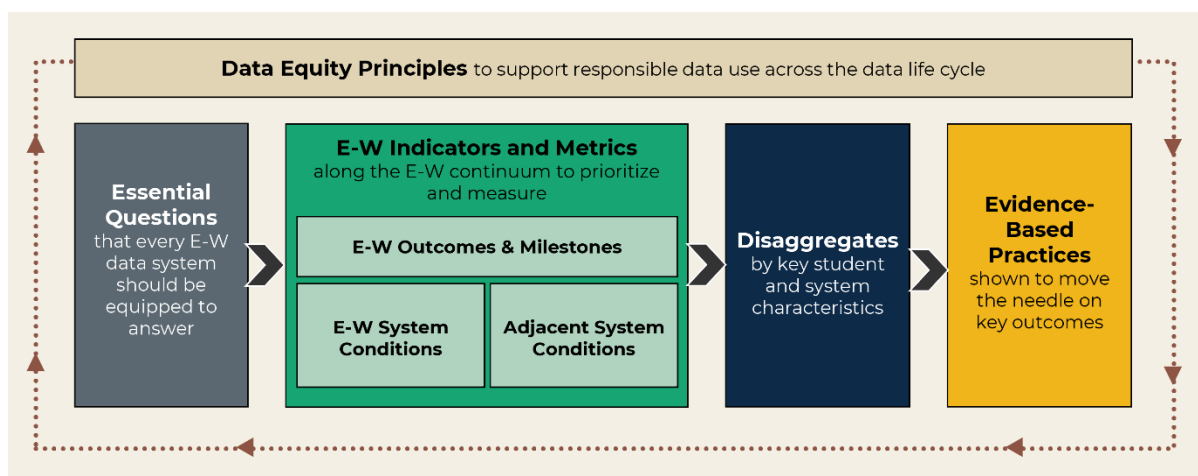


Education-to-Workforce Indicator Framework: Essential Questions Guide



The **Education-to-Workforce Indicator Framework (E-W Framework)** is designed to promote data collection and use to advance educational and economic opportunity for all. The framework offers guidance for ethical and effective data use, essential questions and data that matter most, ways to disaggregate data to inform action, and evidence-based practices to drive positive change.



Visit our website at www.educationtoworkforce.org to learn more or contact us at EWframework@mathematica-mpr.com for additional support

What is the purpose of this guide?

This guide offers practical guidance and tools for those seeking to:

- Better understand why and how to use essential questions as a tool to prioritize what matters most to measure, assess the state of education and workforce systems and, ultimately, to promote educational and economic opportunity for all.
- Explore the E-W Framework's 20 essential questions and identify those most applicable to a given context, system, sector, organization, or goal.
- Identify allies, collaborators, and contributors to achieve alignment across data systems.

Essential questions are what education and workforce data systems must answer to understand how students are performing and progressing on their journeys from early education through their careers.

Example question: *Are third graders meeting or exceeding benchmarks in reading and math?*

The E-W Framework can help decision makers approach policy and practice through the lens of essential questions—ultimately leading to more actionable data and positive outcomes for students in their journeys along the E-W continuum.

Who should use this guide?

The E-W Framework is designed for people and organizations who use education and workforce data to diagnose inequities, implement evidence-based decisions, and monitor the impact of policies and programs to address those inequities.

This essential questions guide can support anyone seeking to develop or enhance an essential questions-based approach within their education-to-workforce organization or network.



Policymakers



Administrators and educators



Community organizations and advocates



Funders and practitioners



Researchers and evaluators

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“We must be committed to improving outcomes for each and every student. Equitable responses through the lens of essential questions ensure that we reach students, families, and communities where they are without leaving them where they are. Too often students are successful despite the E-W system— we must aim to make students successful because of it.”

— Dr. Zephine Smith Dixon, special education policymaker
and school improvement expert

Why and how can essential questions be used?

Why lead with essential questions?

Education and workforce organizations often have a lot of data but could benefit from resources that help them decide how to use it to achieve the greatest impact. In addition, the absence of connections across different educational and workforce-related data systems creates silos of information and analysis, which make it difficult to fully understand the assets and needs of the whole child, the whole person, or the whole community. These gaps in data collection and absence of system linkages make it hard for decision makers, organizations, and communities to fully answer critical questions about student outcomes and E-W systems.

