EdFacts, CEDS, and the P20W+ Col Reference Architecture

US National Perspectives

We WANT your input!
Session Description and Participants

An overview of the federal reporting requirements which states have in common, the Common Education Data Standards that support federal reporting, and the P20W+ reference architecture that CCSSO member states have developed to support State Longitudinal Data Systems (SLDS)

Participants:

- Tricia Farris, AEM
- Ben Silberglitt, Cedar Labs
- Jim McGlynn & Greg Nadeau, Public Consulting Group

This session is meant to be informal and participatory. More of a conversation.
Common Education Data Standards (CEDS)

Supports tools built around consistent, transparent uses of data

CEDS evolves in response to user needs

Community driven, cooperatively funded, transparently governed
CEDS Ontology

Coming SOON
What is Generate?

SEA Data System

CEDS

OSD

Data Warehouse

CID

Center for the Integration of IDEA Data

IDEA

Generate
State Education Agencies Implementing Generate

- Bureau Indian Education
- Colorado
- CNMI
- Iowa
- Kansas
- Kentucky
- Maine
- Michigan
- Mississippi
- Montana
- Nebraska
- Nevada
- New Hampshire
- New Jersey
- New Mexico
- North Carolina
- North Dakota
- Oklahoma
- South Carolina
- Utah
- Vermont
- Washington
- West Virginia
- Wyoming
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<thead>
<tr>
<th>File Specification Number</th>
<th>File Specification Description</th>
<th>Status</th>
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<tbody>
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<td>FS210</td>
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<td>To be developed in Generate</td>
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<tr>
<td>FS211</td>
<td>Title III English Learner Exited</td>
<td>To be developed in Generate</td>
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<tr>
<td>FS212</td>
<td>Comprehensive Support and Target Support Identification</td>
<td>To be developed in Generate</td>
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<tr>
<td>FS218</td>
<td>N or D in Program Outcomes - State Agency</td>
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</tr>
<tr>
<td>FS219</td>
<td>N or D in Program Outcomes - LEA</td>
<td>To be developed in Generate</td>
</tr>
<tr>
<td>FS220</td>
<td>N or D Exit Program Outcomes - State Agency</td>
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<td>FS223</td>
<td>Title I School Status</td>
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<td>N or D Assessment Proficiency - State Agency</td>
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<td>FS226</td>
<td>Economically Disadvantaged Students</td>
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</tbody>
</table>
SLDS Workgroup for Scalable Data Use (ScDU)
What’s Ahead?

**IPEDS** Integrated Postsecondary Education Data System

Common Education Data Standards
Enabling Conditions for Effective Data Use

Leveraging data to support compliance and drive insights, collaboration, and continuous improvement for lifelong learners and earners

- Quality, Capacity, and Culture
- Responsible Data Access and Sharing
  - Shift from Moving to Using Data
  - Converting data -> information
- EDFacts
  - EDPass
  - Generate
- IPEDS
- Standards
  - Interoperability
  - Data Privacy
  - Infrastructure
Col Reference Architecture

P-20W+ Capability Model

© Access 4 Learning (A4L) Community and PESC
Build Common Pathways
Invest in Community-Driven Solutions

© Access 4 Learning (A4L) Community and PESC
Build with Privacy & Security

School / Department of Education
(Data Controller)

Written Contract
Clause 1
Clause 2

Contract Obligations Pool

Legal / Policy

Control Benchmark Sets

SDPC Set
Set 2

NIST/ISO/IEEE
“Other” standards

You pick the technical security standard

Privacy Obligation Document (POD)
Obligation 1 XML
Obligation 2 XML

A machine-readable document for detailed obligations

Vendor (Data Processor)

The legalese from the DPA

The technical obligation from the legalese

Technical
Push Error Correction to Source Systems
Get Involved!

Common Education Data Standards (CEDS) Open Source Community (OSC)

Popular repositories

- **CEDS-IDS**
  - The CEDS Integrated Data Store facilitates 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: 39
  - Py: 17

- **CEDS-Data-Warehouse**
  - 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: 18
  - Py: 3

- **CEDS-Data-Warehouse-Parquet**
  - 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...
  - Py: 9
  - R: 1

- **CEDS-Ontology**
  - The CEDS Ontology is a draft project to express the Common Education Data Standards (CEDS) in Web Ontology Language (OWL).
  - 2

People

This organization has no members. It must be a member to join an organization.

Top languages

- TSQL
- Python

Most used topics

- ceds
- education-data
- education-data-standard
- data-warehouse

Report abuse
JSON/JSON-LD Framework

Create a CEDS JSON/JSON-LD Framework and required code and processes to move Early learning to K12 + Workforce data into and out of all CEDS resources.

