



SLDS Issue Brief

CEDS and SLDS – Aligning Efforts

The Statewide Longitudinal Data Systems (SLDS) Grant Program has awarded grants to states since 2005 with the goal of helping states achieve successful design, development, implementation, and expansion of K12 and P-20W (early learning through workforce) longitudinal data systems. Grantee states are in various stages of SLDS implementation, from those who have successfully built and are maintaining an SLDS, to those who have just begun efforts with a fiscal year (FY) 2012 SLDS grant. The purpose of this document is to detail how the Common Education Data Standards (CEDS) and associated tools can help states at all levels of SLDS development address data management challenges. It highlights the work of two states—Kansas and North Carolina—as they use CEDS to move forward with their SLDS efforts.

What Is CEDS?

The 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. CEDS is, by definition, well suited to integration within SLDS efforts, as both projects aim to increase the value of education data through greater usage driven by standardization and sharing across sectors, states, and beyond. As SLDSs mature across the states, CEDS and the Align, Connect, and myConnect tools (see box at right) create a timely interconnection to bring these efforts together. By incorporating CEDS and the CEDS tools into SLDS undertakings, states can elevate these efforts to the next level.

Each state faces different challenges with its SLDS, but the CEDS tools are flexible enough to be used in numerous ways—there is no right or wrong way to use CEDS. CEDS and the Align, Connect, and myConnect tools provide a means to engage nontechnical program staff and data stewards in the expanded use of the SLDS. Perhaps most importantly, CEDS can help to initiate conversations around specific issues to ultimately move data management practices, data governance practices, and the SLDS as a whole forward.

The CEDS Tools

Align

<https://ceds.ed.gov/align.aspx>

Users can import their data dictionary and map their elements to align with the CEDS Standard, as well as view and compare other users' published maps using CEDS alignment reports.

Connect

<https://ceds.ed.gov/connect.aspx>

Connect allows users to select and view the alignment to various education data-related components, including indicators/metrics, policy questions, and state EDFacts metrics.

myConnect

<http://ceds.ed.gov>; click on Tools

The myConnect feature allows users to apply their aligned maps to the elements needed for any connection.



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For more information on the IES SLDS Grant Program or for support with system development, please visit <http://nces.ed.gov/programs/SLDS>.

CEDS in North Carolina: Many Uses, Many Benefits

In North Carolina, CEDS has been integrated into many initiatives, including the following:

- *Vendor alignment.* Many vendor products are proprietary. By requiring vendors to align with CEDS, the products become standardized enough that any necessary changes to the products or vendors are less disruptive to ongoing processes in the state.
- *Commonality across sectors.* When North Carolina started building its P-20W SLDS, commonality was needed across all education sectors and into the workforce in order for the system to be successful. The SLDS grant helped convince stakeholders to standardize due to the broad range of stakeholder systems. The stakeholders collectively agreed to use the nationally recognized education data standard: CEDS.
- *Sharing of data across state lines.* North Carolina has been involved in the State Exchange of Education Data (SEED, formerly Southeastern Education Data Exchange) initiative since its pilot phase. The goal of SEED is to share information for transfer students who cross state lines. Participating states include Alabama, Colorado, Florida, Georgia, Kentucky, North Carolina, Oklahoma, and South Carolina. “From the very first meeting, there was never any other discussion aside from ‘we will align with CEDS,’” said Karl Pond, Enterprise Data Manager at the North Carolina Department of Public Instruction. “We will align with CEDS because the first word is ‘common.’” The decision to use the CEDS standard for mapping SEED increased the buy-in among the participating states.
- *Identifying discrepancies and gaps in data systems.* In North Carolina, the use of CEDS helps pinpoint differences in how agencies capture and define data within their individual systems, which informs long-term planning for what the state would like its SLDS to produce. For example, if federal reporting requires that the state report on which North Carolina students finished one year of college within 24 months of enrolling at an institution of higher education (IHE), “the problem is defining one year of college,” said Pond. “If two of three of my IHE sectors put in a field that says ‘year: freshman, sophomore, junior, senior,’ but the other one doesn’t, I’ve got a problem.” CEDS is useful in finding such discrepancies so that they can be addressed.
- *Simplifying and consolidating data requests.* North Carolina has published its Common Education Data Analysis and Reporting System (CEDARS) map on CEDS for anyone to view. “People called and said ‘I’d really like to know about this,’ and we thought the easiest

