Common Education Data Standards

Overview

CEDS is an education data management initiative whose purpose is to streamline the understanding of data within and across P-20W institutions and sectors. The CEDS initiative includes a *common vocabulary*, data models that reflect that *vocabulary*, *tools* to help education stakeholders understand and use education data, an assembly of *metadata* from other education data initiatives, and a *community* of education stakeholders who discuss the uses of CEDS and the development of the standard.

All of the overview content can be found on the GitHub site at
https://cedstandards.gitbook.io/ceds-gitbook

What Is CEDS?

- CEDS is a national P-20W data standard for the unit-record level. CEDS can be used at the local level for early learning providers, schools, and postsecondary institutions, as well as for higher levels for state early learning agencies, Local Education Agencies (LEAs), State Education Agencies (SEAs), and postsecondary coordinating and governing boards.
- CEDS is comprised of more than 17,000 unique elements complete with definitions and enumerations, an Integrated Data Store, and a Data Warehouse.
- CEDS is open-source, meaning you--the community--drive the CEDS standard and help build out the tech stack associated with the standard.

Why Use CEDS?

- CEDS is open-source, meaning you--the community--drive the CEDS standard and help build out the tech stack associated with the standard.
- CEDS is free. The data standard and the CEDS tech stack are free resources. The standard is available on the CEDS website and the tech stack is available through GitHub, an open-source community.
- CEDS allows your applications to understand their data. CEDS goes beyond local column names to provide a valid, certifiable definition. Your STUDENT_FIRST and their FIRSTNAME columns can find each other through CEDS mapping. CEDS provides precision and makes data interoperation possible.

Data Models

The Common Education Data Standards (CEDS) is expressed as different models to meet the needs of all CEDS community members. CEDS offers:

- **Domain Entity Schema** – Primarily used for easy understanding of the standard.

- **Ontology** – Primarily used to demonstrate the relationship between elements in the standard.
- **Integrated Data Store** – Primarily used for transactional storage of data based on the standard.
- **Data Warehouse** – Primarily used for longitudinal storage and efficiently reporting data.

At this link, the data models are described along with links to more information:
https://cedstandards.gitbook.io/ceds-gitbook/data-models

Webinars

The link below will bring you to a series of powerful webinars that explain how to use CEDS and the tools. Note that some of the content may be outdated as we look for funding to update, sustain and enhance the specification.
Webinar Page URL: https://cedstandards.gitbook.io/ceds-gitbook/webinars

Resources

Discover a wealth of resources tailored to support community and standards development at CEDS. Our carefully curated collection includes reports, case studies, toolkits, and research papers, all designed to empower you with the knowledge and tools needed to drive innovation and growth the field. Whether you're a seasoned professional or just starting your journey in community development, our resources will provide valuable insights and actionable solutions. Explore CEDS resources to make informed decisions and catalyze positive change in your community.
Resources Document Link: https://cedstandards.gitbook.io/ceds-gitbook/resources

The Open Source Community

CEDS Governance

CEDS is an open-source standard governed by the CEDS Community. The CEDS Community is comprised of anyone interested in education data standards—e.g., developers, program staff, federal, state, and local education staff, and researchers. The CEDS standards is expanded and modified based on the needs and input of the Community. CEDS manages the CEDS Community's needs and input via the Open Source Community on GitHub.

Open Source Community (OSC)

The CEDS Open Source Community (OSC) is a dynamic hub where innovation meets collaboration. Based on open-source principles, our community thrives on the collective intelligence and passion of developers, researchers, and data enthusiasts from around the community.

Whether you're a seasoned developer, a curious learner, or a visionary, this community is your gateway to a world of possibilities. Join the community at https://github.com/cedstandards in our journey to empower, inspire, and transform the digital realm of education standards through the power of open source.

Please note with the cancellation of the support contracts for CEDS change requests and enhancements are not supported as they were.   As funding and future plans get solidified we will update this in the community. Data Standards United has submitted a proposal to house that work and the OSC has started a CEDS Sustainability Project that is staffed by State Education Agency leaders

CEDS Community URL:
https://cedstandards.gitbook.io/ceds-gitbook/governing-the-ceds-standard

CEDS Collaborative Exchange

There is a collaborative site on the GitHub that supports projects that require or wish to collaborate with other projects.   The purpose of this site is to provide a location where contributors, who build open source resources that use the Common Education Data Standards (CEDS) data models, can distribute and maintain the resources in a collaborative way.

We will coordinate between that site and the DSU Open Projects site (which includes non-CEDS projects as well).

