Education-to-Workforce Indicator Framework Chapter III. Disaggregates

Framework excerpt

This file contains Chapter III of the Education-to-Workforce Indicator Framework. This chapter describes key background characteristics that education-to-workforce systems should use to disaggregate data and assess disparities, along with guidance on how best to collect the information necessary for disaggregation. The full framework includes five chapters:

- I. Introduction and approach
- II. Indicators and metrics
- III. Disaggregates
- IV. Evidence-based practices
- V. Data equity principles



A. Overview

"Disaggregates" refer to background or contextual characteristics of individuals and systems by which data should be examined to analyze disparities, monitor progress, and guide action. We recommend that education-toworkforce (E-W) systems collect or link data on the 25 disaggregates identified in this chapter. To develop this recommended list, we reviewed the 41 source frameworks listed in Appendix A and synthesized common disaggregates for E-W data systems. We acknowledge that some disaggregates will be more or less relevant in certain contexts. For example, although all sectors should disaggregate data by background characteristics such as race and ethnicity, income, gender, and disability status, postsecondary systems should also consider disaggregating data by factors such as students' enrollment intensity and field of study.

Per our guidance in the data equity principles chapter, we emphasize the importance of disaggregating data on both outcomes and system conditions to identify, expose, and act on

National Academies guidance on tracking disparities

In its 2019 report, *Monitoring Educational Equity*, the <u>National Academies of Sciences</u>, <u>Engineering, and Medicine</u> recommend that systems measure educational equity based on indicators of disparities—that is, betweengroup differences among those student groups most salient for policy attention.

As noted in the report, "the purpose of such indicators is not to track progress toward aggregate goals, such as that all students graduate high school within 4 years of entering 9th grade, but to identify differences in progress toward that goal, differences in students' family background and other characteristics, and differences in the conditions and structures in the education system that may affect students' education."

The National Academies define a disparity as not just a large difference in individual outcomes, but also a lack of appropriate resources or effort to meet the needs of all groups of students.

the structural inequities that cause disparate outcomes across groups, and avoid perpetuating existing stereotypes and deficit narratives. Data Equity Principle 3 contains additional guidance on data disaggregation to support equity goals, including suggestions on how to apply disaggregation throughout the data cycle, reflection questions and potential pitfalls for data users to consider, and additional resources to consult.

For each disaggregate listed in this chapter (Exhibit III.1), we provide the following information:

- Sectors. The sectors that should prioritize collecting and analyzing data on the disaggregate (pre-K, K–12, postsecondary, and/or workforce). Although some disaggregates are most relevant to only one sector, many apply to multiple sectors.
- **Definition.** A suggested definition for the disaggregate that can be applied across contexts.
- Why it matters. A summary of the importance of disaggregating E-W data by that characteristic.
- What to know about measurement. Considerations about measuring the disaggregate, including best practices for collecting the information appropriately and consistently. We also note when there is limited consensus on measurement and opportunities to advance the field.
- **Source frameworks.** The number of sources (including indicator frameworks, program reporting guidelines, and data system elements) consulted that mention the disaggregate.

Exhibit III.1. Disaggregates



LGBT = lesbian, gay, bisexual, or transgender; PS = postsecondary.

B. Recommended disaggregates for E-W systems

Race and ethnicity



Definition: Self-reported race and ethnicity

Why it matters: Disaggregating data by race and ethnicity is critical for identifying and addressing disparities in outcomes related to systemic and institutional racism. As discussed throughout this report, individuals and communities of color are often disadvantaged by inequitable access to resources and services in education systems, workforce systems, and beyond. Measuring outcomes by racial and ethnic groups is required for accountability in grades K–12 under the Every Student Succeeds Act (ESSA) and as part of required reporting to the Integrated Postsecondary Education Data System (IPEDS) for postsecondary institutions receiving Title IV funds.

What to know about measurement: Data systems across sectors do not always use the same reporting standards for race and ethnicity, which can limit the comparability and availability of data reported across sectors. For example, IPEDS requires postsecondary institutions to exclude students who are nonresident aliens according to the visa and citizenship information on record at the institution from race and ethnicity reporting; these students instead are classified as a separate category of nonresident aliens.¹²⁰⁶ The National Student Clearinghouse (NSC) also asks institutions to follow these guidelines established by IPEDS. Further, the NSC does not require institutions to report students' race and ethnicity, and only 62 percent of 2020–2021 enrollment records reported to the NSC included this information.¹²⁰⁷

E-W systems should align their approaches to collecting and reporting race and ethnicity data. These systems may follow the minimum categories required by the U.S. Department of Education, which are based on guidelines by the Office of Management and Budget. These include collecting data on two categories for ethnicity (Latino or Hispanic or not Latino or Hispanic) and five categories for race (American Indian or Alaska Native; Asian; Black or African American; Native Hawaiian or Other Pacific Islander; White). Individuals may select more than one race. This information is then used to report on seven categories: Latino or Hispanic of any race, and—for individuals who are not Latino or Hispanic—American Indian or Alaska Native; Asian; Black or African American; Native Hawaiian or Other Pacific Islander; White; or two or more races.^{1208, 1209} Note that this guidance requires collecting data separately on Latino or Hispanic ethnic identity and racial identity, which are not mutually exclusive categories, and reporting race and ethnicity data for all students, including nonresident aliens.

In addition to these minimum categories, we recommend capturing more detailed ethnicity data based on national origin, as broad race and ethnicity groupings can mask disparities. For instance, there are more than 48 Asian ethnicities, and patterns of disparities emerge when disaggregating data for South Asian groups, such as Laotians and Cambodians, separately from East Asian groups, such as Chinese and Korean.¹²¹⁰ As another example, individuals with origins in North Africa and the Middle East are categorized as "White" under federal definitions, though these groups may face different experiences and challenges than do White Americans with European roots. **Source frameworks:** This disaggregate appeared in 25 source frameworks reviewed for this report, including the Institute for Higher Education Policy (IHEP) Postsecondary Metrics framework,¹²¹¹ the StriveTogether Guide to Racial and Ethnic Equity Systems Indicators,¹²¹² and the Urban Institute's Boosting Upward Mobility framework.¹²¹³

Gender



Definition: Self-identified gender

Why it matters: Gender disparities are evident in many E-W outcomes, both overall and within groups, such as groups broken out by race and ethnicity. Women now graduate from high school, enroll in college, and complete college (across all degree types) at higher rates than men.^{1214, 1215} However, pay inequities that disadvantage women persist in the workforce, with women earning approximately 82 cents for every dollar earned by men.¹²¹⁶ Although wage data disaggregated by nonbinary status is not currently widely available, research by the Human Rights Campaign suggests that workers identifying as nonbinary earn approximately 70 cents for every dollar compared to the "typical" worker (based on median weekly earnings of all full-time workers reported by the Bureau of Labor Statistics).¹²¹⁷ Disaggregation by gender is required in grades K–12 under the Every Student Succeeds Act (ESSA). The Integrated Postsecondary Education Data System (IPEDS) also collects and reports postsecondary enrollment and completion data by gender.

