Introduction

Listing every element an LEA or school collects, along with definitions for each element, can be a daunting task. . . . CEDS can help.

Local education agencies (LEAs) across the country collect data about students and use these data to foster academic achievement by identifying students' special needs, monitoring their academic progress, and developing successful teaching and learning strategies. Parents and students rightfully have concerns about what data is collected and stored and for what purposes it is used. Families expect and deserve openness and transparency from LEAs about the data they collect. Parents also expect that LEA personnel will respect each student's privacy and that data systems will ensure protection of the confidentiality of each child's personal information. It is important for LEAs to disclose, in an understandable way, what data they collect and why— and the Common Education Data Standards (CEDS) can help.

Best Practices in Ensuring Data Transparency

The U.S. Department of Education, through its Privacy Technical Assistance Center (PTAC), recommends a number of best practices for improving the transparency of LEAs in a document titled *Transparency Best Practices for Schools and Districts*. CEDS can help with two specific areas of transparency, as described in the section of this document titled "Recommendations on What to Communicate to Parents":

CEDS provides not only free online resources LEAs can use, but also free technical assistance to help LEAs build their data dictionary in CEDS. Use the Contact Us link on the CEDS home page to ask for help.

- **What information are you collecting about students?** PTAC recommends that LEAs and schools develop and publish a data inventory listing the information that is collected from or about their students.

- **Why are you collecting this information?** PTAC suggests that LEAs and schools explain why student information is collected (e.g., for state or federal reporting, to provide educational services, to improve instruction, to administer cafeteria services, etc.).

For both of these areas, PTAC indicates that a best practice is to provide this information to the public at the data element level. Listing every element an LEA collects, along with definitions for each element, can be a daunting task. While it may be possible for IT staff to pull a list of technical element names from the database, the need to provide user-friendly terms and a complete definition for each element can create a burden on the already constrained resources of LEAs.

PTAC website:
http://ptac.ed.gov/

Transparency Best Practices for Schools and Districts:
http://ptac.ed.gov/document/Transparency-Guidance

Using CEDS to Achieve Data Transparency

CEDS offers free, easy-to-use resources and tools that LEAs can access and then use to provide public data transparency. When an LEA wishes to create a publicly accessible data dictionary that fulfills the need for transparency, two main components are needed: a standard vocabulary, and a data dictionary that is aligned, or mapped, to that standard. Fortunately, CEDS offers tools and resources for both:

- **Determining a standard vocabulary** can be accomplished by using the CEDS Standard (also known as the CEDS Domain Entity Schema).

- **Using a data dictionary tool** can be accomplished by using the CEDS Align tool.

The **CEDS Standard** is the foundation of CEDS. It includes an extensive list of education vocabulary terms, known as elements. Each element is paired with a sentence definition that concisely explains what it represents. The CEDS Standard's broad list of elements and definitions spans all education domains: early childhood, K12, postsecondary, adult education, and workforce. Rather than trying to determine user-friendly elements and definitions on their own, LEAs can take advantage of the work that has already been done in CEDS to create a list of elements that are locally used.

In addition to the Standard, the CEDS initiative also includes a tool called **CEDS Align**. CEDS Align assists LEAs in building out a data inventory—also known as a data dictionary—that includes each element, its definition, and information about why it is being collected. When an LEA uses CEDS Align to map its own data dictionary to the CEDS Standard, it can easily learn from and share with other education entities, at all levels of government across the country.

CEDS Standard (CEDS Domain Entity Schema):
https://ceds.ed.gov/domainEntitySchema.aspx

CEDS Align:
https://ceds.ed.gov/align.aspx

Determining a Standard Vocabulary with the CEDS Domain Entity Schema

Releasing a standard vocabulary to stakeholders with complete definitions is paramount to transparency. As an LEA lists out the data elements it collects in its data system, there will be a number of immediate challenges with which CEDS can help:

The Challenge	How CEDS Can Help
Technical Element Names Elements consist of column names in a table or spreadsheet that are too technical for the average person to understand.	**User-Friendly Element Names** The CEDS Standard vocabulary contains over 1,600 unique, user-friendly education elements that are standard to the education community.

The Challenge	How CEDS Can Help
A Lack of Definitions Elements do not have definitions, the definitions are short or not for external user consumption, or the definitions are stored in the minds of various program staff.	**Complete Definitions** The CEDS Domain Entity Schema contains complete sentence definitions for each of its elements. The definitions have already been reviewed by a nationwide community of education stakeholders.
Duplicate Element Names Duplicate elements are stored in multiple systems with slight variations of the element name.	**Consistent, Standard Element Names** The CEDS Standard vocabulary contains hundreds of unique education element names. A community of stakeholders worked together and determined these names to be the most commonly used.