Collaborative Exchange URL: https://github.com/CEDS-Collaborative-Exchange
DSU Open Projects URL: 🗎 DSU Open Projects Page

The Assets

The assets of the CEDS community live on GitHub. They are public assets.   To reach them:

1. Click on this link: https://github.com/CEDStandards and log in if you have a GitHub login.
2. You will see the below page - each component on this page will lead you to another page that has instructions on how to use those assets

Common Education Data Standards

CEDS Open Source Community (OSC)

[Follow]

👥 **105 followers**   🔗 https://ceds.ed.gov   🔗 https://cedstandards.gitbook.io/ceds-...   🔗 https://ceds.communities.ed.gov/#pr...   🔗 https://github.com/CEDS-Collaborativ...

Popular repositories

CEDS-IDS [Public]

The CEDS Integrated Data Store factors the entities and attributes of the CEDS Domain Entity Schema (DES) with standard technical syntax and 3rd normal form database normalization. The IDS Logical ...

🔴 TSQL   ⭐ 43   ⑂ 19

CEDS-Elements [Public]

The Common Education Data Standards (CEDS) are an education data management initiative whose purpose is to streamline the understanding of data within and across P-20W institutions and sectors. CED...

⭐ 40   ⑂ 7

CEDS-Data-Warehouse [Public]

Modeled for longitudinal storage and reporting of P-20W data, the Common Education Data Standards (CEDS) Data Warehouse implements star schema data warehouse normalization techniques for improved q...

🔴 TSQL   ⭐ 24   ⑂ 5

CEDS-Data-Warehouse-Parquet [Public]

The Common Education Data Standards (CEDS) Data Warehouse Parquet (DW Parquet) standard is designed for data engineering and data science needs in the cloud. The DW Parquet Models mirror the SQL-ba...

🔵 Python   ⭐ 11   ⑂ 3

CEDS-Ontology [Public]

The CEDS Ontology is draft project to express the Common Education Data Standards (CEDS) in Web Ontology Language (OWL).

⭐ 7   ⑂ 2

People

This organization has no public members. You must be a member to see who's a part of this organization.

Top languages

🔴 TSQL   🔵 Python

Most used topics

[ceds] [education-data] [education-data-standards] [data-standards] [data-warehouse]

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🗂 **Repositories**

🔍 Find a repository... [Type ▾] [Language ▾] [Sort ▾]

CEDS-Ontology [Public]

The CEDS Ontology is draft project to express the Common Education Data Standards (CEDS) in Web Ontology Language (OWL).

⭐ 7   ⚖ Apache-2.0   ⑂ 2   ⊙ 11   ⇄ 1   Updated last month

CEDS-Elements [Public]

The Common Education Data Standards (CEDS) are an education data management initiative whose purpose is to streamline the understanding of data within and across P-20W institutions and sectors. CEDS includes a common vocabulary complete with standard elements names, definitions, and option sets. This repository contains all the CEDS elements, de...

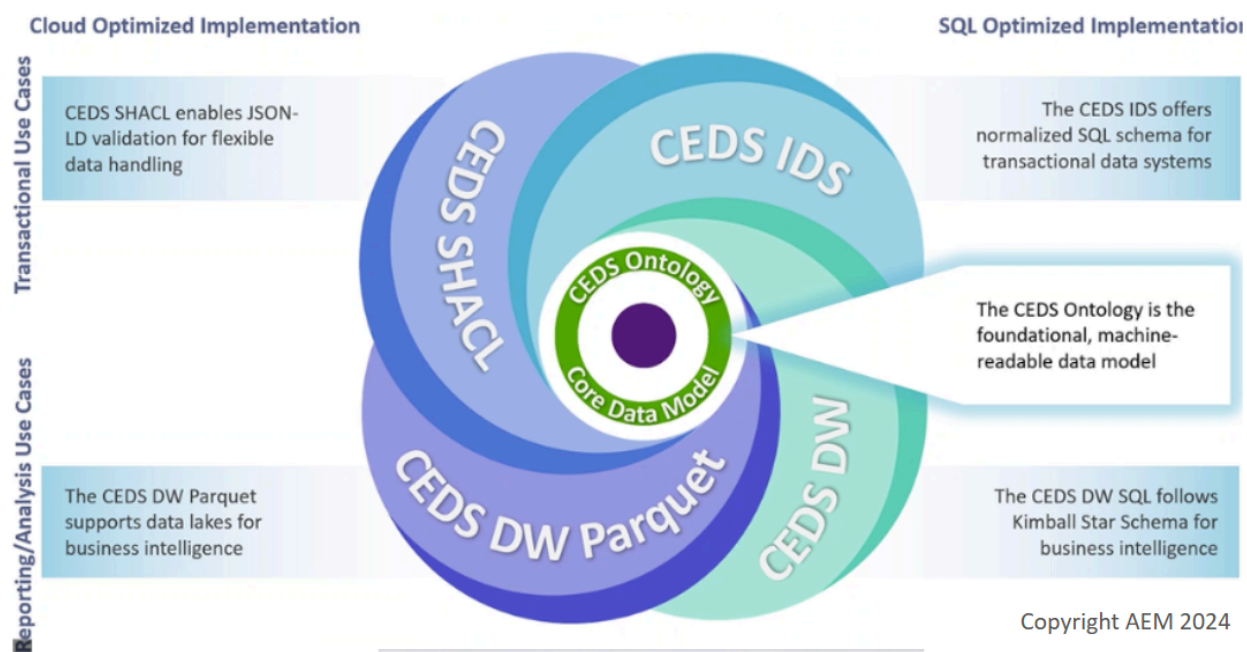⭐ 40   ⑂ 7   ⊙ 443   ⇄ 0   Updated on Jan 31