• Interested States:
  • Georgia
  • Iowa
  • Indiana
  • Maine
  • Michigan
  • Mississippi
  • North Carolina
  • Nebraska
  • New Mexico
  • Nevada
  • South Carolina
  • South Dakota

• Project Duration
  • 12 months

• High-level tasks
  • Create high level executive summary
  • As-Is/To-Be Model
  • Gap Analysis
  • Review existing Mississippi work

• Project Dependencies
  • Existing Mississippi work
  • CEDS Ontology release
Establish Standards for Reporting

Create non-topic specific standards (architecture, documentation and testing) for the development of data representations, reports and/or dashboards

- Interested States:
  - Georgia
  - Guam
  - Illinois
  - Kansas
  - Michigan
  - Missouri
  - New Hampshire
  - North Carolina
  - South Dakota
  - Virginia

- Project Duration
  - 33 months

- High-level tasks
  - Set a scope and baseline
  - Gather documentation
  - Conduct gap analysis
  - Develop standards and plan for meeting the gaps

- Project Dependencies
  - None
Baseline Generate

Complete development, pilot, and submission of all EDFacts file specifications from Generate by at least one state per file. Maintain all code, test cases, documentation for Generate in a public GitHub.

- **Interested States:**
  - CNMI
  - DC
  - Guam
  - Kansas
  - Maine
  - Mississippi
  - Nebraska
  - Nevada
  - Utah
  - Virginia

- **High-level tasks**
  - Create project plan
  - Establish assignments for each component of each EDFacts file
  - Establish code management/test cases
  - Create/maintain documentation
  - Update CEDS EDFacts Connections as needed
  - Do code development/UI development
  - Upload EDFacts files during EDPass window

- **Project Dependencies**
  - Simultaneous submission of EDFacts files using shared resources
  - SEAs need quality data collection for Generate at unit-record-level
  - CEDS Open Source Community – new versions of CED DW

- **Project Duration**
  - Need further discussion to determine
All are welcome to join a ScDU Workgroup

CEDS-SLDS Scalable Data Use Projects (ScDU). States and territories identified these projects as high-priority initiatives that can significantly advance both their individual goals and the overall CEDS community. These workgroups will be driven by FY23 grantees and their peers and supported by the CEDS team and the SLDS SST.

- **Generate Project Workgroup** – Complete the development, pilot, and submission of all EDFacts file specifications from Generate, including development and maintenance of all code, test cases, and documentation for Generate.
  - To attend the Generate Project Kickoff on 5/7 at 2:30-3:30pm EST, [register here](#).

- **JSON Project Workgroup** – Create a CEDS JSON/JSON-LD Framework, including required code and processes to move early learning, K12, postsecondary, and workforce data into and out of CEDS resources.
  - To attend the JSON Project Kickoff on 5/10 at 2-3pm EST, [register here](#).

- **Reporting Standards Project Workgroup** – Create architecture, documentation and testing standards for the development of data representations, reports and/or dashboards.
  - To attend the Reporting Standards Project Kickoff on 5/10 at 12:30-1:30pm EST, [register here](#).
All are welcome to join a ScDU Workgroup

In addition to the projects above, we anticipate assembling project workgroups for the following priorities, with some that may begin as early as fall 2024:

- **Topic-Based Reports Project** – Create a dashboard(s) that allows for public visualization and downloadable data focusing on key topics like K-12 indicators, school finance, educator workforce, and postsecondary. This project will produce shared resources, methodologies, and content that could be customized as needed.

- **Data Asset Management Project** – Develop CEDS-aligned standards and guidelines to structure how metadata is collected, stored, and managed to support the tracking and management of data assets through the data lifecycle. The model will serve as a baseline framework and blueprint for states looking to implement enterprise-level systems for managing and governing data assets.

- **Ed-Fi to CEDS API Connector Project** – Develop a resource to transform data formatted according to the Ed-Fi data structure into the CEDS format. Leveraging mapping between the ED-Fi and CEDS models and the JSON framework developed by the workgroup above, this tool will create a pipeline for efficiently importing data into the CEDS model.

- **ADRF to CEDS Project** – Develop a standard architecture, processes, documentation, and governance model for seamlessly integrating CEDS data into the Administrative Data Research Facility (ADRF). This work will enhance interoperability and facilitate scalable, collaborative development and use of research and products.
All are welcome to join a ScDU Workgroup

For additional background on the CEDS Scalable Data Use Development Initiative being undertaken by over 20 SLDS FY23 Grantee states, check out resources available here.

For any additional questions, please reach out to
- Jeff Watson at jeffery.watson@sst-slds.org,
- Tami Springer at tami.springer@sst-slds.org,
- or another member of the SLDS State Support Team.
Towards P20W+ State-led Ecosystems
Questions?

We WANT your input!