



CEDS 101

While education institutions across the P-20W (early learning through postsecondary and workforce) environment use many different data standards to meet information needs, there are certain data we all need to be able to understand, compare and exchange in an accurate, timely and consistent manner. For these, we need a shared vocabulary for education data—that is, we need common education data standards. The Common Education Data Standards (CEDS) project is a national collaborative effort to develop voluntary, common data standards for a key set of education data elements to streamline the exchange, comparison, and understanding of data within and across P-20W institutions and sectors.

What is an Education Data Standard?

An education data standard is a set of commonly agreed upon names, definitions, option sets, and technical specifications for a given selection of data elements. For example, in CEDS, the element “Address Type for Organization” is defined as “The type of address listed for an organization” and can be described as one of a finite set of options, including Mailing, Physical and Shipping. When this data element is used as part of a transcript, both the provider and recipient(s) of the document can understand the intended meaning of the data they are expressing, as well as the data it describes.

Reasons for a Common Vocabulary

The highly mobile nature of our population requires that we be able to share high quality data in an efficient manner.

When a student transfers from one program, institution, district or state to another, or advances from one sector of the education system to the next, information must be shared to ensure continuity and appropriateness of services provided (e.g., class placement, program participation). Without common standards for communicating this information, transfer of data may be slow, fraught with errors, and can increase staff burden (e.g., time spent deciphering data), potentially compromising student outcomes.

Beyond the basic need for timely and accurate individual student information, the need for a common vocabulary also stems from the changing nature of how education data is being used. No longer is data used by states, districts, and other programs solely for compliance, but instead used to increase student outcomes, share

CEDS is NOT

- **Required:** Adoption of CEDS is voluntary.
- **All or nothing:** Not all CEDS elements have to be utilized to realize benefits.
- **A data collection:** CEDS collects no data.
- **An implementation:** There is no single implementation that will work for every user.
- **Solely an ED undertaking:** NCES is developing these standards with a group of stakeholders and publishes drafts for public review.
- **A federal unit record system:** CEDS is not a student record system.

successful teaching practices and create new relationships among stakeholders. Local education agencies (LEAs) and state education agencies (SEAs), as well as many higher education institutions and early learning programs, are improving their data capabilities and implementing longitudinal data systems so that they can effectively use data to make real-time decisions. As the efforts of such a diverse group of data users moves forward, the ability to communicate via a common language becomes vital, allowing education stakeholders – including early childhood educators through postsecondary administrators, parents, students, legislators and researchers – to more efficiently work together toward ensuring student success, using consistent and comparable data throughout all education levels and sectors.

No longer is data used by states, districts, and other programs solely for **compliance**, but instead used to increase **student outcomes**, share successful **teaching practices**, and create new **relationships** among stakeholders.

The Parts of the CEDS Standard

The CEDS standards are comprised of several pieces of information that provide content for and describe data items within CEDS:

- **Domain:** Domain indicates the management level at which the data are maintained. CEDS Version 4 contains nine domains: Early Learning, K12, Postsecondary, Adult Education, Career and Technical Education (CTE), Workforce, Assessments, Learning Resources, and Learning Standards.

- **Related Entities and Categories:** Entities represent persons, places, events, objects or concepts about which data can be collected and shared. Examples include Student, School, Assessment, and Organization. Categories are a way of organizing the elements into contextual areas.

- **Element:** Elements are attributes of entities organized by categories, and units of data that can be defined and measured. Elements are comprised of two parts: name (common text name for the element) and definition (a statement of the meaning or significance of the element).

- **Option Set:** Option sets provide recommended alternatives or responses for an element. For some elements, open-ended options are appropriate, such as in “First Name”. For these, no options are presented. For other elements, a set of standard options are provided. For example, the option set for the item “Hispanic or Latino Ethnicity” includes “Yes”, “No”, and “Not Selected,” as the person either does or does not identify as Hispanic or Latino, or may not provide this information.