Using a Data Dictionary Tool with CEDS Align

CEDS offers a tool called Align that fulfills the need for a data dictionary. CEDS Align provides an easy way to store and maintain a data dictionary. This resource is free and contains additional features that give benefits beyond the ability to create a list of element names and definitions.

The Challenge	How CEDS Can Help
Cost Money is not available to put into a resource for managing a data dictionary.	**Free Resource** CEDS Align is a free resource that allows users to create any number of data dictionaries, called "maps," that can be used for internal purposes or shared publicly. CEDS also provides free technical assistance to LEAs that are building their maps.
Managing Multiple User Access Multiple individuals need to contribute to this resource, and there needs to be a way to manage their access to the data dictionary.	**Simple Account Management** CEDS Align allows users to manage their own maps. Users determine who has read-only access and who is permitted to update the map.
Ease of Updating The data dictionary needs to be able to be updated quickly and efficiently. The IT department should not be required to extract or repost the data dictionary every time a change needs to be made.	**24/7 User Access, and Stakeholders Always See the Most Recent Version** CEDS Align allows users to update their maps anytime they have access to the Internet. To facilitate transparency, an LEA can give stakeholders a link to its shared CEDS Align map. As soon as the shared map is updated in CEDS Align, the changes appear in the version stakeholders see.

The Challenge	How CEDS Can Help
Posting the Data Dictionary Online The data dictionary must be posted online so stakeholders can access it. An LEA should not need to devote extra resources to doing this.	**Web Space Without Fees or Hassle** CEDS Align offers a free online interface that is ready to use. There is no need to create new web pages, pay for web hosting, or figure out how to integrate the resource into an already existing platform.
The Ability to Indicate Why These Data Elements are Collected The best practice is to list not only what is being collected, but also why it is being collected.	**Metadata Fields About the Data Elements** CEDS provides additional metadata fields about the data elements that can be used to provide information about why the elements are collected. LEAs can also use CEDS Connect to provide stakeholders with a broader look at how the data are used.
Needs Beyond the Data Dictionary When an LEA puts so much effort into building a data dictionary and sharing it publicly to ensure transparency, additional features are beneficial.	**More Than a Data Dictionary** CEDS Align not only stores local metadata, but also helps align that local metadata to the nationally recognized CEDS Standard. An alignment can then operate as a bridge to a large number of resources and tools available within CEDS. CEDS users can • compare different internal maps to identify and resolve duplicate elements • compare internal maps with other agencies' maps when fulfilling data sharing agreements; • compare internal maps with other organizations' maps, to map elements to theirs more efficiently; and • access the ever-growing list of CEDS Connections to help connect policy and research questions to answers in local data.

Getting to Know CEDS

By accessing CEDS Align, LEAs can create a data dictionary and map it to the CEDS Domain Entity Schema. With functionality that allows users to work privately on a map and also share it publicly through a link, CEDS Align is a tool that offers an efficient and cost-effective way to provide data transparency to stakeholders.

To get started with CEDS, first create a CEDS account. (This can take as little as five minutes.) Then, start creating a locally relevant data dictionary and map it to the CEDS Standard. CEDS offers several resources to assist users in doing this, including the Mapping Toolkit, the Building a Data Dictionary page, and numerous CEDS video tutorials. Users who need additional help are invited to contact the CEDS Support Team for technical assistance.

Once LEAs have an aligned map, they can proceed to using CEDS Connect. CEDS Connect is a repository of information about how other education entities have used education data to answer specific questions. Browse the many Connections that others have made to learn how to use locally gathered data to answer locally relevant questions.

Create a CEDS account:
https://ceds.ed.gov/createAccount.aspx

Mapping Toolkit:
https://ceds.ed.gov/MappingToolkit.aspx

Building a Data Dictionary:
https://ceds.ed.gov/dataDictionary.aspx

CEDS video tutorials:
https://ceds.ed.gov/learnCedsAlignment.aspx

Contact CEDS for technical assistance:
https://ceds.ed.gov/ContactUs.aspx

CEDS Connect:
https://ceds.ed.gov/connect.aspx

SUMMARY

As LEAs strive to meet data collection needs while ensuring transparency—that is, shining a light on the unknown—CEDS can help. PTAC has noted that parents expect openness and transparency from school districts about their data practices, and that it is important that districts communicate what student information they collect and why. CEDS provides free tools, resources, and technical assistance that can be used to resolve many of the transparency challenges currently facing LEAs. CEDS Align is an easy-to-use tool that provides user-friendly and consistent element names, complete definitions, option sets, public access, simple account management, and metadata fields. Further, CEDS Align is more than a data dictionary; it is the key to LEAs' ability to use data to further the goals of education: to help students excel.

This paper was last updated Spring 2017.

Contact Us

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