Education-to-Workforce
INDICATOR FRAMEWORK

Opportunity for All

Aligning Data Systems to Address Disparities from Pre-K Through the Workforce

Tuesday, June 13, 2023

Housekeeping

- **To submit comments or questions** or to directly chat with other participants, open the **Chat Panel**.
  - Click on the Chat icon the bottom right corner of your screen.
  - To submit questions in the chat, send your chat to "Everyone."
- **To enable closed captioning,** click on the "CC" button on the bottom right of the screen and turn on.
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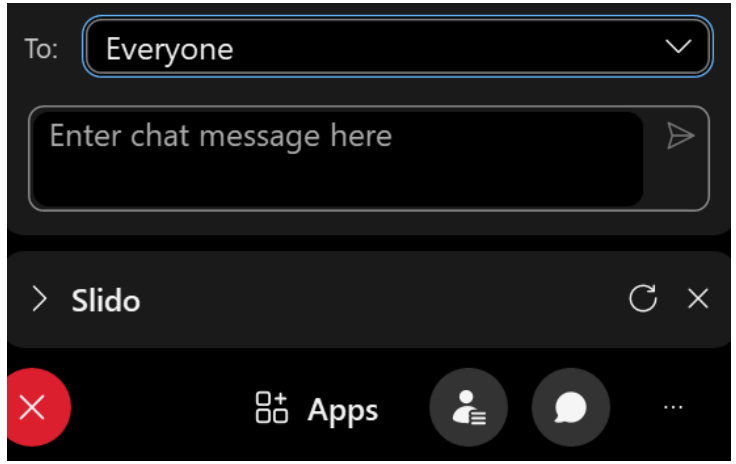

Mathematica

Thanks for joining us!

Poll: Who is in the room today?

About today's speakers

Kate Tromble
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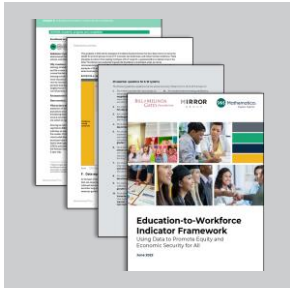
Today’s agenda

The Time Is Now: People Need Access To Data

What Is The Education-to-Workforce Indicator Framework?

Data Equity: Principles And Recommendations



Identifying Next Steps

The Time is Now: People Need Access to Data

Kate Tromble

DQC

We advocate to change the role of data to ensure that data works for *everyone* navigating their education and workforce journeys.

Grace's Path to Success

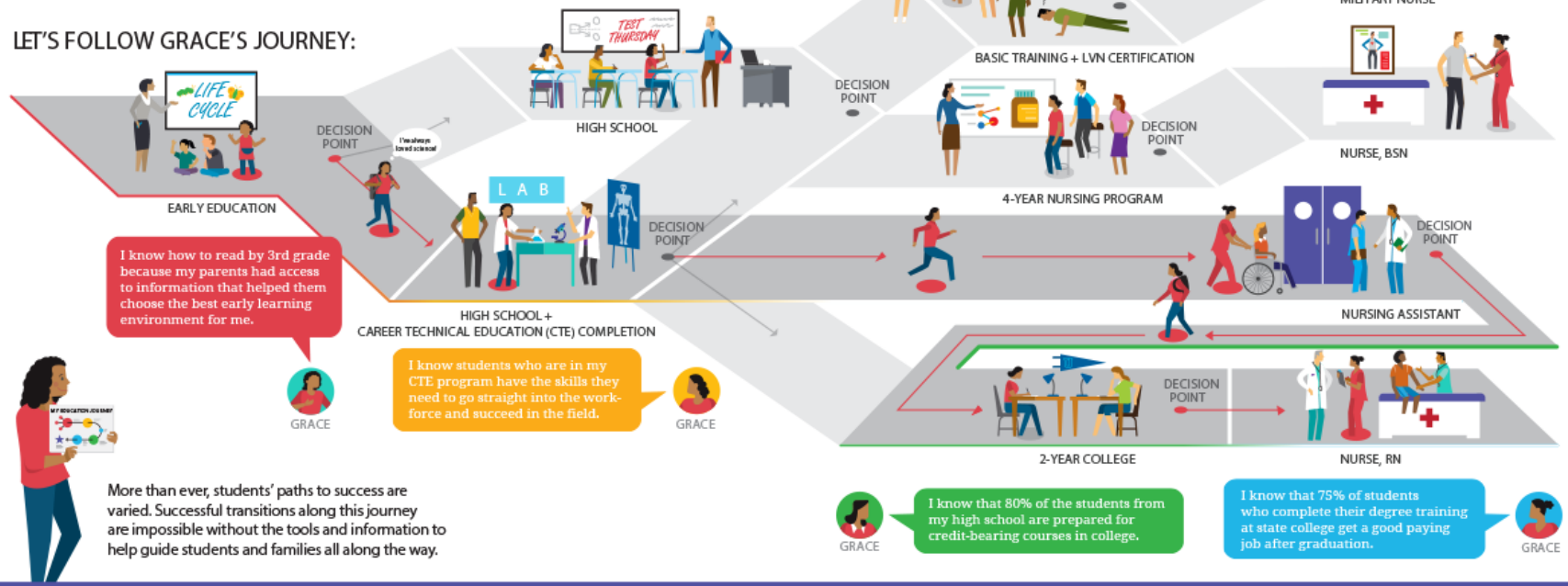
Information is critical to support student success all along the way.

Students' pathways to success are increasingly varied. But no matter the path, students must make choices that shape their future options and opportunities —and they shouldn't have to make these decisions in the dark. Students and their families deserve information that can point them down the right pathway to get them where they want to go.

Grace needed information to help her navigate the right path to reach her goals. Successful transitions are impossible without data to help guide students and their families all along the way. Your state's students deserve no less than Grace.

DQC
DATA QUALITY CAMPAIGN
dataqualitycampaign.org

LET'S FOLLOW GRACE'S JOURNEY:



More than ever, students' paths to success are varied. Successful transitions along this journey are impossible without the tools and information to help guide students and families all along the way.

For guidance and best practice, see DQC's roadmaps to link, govern, and share data between early education, K-12, postsecondary, and the workforce. dataqualitycampaign.org

States must act to meet data access needs: use cases to drive system improvement

- **This is a policy vision.** We are building a concept of what agency and leadership relationships and the resulting data flows should look like.
- **Needed change is technology agnostic.** We're not holding states accountable for IT but for delivering value.
- **This vision will drive policy conversations** that lead to technology conversations.

The need for improved access: heard from stakeholders

- **Superintendents**: 98% report they would be more confident in their abilities to make decisions for their district with better data ***access*** and 61% use data to make decisions about course offerings/curriculum aligned to postsecondary and workforce opportunities.
- **Principals**: 94% said they would feel more confident in their leadership decisions with better ***access*** to their students' postsecondary and workforce outcomes.
- **Parents**: 93% said that easier ***access*** to information would help them feel more confident about their ability to support their child's post-high school decisionmaking.
- **Students**: 80% report that they would feel more confident about the path they take after high school if they had better ***access*** to information.

**DQC 2021 and 2022 poll results in partnership with The Harris Poll*

Access to data should enable successful transitions

- There are multiple transition points along the early childhood to workforce pathway where **access to data from multiple systems is necessary to make decisions.**

- We focused our use cases on these transitions because they:
  - Reflect data that states have long prioritized.
  - Have clear policy drivers, available funding streams, and legal frameworks that have been in place for a number of years.

- There is clear policymaker appetite in **both red and blue states** to use information to support people along pathways from education into the workforce.

- As a result, the work to ensure that everyone has access to the data they need to support these transition points can and must start now.

Help students seamlessly navigate transitions from **high school into college and career pathways**

We will know states have designed their SLDS toward this use case when they meet the following access needs:

Students, families, and counselors have access to timely, useful, personalized, and aggregate data based on the **Education-to-Workforce Indicators** that helps them:

- Begin planning for their future early in high school.
- Streamline the transition process by helping students stay on track to graduate and prepare to easily apply to college and career preparation programs.
- Assist students by identifying high-quality two- and four-year college programs and pathways and sharing information about options, costs, and outcomes.
- Identify job programs and training that lead to quality career outcomes, align with their experience, and allow them to pursue their interests or goals.
- Assess a student's background, academic course history, interests, goals, and skills in order to better advise the student regarding their education and career goals.