Example: *Student test scores* are often used to draw conclusions about *school quality* because test score data are regularly gathered and accessible. However, evidence shows that test scores are likely a poor proxy for measuring characteristics of the school environment, or what the E-W Framework calls “system conditions,” such as *effective program and school leadership* or *access to quality, culturally responsive curricula*.¹

By leading with essential questions, E-W Framework users can **advocate for better data collection** and **leverage practices which produce meaningful insights** for decision makers, practitioners, and families involved in education and workforce systems. Approaching data through the lens of essential questions can support decision makers and practitioners to consider not only what data is being collected, but for whom and for what purpose.

Research shows that **when school leaders used essential questions** to guide collaborative data use in their schools, **staff became more engaged** with the process and **quickly learned how to identify and analyze different types of data** to answer those questions.¹

How can essential questions be used?

Essential questions can be used to...

- Better understand how to address disparities and improve individuals' outcomes;
- Identify which schools and institutions are meeting the needs of their students and workers;
- Highlight opportunities to yield greater insight from existing data (for example, by linking data or creating new data dashboards or reports); and
- Help system leaders prioritize new data they need to collect.

¹ Anderson, T., Blount, D., Lindsay, C., Blom, E., Gebrekristos, S., & Alba, F. (2019). *Robust and equitable measures to identify quality schools (REMIQS)*. The Urban Institute. <https://www.urban.org/sites/default/files/2019/04/15/remiqs-detailed-model-final.pdf>.

Steps for leading with essential questions

Step 1: Identify or draft essential questions

What essential questions must be answered to effectively serve students?

The first step is to **determine the most pressing fundamental questions** you or your organization need to answer about economic or educational experiences and outcomes.

The E-W Framework offers [20 essential questions](#) as a starting point for conversations around data and equitable outcomes. All 20 framework questions are critical for assessing and addressing disparities along the pre-K-to-workforce continuum and guiding action to ensure all individuals can achieve economic mobility and security. However, it may make sense to prioritize certain questions, or even draft additional questions, based on your local or organizational needs.

Data equity best practice: Engage community voices

Students, families, educators, and other community members contribute valuable insights to identifying outcomes and actions that are most impactful to community members, system components that may not be working well for all individuals, and root causes of inequities. Whose voices have been excluded or sidelined in deciding what data to collect and which questions to ask of our system? How can you engage those missing perspectives to identify and prioritize the most essential questions to answer?

Step 2: Identify indicators, metrics, and data sources

What information is needed to answer essential questions?

After you identify your essential question(s), the next step is to think about **what information is necessary to answer them**.

Depending on your role or organization, you may consider exploring your own data library. If you've identified an essential question from the E-W Framework, we recommend exploring the framework to answer this question. More specifically, the framework provides three types of information that can help you plan for tracking progress:

Indicators

The **information that data systems should measure** along the pre-K-to-workforce continuum to assess inequities and track progress in key outcomes and conditions.

Example: Enrollment in quality public Pre-K

Metrics

Methods for measuring indicators in each education-to-workforce sector (pre-K, K-12, postsecondary, and workforce).

Example: Percentage of eligible 3- and 4-year-olds enrolled in public pre-K

Data sources

The likely **source for the data needed** to measure the indicator.

Example: Administrative data

You can find all E-W Framework essential questions mapped to indicators that support individuals in achieving economic mobility and security in [Appendix F](#) of the report and recommended metrics and data sources for each indicator in [Chapter II \(Indicators and Metrics\)](#).

Data equity best practice: Triangulate quantitative data with other sources

Quantitative methods are sometimes viewed as being inherently objective, but quantitative data can still be shaped by motives and biases, particularly in where the data comes from, what the analysis might leave out, and who various decision makers view as the experts on the data. When mapping indicators, metrics, and data sources to your essential questions, consider supplementing quantitative data sources with other approaches to measurement, such as qualitative data from interviews, focus groups, or community participatory action projects that privilege community voice and participation. Gathering multiple sources and types of information can help counter the bias in any one data source.