What to know about measurement: We encourage E-W systems to systematically collect and report gender, and include a nonbinary option. Currently, most E-W data systems collect and report information only on male and female gender. For example, IPEDS allows reporting only for these two categories, and "it is up to the institution to decide how best to handle reporting individuals whose gender does not align with the 'Men' and 'Women' categories."¹²¹⁸ Similarly, the National Student Clearinghouse (NSC) offers only these two options in its reporting guidance. Further, it does not require institutions to report students' gender, and only 64 percent of 2020–2021 enrollment records reported to the NSC included this information.¹²¹⁹ For students whose gender is not reported, the NSC imputes whether they are male or female based on the probability of their first name being associated with either of these two genders.¹²²⁰ According to the Williams Institute, a leading lesbian, gay, bisexual, and transgender (LGBT) research center based at the UCLA School of Law, an estimated 1.2 million adults in the United States identify as nonbinary.¹²²¹ Some public data systems are already moving to include a nonbinary option, including the planned 2022 Civil Rights Data Collection (CRDC) by the U.S. Department of Education.¹²²²

Currently, there are various ways in which transgender status might be captured in data collection. Transgender could be included as a gender option: for example, the Williams Institute recommends offering seven options for self-reporting gender: (1) male, (2) female, (3) transgender male, (4) transgender female, (5) gender nonconforming, (6) nonbinary, (7) other gender identity.¹²²³ Alternatively, systems could ask a separate question about LGBT status that allows disaggregation by transgender status, as described below under "LGBT status." We encourage E-W systems to align on how they collect gender data to inform policy and practice that supports equity for individuals of all gender identities. **Source frameworks:** This disaggregate appeared in 13 source frameworks reviewed for this report, including the Postsecondary Value Commission (PVC) Equitable Value framework,¹²²⁴ the Institute for Higher Education Policy (IHEP) Postsecondary Metrics framework,¹²²⁵ and the Urban Institute's Boosting Upward Mobility framework.¹²²⁶

LGBT status



Definition: Individuals who identify as a member of the LGBT community

Why it matters: Lesbian, gay, bisexual, and transgender (LGBT) individuals come from diverse backgrounds but can face similar challenges related to overt and/or covert discrimination. For example, same-sex and transgender couples face discrimination in housing markets,¹²²⁷ and approximately 30 percent of LGBT individuals report experiencing workplace discrimination at some point in their careers.¹²²⁸ An analysis by the Human Rights Campaign finds that LGBTQ+ workers earn approximately 90 cents for every dollar compared to the "typical" worker (based on median weekly earnings of all full-time workers reported by the Bureau of Labor Statistics).¹²²⁹ In



Source: The Williams Institute (2018).

addition, LGBT individuals experience poverty at a higher rate (22 percent) than non-LGBT individuals (16 percent).¹²³⁰

What to know about measurement: The Williams Institute recommends measuring LGBT status in the following way: "Do you think of yourself as (please check all that apply): (1) Straight; (2) Gay or lesbian; (3) Bisexual; (4), Transgender, transsexual, or gender non-conforming. IF yes to transgender, then probe: (1) Transgender or transsexual, male to female; (2) Transgender or transsexual, female to male; (3) Gender non-conforming." Other measures broaden LGBT to include IA for intersex individuals and asexuality or Q for queer. However, because these terms might be interpreted differently, the Williams Institute does not recommend their inclusion, though respondents should be given a write-in option.¹²³¹ As a less detailed alternative, the Gallup Institute asks a single question: "Do you personally identify as lesbian, gay, bisexual, or transgender?" We encourage E-W systems to align on LGBT data collection to inform policy and practice that supports LGBT individuals. As with other sensitive information, questions about LGBT status should be voluntary and confidential.

Source frameworks: This disaggregate (or a similar indicator of sexual orientation) appeared in three source frameworks reviewed for this report: the United Way Equity framework,¹²³² the California Cradle-to-Career Data System,¹²³³ and the Urban Institute Robust and Equitable Measures to Identify Quality Schools (REMIQS) framework.¹²³⁴

Disability status



Definition: Students who receive special education supports or adults with a disability

Why it matters: Individuals with disabilities may benefit from individualized supports throughout the E-W continuum. For example, in 2017, the national adjusted cohort graduation rate (ACGR) for students with disabilities was approximately 67 percent, an 18-point difference from the overall ACGR of 85 percent.¹²³⁵ In the workforce, individuals with disabilities tend to earn less than non-disabled workers. In 2017, median earnings for full-time, year-round workers with disabilities were \$41,332, compared with \$47,279 for full-time, year-round, non-disabled workers.¹²³⁶ Individuals with disabilities often face higher medical, transportation, and housing costs than those without disabilities, which may present additional obstacles to achieving economic mobility and security.¹²³⁷ Disaggregating outcomes for students who receive special education services is required for accountability in grades K–12 under the Every Student Succeeds Act (ESSA). These data can and should be used to identify both whether students are gaining appropriate access to special education supports and whether some student groups are overrepresented in special education.

What to know about measurement: Disability status is defined and captured differently across systems based on the policy context. In pre-K and K–12, disability status is based on whether students have an individualized education program (IEP) or 504 plan. Students with an IEP or 504 plan, which includes those who do not qualify for an IEP but may benefit from additional accommodations, receive special education services under the Individuals with Disabilities Education Act. Pre-K and K–12 data systems must capture this information, along with the reason for the student's disability, which can be grouped into categories (for example, intellectual disabilities; developmental delays and autism spectrum disorder; speech and language impairments; specific learning disabilities; physical disabilities; and other disabilities, which include attention deficit hyperactivity disorder). This detailed information should also be used to disaggregate data for students receiving special education services, as additional patterns of disparities may emerge.