We will know states have designed their SLDS toward this use case when they meet the following access needs:

Members of the public (individuals, advocates, chambers of commerce, and community organizations) have access to open data sets, aggregate data, query tools, and dashboards that at a minimum contain the **Education-to-Workforce Indicators** and that help them:

- Hold their government accountable for college and career outcomes.
- Answer questions about how schools prepare students to transition into two- and four-year colleges, including equitable exposure to career pathways and transparency on the cost and quality of educational programs.
- Answer questions about whether current college and career readiness programming in high schools prepare students for available college and career pathways and help them establish goals, plan for college and career preparation program applications, and successfully enroll in different programs.

We will know states have designed their SLDS toward this use case when they meet the following access needs:

Policymakers (state legislators, agency heads, local school boards, and district leaders) have data (broken down, as appropriate, by the **Education-to-Workforce Indicators)** that helps them plan, allocate resources, and answer questions, such as:

- Are certain groups of students being tracked into certain, better, or less socially mobile pathways?
- Are historically underserved student populations attending high-quality, affordable two- and four-year colleges?
- Are historically underserved student populations getting into quality career preparation programs and careers? Are different groups of students differently prepared for success in workforce training programs and the workforce based on their experiences in high school?

What might this use case look like in action?

- Early warning systems to ensure students graduate prepared for what's next.
- Auto-admit systems to facilitate enrollment.
- Increased participation and success in dual enrollment programs.
- Effective implementation of career-connected high schools.

State and local examples:

- California's CCGI provides students with information on the admissions requirements of state colleges, ensures they meet those requirements, and helps them apply for financial aid and college more seamlessly.
- seekUT enables Texas-based students to explore postsecondary programs and clear pathways with a focus on affordability and in-demand careers.
- Tools for course mapping and career planning, including My Colorado Journey.
- Tools for matching employers with youth skills, such as Kentucky's Career and Technical Employer Connector.

What is the Education-to-Workforce Indicator Framework?

Naihobe Gonzalez

To support action, data systems should enable users to ask and answer **essential questions** about people's experiences from pre-K to workforce

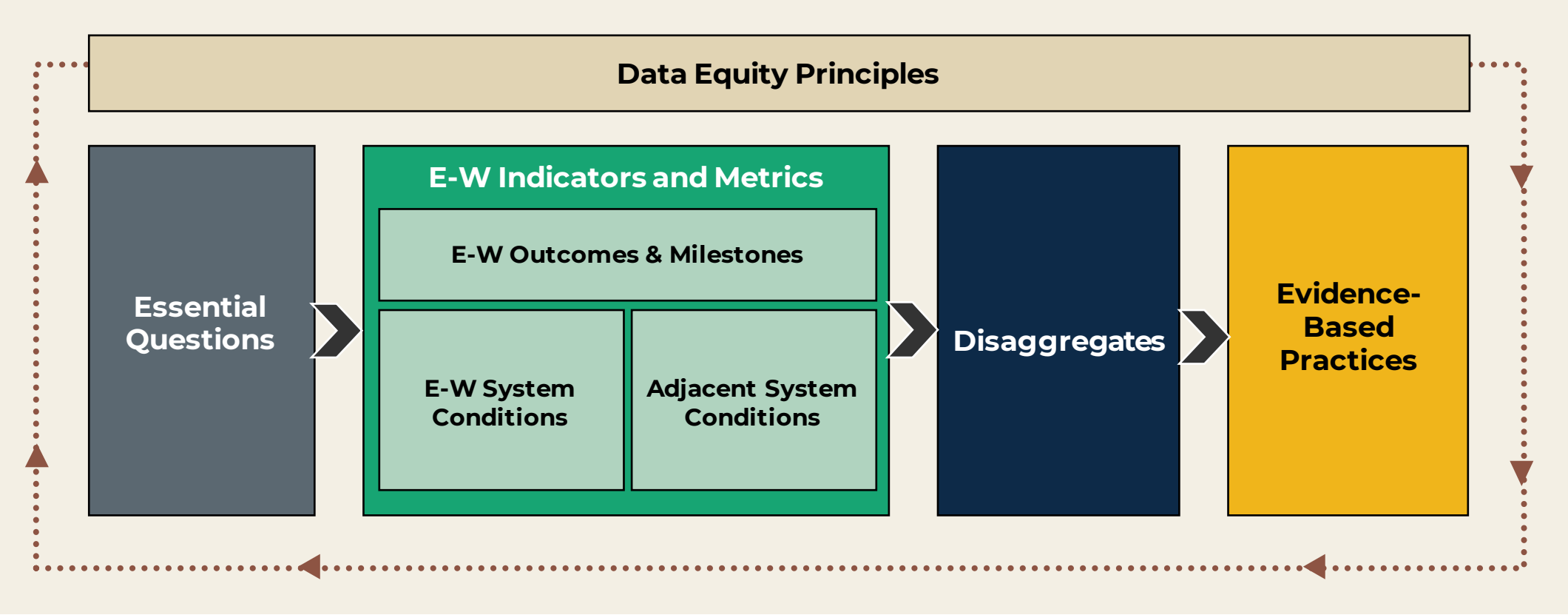
- **What's driving success challenges?** Challenges can rarely be pinpointed to a single cause and are often shaped by system conditions
- **What's working and for whom?** Influx of interventions and initiatives without the right data makes it hard to disentangle what's working
- **What else might we be missing?** Limited ability to assess outcomes holistically, measure and contextualize disparities, and prioritize areas where we can make the biggest difference has equity implications

Holistic guidance for translating data into action

The Education-to-Workforce (E-W) Indicator Framework is intended to promote:

- **Equitable data collection and use** to advance educational and economic opportunity for all
- **Cross-sector collaboration and alignment** across local, state, and national data systems through a common set of indicators and metrics that span pre-K to workforce
- **Modernization efforts of longitudinal data systems** that allow decisionmakers to answer critical questions and take action

What does the framework include?



The E-W Framework's North Star

The North Star, or big goal, for the E-W Framework is to advance equity and to help people achieve economic mobility and security.

We'll know we've achieved this when:

- Structural barriers based on race, ethnicity, gender, sexual orientation, zip code, class, disability, and other factors are dismantled
- A person's background and identity do not predict their outcomes in life
- People have the income and assets needed to achieve and maintain their economic independence
- People possess power and autonomy over their lives
- People feel the respect, dignity, and sense of belonging that come from contributing to one's community

E-W Framework values and design principles

"From-to" shift in values

Deficit framing	→	**Asset** framing
Narrow definitions of success	→	**Broader** notions of success
Focus on a single assessment or milestone	→	Focus on a **system** of **indicators**