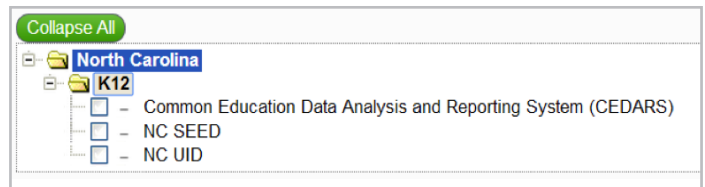


Figure 1. North Carolina's published maps, available at ceds.ed.gov.

way to give them that was to publish the map on CEDS,” said Pond. Data requestors can look at the CEDARS map on CEDS to see what data are available before submitting a request for specific data. CEDS can lead to more focused and limited data requests, saving valuable time for both the requestors and those pulling the data. See figure 1 for a list of all of North Carolina’s published maps.

CEDS in Kansas: A Bridge to Early Childhood Data Systems

In Kansas, the first step for agency staff—particularly in the early childhood sector—was to understand the need for a common language. “The challenge is, how do you retrofit this [common language] into what we’ve already had to do?” said Kathy Gosa, the Kansas State Department of Education’s Information Technology Team Director. “That’s where CEDS has been very useful.”

CEDS has helped Kansas by serving as a bridge between different data systems—most notably between the SLDS and early childhood systems. When Kansas began planning to integrate early childhood data into its SLDS, it had no language with which to communicate with the existing early childhood data systems housed in other state and private organizations. After incorporating CEDS into the integration process, a common language is now emerging.

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The first step to integration was an initial mapping of early childhood data elements. “We [the SLDS and early childhood teams] sat down and went through every element and definition,” said Gosa, “which showed us just how far off we are in how we speak—like a totally different language.” This process is one of continual collaboration: Gosa and her staff work closely with early childhood staff to ensure that they are defining early childhood data elements consistently, as well as to identify overlaps, potential conflicts, and gaps. This process also allows for the identification of new, changed, or removed data elements—which can occur with new iterations or annual updates—allowing Gosa and her staff to maintain an accurate and comprehensive metadata repository.

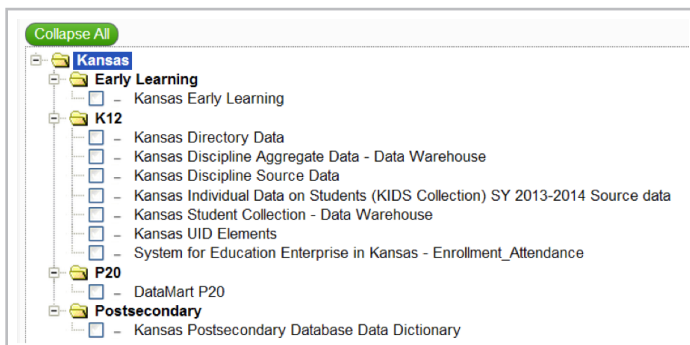


Figure 2. Kansas's published maps, available at ceds.ed.gov.

Using the Align tool, Kansas can more accurately identify what fields exist across the SLDS and early childhood systems and build a more complete map of master data elements. The Kansas Early Learning Map and other data maps are publicly available on the CEDS website (see figure 2).

In a presentation to the state's Early Childhood Integrated Data System (ECIDS) collaborative, an overview of the CEDS work was shared, including a graph depicting the steps of the development process that lead to creating Connections in the CEDS Connect tool:

1. Identify a question.
2. Identify the elements needed to answer that question.
3. Explain how those elements are used to address the question.