In postsecondary and workforce contexts, individuals must self-identify as having a disability to receive certain accommodations.¹²³⁸ Adult disability status is defined by federal law as "someone who (1) has a physical or mental impairment that substantially limits one or more 'major life activities,' (2) has a record of such an impairment, or (3) is regarded as having such an impairment."¹²³⁹ Individuals who meet the U.S. Department of Labor's definition of "frail" would also be included.^{xxvii}

Source frameworks: This disaggregate appeared in 10 source frameworks reviewed for this report, including the National Education Association Great Public Schools Indicator Framework,¹²⁴⁰ the Council of Great City Schools Academic Key Performance Indicator framework,¹²⁴¹ and multiple publications by the National Academies.^{1242, 1243}

^{xxvii} The definition of frail is "an individual 55 years of age or older who is determined to be functionally impaired because the individual - (1) (i) Is unable to perform at least two activities of daily living without substantial human assistance, including verbal reminding, physical cueing, or supervision; or (ii) is unable to perform at least three such activities without such assistance; or (2) Due to a cognitive or other mental impairment, requires substantial supervision because the individual behaves in a manner that poses a serious health or safety hazard to the individual or to another individual."

Income level



Definition: Whether individuals or households are considered low income, middle income, or high income

Why it matters: 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.¹²⁴⁴ 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.¹²⁴⁵ One study showed that just 14 percent of students classified as low socioeconomic status^{xxviii} (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.¹²⁴⁶ 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.

What to know about measurement: 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. For example, schools eligible for the Community Eligibility Provision program do not collect individual-level data to determine eligibility for the National School Lunch Program (NSLP). Because of the limitations of data on NSLP eligibility, some districts are beginning to track alternative measures of economic disadvantage. For instance, Pittsburgh and Philadelphia schools determine whether students are directly certified for the NSLP through the Supplemental Nutrition Assistance Program (SNAP), Temporary Assistance for Needy Families (TANF), Medicaid, or other social service programs.¹²⁴⁷ However, not all low-income individuals may be eligible or participate, so program receipt (whether NSLP, Pell Grants, SNAP, or other programs) may undercount individuals in lower income categories.

We recommend that E-W systems collect data on household income directly and use that information to determine income groupings for disaggregation. One standard approach is to form income groupings in relation to the federal poverty level (FPL): for example, (1) up to 200 percent of FPL, (2) 200 to 399 percent of FPL, and (3) 400 percent or higher. In 2021, the 200 percent threshold for a family of a four was \$53,000 and the 400 percent threshold was \$106,000.¹²⁴⁸ (These values apply to the contiguous United States; FPL values are higher in Hawaii and Alaska.) Another approach, one the U.S. Department of Housing and Urban Development uses, is based on the area median income (AMI) rather than the FPL. Under this guidance, "low income" is defined as up to 80 percent of AMI and "moderate income" is defined as 80 to 120 percent of AMI. Because AMI definitions are based on local data, the thresholds can vary significantly across localities and better reflect differences in the cost of living. For instance, the

^{xxviii} Per the U.S. Department of Education, "students' SES is based on their parents' education and occupations as well as family income, and is measured by a composite score on these variables. The low-SES group is the lowest quartile; the middle-SES group is the middle two quartiles; and the high-SES group is the upper quartile."

"low-income" threshold for a family of four living in San Francisco, California in 2021 was \$106,550.¹²⁴⁹ In Chattanooga, Tennessee, that threshold was \$57,050.¹²⁵⁰ We encourage E-W systems to converge on an approach to reporting income groups for data disaggregation.

Source frameworks: This disaggregate appeared in 20 source frameworks reviewed for this report, such as the National School Readiness Indicators Initiative,¹²⁵¹ the Urban Institute Robust and Equitable Measures to Identify Quality Schools (REMIQS) framework,¹²⁵² and the Postsecondary Value Commission Equitable Value framework.¹²⁵³

Parental education level



Definition: Highest level of education achieved by either parent

Why it matters: Parents' education levels are strongly associated with educational outcomes, including grades, graduation, and students' aspirations for their own achievement.^{1254, 1255, 1256} Individuals who have at least one parent with a bachelor's degree have higher rates of bachelor's degree attainment, higher median household income, and higher median wealth.¹²⁵⁷ Higher levels of parental education are also associated with intergenerational wealth and therefore greater economic security.¹²⁵⁸

What to know about measurement: $\ensuremath{\mathbb{E}}\xspace{-}\ensuremath{\mathbb{W}}\xspace$

systems should collect consistent information on the educational attainment of both parents—for example, by adopting the following categories used in the American



Data source: Pew Research Center (2021).

Community Survey (ACS): no schooling completed; nursery school; grades 1 through 11; 12th grade—no diploma; regular high school diploma; general equivalency diploma (GED) or alternative credential; some college credit but less than one year of college; one or more years of college credit, no degree; associate's degree; bachelor's degree; master's degree; professional degree beyond bachelor's degree; doctorate degree. As a simpler alternative, the Free Application for Federal Student Aid (FAFSA) uses four categories to ask about the level of schooling completed by each parent: middle school/junior high; high school; college or beyond; and other or unknown. These data can be used to determine whether a student is a first-generation college student while also allowing for further disaggregation if needed.