Step 3: Identify gaps and next steps

What information is available, what is missing, and what next steps can I take?

After you identify the milestones for tracking progress toward your essential question(s), any **gaps in the available data and next steps** will become clearer. Consider issues such as:

- What do I **already know** and/or **have access to**? Where are the gaps in my data?
- **What is my role** in gathering information that would answer this question?
- How else can I help make **data more useful** in promoting equitable outcomes for students?

Data equity best practice: Disaggregate data guided by an understanding of root causes

Practitioners, decision makers, and other data users must acknowledge the diversity of experiences among communities and should seek to uncover disparities that can be hidden in aggregate data. Disaggregating data can help you identify and monitor disparities and make informed decisions that lead to greater equity. Data analysis might require multiple levels of disaggregation to capture the intersectional nature of individuals' lived experiences and must be guided by an understanding of root causes to avoid perpetuating existing stereotypes and deficit narratives. Identifying gaps and planning next steps (Step 3) should include identifying whether you can disaggregate both outcomes and system conditions related to your essential questions by multiple relevant background characteristics. The E-W Framework offers further guidance on disaggregating data, including key disaggregates to consider.

Case study: Assessing student access to quality school environments

Step 1: Identify or draft essential questions

George works for a research and advocacy program dedicated to advancing equity in Pre-K through postsecondary education.



While reviewing the E-W Framework’s [20 essential questions](#), George identifies several as critical to his work. He decides to **hold a focus group with his organization’s community advisory members** to gather their input, and they collaboratively decide on addressing one priority question.

Understanding whether students have access to quality school environments can help George and his organization **understand the extent to which their work has been successful**, as well as **where they might focus future advocacy efforts**.

Priority question: Do students have access to quality school environments including quality curricula and instruction, experienced teachers, effective leaders, and adequate funding?

Step 2: Identify indicators, metrics, and data sources

George visits [Appendix F](#) of the E-W Framework to find **13 unique indicators** mapped to this essential question. Then, he explores [Chapter II \(Indicators and Metrics\)](#) to identify all **recommended metrics and data sources** aligned with each:

Indicators		
Outcomes & Milestones		E-W Systems Conditions
1. Early grades on track	5. Teacher credentials	9. Teachers' contributions to student learning growth
2. 6th grade on track	6. Teacher experience	10. Effective program and school leadership
3. 9th grade on track	7. Classroom observations of instructional practice	11. Institutions' contributions to student outcomes
4. High school graduation	8. Student perceptions of teaching	12. Access to quality, culturally responsive curricula
		13. Expenditures per student
Recommended metric(s): Percentage of students in grades 1 and 2 meeting grade-level math and reading benchmarks, with an attendance rate ≥90%, and no in- or out-of-school suspensions or expulsions		Recommended metric(s): Recommended metric(s): No specific measures or tools identified
Data source(s): Assessments; administrative data		
		Data source(s): Curriculum materials

As George seeks to answer this essential question, he runs into a challenge: **data on quality, culturally responsive curricula are not widely available**. Based on his community's context and needs, George and others decide to immediately prioritize addressing data alignment (including collection and disaggregation) around whether students are *on track in early grades* and *have access to quality, culturally responsive curricula*.