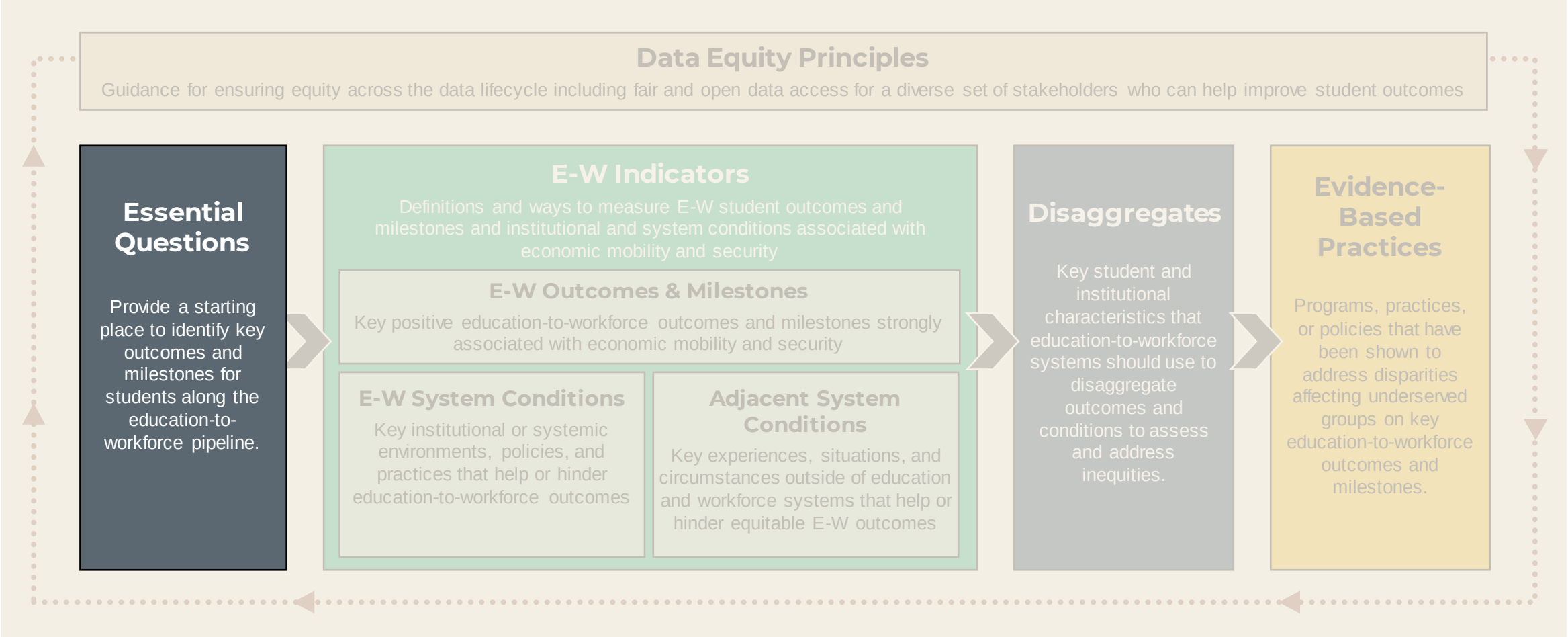
Design principles

Definitions of student success include **both** academic and non-academic outcomes, and all are valued by students, practitioners, and the communities that support them

The framework values and reflects **multiple** pathways to success

How we developed the framework

Essential Questions



Essential Questions

Every state and locality should be able to ask and answer **essential questions** about how their students are progressing throughout their journeys from pre-K into the workforce. For example…

Are students demonstrating satisfactory academic progress, consistent attendance, and positive behavior to be considered **on track in the early grades**?

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 quality school environments** including quality curricula and instruction, experienced teachers, effective leaders, and adequate funding?

Are teachers and schools making sufficient **contributions to academic growth** for students?

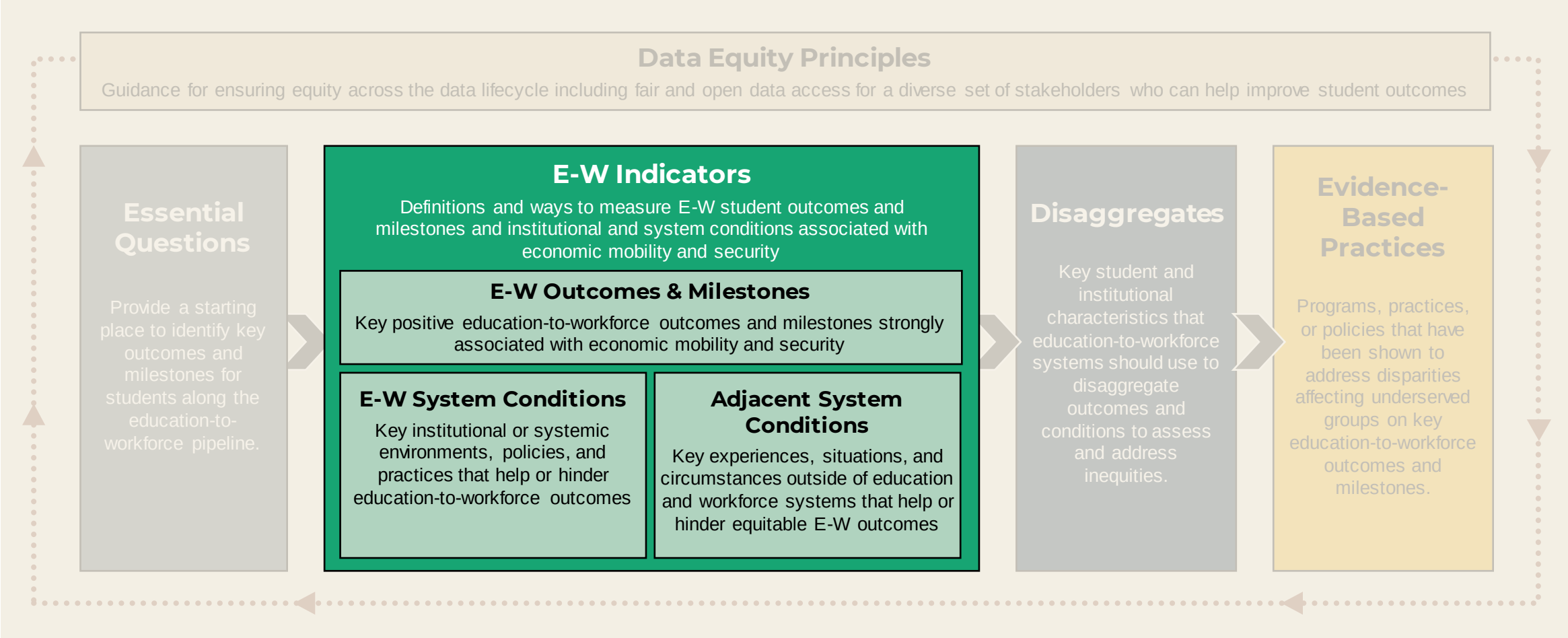
Are there populations of students that disproportionately experience **exclusionary discipline practices** that disrupt their educational experience?

Do students and families have access to adequate **public supports and neighborhood conditions** to enable them to succeed academically and in the workforce?

What type of data would you want to answer this question?

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

Indicators and Metrics



Indicators and Metrics

The framework provides definitions and ways to measure **99 E-W outcomes and milestones** and related **E-W** and **adjacent system conditions** associated with economic mobility and security.

Outcomes and milestones
Key outcomes and milestones along the E-W continuum strongly associated with people achieving economic mobility and security

Examples:
- **6th grade on track**
- **High school graduation**

E-W system conditions
Key institutional or systemic environments, policies, and practices within and across E-W systems that support positive E-W outcomes

Examples:
- **Teacher credentials**
- **Student perceptions of teaching**

Adjacent system conditions
Key experiences, situations, and circumstances outside of E-W systems that support positive E-W outcomes

Examples:
- **Food security**
- **Access to transportation**

Outcomes and milestones

Key positive education-to-workforce outcomes and milestones strongly associated with economic mobility and security

Enrollment in quality public pre-K	Kindergarten readiness: language and literacy	Kindergarten readiness: cognition	Early grades on track	Consistent attendance	Positive behavior	Math and reading proficiency in grade 3	6th grade on track
8th grade on track	Math and reading proficiency in grade 8	Successful completion of Algebra 1 by 9th grade	9th grade on track	Grade point average	Math and reading proficiency in high school	College preparatory coursework completion	Early college coursework completion
SAT/ACT participation and performance	FAFSA completion	College applications	High school graduation	Selection of a well-matched postsecondary institution	Senior summer on track	Postsecondary enrollment directly after high school graduation	First-year credit accumulation
First-year program of study concentration	Gateway course completion	Postsecondary persistence	Transfer (if applicable)	Postsecondary certificate or degree completion	Enrollment in graduate education	Graduate degree completion	Kindergarten readiness: social-emotional development
Kindergarten readiness: approaches to learning	Kindergarten readiness: perceptual, motor, and physical development	Self-management	Growth mindset	Self-efficacy	Social awareness	Cultural competency	Civic engagement
Social capital	Mental and emotional well-being	Physical development and well-being	Successful career transition after high school	CTE pathway concentration	Industry-recognized credential	Participation in work-based learning	Digital skills
Communication skills	Higher-order thinking skills	Minimum economic return	Student loan repayment	Employment in a quality job	Economic mobility	Economic security	