Source frameworks: This disaggregate appeared in six source frameworks reviewed for this report, such as the National School Readiness Indicators Initiative¹²⁵⁹ and the California Cradle-to-Career Data System.¹²⁶⁰

First-generation college student



Definition: Students who are the first in their family to complete any postsecondary degree

Why it matters: First-generation students may benefit from additional supports to prepare for standardized tests, submit college applications, enroll in postsecondary school, and succeed in their first year of college and beyond. Students whose parents have limited experience with the postsecondary system "may lack the critical cultural capital necessary for college success."¹²⁶¹ First-generation college students tend to have lower rates of postsecondary persistence and completion: one study showed that 33 percent of first-generation students left school without returning within three years of beginning college, compared to 14 percent of students with at least one parent with a bachelor's degree.¹²⁶²

What to know about measurement: Many definitions of "first-generation" college students are used in practice, with one study finding that estimates of the prevalence of first-generation status can range from 22 to 77 percent, depending on the definition used.¹²⁶³ Under federal guidance used to determine eligibility for TRIO programs (Upward Bound, Talent Search, and Student Support Service), a student is considered "first generation" if neither parent completed a four-year college degree.¹²⁶⁴ The Institute for Higher Education Policy defines first-generation status based on neither parent having *completed* any college degree—that is, a student may be considered first generation if their parents enrolled in college but did not complete it.¹²⁶⁵ In contrast, the National Student Clearinghouse (NSC) classifies a student as "first generation" if neither parent *ever* attended a college or university.¹²⁶⁶ More recently, some support organizations, such as College Track, consider students whose parents completed a four-year degree outside of the United States as "first generation." We encourage E-W systems to align on a definition of "first generation" to support coherence and common understanding in the field.

Source frameworks: This disaggregate appeared in six source frameworks reviewed for this report, such as the Institute for Higher Education Policy Postsecondary Metrics Framework¹²⁶⁷ and the National Student Clearinghouse Postsecondary Data Partnership.¹²⁶⁸

Student from migrant family household



Definition: Students who are the children of migratory or seasonal farmworkers or are migratory or seasonal farmworkers themselves

Why it matters: Migratory children frequently change schools and districts, forcing them to contend with varied curricula and school processes and limiting their ability to develop support systems and sustained social connections. The Association of Farmworker Opportunity Programs estimates there are approximately half a million child farmworkers in the United States,¹²⁶⁹ and estimates of graduation rates for migrant students are approximately 45 to 50 percent, well below the national average.¹²⁷⁰ In high school, college outreach programs do not consistently reach students from migrant households, which negatively impacts their likelihood of applying for and enrolling in postsecondary education.¹²⁷¹

What to know about measurement: Under the Every Student Succeeds Act (ESSA), a migratory child is defined as "a child or youth who made a qualifying move in the preceding 36 months—(A) as a migratory agricultural worker or a migratory fisher; or (B) with, or to join, a parent or spouse who is a migratory agricultural worker or a migratory fisher." Migratory children may receive support from federally funded pre-K programs such as Migrant and Seasonal Head Start and the Migrant Education Program in K–12. Although migrant students can be difficult to track, the U.S. Department of Education's Migrant Student Records Exchange Initiative provides a data infrastructure to track and manage records for students who move frequently and have data records in more than one state.¹²⁷² At the postsecondary level, first-year undergraduate students who are the children of migratory or seasonal farmworkers or are migratory or seasonal farmworkers themselves can receive support through the federal College Assistance Migrant Program.

Source frameworks: This disaggregate appeared in three source frameworks reviewed for this report: the Urban Institute Robust and Equitable Measures to Identify Quality Schools (REMIQS) framework,¹²⁷³ Workforce Innovation and Opportunity Act reporting guidelines,¹²⁷⁴ and the California Cradle-to-Career Data System.¹²⁷⁵

Home language



Definition: The language an individual speaks at home, if not English

Why it matters: Home language can provide greater insight into the experiences of emerging multilingual students classified as English learners and those who speak another language at home but may not be classified as English language learners. Data from the American Community Survey show that approximately 20 percent of the U.S. population primarily speaks a language other than English at home.¹²⁷⁶ As noted in the E-W System Conditions section of this report, school-family engagement is important for students' success; however, families with limited English proficiency often face barriers to accessing or understanding educational resources.¹²⁷⁷

What to know about measurement: All state departments of education recommend or require school districts to use a home language survey (often during the school enrollment process) as a first step to identify children who many need English language learner services. The following three home language survey questions have been approved by the U.S. Department of Education Office for Civil Rights and the U.S. Department of Justice: "(1) What is the primary language used in the home, regardless of the language spoken by the student? (2) What is the language most often spoken by the student? (3) What is the language in which parents or other individuals prefer to receive communications. Postsecondary and workforce institutions may also consider collecting this information on a voluntary basis.

Source frameworks: This disaggregate appeared in two source frameworks reviewed for this report: the Urban Institute Robust and Equitable Measures to Identify Quality Schools (REMIQS) framework¹²⁷⁹ and the Project THRIVE State Indicators for Early Childhood.¹²⁸⁰

English learner



Definition: A student or individual who is classified as an English language learner or as having limited English proficiency

Why it matters: Approximately 9 percent of K–12 students are considered English learners.¹²⁸¹ In 2017, the national adjusted cohort graduation rate (ACGR) for students with limited English proficiency was approximately 66 percent—a 19-point difference from the overall ACGR of 85 percent.¹²⁸² One analysis of labor market outcomes shows that English-proficient workers earn 25 to 40 percent more than individuals with limited English proficiency.¹²⁸³ A survey of low-wage workers by the Harvard Business School indicates that English language fluency is helpful in achieving upward mobility in the workplace.¹²⁸⁴ Disaggregating outcomes for English learners is required for accountability in grades K–12 under the Every Student Succeeds Act (ESSA).

What to know about measurement: In pre-K and K–12, students with a home language other than English must be assessed for their English proficiency. Students who do not meet local English proficiency standards are classified as English language learners, and their proficiency (and status as an English learner) is reassessed each academic year. In addition to tracking students' current status as an English learner, some systems further disaggregate data by whether a student was *ever* an English learner (which includes students who have been reclassified), is a newcomer English learner (enrolled for less than four years in U.S. schools), or is a long-term English learner (classified as an English learner for more than five years). In postsecondary and workforce contexts, the federal government defines limited English proficiency as "individuals who do not speak English as their primary language and who have a limited ability to read, speak, write, or understand English."¹²⁸⁵ These individuals may be entitled to receive language support from federal and state agencies.

