COMMON EDUCATION DATA STANDARDS
Using CEDS

While education institutions across the P-20 (early learning through postsecondary) environment use many different conventions for capturing data and meeting information needs, there are certain data that must be easily understood, compared, and shared by all. 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 provides voluntary standards for a key set of education data elements to streamline the exchange, comparison, and understanding of data within and across P-20 institutions and sectors. Beyond the standards (definitions, option sets, technical specifications, etc.), CEDS has developed a data model and an innovative new tool to help organizations across P-20 to align with CEDS and effectively leverage the standards to support data sharing and utilization.*

CEDS is ultimately intended to help stakeholders across P-20 to answer common questions.

Start with the Standards

If your organization is new to the CEDS conversation, begin your experience with the standard itself. Viewable at http://ceds.ed.gov/elements.aspx, the standard is comprised of several pieces of information that provide context for and describe the data items:

- Elements, including name and definition
- Option sets, including name and definition
- Related entities
- Related use cases
- Alternative names and other notes

(See the Anatomy of CEDS brief for more detailed information).

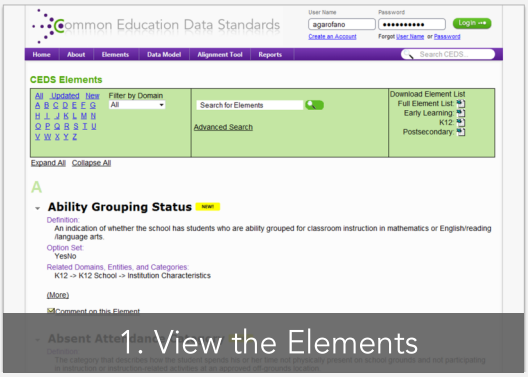
Map Your Standards with the Alignment Tool

The CEDS Alignment Tool (http://ceds.ed.gov/alignmenttool.aspx) is a Web-based solution that allows stakeholders to:

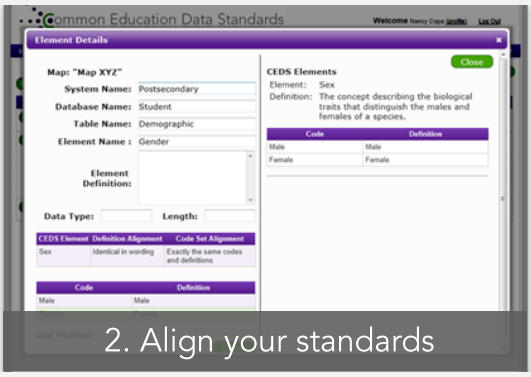
- Import or input their organizations' data dictionaries
- Compare (or "map") their data dictionaries (element names, definitions, and options sets) to CEDS
- Compare their data dictionaries with other participating organizations

This process facilitates alignment both with CEDS and across systems, paving the way for easier sharing and comparison of data. For example, if a state education agency is interested in sharing data with the Department of Labor in its state, these organizations can import their data dictionaries into the CEDS Alignment Tool, map them to CEDS, and make these "maps" viewable to the other state agency. This powerful tool shows the users where the differences exist between the standards, and what standards their organizations have in common.

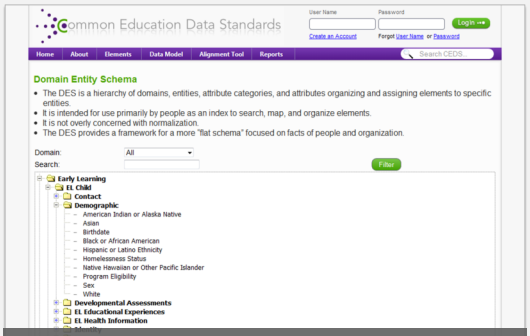
For states developing a statewide longitudinal data system (SLDS), technical assistance on CEDS alignment is available from the SLDS Program's State Support Team.



1. View the Elements



2. Align your standards



3. Explore the Model

Visit ***http://ceds.ed.gov*** to learn more about CEDS, view the standards, explore the data model, and use the tools.

Explore the Data Model

The CEDS Data Model presents a logical view of the standards. In other words, a system-agnostic representation that contains attributes, shows cardinality, and uses the commonly-used names for all entities. When planning to build or modify a database or implementation to align with CEDS, the Data Model provides a high-level framework to translate common entities, elements, and relationships into physical models for a specific database platform that addresses the indexing, performance optimization, and normalization or denormalization appropriate for the specific application addressing local information needs.

CEDS Uses

CEDS can be used to support a host of processes. Some example scenarios include:

- ED*Facts* data store development and reporting
- Cross-state collaboration
- High School Feedback report
- District data collection streamlining
- P-20 Data Warehouse
- Early Learning data system planning (starting the conversation)
- Student-teachers linkage
- IPEDS data store (adoption of CEDS will streamline reporting)
- Assessments (district and state level)
- Cross-state or cross-district data exchange
- Data consolidation within a sector (i.e., combining multiple K12 databases within a state)

Stay Tuned for the Use Case Generator

In 2012, the CEDS Use Case Generator will be added as a supplemental tool, allowing users to view their existing data dictionaries in relation to a host of real-world applications. This innovative tool will provide information on the CEDS elements necessary to conduct analyses for various use cases. Does your organization collect the data needed to:

- answer key policy questions across P-20;
- create a high school feedback report;
- support uses of assessment data; or
- calculate indicators for federal reporting?

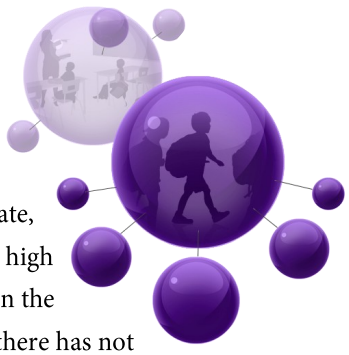
By working in tandem with the CEDS Alignment Tool to compare your mapped data dictionary to the data needed for specific identified use cases, the Use Case Generator will be able to tell you. This powerful, highly anticipated tool will vastly simplify the journey from data standards to data use.

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. Physical implementation decisions will be made by practitioners and solution providers in the field based on their specific objectives.
- **Solely an ED undertaking**: NCES is developing these standards with a group of stakeholders and publishes drafts for several public review cycles.
- **A federal unit record system**: CEDS is not a student record system.

Implementations of CEDS

Developers of education technology for data collection, storage, exchange, and utilization have been incorporating—and will continue to incorporate—CEDS into their technology solutions (implementations). Implementations of CEDS will be as varied as the organizations that develop and deploy them. In addition, the possible options for complementing existing systems or building new systems are virtually limitless. Solutions for data management and usage will continue to be developed to meet the needs of the particular environment in which they will be applied—from a state education agency that utilizes the SIF Implementation Specification to collect data over the wire from its districts, to a local school district implementing the Ed-Fi dashboards, or an institute of higher education utilizing the PESC Approved Standard for IPEDS reporting . As a P-20 data standard, implementation of CEDS can either be selective, focusing on a sector-specific portion of CEDS, or more comprehensive, encompassing the full spectrum of P-20 standards.



Why Do We Need CEDS?

Education stakeholders—parents to teachers, administrators, and legislators, and researchers—need accurate, timely, and consistent data to inform decisionmaking. From school enrollment decisions to policymaking, high quality data provide the basis for sound decisionmaking. While numerous data standards have been used in the field for decades—different vocabularies and technical specifications for collecting and exchanging data—there has not emerged a universal language that can serve basic information needs across all sites, levels, and sectors throughout the P-20 environment. By identifying, compiling, and building consensus around the basic, commonly used elements across P-20, CEDS meets this critical need.