Sustainable Integration of CEDS: Supporting Work in Kansas

Kansas has integrated CEDS into its daily work not as a separate initiative, but rather as a key component of its SLDS. "[CEDS] has to be part of the ongoing process," said Kathy Gosa, the Kansas State Department of Education's Information Technology Team Director. "We find value in it, and it fits into our other processes to keep applications up to date and provide useful information for reports." CEDS supports several of Kansas's goals for running a data system, Gosa said, "so if you can build it into that whole process, I think you can be successful."

CEDS has also been subtly woven into the state's data governance efforts. The data governance board and data stewards have each received several presentations to familiarize them with CEDS, with data stewards completing more specific training due to their hands-on relationship with the data. Although there has been a lot of effort around CEDS awareness, Kansas has not mandated any particular activities. In this way, CEDS is "not driving things, but supporting the work that the data governance board is responsible for," said Gosa.

Once the Connection is built and published, the myConnect tool can be used to identify elements in the early childhood systems that align to the elements in the Connection.

Selecting data elements and creating CEDS Connections are often driven by the policy questions that stakeholders want answered and the data needed to answer them. Key policy questions developed by Kansas's early childhood stakeholders guided this process. Although many early childhood staff said they did not consider themselves "data people," CEDS has provided a concrete process to engage them in the SLDS by demonstrating the link between the high-level concepts represented in their policy questions and actual data elements.

Further Uses for CEDS

The use of CEDS in North Carolina and Kansas demonstrates that the CEDS Standard and the Align, Connect, and myConnect tools can be used by states and agencies with SLDS systems in different stages of development. North Carolina used CEDS to integrate numerous different efforts, while Kansas used CEDS to serve as a bridge from an existing SLDS to early childhood systems.

CEDS can support SLDS efforts regardless of where a state is with its SLDS grant (see figure 3, next page). For new or updated data systems, CEDS provides a standardized blueprint for the data definitions and streamlines the development and establishment of those systems. This reduces the level of effort and costs for implementation. States are also developing Connections to see what questions they want to answer, and then using the data elements from those Connections to build an Align map. For data systems in the early stages of development or that are being fed by various existing systems, the CEDS model can be an impetus for conversations on linking systems such as early learning or workforce with existing K12 or K-20 systems. For SLDS grants that are nearing completion, different CEDS Connections can be used to explore expansion of the SLDS, thus showcasing the power of an SLDS to build the case for sustainability with executive leadership and policymakers.

It is important to note that states with completed SLDSs do not need to re-engineer data systems or data warehouses for CEDS and the CEDS tools to be valuable; *CEDS is not all or nothing*. CEDS and the CEDS tools can be used for projects going forward from any point in the life of the SLDS. For example, states can

- use CEDS Policy or *EDFacts* Connections to expand the use of an existing SLDS;
- use CEDS Align maps to expand data sharing with agencies outside the P-20W (e.g., state social service or health agencies); and
- use CEDS Civil Rights Data Collection Connections to explore providing assistance to districts and schools with reporting.

