Common Education Data Standards

CEDS 101
A language is a **standard** form of **communication**.

Humans speak **many different languages**.

But, there are **certain things we all need to understand and communicate**.

For these, we need a **common language**.
FOR EXAMPLE: Sign symbols

Imagine...

You arrive at an airport in a foreign city where an unfamiliar language is spoken.
How do you find your way?

Universal travel sign symbols developed in the 1970s aided wayfinding.
What is CEDS?

A **vocabulary** including standard definitions, option sets, & technical specifications to streamline sharing and comparing information

A national collaborative effort to develop **voluntary, common** data standards for a key set of education data elements

Voluntary Common Vocabulary
CEDS is Not

- Required
- All or nothing
- A data collection
- An implementation
- Solely an ED undertaking
- A federal unit record system
What is an Education Standard?

A set of commonly agreed upon names, definitions, option sets, and technical specifications for a given selection of data elements.

FOR EXAMPLE: Address Type for Organization

“The type of address listed for an organization”
Reasons for a Common Vocabulary

1. **Accurate, timely, and consistent data to inform decisionmaking**
2. **Share & compare high quality data within & across P-20 sectors**
3. **Decrease the staff burden associated with deciphering data**
Imagine...

A child from Early Learning Program A also enrolls in Early Intervention Part C services that use a different education data standard.
Here’s a child:
Matthe Smith III
Race = Guamanian
Gender = M

Did you mean:
Matthew?
Smith?
Suffix = III?
Race = NHOPI?
Sex = M?

EL Program A
Early Intervention
Example 2

Imagine...

A student from a high school in State A enrolls in a university in State B that uses a different education data standard.
Here’s a new student:

Jonatha TsumuraII
Race = Japanese
Gender = M

Did you mean:
Jonathan ?
Tsumura ?
Suffix = II ?
Race = Asian ?
Sex = M ?

High School in state A

IHE in state B

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When both provider and recipient use the standard **in the defined way**, there is a **common understanding** on the intended meaning.
CEDS Anatomy: The Basics
Standard Information: The Basics

- **Element Definition**: Hispanic or Latino Ethnicity
  - Definition: An indication that the person trace Central and South America, and others
  - Usage Notes: K12: Use cases support Yes and Not Selected as options - As defined in K12
  - Option Set:
    - **Description** | **Option**
      - Yes
      - No
      - Not Selected
  - 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

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Standard Information: The Basics (cont.)

Related Topics
- Early Learning -> Program Entry
- Early Learning -> Staff Quality
- K-12 -> EDFacts
- K-12 -> High School Generated Transcript
- K-12 -> LEA-to-LEA Student Record Exchange
- K-12 -> LEA-to-SEA Student Record Exchange
- K-12 -> Teacher Compensation Survey
- Postsecondary Education -> Complete College America
- Postsecondary Education -> IPEDS
- Postsecondary Education -> IPEDS -> HR
- Postsecondary Education -> Transition

CEDS Element ID
- 00144

Element Technical Name
- HispanicOrLatinoEthnicity

XML
- `<xs:simpleType name="HispanicOrLatinoEthnicity">
  <xs:annotation>
    <xs:documentation>Usage: Hispanic or Latino Ethnicity</xs:documentation>
    <xs:restriction base="xs:token">
      <xs:enumeration value="Yes"/>
      <xs:enumeration value="No"/>
      <xs:enumeration value="NotSelected"/>
    </xs:restriction>
  </xs:annotation>
</xs:simpleType>`
Domain

• Management level at which the data are maintained.

• Some correspond with sector(s) of P-20 system.

• CEDS contains 9 domains
  → Early Learning
  → K12
  → Postsecondary
  → Adult Education
  → CTE
  → Workforce
  → Learning Resources
  → Assessments
  → Learning Standards
Elements

• Attributes of entities, and units of data that can be defined and measured.

• Two parts:
  → **Name**: Common text name for the element
  → **Definition**: A statement of the meaning or significance of an element
Option Set

• Provide **recommended alternatives or responses** for an element.

• Can be:
  
  → **standard set of options**:  
    Ex) LANGUAGE CODE
  
  → **open-ended**:  
    Ex) FIRST NAME
Related Categories & Entities

- **Persons, places, events, objects, or concepts** about which data are collected.

- **Provide context** for the data elements.

- Examples:
  - Student → EL Child
  - Staff → Assessment
  - School → Organization
Related Topics

- **Real-world applications** for which an element can be used to support.

- Examples:
  - EDFacts & IPEDS reporting
  - LEA-to-LEA Student Record Exchange
  - High School Generated Transcript
CEDS Tools

- A Robust & Expanding Common, Voluntary Vocabulary drawn from existing sources
- Powerful Stakeholder Tools & Models
  - Connect
  - Logical Data Model
  - Align
  - myConnect

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CEDS Logical Data Model

• Provides a high-level framework for translating standards into physical models

• System-agnostic representation

• 2 distinct views:
  • Domain Entity Schema
  • Normalized Data Schema
Align

Web-based tool that allows users to

• **Import** or input their data dictionaries
• **Align** their current data to CEDS
• **Compare** themselves with others
• **Analyze** their data in relation to various other CEDS-aligned efforts
Connect

- Allows stakeholders to connect specific and relevant maps to a growing pool of CEDS Connections

Stakeholders from varied types of educational organizations can use the tool to

- **answer** policy questions
- **calculate** metrics and indicators
- **address** reporting requirements
• Allows users to see the data elements in a published Connection side by side with their own data elements
Extend

- Allows users to see data definitions from other efforts that have not yet been adopted into CEDS but are relevant to specific data systems and education data discussions
- The website has expanded to include a repository of metadata from other efforts:
  - Element Search Tool: When searching CEDS elements by name, users may choose "Search Extend Elements" to expand the search to include the Extend elements
  - Domain Entity Schema: When using the drill down function of the Domain Entity Schema, users may choose "Extend Your Search" to see the Extend elements
  - Downloads: Users may choose "Include Extend Elements in Download" when using the new Excel dynamic download tool
Who’s Involved
CEDS Stakeholders

• **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

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CEDS Stakeholders (cont.)

• **U.S. Department of Education**
  - NCES (SLDS, IPEDS, Forum)
  - EDFacts
  - Office of Educ. 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**

• **Foundations**
Engage with CEDS
http://ceds.ed.gov