CEDS-IDS [Public]

Repository Descriptions
Each repository has instructions on how to retrieve or deploy that particular asset or project.

CEDS Ontology

URL: https://github.com/CEDStandards/CEDS-Ontology
Description: The CEDS Ontology is a new way of looking at CEDS. An ontology serves to define entities and the connections between them. In education, we categorize Organizations into types such as a K12 School, a Postsecondary Institution, or an Early Learning Program. We can also describe the relationship that exists between a Person and that Organization such as Enrollment, Assignment, or Employment. The CEDS Ontology builds on the CEDS Integrated Data Store model by not only demonstrating relationships exist between elements through Primary and Foreign Key relationships, but by providing definitions and meaning about those relationships through Object Properties.

The purpose of the Ontology is to describe CEDS at the most granular level possible. From this machine-readable understanding, additional resources can be created such as JSON, JSON-LD, XML, and a host of other machine-readable standards. It will also become easier to link CEDS to other ontologies and standards using equivalencies (an indication when one standard's element is equivalent to another standard's element) making translation a much more intuitive machine-readable process. We can now indicate where CEDS ends and another standard begins, enabling the adoption of multiple standards in the same ecosystem

CEDS Elements

URL: https://github.com/CEDStandards/CEDS-Elements

Description: The Common Education Data Standards (CEDS) are an education data management initiative whose purpose is to streamline the understanding of data within and across P-20W institutions and sectors. CEDS includes a common vocabulary complete with standard element names, definitions, and option sets. This repository contains all the CEDS elements, definitions, option sets and their definitions, and entities and definitions. Its purpose is to expand that vocabulary to meet the needs of every education stakeholder. The expanded vocabulary is then added to the CEDS Standard and the CEDS Integrated Data Store, as appropriate.

CEDS Integrated Data Store (IDS)

URL: https://github.com/CEDStandards/CEDS-IDS
Description: The Common Education Data Standards (CEDS) Integrated Data Store (IDS) factors the complete set of CEDS elements, entities and attributes with standard technical syntax and 3rd normal form database normalization. The IDS Model provides a standard framework for integration of P-20W data systems through a well-normalized operational data store. It can be used for transactional education data systems, to perform near real-time reporting, and as a standard staging area to load the CEDS Data Warehouse. The CEDS Data Model Guide can be found here [https://github.com/CEDStandards/CEDS-IDS/tree/master/doc].

CEDS Data Warehouse

URL: https://github.com/CEDStandards/CEDS-Data-Warehouse
Description: Modeled for longitudinal storage and reporting of P-20W data, the Common Education Data Standards (CEDS) Data Warehouse implements star schema data warehouse normalization techniques for improved query performance.

CEDS Data Warehouse Parquet

URL: https://github.com/CEDStandards/CEDS-Data-Warehouse-Parquet
Description: The Common Education Data Standards (CEDS) Data Warehouse Parquet (DW Parquet) standard is designed for data engineering and data science needs in the cloud. The DW Parquet Models mirror the SQL-based CEDS Data Warehouse. Parquet files are designed for rapid and distributed reporting across multiple technology stacks, data processing and BI tools, and are cloud vendor agnostic. This standard is ideal for stakeholders implementing reporting structures in a data lake environment.