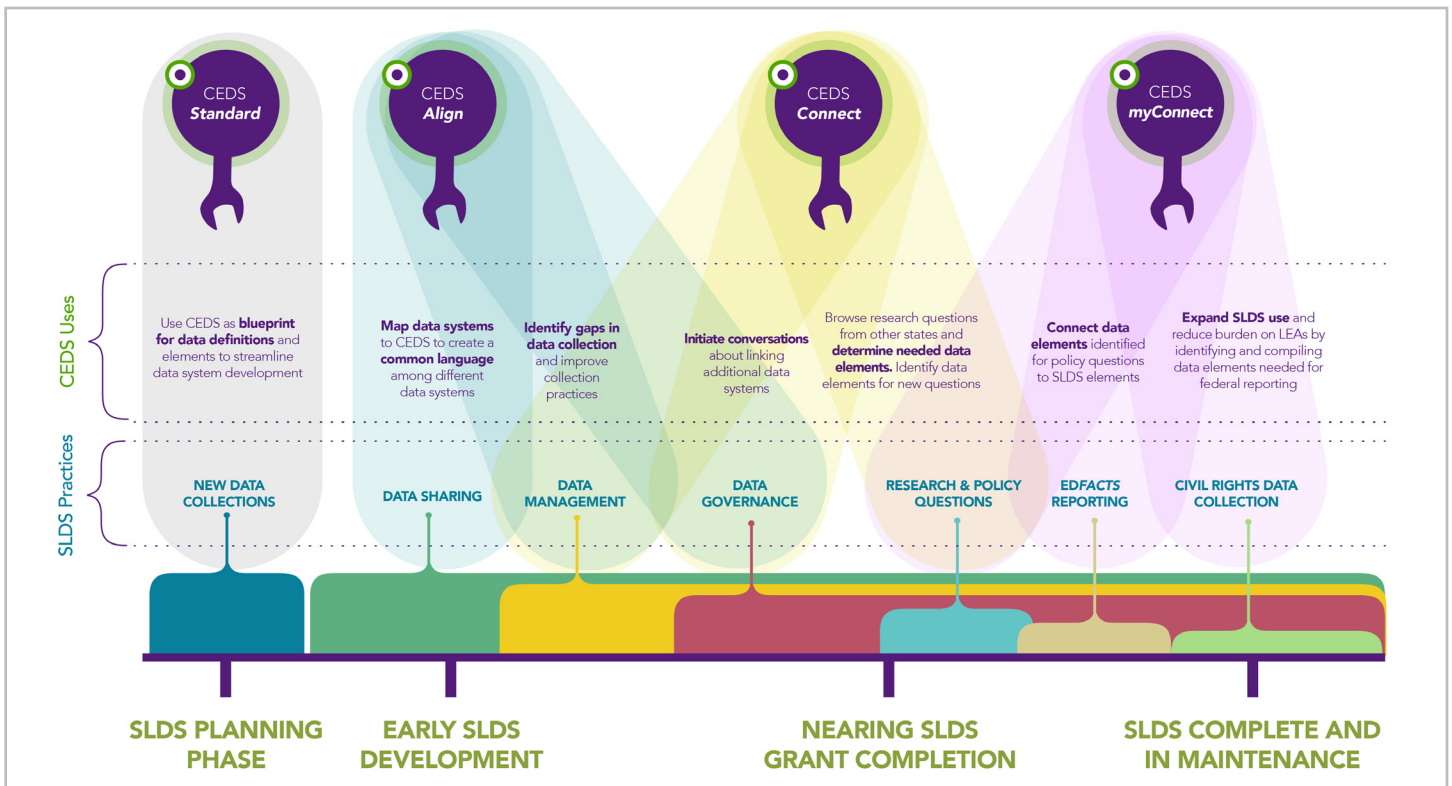


Figure 3. CEDA tools support a range of practices at all stages of the SLDS development process.

Whether incorporating data from new sources into the SLDS, or to giving the SLDS an expanded role in data reporting, policy, or research activities, states can use the CEDA tools both to support their existing efforts and to inspire future activities. CEDA's common language for education data provides a foundation for conversations about data sharing, and the collaborative Connect and myConnect tools allow states to showcase their own data use work and to build on the work of others. For more information about CEDA and to request assistance, please visit ceda.ed.gov.

Who Should Do the CEDA Align Mapping?

While almost anyone within an agency who works with data will most likely have the ability to effectively use the CEDA Align tool, it can be difficult for states or agencies to decide on the right person to tackle mapping their data dictionaries with Align. Ideally, the work will be completed by someone with the appropriate technical and data skills, but who also has an idea of the data system's "big picture." Some qualifications to consider include a staff member who

- has the correct knowledge of the data system to do the Align mapping correctly;
- is respected by numerous stakeholders in the agency, so the Align mapping work will be trusted;
- can work with others in the agency to persuade them of the value of CEDA so that they will validate the Align mapping work; and
- is supported as part of the overall data governance effort, both personally and in his or her Align mapping work.

Additional Resources

Kansas State Department of Education
<http://www.ksde.org/>

North Carolina Department of Public Instruction
<http://www.ncpublicschools.org/>