The screenshot shows the 'Element Details' page for 'Hispanic or Latino Ethnicity'. Annotations on the left side of the image point to various parts of the interface:

- ELEMENT:** Points to the title 'Hispanic or Latino Ethnicity'.
- DEFINITION:** Points to the text: 'An indication that the person traces his Central and South America, and other S Usage Notes K12: Use cases support Yes and No as Selected as options - As defined in IPED'.
- OPTION SET:** Points to the table below the definition.
- DOMAIN:** Points to the 'K12 -> K12 Staff' and 'K12 -> K12 Student' entries in the 'Related Entities and Categories' section.
- ENTITY:** Points to the 'K12 -> K12 Student' entry.
- RELATED CONNECTIONS:** Points to the list of related connections.
- CEDS ELEMENT ID:** Points to the 'CEDS Element ID' field.
- ELEMENT TECHNICAL NAME:** Points to the 'Element Technical Name' field.
- XML:** Points to the XML snippet at the bottom.

Description	Option
Yes	Yes
No	No
Not selected	NotSelected

Related Entities and Categories

- Adult Education -> AE Participant
- Early Learning -> EL Child
- Early Learning -> EL Staff
- K12 -> K12 Staff
- K12 -> K12 Student
- Postsecondary -> PS Staff
- Postsecondary -> PS Student

Related Connections

- Early Learning -> Program Entry
- Early Learning -> Staff Quality
- K-12 -> EDFacts
- K-12 -> High School Generated Transcr
- K-12 -> LEA-to-LEA Student Record Ex
- K-12 -> LEA-to-SEA Student Record Ex
- K-12 -> Teacher Compensation Survey
- Postsecondary Education -> Complete C
- Postsecondary Education -> IPEDS
- Postsecondary Education -> IPEDS -> H
- Postsecondary Education -> Transition

CEDS Element ID: 000144

Element Technical Name: HispanicOrLatinoEthnicity

XML: <xs:simpletype name="HispanicOrLatinoEthnicity" base="string" use="required" />

• **Related Connections:** Connections indicate real-world applications that individual elements can be used to support and that were used as the context to develop the element. Examples include ED Facts and IPEDS reporting, LEA-to-LEA Student Record Exchange, High School Generated Transcript, Early Childhood Policy Questions, etc.

CEDS Align and CEDS Connect

Along with the Standards, CEDS includes multiple tools to allow stakeholders to use and integrate the Standards into various parts of their work.

CEDS Align is a web-based tool that enables users to import or input their data dictionaries, align their elements to CEDS, compare their data dictionaries with those of other users, and analyze their data in relation to various other CEDS alignments. CEDS Align is designed to enable education stakeholders to understand how their data dictionaries relate to the Standards, as well as what similarities or gaps might need to be addressed in sharing data among educational sectors and across state lines.

CEDS Connect enables users at different levels to consider “connections” such as metric definitions of data points, policy questions, or federal data reporting requirements by establishing the data elements necessary to answer a given connection, as well as recommend logic and routines for analysis. CEDS Connect is designed to help the education data community work together toward standard definitions and methodologies that will provide common, comparable data measurements and reporting across districts, state and multiple educational agencies. CEDS Connect also allows stakeholders from varied educational organizations can use the tool’s myConnect feature that builds upon CEDS Align to apply their Align maps to the elements needed for any connection.

myConnect allows users who have mapped their data systems to CEDS via the Align tool to apply them to a particular CEDS Connection. By using CEDS as a bridge, this allows users to see how the elements in their own data systems might correspond to the elements necessary to answer a particular policy issue or data question.

Explore and Engage with CEDS

To learn more about CEDS, explore the standards at <https://ceds.ed.gov>. CEDS Align will show you how closely your organization’s data dictionary matches CEDS and the data standards used by other organizations. Create or view “connections” within CEDS Connect to determine metrics and indicators for different questions and to consider routines for data analysis. Use myConnect to see the data elements in a published Connection side by side with your own data elements.

CEDS Stakeholder Group

Stakeholders from across the P-20 environment have contributed to CEDS development. Participants represent:

- State Agencies
 - State Education Agencies
 - State Higher Education Agencies
 - Social Services Agencies
- Local Education Agencies
 - K12
 - Head Start
 - Social Services
- Institutions of Higher Education
 - Public
 - Private
 - Community Colleges
- U.S. Department of Education
 - NCES (forum, SLDS, IPEDS)
 - ED Facts
 - Office of Education Technology
 - Financial Student Aid
 - Office of the Undersecretary
 - Special Education
- U.S. Health and Human Services
- U.S. Department of Labor
- Interoperability Standard Organizations
- Education Associations