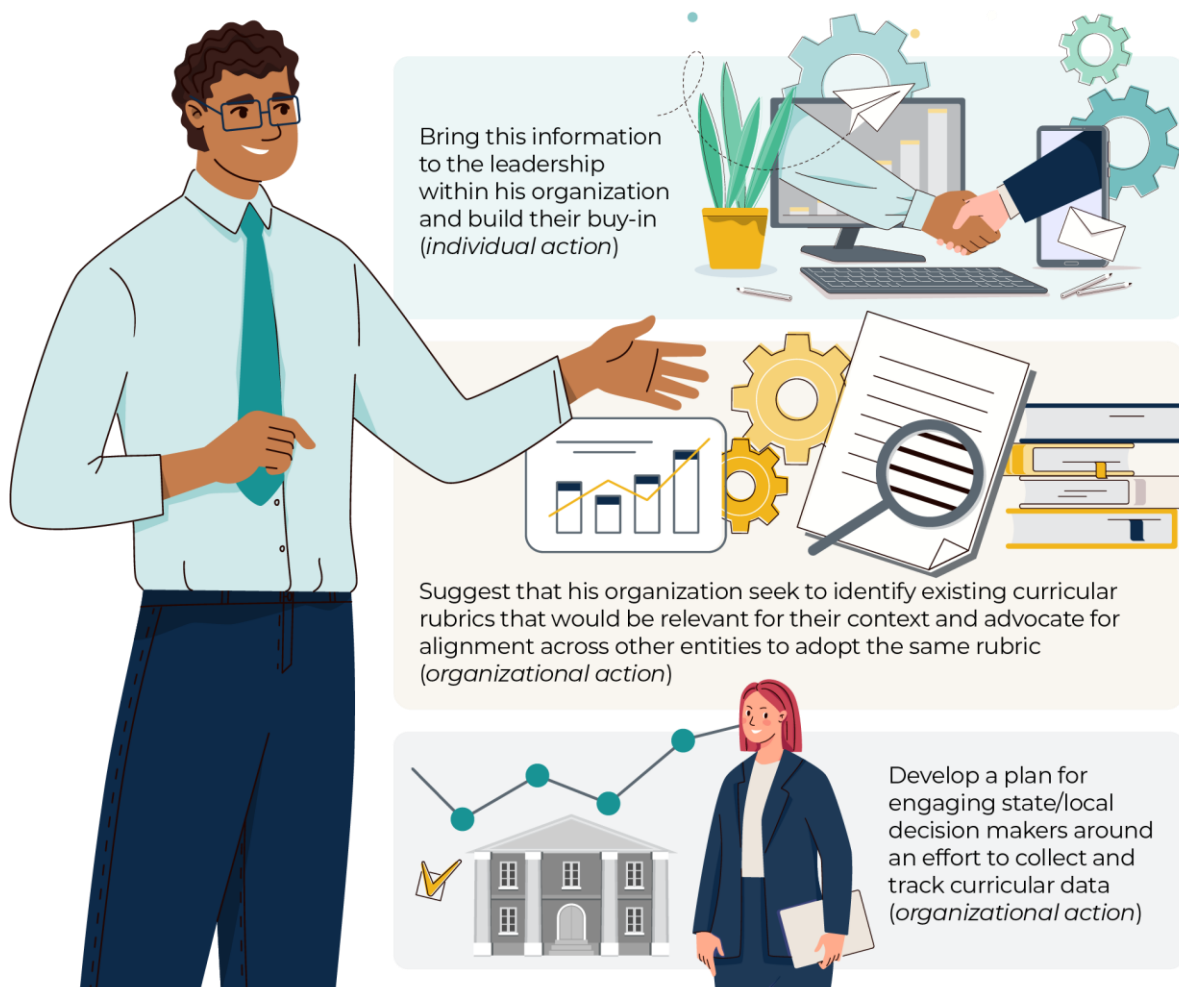
Step 3: Identify gaps and next steps

Seeing this gap, George reflects on potential **next steps**, particularly what actions he can take **as an individual and as part of an organization**.

He identifies two potential factors at play:

1. Systems are not widely tracking curricular materials used.
2. There is a lack of consensus around how to measure if curricular materials are "quality" and "culturally responsive."

George considers **who** might be able to help **collect these curricular data**, as well as **who** could **help select a standardized metric** and **how**. Finally, he considers what steps could be taken to engage these individuals or entities. George decides to:



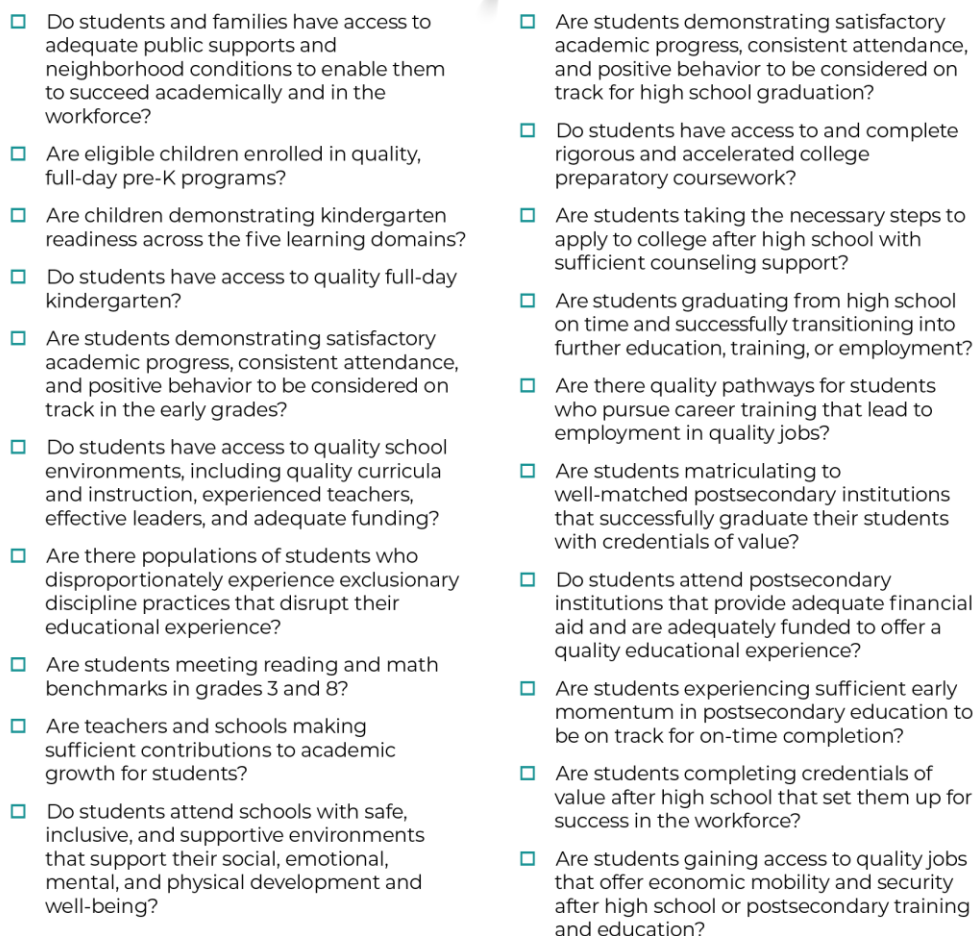
Reflection tool: A guide for leading with essential questions

Step 1: Identify or draft essential questions

Use this component to identify the questions that are essential for your context to promote educational and economic opportunity, given your goals, priorities, and the focus of your work.

All 20 of the E-W Framework's essential questions are critical for guiding action to ensure individuals can achieve economic mobility and security. However, it may make sense to prioritize certain questions, or even draft additional questions, based on your local or organizational needs. For example, action may depend on the policy priorities of state and local decision makers, or some questions might be outside the direct scope of work for certain nonprofits or community organizations.

Select the question or questions below that most align with your priorities:

- 
- ☐ Do students and families have access to adequate public supports and neighborhood conditions to enable them to succeed academically and in the workforce?
 - ☐ Are eligible children enrolled in quality, full-day pre-K programs?
 - ☐ Are children demonstrating kindergarten readiness across the five learning domains?
 - ☐ Do students have access to quality full-day kindergarten?
 - ☐ Are students demonstrating satisfactory academic progress, consistent attendance, and positive behavior to be considered on track in the early grades?
 - ☐ Do students have access to quality school environments, including quality curricula and instruction, experienced teachers, effective leaders, and adequate funding?
 - ☐ Are there populations of students who disproportionately experience exclusionary discipline practices that disrupt their educational experience?
 - ☐ Are students meeting reading and math benchmarks in grades 3 and 8?
 - ☐ Are teachers and schools making sufficient contributions to academic growth for students?
 - ☐ Do students attend schools with safe, inclusive, and supportive environments that support their social, emotional, mental, and physical development and well-being?
 - ☐ Are students demonstrating satisfactory academic progress, consistent attendance, and positive behavior to be considered on track for high school graduation?
 - ☐ Do students have access to and complete rigorous and accelerated college preparatory coursework?
 - ☐ Are students taking the necessary steps to apply to college after high school with sufficient counseling support?
 - ☐ Are students graduating from high school on time and successfully transitioning into further education, training, or employment?
 - ☐ Are there quality pathways for students who pursue career training that lead to employment in quality jobs?
 - ☐ Are students matriculating to well-matched postsecondary institutions that successfully graduate their students with credentials of value?
 - ☐ Do students attend postsecondary institutions that provide adequate financial aid and are adequately funded to offer a quality educational experience?
 - ☐ Are students experiencing sufficient early momentum in postsecondary education to be on track for on-time completion?
 - ☐ Are students completing credentials of value after high school that set them up for success in the workforce?
 - ☐ Are students gaining access to quality jobs that offer economic mobility and security after high school or postsecondary training and education?