E-W system conditions

Key institutional or system environments, policies, and practices that help or hinder education-to-workforce outcomes

Access to quality public pre-K	Access to full-day pre-K	Access to child care subsidies	School-family engagement	Equitable discipline practices	Access to full-day kindergarten
English learner progress	Teacher credentials	Teacher experience	Educator retention	Classroom observations of instructional practice	Student perceptions of teaching
Teachers' contributions to student learning growth	Effective program and school leadership	Institutions' contributions to student outcomes	Access to college preparatory coursework	Access to early college coursework	Equitable placement in rigorous coursework
Access to quality, culturally responsive curricula	Expenditures per student	Access to early intervention screening	School safety	Inclusive environments	Representational racial and ethnic diversity of educators
School and workplace racial and ethnic diversity	School and workplace socioeconomic diversity	Access to health, mental health, and social supports	Access to college and career advising	Access to in-demand CTE pathways	Unmet financial need
Cumulative student debt	Expenditures on workforce development programs	Access to jobs paying a living wage	Access to ongoing career skills development		

Adjacent system conditions

Key experiences, situations, and circumstances outside of E-W systems that help or hinder education-to-workforce outcomes

Childhood experiences	Health insurance coverage
Food security	Access to affordable housing
Access to technology	Access to transportation
Exposure to neighborhood crime	Neighborhood economic diversity
Neighborhood racial diversity	Neighborhood juvenile arrests

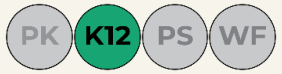
Domains: Academic progress and completion; Social, emotional, and physical well-being; Career readiness and economic success; Cross-domain

Zooming in on a single indicator

For each indicator, we provide the relevant **E-W sector(s)**, a **definition**, a description of **why it matters**, recommended **metric(s) and data source(s)**, **measurement considerations**, and a description of **source frameworks**.

Select Indicator: 9th Grade on Track

Sector



Indicator Type: Outcomes & Milestones

Domain: Academic Progress & Completion

Definition 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

Recommended metric: Percentage of students in grade 9 with a GPA of 3.0 or higher, no Ds or Fs in English language arts or math, attendance of 96 percent or higher, and no in- or out-of-school suspensions or expulsions

Data source: Administrative data; student transcripts

Why it matters

9th grade is a foundational year on students' paths to on-time high school graduation and postsecondary education. For example, grade point average (GPA) in grade 9 predicts GPA in grade 11, which plays a role in college admissions and predicts students' postsecondary enrollment and first year postsecondary retention. Research demonstrates the predictive value of other measures of 9th grade performance as well and the additional benefit of considering multiple measures in grade 9—rather than a single one—to identify whether students are on track to graduate high school on time.

Research on 9th-grade on-track indicators shows they can highlight disparate needs for support for students from different racial, gender, and economic backgrounds. For instance, Black and Latino 9th graders tend to have lower GPAs than their peers. Moreover, 9th grade on-track indicators can play a critical role in dropout prevention efforts.

What to know about measurement

Each on-track indicator in the E-W Framework is supported by research conducted in specific district contexts; therefore, the specific criteria used to define whether a student is on track may not predict long-run outcomes equally well in all settings. To define this indicator, we drew on recommendations from the Bill & Melinda Gates Foundation and work by the UChicago Consortium on School Research, CORE Districts, and Balfanz and Byrnes.

Relative to the early and middle grades, research and measurement of on-track indicators in grade 9 have been more common, though the field has largely focused on dropout prevention rather than college readiness..

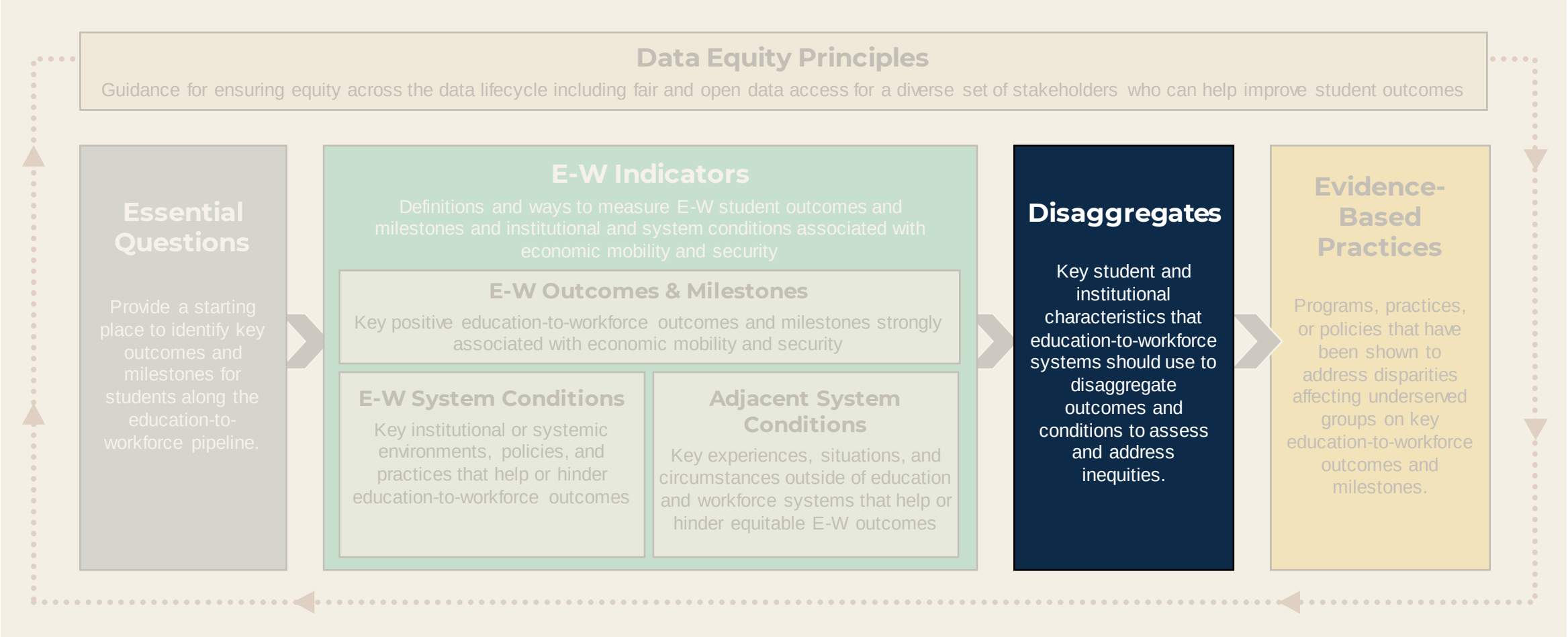
For example, the metrics and thresholds recommended by Balfanz and Byrnes (such as attendance of 90 percent or higher and no more than one suspension) predict whether students are likely to graduate high school.

We suggest raising these thresholds to emphasize readiness to enroll and succeed in postsecondary education. However, research based on local data should validate the criteria used to measure students' on-track status for college.

Schools record student course grades, attendance, and suspensions data as part of their regular operations, making this indicator theoretically feasible to measure. However, reporting of these administrative data to higher levels (district, state, federal) varies, and the underlying data are not necessarily comparable across localities. Currently, 14 states include 9th-grade on-track measures in their Every Student Succeeds Act (ESSA) accountability plans or publicly report this information, but the metrics used vary. For instance, some states focus only on credit accumulation, whereas others Chapter II. Indicators and metrics: Outcomes and milestones Mathematica® Inc. consider course performance in particular core subject areas. We note that relative to data on course grades, which are updated after every marking period, data on credits earned are updated at most twice a year, which make course grades more actionable information for intervention purposes.

Source frameworks: This indicator appeared in two source frameworks reviewed for this report by the Council of the Great City Schools and the Bill & Melinda Gates Foundation.

Disaggregates



Disaggregates

Education and workforce systems should disaggregate data by **key student and institutional characteristics** to assess and address inequities across groups and schools.