Source frameworks: This disaggregate appeared in nine source frameworks reviewed for this report, such as the Council of Great City Schools Academic Key Performance Indicator framework,¹²⁸⁶ the California Cradle-to-Career Data System,¹²⁸⁷ and Workforce Innovation and Opportunity Act reporting requirements.¹²⁸⁸

Attendance intensity



Definition: Whether a child attends a half-day or full-day pre-K or kindergarten program, or a postsecondary student attends college part time or full time

Why it matters: As noted in the E-W System Conditions section of this report, access to and participation in full-day pre-K and kindergarten are associated with greater academic achievement for children. Full-day programs can also help mitigate logistical challenges for working families, improve children's attendance in school,¹²⁸⁹ and increase mothers' labor force participation.¹²⁹⁰

At the postsecondary level, part-time college students often face greater challenges in completing their postsecondary credentials than students who attend full time. Data from the National Student

Clearinghouse (NSC) show that six-year degree completion rates for full-time students are approximately four times higher (84 percent) than for part-time students (21 percent) and nearly twice as high as for students who alternate between part-time and full-time enrollment (44 percent).¹²⁹¹ In addition, to be eligible for the maximum award amounts for federal financial aid, students must be enrolled for 12 credit hours or the equivalent (that is, considered full-time students). The Integrated Postsecondary Education Data System (IPEDS) reports data by full-time and part-time status.

What to know about measurement: States and districts use different definitions to determine which pre-K and kindergarten programs are half day versus full day,¹²⁹² so these labels are not always comparable. We recommend collecting information on the duration of programs and following the Civil Rights Data Collection (CRDC), which defines full-day programs as being six hours per day each weekday.¹²⁹³

Postsecondary institutions may also classify part-time and full-time students differently, though all must collect data on the number of credits students are taking because this information affects financial aid awards. We recommend using this information to consistently report on part-time and full-time status following IPEDS, which defines full-time students as those taking 12 or more semester credits, 12 or more quarter credits, or 24 or more clock hours a week in each term.

Source frameworks: This disaggregate appeared in three source frameworks reviewed for this report: the California Cradle-to-Career Data System,¹²⁹⁴ the Institute for Higher Education Policy Postsecondary Metrics Framework,¹²⁹⁵ and the NSC Postsecondary Data Partnership.¹²⁹⁶

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K–12 school type



Definition: The type of school that a student attends

Why it matters: Different types of K–12 schools, including charter schools, magnet schools, and alternative education schools, may have different educational aims and student populations, making it critical to understand who they serve, what types of supports they provide to students, and how well they support student outcomes. Of the more than 50 million public school students in 2018–2019, approximately 7 percent were enrolled in charter schools, 5 percent in magnet schools, and 0.9 percent in alternative schools.¹²⁹⁷ Another 4.7 million students attended private schools.¹²⁹⁸

What to know about measurement: The U.S. Department of Education's Common Core of Data classifies K-12 schools according to whether they are public or private; charter or non-charter; magnet or non-magnet; and whether they are regular schools, special education schools, career and technical schools, or alternative education schools. The categories are not mutually exclusive—per the U.S. Department of Education, "magnet, charter, and virtual schools are also included under regular, special education, vocational, or alternative schools as appropriate."¹²⁹⁹ Each of these distinctions may be relevant for disaggregation, depending on the context and the question being asked of the data.

Source frameworks: This disaggregate appeared in one source framework reviewed for this report: the California Cradle-to-Career Data System.¹³⁰⁰

Postsecondary institution classification



Definition: The highest undergraduate degree level (less than two years, two year, or four year) and the sector (public, nonprofit, or for-profit) of a postsecondary institution

Why it matters: Disaggregating student achievement and earnings by postsecondary institution level and sector can reveal disparities in whether and how institutions produce value for students. Data from 2022 published by the National Student Clearinghouse (NSC) show that four-year college students who attend private nonprofit institutions graduate within six years at the highest rate (78 percent), followed by students in public institutions (69 percent) and private for-profit institutions (46 percent); the graduation rate for students in public two-year colleges is 42 percent.¹³⁰¹ Institution type has also been shown to be related to debt burdens and unemployment rates.¹³⁰² As discussed in the Outcomes and Milestones section of this report, private for-profit institutions, which disproportionately serve students from low-income households, are less likely to deliver a minimum economic return for students than their public and private nonprofit counterparts.¹³⁰³ The Integrated Postsecondary Education Data System (IPEDS) reports data by the level and sector of postsecondary institutions.

What to know about measurement: In IPEDS, postsecondary institutions are classified by the highest undergraduate degree level they offer (less than two years, two year, or four year) and the sector of funding control (public, private nonprofit, or private for-profit). The Carnegie Classification of Institutions of Higher Education offers more detailed institutional categories that can also be useful for disaggregation, as recommended by the National Academies. For instance, these tiers distinguish "R1" doctoral universities with very high research activity from "R2" doctoral universities with high research activity and other doctoral/professional universities, which are classified as "D/PU."¹³⁰⁴

Source frameworks: This disaggregate appeared in two source frameworks reviewed for this report: the California Cradle-to-Career Data System¹³⁰⁵ and the NSC Postsecondary Data Partnership.¹³⁰⁶

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Transfer enrollment status



Definition: Whether students are first-time students in college or have transferred from another postsecondary institution

Why it matters: Nearly half of first-time college students begin their postsecondary career in community colleges.¹³⁰⁷ The transfer process can increase time to degree and, depending on institutional policies and norms, create logistical and other challenges for students. Transfer students sometimes face difficulty in accessing support services and integrating into campus culture,¹³⁰⁸ which may in turn affect their chances of graduation. Approximately 42 percent of students who start at community colleges and transfer out earn a bachelor's degree within six years, compared to 66 percent of students who start at public four-year institutions.^{1309, 1310} Disaggregating data by transfer enrollment status can allow colleges and universities to better identify and support transfer students.

What to know about measurement: The Integrated Postsecondary Education Data System (IPEDS) surveys institutions on their number of "transfer-in (non-first-time entering)" students but does not provide information on the type of institution from which they transferred, which is important in understanding students' experiences. Institutions can use individual-level student records to identify whether a student is a first-time or transfer student, as well as the type of institution from which they transferred (for example, from a two-year college into a four-year college).