Reflection: Selection and prioritization

The following prompts can help you consider *why* certain essential questions were or were not selected, as well as provide a chance to *prioritize*, *identify any gaps*, and *address those gaps*.

1. Why did I/we **select** the question(s) that we did?

2. Why did I/we **not select** the other question(s)?

3. Of the selected questions, **which are the highest priority?**²

4. Are there any **gaps or key information missing?**

² If you find that you identified too many relevant questions for your team/system/organization to tackle, consider one of the following approaches to help you prioritize:

- [Visualize the vote](#) | LUMA Institute
- [Importance/Difficulty matrix](#) | LUMA Institute
- [Bull's-eye Diagramming](#) | LUMA Institute.

Draft your own essential questions (optional)

If you identified gaps or missing information in the essential questions above, we encourage you to draft your own below.

Before you draft questions, we recommend **reviewing [Appendix F of the E-W Framework](#)** to deepen your understanding of the scope of the framework’s 20 essential questions and their relevant indicators, including adjacent system conditions such as access to housing, and physical, mental, and social well-being. As you draft questions, consider the following:

- **Write new questions in person-focused language.** For example: “Are students...” or “Do individuals...”
Note: Not all questions must be phrased using person-centered sentence starters, but it is important to ask and answer questions through the lens of individuals’ experiences within education and workforce systems to ensure that questions will focus action on individuals’ needs rather than systems’ or organizations’ needs.
- **Good essential questions center major issues, opportunities, or themes relevant to individuals’ lives and key milestones on their education-to-workforce journeys.** Consider framing your question by asking what actions or conditions are necessary for individuals to thrive as they progress from early education through their career.

Additional essential question(s)

1.

2.

3.

4.

Reflection: The big picture

Use the probes below to reflect on your essential question(s) within the context of your role, your organization, and the work you do to support individuals along the education to workforce continuum.

1. How could answering your essential question(s) **further advance educational or economic opportunity for all?** (Consider: Who could use this information? For what decisions, actions, or outcomes? With what populations and in what contexts?)

2. How could your organization **solicit and elevate the perspectives of the community you engage with** while you work toward answering your essential question(s)?

3. How could you or your organization **advance progress toward answering each essential question through the work you already do?** (For example: Do you already gather or leverage relevant data? Do you have relationships with agencies that could gather or link needed data? Do you help decision-makers and practitioners make sense of data to inform their policies or practices?)

4. What role could you play in **building buy-in within your organization or community** around the importance of answering your essential question(s)?

Step 2: Identify indicators, metrics, and data sources

Use this component to identify the relevant indicators, metrics, and data sources needed to measure progress toward your essential question(s).

Now that you've identified your essential question(s), you're ready to determine what data matter most to track progress.

What do I need to know to answer this question? **When** would I need to know it?
How can I measure it in a way that ensures the data is useful?

If you've selected question(s) from the E-W Framework: Navigate to [Appendix F](#) to find a list of **relevant indicators** mapped to each essential question. Next, explore [Chapter II \(Indicators and Metrics\)](#) to find lists of **recommended metrics** and **suggested data sources** for each indicator.