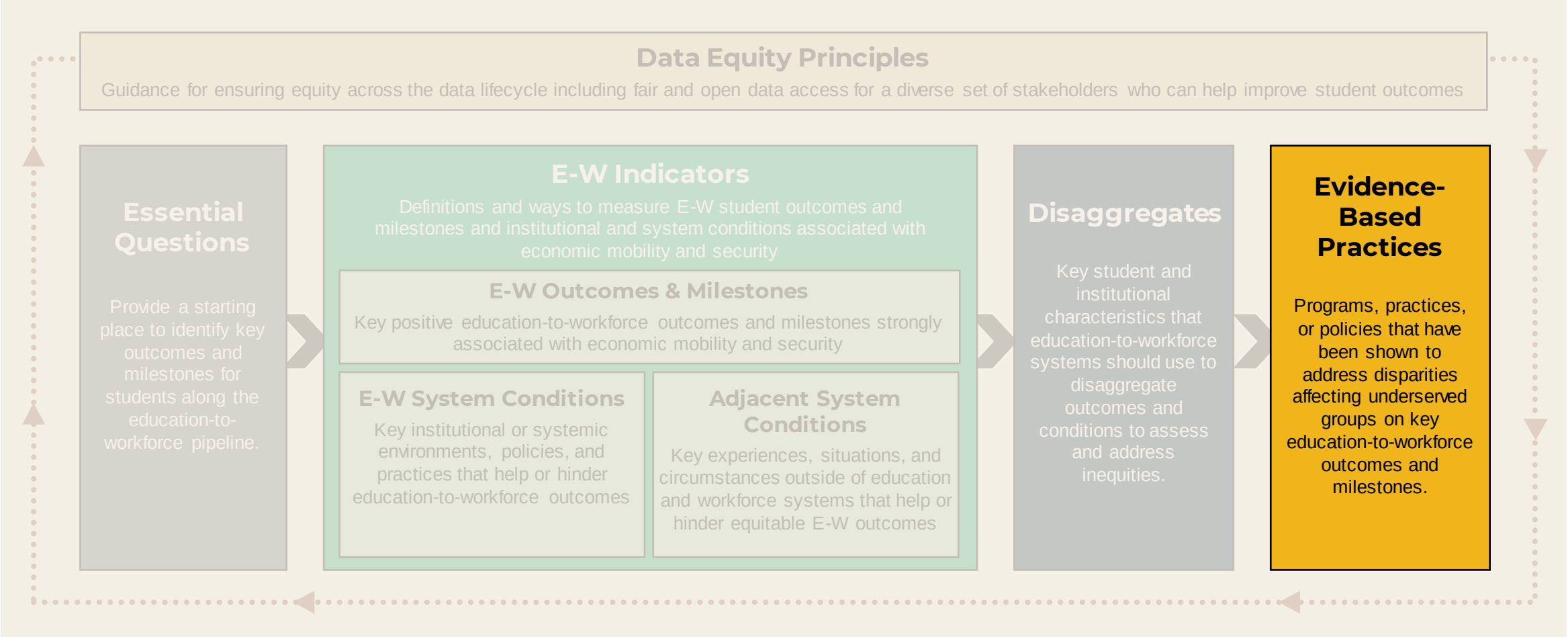
Recommended disaggregates

- Race/Ethnicity
- Income Level
- Gender
- Disability Status
- English Learner
- Individuals Experiencing Homelessness or Housing Instability
- Individual or Family Military Status
- Individuals with Current or Past Child Welfare Involvement
- Urbanicity
- Home Language
- Parental Education Level
- Attendance Intensity (Part or Full-Time)
- Age Group (e.g. Adult Learners)
- Student from Migrant Family Household
- K12 School Type
- Justice Involvement
- LGBT Status
- Postsecondary Institution Classification
- Credential Seeking Status
- Transfer Enrollment Status
- First Generation College Student
- Postsecondary Major
- Occupation Category
- Dislocated Worker Status
- Literacy Level

Example: Income Level

Disaggregate	Significance	Measurement Considerations
Whether individuals or households are considered low income, middle income, or high Income **Sector:** EC K12 PS WF	Disaggregating data by income level is important for identifying disparities caused by economic inequality and unequal access to certain supports. For example, in 2017, the national adjusted cohort graduation rate (ACGR) for economically disadvantaged students was 78 percent, compared to the overall ACGR of 85 percent. In addition, students who graduate from low-income high schools are more likely to leave college after the first year than those from higher income high schools. One study showed that just 14 percent of students classified as low socioeconomic status (SES) earned a bachelor's degree or higher within eight years of high school completion, compared to 29 percent of middle-SES students and 60 percent of high-SES students.	Measuring outcomes for students from low-income households is required for accountability in grades K–12 under the Every Student Succeeds Act (ESSA), and the Integrated Postsecondary Education Data System (IPEDS) collects and reports postsecondary enrollment and completion by Pell Grant status, as well as net price by income level. E-W systems currently use various (and sometimes proxy) measures to determine income level, as the available data vary across sectors. For example, K–12 systems might measure low-income status based on whether students receive free or reduced-price lunch, whereas postsecondary systems might measure it based on Pell Grant receipt. These classifications are often imperfect proxies for income level. We recommend that E-W systems collect data on household income directly and use that information to determine income groupings for disaggregation.

Evidence-based practices



Evidence-based practices

Evidence-based practices include **programs, practices, or policies** that have been **shown to address disparities** affecting underserved groups and can be used to link indicators to concrete action.

Select evidence-based practices

ECE	K-12	PS	Workforce
Skill-based curricula	Response to Intervention	Co-requisite support	Employer partnerships with CTE programs
Social skills training	SEL curricula and programs	Mentoring and coaching	Youth workforce dev programs
Parent programs	High-impact tutoring	Digital learning	Sector-oriented job training

How to apply the E-W Framework to select an evidence-based practice

1. Diagnose the need by conducting a root cause analysis using framework metrics
2. Identify potential evidence-based practices for consideration
3. Select a practice, weighing the evidence base against feasibility
4. Plan and monitor implementation and outcomes using framework metrics

K-12 evidence-based practices

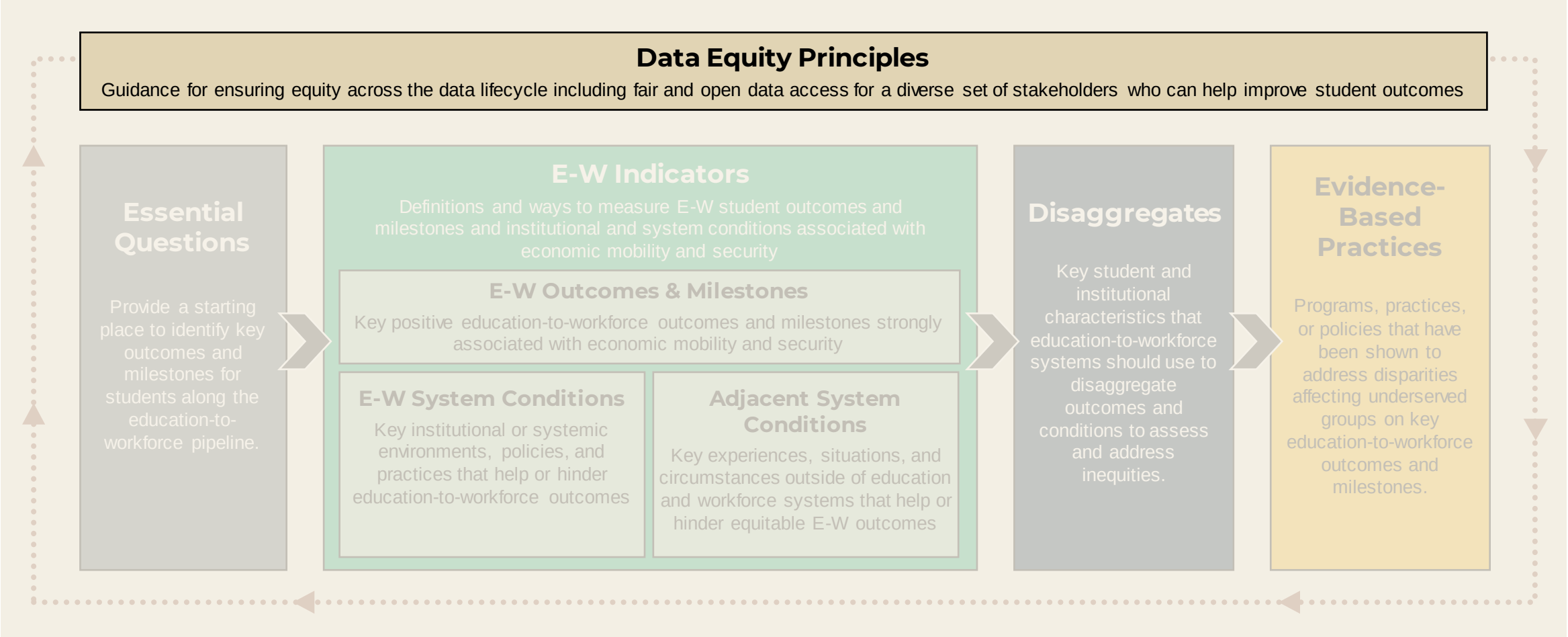
Evidence-based practices include **programs, practices, or policies** that have been **shown to address disparities** affecting underserved groups and can be used to link indicators to concrete action.

