USING CEDS:
DATA GOVERNANCE

*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.*

The "How Do I Use CEDS?" series of briefs addresses various ways that different data stakeholders may find CEDS and its associated tools helpful in their data tasks and responsibilities. CEDS is built in a way to support a variety of implementations that are all different; there is no one way to "use" CEDS. This brief focuses on how CEDS can be used to support data governance efforts within an organization or across organizations as part of a P-20W initiative.

Data Governance

Data governance refers to the overall management of the availability, usability, integrity, quality and security of data. Central to data governance is the creation of policies, roles and responsibilities that ensure that various stakeholders have clarity and consistency regarding the purpose, use and presentation of data. One of the common issues data governance can be used to address is a lack of shared language regarding data elements. If groups of stakeholders use different terms to mean the same thing, or if the same term is used to indicate different things, confusion may occur and data cannot be shared effectively. For example, in K12 education, "discipline" refers to a student being penalized after an infraction, and may be viewed as a cause for concern. In postsecondary, however, "discipline" refers to the academic category or subject into which a course or program of study falls, and is a rather neutral concept. CEDS was developed with a deliberate focus on ensuring that the standards are consistent and clear across different levels and entities.

Differences in terms may occur not only between different educational levels, but also between different content areas or agencies. For example, the early learning community has identified misalignment not only between early childhood data elements/terms and those of K12 and postsecondary, but also between early childhood elements and those used in special education.

Using CEDS Align and CEDS Connect for Data Governance

In addition to the standards, CEDS includes tools to allow stakeholders to use and integrate the standards into various parts of their work and support data governance at every level.

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.

The *CEDS Align* tool can be used to identify policy questions and related data elements, define analytic approaches, calculate metrics and indicators, address reporting requirements, and more.

CEDS Align can be used to support state and district data governance efforts. For example, by mapping their own data systems to CEDS, state and district data teams can see both where their data definitions differ from CEDS and where their data definitions vary within the state or district. Users can also map state systems from different sectors, such as SLDS, higher education and early learning. This information can inform state discussions about which data to collect and store, how to define it and how to use it.

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.

CEDS Connect can build upon the CEDS Align tool to identify policy questions and related data elements, define analytic approaches, calculate metrics and indicators, address reporting requirements, etc.

Like CEDS Align, CEDS Connect can be used to support data governance efforts focused on documenting and standardizing metrics. CEDS Connect enables governance teams, which focus on providing stakeholders with clarity regarding the purpose, use and presentation of data, to consider ways to remain consistent in the delineation and use of data elements, analytic approaches and various metrics and indicators.

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.

Steps for Using CEDS in Support of Data Governance

1. Convene stakeholders to identify the policies and/or programs that the data systems should be able to support and the associated types of questions the group is interested in answering
2. Identify the data sources and systems currently available, and gather and analyze reports currently being generated by these data sources
3. Become familiar with the CEDS standards
4. Work with stakeholders to identify the value and potential uses of alignment with CEDS
5. Prioritize practical opportunities for alignment with CEDS
6. Align your data dictionary(ies) to CEDS using the CEDS Align tool
7. Compare the different CEDS Align maps in order to find duplications, gaps, etc.
8. Gather stakeholders to discuss any differences or gaps found in maps and how they can be resolved
9. Determine the process to update your information and the frequency with which to check CEDS resources (especially when new versions of CEDS are released)

States with mature data governance processes and data systems will probably begin using CEDS to support the work at step 3.

Example of CEDS in Data Governance at the State Level: Washington

In Washington, the data governance group has recommended the adoption of "the CEDS data definitions, terminology, relationships, and code sets for a core subset of data elements commonly used by and among state/district/postsecondary institution student information systems." The expectation is that a cross-agency state adoption will help improve the quality and reliability of state data. The governance group recommended that CEDS adoption include the mapping of their education data definitions against other P-20 state entities, sharing and analysis of the alignment between their definitions and those of other entities and ultimately, using the CEDS standards as a tool to work with stakeholder partners. For a more detailed description of this work including the parties involved please see "CEDS in the Field: Washington Steps Toward CEDS Alignment" at *https://ceds.ed.gov*.

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.

Additional Resources

CEDS in the Field: Washington Steps Toward CEDS Alignment
https://ceds.ed.gov/pdf/ceds-in-the-field-wa.pdf

Traveling Through Time: The Forum Guide to Longitudinal Data Systems. Book 3: Effectively Managing LDS Data. Part I: Governing the Data.
http://nces.ed.gov/forum/ldsguide/book3/part1.asp

P-20W Data Governance: Tips from the States
http://nces.ed.gov/programs/slds/pdf/brief4_P_20W_DG.pdf

P-20W Data Governance Challenge: College and Career Readiness
http://nces.ed.gov/programs/slds/pdf/dgscenario_ccr.pdf