If you've drafted your own essential question(s): Consider what key information you need to track to answer your question (these are your **indicators**, such as *milestones, outcomes, and systems conditions*). Then consider how you might measure that information (these are your **metrics**) and how you can gather it (these are your **data sources**).

Note: As you determine what data matter most to track progress, it is important to consider the following:³

- Is this indicator **meaningfully related** to the question I'm asking?
- Are data to measure this indicator either **widely available** or **feasible** to collect?
- Can data on this indicator be **disaggregated** so I can analyze patterns by student subgroup or system condition?

Essential question: Do students have access to and complete rigorous and accelerated college preparatory coursework?

Indicators What key information do you need to answer this question?	Metrics How might you measure that information?	Data sources Where might you find that information?
Example: Information about students' experiences with college preparatory coursework (E-W indicator: "Early college coursework completion")	Example: Percentage of high school students who enroll in and pass at least one early college course	Example: Student transcripts (or district or state reports based on student transcript data)

³ See p. 21 of the E-W Framework for additional criteria to consider when developing indicators and related data.

Essential question: _____

Indicators

What key information do you need to answer this question?

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Metrics

How might you measure that information?

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Data sources

Where might you find that information?

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Step 3: Identify gaps and next steps

Use this component to assess current gaps in your data and reflect on your role toward additional alignment and advocacy.

Once you have identified the indicators, metrics, and data sources needed to answer your essential question(s), the next step is to **identify gaps and next steps** within the context of your role, organization, or work.

Reflection: Next steps

1. Which metrics or data sources are **already accessible** to you?

2. Which metrics **are already gathered but not yet available to all who need it?**

3. Which metrics or data sources **are already available but may require adaptation to holistically answer your essential question(s)? What adaptation is needed?** (For example: Additional linkages to enable disaggregation.)

4. Which metrics would **require new data collection altogether? Do you have recommendations on how to implement this collection?** (For example: Attaching to an existing data collection process.)

5. **How could you (or your organization) play a role** in addressing gaps in data collection or reporting? (For example: decision making, advocacy)

6. Who are **other partners in this work** that you could consider engaging? How might you engage them?

7. How will you commit to **engaging in ethical behavior to respect the rights of data providers, promote wellbeing, and reduce harm?** (See [Chapter V. Data equity principles](#) in the E-W Framework for additional information.)

8. How will you commit to **examining social and historical context to identify root causes of disparities, inform your data collection practices, and how you use and develop solutions?** (See [Chapter V. Data equity principles](#) in the E-W Framework for additional information.)

9. **What commitment will you make to engaging the community you work with** in current and future conversations and actions?

Key terms

The definitions below are for **key terms**, as they are used in **this document** and **the E-W Framework**.

Data	Distinct pieces of information, usually collected, stored, and processed for a specific purpose. They can be either quantitative or qualitative.
Data equity principles	Practices for centering equity in the collection, analysis, reporting, and application of education-to-workforce data.
Data source	The likely source for the data needed to measure the indicator, including administrative data regularly collected as part of institutions' general operations (for example, in student information systems and employee performance management systems), and data from assessments, transcripts, and surveys (which can be loaded into data systems).
Disparities	Documented differences in outcomes between groups.
Equity	Just and fair inclusion in a society in which all can participate, prosper, and reach their full potential. Equity is achieved when structural barriers based on race, ethnicity, gender, sexual orientation, zip code, class, disability, and other factors are dismantled so an individual's background and identities no longer predict their outcomes in life.
Indicators	The information data systems should measure along the pre-K-to-workforce continuum to assess inequities and track progress in key outcomes and conditions.
Inequities	The conditions that arise when policies, practices, attitudes, or cultural messages make it harder for some individuals—and easier for others—to fully participate in, contribute to, and take advantage of opportunities and resources based on their identities and background traits. Inequities are apparent when identities or background traits such as race, ethnicity, gender, sexual orientation, zip code, class, or disability statistically predict outcomes.
Metrics	The operationalized measurement of an indicator. For indicators requiring survey data, we suggest instruments with an evidence base, though users may consider different instruments, depending on their context.



Visit our website to learn more or contact us at EWframework@mathematica-mpr.com with questions about this guide or for additional support.