Evidence-based practices in Kindergarten-12th grade

Evidence-based curricula	High-impact tutoring	Out-of-school programs
Response to intervention	SEL curricula and programs	Small, personalized learning communities
Accelerated postsecondary pathways	Career pathways programs	Enhanced college advising

Intervention	Description	Associated Outcome & Milestones
Evidence-based curricula	A growing body of experimental research shows that particular subject-specific curricula can lead to different academic achievement outcomes for students. Great Explorations in Math and Science (GEMS) Space Science Sequence, which uses models, hands-on investigations, peer-to-peer discussions, reflection, and informational student readings, has been shown to improve science achievement for students in grades 4-5. There is limited evidence about the features of curricula that make them effective, although research summarized by Education First suggests that content richness and standards alignment are common qualities of effective curricula. Also, curricula that prioritize student engagement through additional instructional materials or culturally relevant content may have positive effects on student achievement. Curricula that engage and support teachers effectively may increase the frequency and fidelity of implementation, which are likely to shape the effectiveness of those curricula in improving student achievement. We recommend decision makers consult the WWC, as well as resources such as EdReports, which rates curricula according to their coherence, standards alignment, and usability, to inform the selection of evidence-based curricula.	- 6th grade on track - 9th grade on track - High school graduation

Data Equity Principles



Data Equity: Principles and Recommendations

Adrian Neely

What are Data Equity Principles?

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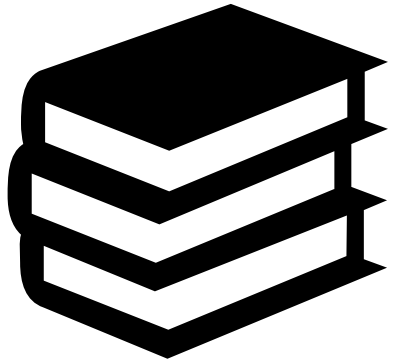
How was this resource developed?

Literature Review



Contributory Input

7 Data Equity Principles

1. **Employ ethical behavior** to respect the rights of individuals who provide data, promote greater equity and well-being, and minimize the risk of harm.
2. **Protect the privacy** of individuals who provide data while ensuring appropriate ownership and **access to information.**
3. **Disaggregate data** on both outcomes and system conditions to analyze disparities, monitor progress, and guide action.
4. Examine social and historical contexts to **identify root causes of disparities,** inform data collection and use, and develop data-driven solutions.
5. **Question default methods and assumptions** for data collection and analysis and triangulate quantitative data with other sources.
6. Ensure data visualizations **promote inclusion and awareness** across culturally, linguistically, and racially diverse audiences.
7. **Restore communities as data experts** using culturally responsive approaches to engagement and co-creation that support equitable data use.

Data Equity Principles

Data equity is critical to ensure fair data access, governance, and use that enables policymakers, practitioners, and researchers to use data to improve student outcomes.

Data equity principles

Principle 1	Principle 2	Principle 3	Principle 4	Principle 5	Principle 6
Employ ethical behavior to respect the rights of data providers, promoting wellbeing and reducing harm.	**Protect the privacy** of data providers while ensuring appropriate **access to information.**	**Disaggregate data** to help analyze disparities, monitor progress, and guide action.	Examine the social and historical context to **identify the root causes of disparities,** inform data collection and use, and develop data-driven solutions.	**Question default methods and assumptions** for data collection and analysis and triangulate quantitative data with other sources.	Ensure data visualizations **promote inclusion and awareness** across culturally, linguistically, and racially diverse audiences.

Principle 7

Restore communities as data experts using equity-based approaches to engagement that build trust and minimize harm.

The data lifecycle

MIRROR GROUP

/ Which of these data equity principle(s) do you already apply in your work?

A closer look at Principle #1

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PRINCIPLE 1: Employ ethical behavior to respect the rights of individuals who provide data, promote greater equity and well-being, and minimize the risk of harm.

Ethical behavior requires data users to evaluate data practices to determine whether they have the potential to contribute to greater equity, as opposed to reinforcing the status quo or even causing harm to communities already most marginalized, such as Black and Indigenous people. It requires data users to consistently challenge ideas, practices, or policies that fuel systemic racism. To combat systemic racism means to challenge the notion that differences between racial groups are simply inherent, rather than understanding that racial disparities are a product of longstanding oppressive systems and policies. Data users must question whether they are addressing the underlying structural factors that perpetuate inequity, respecting the dignity and autonomy of all individuals, and maximizing benefits while minimizing the risk of harm.

Although Institutional Review Boards (IRBs) determine whether ethics are upheld in research,[xxxi] in practice IRBs are not well equipped to perform deep reviews that center the concerns of marginalized groups to advance racial equity. For example, IRBs have allowed people of color to be systematically underrepresented in clinical trials, even when they are most affected by the health conditions being studied.[1513] In addition, many data projects occur in settings with little or no ethical oversight. Data users must carefully assess data projects' potential risks and benefits to the well-being of individuals and society at large to avoid being extractive and exploitative. Data users must weigh the risks and benefits holistically, with an eye toward the groups that might be differentially affected to ensure both risks and benefits are distributed fairly, and racial equity is being promoted.

Data users should be attentive to uses of data that carry a high risk of causing harm, such as algorithms, or data-based decision tools, that may lead to discriminatory practices. Algorithms reflect the biases of the people who develop them and of the underlying data. If considering using an algorithm to inform decision making, data users must ensure transparency, assess algorithmic bias, and determine the potential positive and negative consequences of applying the algorithm in practice. Decisions based on a data algorithm should always be reviewed by humans, and affected individuals should have the ability to contest the decision. Data users should also be attentive to minimizing the amount of data collected on sensitive topics (for example, mental health) and rigorously protecting personally identifiable information.

At the outset of any data project, decision makers should identify and communicate who is funding the project and what their priorities are, the types of decisions the data will inform, the data project's stated public benefit and equity goals, whether the data project meets the needs and addresses the concerns of the intended beneficiaries, and whether the data project could lead to unintended consequences or have racial equity implications (good or bad). They must engage the groups of people whom the data project might affect to make these determinations, be responsive to their feedback, and ensure transparency.

Community engagement is especially critical if the project could have serious or disproportionate impact on marginalized groups or those facing multiple barriers. Involving multiple partners, including proximate leaders from affected communities, in data governance, institutional review, and advisory structures, can help data users ensure the project is successful in promoting equity and well-being.

[xxxi] Ethical principles of research are described in the Belmont Report, which guides human subjects' protections in research (but does not have a racial equity lens).

Employ ethical behavior to **respect the rights of individuals** who provide data, promote greater **equity** and **well-being**, and **minimize the risk of harm**.

Principle description 1

MIRROR GROUP

The importance of transparency in ethical data use

Mount Saint Mary's University, a small, private college in Maryland, made the news in 2016 after a plan to use student data to boost retention rates became public. New students would have to take a survey that the school would use to predict their likelihood of dropping out; students with a high probability would then be encouraged to unenroll before they were counted in the retention data that colleges report to the federal government. Mount Saint Mary's did not disclose to students that their survey responses could be used to encourage them to leave (Ekowo & Palmer, 2016)—a major ethical breach. In contrast, other colleges, such as Georgia State University and Temple University, have successfully used predictive analytics to improve graduation rates by involving students and staff in the process. Transparency is at the heart of using data ethically and equitably, allowing for greater oversight and accountability.