Source frameworks: This disaggregate appeared in three source frameworks reviewed for this report: the California Cradle-to-Career Data System,¹³¹¹ the National Student Clearinghouse Postsecondary Data Partnership,¹³¹² and the Institute for Higher Education Policy Postsecondary Metrics framework.¹³¹³

Credential-seeking status



Definition: Type of award a student is seeking upon completion of studies

Why it matters: Not everyone who enrolls in postsecondary education intends to earn a credential; for instance, some students audit or take courses to pursue personal interests or fulfill other academic requirements. Disaggregating data by credential-seeking status can help colleges (1) identify and provide support to students seeking different types of credentials, and (2) adjust for non-credential seekers in calculating completion rates to offer a more accurate representation of student outcomes.

What to know about measurement: We recommend postsecondary institutions track whether students seek a postsecondary credential, as well as the type of credential they seek. The National Student Clearinghouse (NSC) collects data on students' "degree-seeking" status (whether they are seeking a degree or not) as well as their "class/credential level" (whether they are enrolled in or completing an undergraduate certificate program, associate's degree program, bachelor's degree program, post-baccalaureate certificate program, master's degree program, doctoral degree program, post-doctorate degree program, or professional degree program). For students not seeking degrees, it captures whether they are enrolled at the undergraduate or graduate or professional level. However, these fields are not required for all students. Although 88 percent of 2020–2021 enrollment records reported to the NSC included students' class or credential level, only 37 percent included their degree-seeking status.¹³¹⁴

Source frameworks: This disaggregate appeared in three source frameworks reviewed for this report: the California Cradle-to-Career Data System,¹³¹⁵ the NSC Postsecondary Data Partnership,¹³¹⁶ and the Institute for Higher Education Policy Postsecondary Metrics framework.¹³¹⁷

Postsecondary major



Definition: A student's postsecondary major(s)

Why it matters: Some fields of study are more lucrative than others; therefore, a student's postsecondary major is likely to be linked to longer-term economic outcomes. Degree holders in science, technology, engineering, or mathematics (STEM) fields, for example, tend to earn higher wages.^{1318, 1319} Degree holders in business and health fields also tend to earn above-average wages, whereas degree holders in arts, social work, and education tend to earn the lowest wages over time, based on an analysis by Georgetown University that analyzed earnings by major groupings.¹³²⁰ The same analysis also noted that, despite being associated with lower earnings, more than 20 percent of students choose to major in education, arts, psychology, or social work. The Postsecondary Value Commission calls these fields "high social value" fields and points out that these professions are systematically undervalued.¹³²¹

What to know about measurement: Postsecondary institutions that receive federal financial aid are required to report students' field of study across 33 areas; specifically, fields of study are tracked using Classification of Instructional Programs (CIP) codes, which are divided into 60 main areas.¹³²² Information on field of study is also reported in the Integrated Postsecondary Education Data System (IPEDS). CIP codes can be further grouped into STEM fields using a list published by the U.S. Department of Homeland Security.¹³²³ CIP codes can also be linked to occupational categories via Standard Occupational Classification (SOC) codes, allowing E-W systems to link postsecondary data to labor market data.

Source frameworks: This disaggregate appeared in two source frameworks reviewed for this report: the California Cradle-to-Career Data System¹³²⁴ and the Institute for Higher Education Policy Postsecondary Metrics framework.¹³²⁵

Occupation category



Definition: A worker's occupational category

Why it matters: An individual's occupation type can help or hinder their ability to achieve economic mobility and security. Across industries, individuals in management occupations earn the highest median wages (\$109,760 annually, as of 2020), whereas individuals in food preparation and serving occupations earn the lowest median wages (\$25,500 annually, as of 2020).¹³²⁶ Other high-wage categories include occupations in computer science, law, engineering, and business, whereas other low-wage categories include jobs in personal care and service, health care support, and building maintenance. Nearly half of American workers are employed in low-wage jobs (defined as earning less than approximately \$20 per hour), and low-wage jobs generally provide limited opportunities for advancement and upward mobility.¹³²⁷

What to know about measurement: The Bureau of Labor Statistics publishes wage data by occupational category (using the Standard Occupational Classification [SOC] system), job characteristics, and industry. Within the SOC system, occupations are categorized into 22 major categories (such as "management occupations" and "food preparation and serving occupations," described above), and 92 minor categories (such as "top executives" and "cooks and food preparation workers").¹³²⁸ SOC codes can be linked to fields of postsecondary study using a "CIP-SOC Crosswalk," a joint effort by the Bureau of Labor Statistics and the National Center for Education Statistics (NCES),

which matches six-digit Classification of Instructional Programs (CIP) codes with six-digit SOC codes.¹³²⁹ The Census Bureau also provides information on how to map SOC codes to industry codes from the North American Industrial Classification System (NAICS), which is used to classify employers' industries.¹³³⁰ Wage records in state unemployment insurance systems contain information on the employer's industry but do not always report the employee's occupation, although in recent years some states have added SOC codes to wage records, as there can be several occupations within an industry.¹³³¹

Source frameworks: This disaggregate is required for Workforce Innovation and Opportunity Act reporting.¹³³² It did not appear in any other source frameworks reviewed for this report.

Dislocated worker status



Definition: Individuals who have been terminated or laid off from employment, are unemployed due to economic conditions or natural disaster, are unemployed or underemployed spouses of active-duty members of the U.S. Armed Forces, or are displaced homemakers having trouble finding employment

Why it matters: Losing one's job can have significant emotional, social, and financial consequences. Low-wage workers were displaced by the COVID-19 pandemic at higher rates than middle- and highwage workers, according to an analysis by the Brookings Institution.¹³³³ Dislocated low-wage workers often do not have substantial savings or family economic support for backup. They may benefit from services to help them identify financial supports, navigate the emotional impacts of a job loss, and prepare to return to the workforce or pursue further education or training.¹³³⁴

What to know about measurement: Under the Workforce Innovation and Opportunity Act (WIOA), dislocated workers include individuals experiencing job instability due to a number of reasons, including but not limited to "job loss, mass layoffs, global trade dynamics, or transitions in economic sectors." ¹³³⁵ Displaced homemakers and spouses of active-duty members of the U.S. Armed Forces facing unemployment or underemployment and difficulty obtaining or upgrading employment are also included in the definition.¹³³⁶ Outside of workforce development programs, information on individuals' status as dislocated workers is also captured in the Free Application for Federal Student Aid (FAFSA) to determine their expected family contribution.

Source frameworks: This disaggregate is required for WIOA reporting.¹³³⁷ It did not appear in any other source frameworks reviewed for this report.

