



# USING CEDS: VENDORS AND RESEARCHERS

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 and its associated tools can be used to help data agencies collaborate with each other, as well as with researchers and vendors.

## CEDS is a Common Vocabulary

The highly mobile nature of our population requires that we be able to share high quality data in an efficient manner. When a student transfers from one program, institution, district or state to another, or advances from one sector of the education system to the next, information must be shared to ensure continuity and appropriateness of services provided (e.g., class placement, program participation). Without common standards for communicating this information, transfer of data may be slow, fraught with errors, and can increase staff burden (e.g., time spent deciphering data), potentially compromising student outcomes.

Beyond the basic need for timely and accurate individual student information, the need for a common vocabulary also stems from the changing nature of how education data is being used. No longer is data used by states, districts, and other programs solely for compliance, but instead used to increase student outcomes, share successful teaching practices and create new relationships among stakeholders. Local education agencies (LEAs) and state education agencies (SEAs), as well as many higher education institutions and early learning programs, are improving their data capabilities and implementing longitudinal data systems so that they can effectively use data to make real-time decisions. As the efforts of such a diverse group of data users moves forward, the ability to communicate via a common language becomes vital, allowing education stakeholders – including early childhood educators through postsecondary administrators, parents, students, legislators and researchers – to more efficiently work together toward ensuring student success, using consistent and comparable data throughout all education levels and sectors.

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## Tools to Assist Vendors and Researchers: CEDS Align and CEDS Connect

In addition to the common standards, CEDS includes tools to allow stakeholders to use and integrate the standards into various parts of their work.

**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.

As highlighted below, states can require that vendors use CEDS Align to demonstrate that vendor data standards are consistent with state standards. As the CEDS user community continues to grow, it is likely that more states and districts will make similar decisions. In addition, some vendors are already publicizing their compliance with CEDS; it is likely that other vendors will join this group as the CEDS standards and tools become increasingly prominent. Vendors may create a map in Align and share with only those to whom they give access, and can ‘unshare’ at any time.

**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.

**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.

## Negotiating with New Stakeholders: Vendors and Researchers

Data vendors and education researchers are two groups with much to gain from utilizing CEDS in their work.

### *CEDS and Vendors*

States, districts and vendors all have found advantages in using CEDS standards and tools.

Many states and districts are negotiating with vendors to create custom – or at least expressly configured – data solutions rather than purchasing pre-made, “out of the box” tools. Within these relationships, some data system teams are requiring that vendors incorporate the CEDS standards in any products developed or customized. And, some SEAs and LEAs are including in their vendor RFP the requirement that any vendor applying needs to use CEDS Align to map the vendor’s data definitions against those of the state’s system. This use of the CEDS tool supports the state’s

efforts to ensure that any vendor chosen will develop a product aligned with the state's data standards. Vendors, too, are finding it beneficial to align with CEDS. As the CEDS standards are used in more and more states and districts, vendors are finding that advertising solutions already in compliance with CEDS gives them an advantage in the RFP process, and a leg up in working with clients.

## *CEDS and Researchers*

State and district teams also work with researchers who wish to use state and LEA data. To better ensure that researchers understand the data, states and districts may consider incorporating the use of CEDS standards and tools into the request for proposal, research plans, and memorandums of understanding of those given permission to use data. By requiring the use of CEDS, states, districts and researchers ensure a common vocabulary support these data sharing efforts.

For example, a researcher investigating attendance rates in a state must ensure that he or she is defining the term as the state does; otherwise the research results will not accurately reflect state policy. Does the state define attendance using a particular number of hours within a given day, or on a full day? If a researcher does not define the term as the state does, the data published could provide an inaccurate picture of what is truly happening in the state. But if the provider's data dictionary is aligned in a CEDS Align map, both the locality and the researcher can be sure that a common language is in place, increasing the accuracy of any research completed.

Further, data teams may want to consider encouraging researchers to use CEDS Connect to define analytic approaches, calculate metrics and indicators for their research. This use of CEDS Connect can serve to make the data request process more efficient, the analysis more transparent and to help build statistical capacity. Align and Connect reports can be used to choose a set of Connections to see the mutually exclusive, exhaustive list of elements across the Connections. Users may also choose CEDS elements and either see what Connections exist that contain those elements or see which published maps have at least one element aligned to each element selected.

## 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.