Case study 2

Application throughout the data life cycle

3

Key phases for this principle	Example applications
Context-setting	Hold listening sessions with community members to learn what types of data projects the community thinks are relevant to improve their lives. Consider the impacts of structural racism on the priority community and listen to the stories of community members to identify ways the work could be beneficial to them. Examine the results of past data projects, including past approaches to centering equity, to identify strengths and areas for improvement.
Planning	Establish a governance or review body with representation from multiple stakeholders, including proximate leaders from affected communities. Convene this body to agree on the goals of the project, identify risks and benefits, develop mitigation strategies, and inform decisions at each phase of the data cycle. Consider formalizing a commitment to ethical data use by drafting a social impact statement[1501] that outlines how to put principles into practice.
Collection	Minimize the collection of sensitive and personally identifiable information unless it is critical to achieving the project's intended benefits. Eliminate the collection of any nonessential data to minimize burden on individuals. Individuals, especially those in marginalized communities, may perceive the collection of unnecessary personal information as over-surveillance and question whether the data collection has hidden purposes.
Access	As appropriate, securely share data with partners to reduce the burden of duplicate data collection (see Principle 2 for additional considerations on data privacy and access). Communicate policies on data storage, access, and use in lay terms.
Analysis	Clearly describe the methods and algorithms used to analyze the data, their potential for inaccuracy and bias, and how they will be used to inform decision making. Seek out and incorporate communities' interpretation of the data.
Reporting	Return data and research results to community members in a form they can use. Create channels to report grievances. Publicly disseminate the results of the analysis and invite others to build on the research in an ethical manner that will produce continuous benefits to the community. Accurately identify the strengths and weaknesses of the data.

Reflection questions 4

- Who would benefit from or be burdened by the data project? Are both benefits and burdens shared equitably?
- What are the potential risks of the project versus the risks of not proceeding with it?
- Could you modify the project to enhance positive impacts or reduce negative impacts?
- Are governance and oversight mechanisms in place? Do they include community representation?
- How will you know whether the intended benefits to the community were achieved?

Be on the lookout 5

- "Early warning" and other predictive indicators can be powerful tools. However, they should not be used for increased monitoring or punitive action.
- Data users must be aware that biases in the inputs used to form predictions can perpetuate stereotypes and even lead to discriminatory treatment. For example, although past suspensions are predictive of high school graduation, they also reflect racial bias in school-based disciplinary actions.
- Algorithms should never override the judgment of individuals. Balancing information from the algorithm with the judgment of practitioners, students, and parents, and other qualitative or contextual data can help ensure equitable outcomes are achieved.

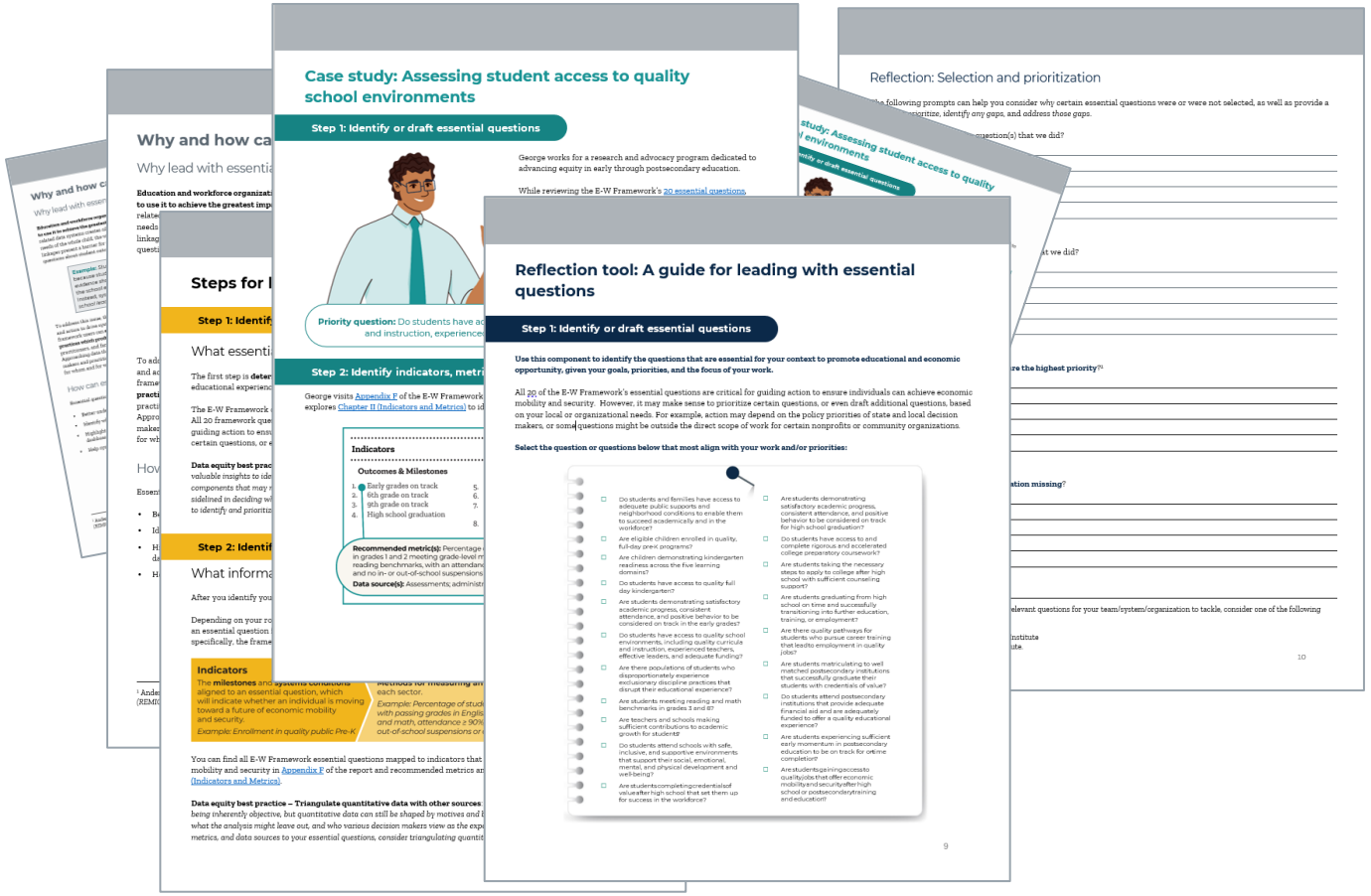
Additional resources 6

- Principles for Advancing Equitable Data Practice. This brief by the Urban Institute describes the Belmont Report's ethical principles and offers examples of practices and resources to integrate the principles throughout the data life cycle with an equity lens.
- The Data Equity Framework. This framework from We All Count identifies key equity-impacting decision points in data projects and offers practical tools for developing and implementing ethical data projects that center equity.
- A Toolkit for Centering Racial Equity Throughout Data Integration. This toolkit by Actionable Intelligence for Social Policy includes chapters on "Racial Equity in Planning" and "Racial Equity in Algorithms/Statistical Tools" which describe positive and problematic practices with ethical implications, as well as citing brief case studies.
- Forum Guide to Data Ethics. This report by the National Forum on Education Statistics offers nine "canons" of data ethics in education, along with real-life examples and resources to implement these canons.
- Racial Equity Considerations and the Institutional Review Board. This Child Trends blog post describes why racial equity matters in IRB submissions and offers suggestions for applying an anti-racist lens when submitting to an IRB.

What is an essential question that would help you make more informed decisions in service of equity?