Basic skills level

PK K12 PS WF

Definition: An individual's level of basic skills proficiency

Why it matters: The Workforce Innovation and Opportunity Act (WIOA) considers an individual to be "basic skills deficient" if they are "unable to compute or solve problems, or read, write, or speak English, at a level necessary to function on the job, in the individual's family, or in society."¹³³⁸ As discussed in

the Outcomes and Milestones section of this report, competencies such as math and reading proficiency, communication skills, higher-order thinking skills, and digital skills are important for workforce readiness and success. English proficiency is also associated with greater academic achievement and improved workforce outcomes, as discussed under the English learner disaggregate.

What to know about measurement: Basic skills deficiency is used as an eligibility criterion for some federal workforce development programs, including Job Corps and YouthBuild. Federal regulations allow states to adapt the federal definition of "basic skills deficient," as long as the modified definitions retain core components of the federal definition.¹³³⁹ Federal law also allows states to determine how to measure basic skills level, and assessment methods vary across states. For example, Washington State exclusively uses the Comprehensive Adult Student Assessment System (CASAS) tests to determine basic skills deficiency, ¹³⁴⁰ whereas South Dakota permits the use of ACCUPLACER[®], ACT[®] WorkKeys[®] CurriculumTM Placement Quiz, WorkKeys Assessments, TABETM, National Career Readiness Certificate (NCRC), or Best PlusTM and Best LiteracyTM assessments.¹³⁴¹

Source frameworks: This disaggregate is required for WIOA reporting.¹³⁴² It did not appear in any other source frameworks reviewed for this report.

Age group (for example, adult learners)



Definition: An individual's age grouping

Why it matters: Approximately 50 percent of adult learners—that is, those first starting college after age 24—complete degrees within six years, compared to approximately 64 percent of traditional-age students (those starting college at age 20 or younger).¹³⁴³ Furthermore, more than 30 million adults have completed some college but have not earned a college degree. Although completing a degree program is likely to result in higher earnings for working adults, adult learners often need to balance competing demands when considering reentry to college, such as work and family obligations.¹³⁴⁴ In the workforce, older workers often contend with age discrimination in hiring: one experimental study found that younger applicants received callbacks for jobs at higher rates than older applicants, despite their resumes being identical otherwise.¹³⁴⁵

What to know about measurement: Data systems regularly collect individuals' date of birth, which can be used to disaggregate data by age groups. For example, it is common to disaggregate enrollment in early learning programs by age, especially because eligibility for programs depends on the age of the child. Although K–12 systems typically do not disaggregate data by age groups, schools and districts can use students' age to determine whether they exceed the expected age for their grade level. The National Student Clearinghouse (NSC) Postsecondary Data Partnership disaggregates data by the age at which students first enter college, with categories including "traditional age" (20 or younger), "delayed entry" (21 to 24), and "adult learners" (older than 24). The Integrated Postsecondary Education Data System (IPEDS) reports postsecondary enrollment using more detailed age groups: 14 to 17, 18 and 19, 20 and 21, 22 to 24, 25 to 29, 30 to 34, and 35 and older. To report labor market data, the Bureau of Labor Statistics also uses several age groupings, starting with 16 to 19 years through 65 years and older. **Source frameworks:** This disaggregate appeared in eight source frameworks reviewed or this report, such as the National Academies Key National Education Indicators,¹³⁴⁶ the Institute for Higher Education Policy Postsecondary Metrics framework,¹³⁴⁷ and the Urban Institute's Boosting Upward Mobility framework.¹³⁴⁸

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Urbanicity



Definition: Whether an individual or institution is located in an urban, suburban, town, or rural area

Why it matters: Place-based characteristics influence opportunities for students, as well as challenges they may face. For example, those in urban areas may be more likely to experience pollution and violence, whereas those in rural areas may have more difficulty accessing health care and transportation. A study by ACT Research suggests a third of residents in rural areas do not have access to high-quality broadband internet and found that rural students are less likely to rate their home internet as "great" and more likely to rate it as "unpredictable" than non-rural students.¹³⁴⁹ The same study found that students in rural schools are less likely to enroll in rigorous coursework (including advanced math or science courses and Advanced Placement [AP] classes) than non-rural students, and more likely to participate in extracurricular activities, such as varsity athletics and student government.

What to know about measurement: Urbanicity can be defined according to the categories developed by the National Center for Education Statistics (NCES) in partnership with the Census Bureau. They include four major locale categories—city, suburban, town, and rural—each of which contain three subtypes, for a total of 12 categories.¹³⁵⁰ The categories are based not just on population size, but also on proximity to larger urban centers, and can be determined for a given location using a geographic database maintained by the Census Bureau.¹³⁵¹ The Census Bureau also classifies census blocks according to three broader categories—urban areas, urban clusters, and rural areas—which are updated after each decennial census.¹³⁵²

Source frameworks: "Urbanicity" did not appear in any source frameworks reviewed for this report, but three frameworks—the National Academies Key National Education Indicators,¹³⁵³ the California Cradle-to-Career Data System,¹³⁵⁴ and the Institute for Higher Education Policy's Higher Education in Prison Key Performance Indicator Framework¹³⁵⁵—recommend capturing "region" or "geography."

Individuals experiencing homelessness



Definition: Any individual who lacks a fixed, regular, and adequate nighttime residence¹³⁵⁶

Why it matters: Individuals experiencing homelessness or housing instability face a host of unique challenges, including unsafe shelter and limited or inconsistent access to food, transportation, health care, and technology.¹³⁵⁷ The instability caused by intermittent or chronic homelessness can make it difficult for students to attend and succeed in school, and for job seekers to secure and retain

employment. More than 1.3 million students in public elementary and secondary schools are estimated to experience homelessness.¹³⁵⁸ Students experiencing homelessness are significantly less likely to graduate high school than housed students, with graduation rates below 60 percent in some states, compared to the national adjusted cohort graduation rate (ACGR) of 86 percent.¹³⁵⁹ K–12 schools are required to disaggregate data by homelessness status under the Every Student Succeeds Act (ESSA).

