant, centering the lived experiences and heritage of students' ethnic or racial backgrounds.
✓	✓	✓	✓	Inclusive environments	Individuals feel they belong and feel connected to their peers in their schools, postsecondary institutions, and workplaces.

Note: Light gray check marks indicate that the indicator should be measured in the check-marked sector, but the indicator is not considered emerging *in that sector*. For instance, *Classroom observations of instructional practice* is classified as "emerging" for the postsecondary sector but "well-established" for the pre-K and K-12 sectors because classroom observations are widely conducted there.