Q&A

Identifying next steps: Essential questions guide



- **Why and how can essential questions be used?**
- **Steps for leading with essential questions**
  - Identify or draft essential questions
  - Identify indicators, metrics, and data sources
  - Identify gaps and next steps
- **Case study**
- **Reflection tool**

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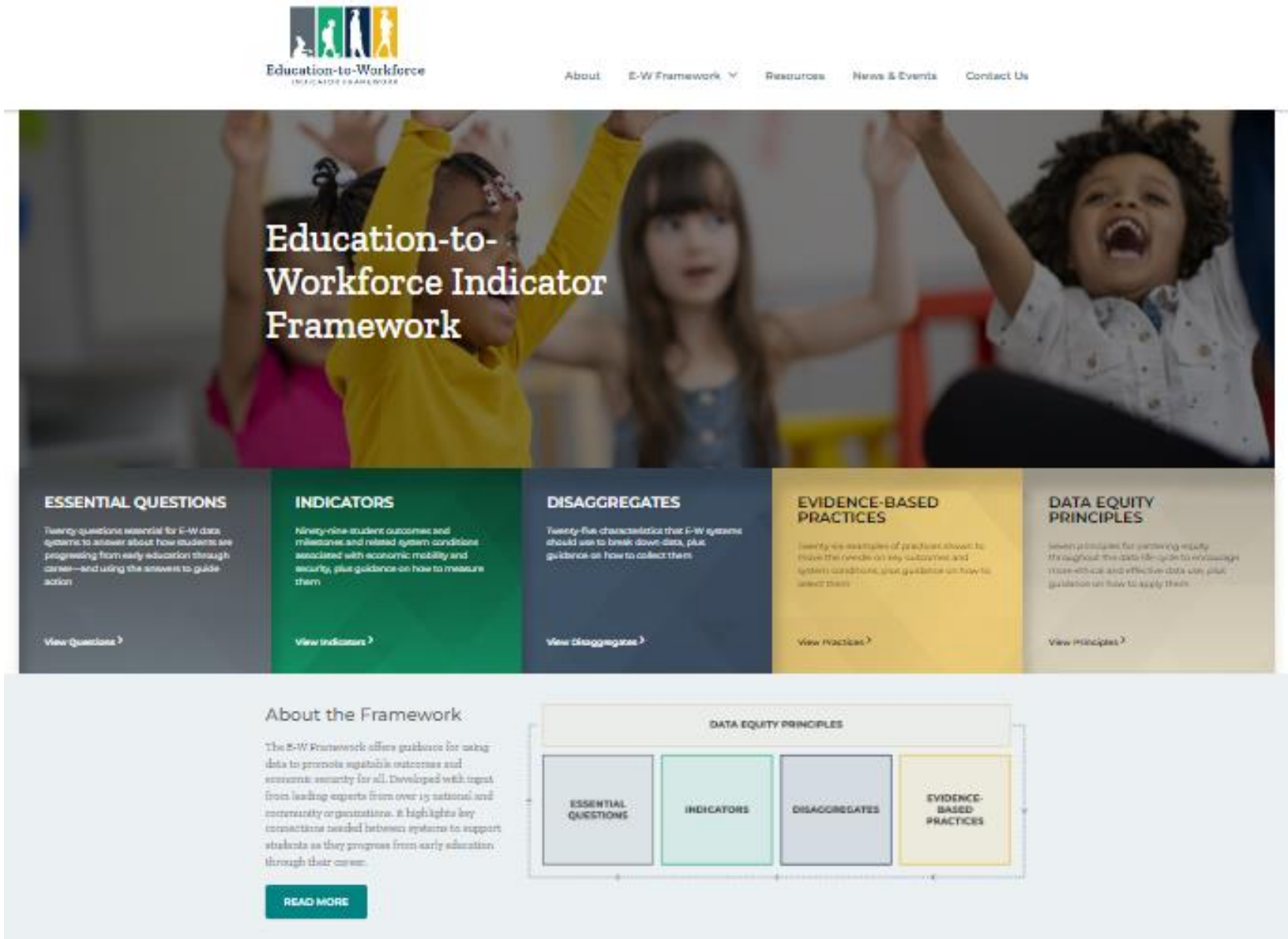
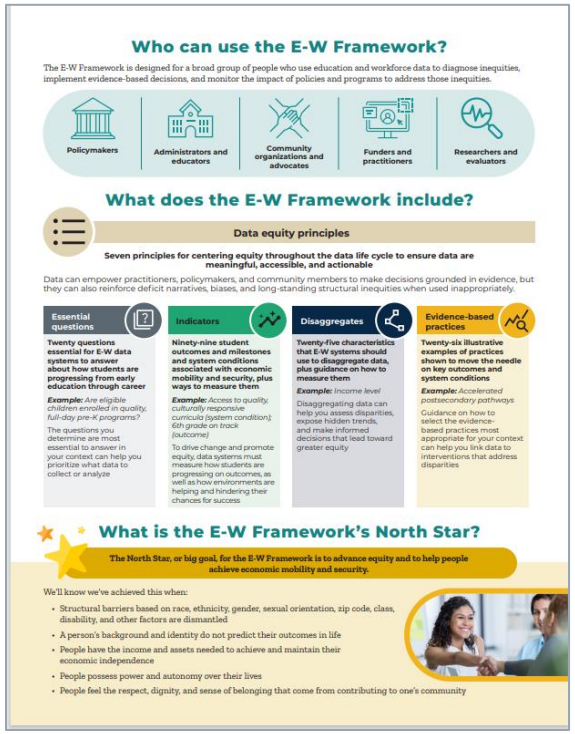
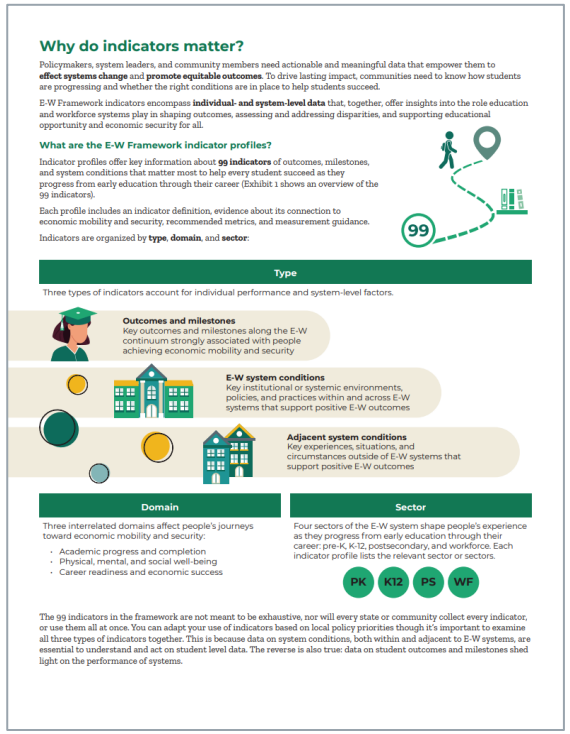


Four at-a-glance resources

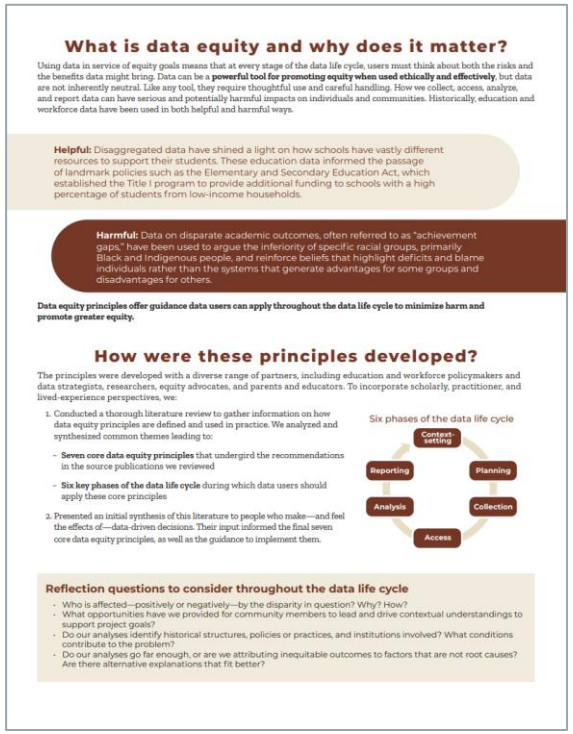
Framework at a Glance



Indicators at a Glance



Data Equity Principles at a Glance



Source Frameworks at a Glance

/ What components of the framework would you want to explore further at a future convening or meeting?

Thank you!

Additional questions?
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