What to know about measurement: Federally funded pre-K programs and K–12 schools, the Free Application for Federal Student Aid (FAFSA), and Department of Labor programs collect data on whether individuals are experiencing homelessness, broadly defined as lacking a "fixed, regular, and adequate nighttime residence." However, this definition is not detailed further in federal law, and the resulting data may fail to capture the true extent of this issue. For example, students who live with extended family members for temporary housing may be undercounted. Although the FAFSA asks about homelessness, postsecondary institutions should consider collecting this information via application and registration materials, as students without access to a permanent home may have more difficulty completing the FAFSA.¹³⁶⁰ Finally, we note that it is possible to experience housing instability or insecurity without experiencing homelessness. Though there are several definitions of housing instability or insecurity, work is underway in the field to develop unified measures.¹³⁶¹

Source frameworks: This disaggregate appeared in four source frameworks reviewed for this report: the Urban Institute Robust and Equitable Measures to Identify Quality Schools (REMIQS) framework,¹³⁶² the Dimensions of Equity Framework,¹³⁶³ the California Cradle-to-Career Data System,¹³⁶⁴ and Workforce Innovation and Opportunity Act (WIOA) reporting requirements.¹³⁶⁵

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Individual or family military status



Definition: Whether a student, parent, or spouse is a member of the U.S. Armed Forces (including the reserves or National Guard)

Why it matters: Children and spouses of active military members relocate frequently, creating challenges for students navigating different school systems and military spouses seeking stable employment.¹³⁶⁶ Military veterans also experience disability at disproportionately high rates, with 26 percent of veterans reporting a service-connected disability in 2020, thus creating obstacles to workforce reentry.¹³⁶⁷ The Every Student Succeeds Act (ESSA) requires K–12 schools to disaggregate data for students who have parents or guardians in the military.

What to know about measurement: E-W systems frequently collect information on individual or family military status. K–12 systems track whether a student's family is in the military. The Free Application for Federal Student Aid (FAFSA) asks students to report if they are veterans of the U.S. Armed Forces, and the Integrated Postsecondary Education Data System (IPEDS) asks institutions to report data on students receiving military service member and veteran benefits.¹³⁶⁸ The National Student Clearinghouse (NSC) collects information on a student's status as either a veteran receiving benefits, a veteran who does not receive benefits, or a veteran's dependent receiving benefits (though as an optional field, it is seldom reported).¹³⁶⁹ Federally funded workforce programs collect information on whether someone is a veteran or eligible spouse,¹³⁷⁰ and employees may also self-identify as a veteran to employers.

Source frameworks: This disaggregate appeared in three source frameworks reviewed for this report: the California Cradle-to-Career Data System,¹³⁷¹ the Institute for Higher Education Policy's Higher Education in Prison Key Performance Indicator Framework,¹³⁷² and Workforce Innovation and Opportunity Act (WIOA) reporting requirements.¹³⁷³

Individual with current or past child welfare involvement



Definition: Students in foster care

Why it matters: Students in foster care change schools more frequently than other students, tend to have higher rates of absenteeism, and experience trauma at higher rates.^{1374, 1375} Students involved in foster care are significantly less likely to graduate high school than their peers, with graduation rates below 50 percent in some states compared to the national adjusted cohort graduation rate (ACGR) of 86 percent.¹³⁷⁶ Youth who age out of foster care are employed at lower rates, earn less, and progress more slowly in the labor market than other youth.¹³⁷⁷ K–12 schools are required to disaggregate data by foster care status under the Every Student Succeeds Act (ESSA).

What to know about measurement: Children in foster care are eligible for free Head Start, and some states have begun to link data between early childhood and child welfare data systems.¹³⁷⁸ K–12 systems are required to track whether students are in foster care, and some states have also begun to coordinate data linkages between education and child welfare agencies.¹³⁷⁹ College students with past experience in foster care are eligible for different types of state and federal financial aid assistance. For example, the Free Application for Federal Student Aid (FAFSA) asks students to report whether they were in foster care or a dependent or ward of the court since turning 13.

Source frameworks: This disaggregate appeared in four source frameworks reviewed for this report: the National School Readiness Indicators Initiative, the Dimensions of Equity framework,¹³⁸⁰ the California Cradle-to-Career Data System,¹³⁸¹ and Workforce Innovation and Opportunity Act (WIOA) reporting requirements.¹³⁸²

Justice involvement



Definition: Individuals who have interacted with the justice system in any capacity

Why it matters: Being arrested, even if an individual ultimately is not convicted of a crime, can result in emotional and psychological trauma, as well as missed school and work opportunities. More than one-quarter of justice-involved youth drop out of school within six months of being released from juvenile justice facilities, and only 15 percent of students released from juvenile detention in 9th grade graduate high school within four years.¹³⁸³ Justice-involved adults also face dire labor market prospects: according to a study by the U.S. Department of Justice, one-third of formerly incarcerated individuals in the study population remained unemployed for four years after their release from prison.¹³⁸⁴

What to know about measurement: There is no single definition of justice involvement used across sectors. Our suggested definition, which draws on the Institute for Higher Education Policy's Higher Education in Prison Key Performance Indicator Framework, is intentionally broad. At the K–12 level, schools may coordinate with the juvenile justice system to provide support to students reentering school after being in detention and those under probation supervision, given that attending school is a common requirement for youth on probation.¹³⁸⁵ At the postsecondary level, students under incarceration or with certain types of criminal convictions can have limited eligibility for federal student aid and face other challenges (though as of the 2022–2023 award year, incarcerated students will no longer be ineligible for federal Pell Grants).¹³⁸⁶ Though some localities and states have banned employers from asking job applicants about their criminal history, the U.S. Department of Labor continues to track this information for program participants. We recommend collecting information on justice involvement only to identify individuals who need additional support from E-W systems—for example, during reentry into school, college, or the workforce. This information should not be used for exclusionary or discriminatory purposes, and every effort should be made to protect and respect individuals' privacy.

Source frameworks: This disaggregate appeared in four source frameworks reviewed for this report: the Dimensions of Equity framework,¹³⁸⁷ the Institute for Higher Education Policy's Higher Education in Prison Key Performance Indicator Framework,¹³⁸⁸ Workforce Innovation and Opportunity Act (WIOA) reporting requirements,¹³⁸⁹ and the Urban Institute's Boosting Upward Mobility framework.¹³⁹⁰

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