



INTERACTIVE INSTITUTES **2020**

BUILDING AND SUSTAINING A CULTURE OF HIGH-QUALITY DATA

Opening the Door for Data Use: Improving Data Quality With Data Integration



IDEA DATA
CENTER

Collect, Report, Analyze, and
Use High-Quality Part B Data



Presenters



Fort Worth, TX – March 3–4, 2020

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What This Session Will Cover



- Data integration and data quality
- The role of data governance
- IDC's *SEA Data Processes Toolkit*
- Center for the Integration of IDEA Data's (CIID) *Data Integration Toolkit*
- State experiences with integration and the toolkits
- Small group discussions and sharing



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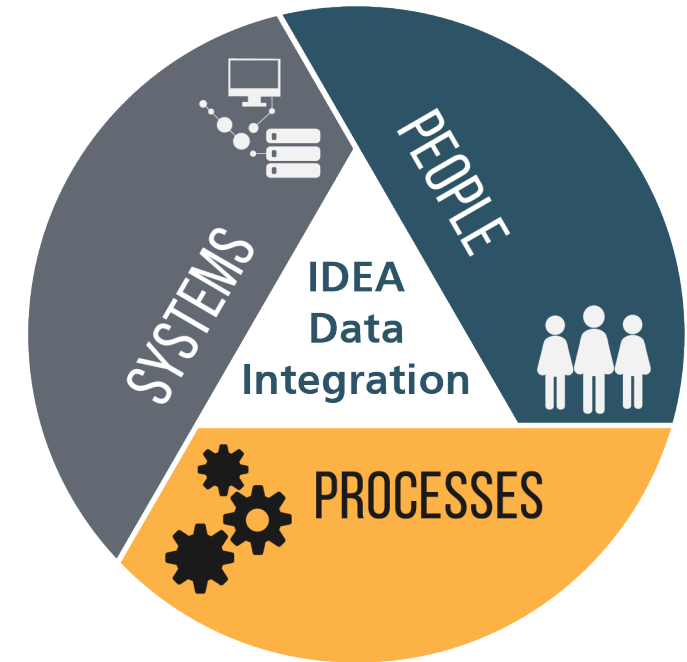
To Integrate

To form, coordinate, or blend
into a functioning or unified
whole



Data Integration

The combination of **technical and business processes** used to **combine data from disparate sources** into meaningful and valuable information



Definition: Coffey, M., Chatis, C., Sellers, J., and Taylor, R. (2014). *Early Childhood Integrated Data Systems Toolkit*. U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved from <https://slds.ed.gov/#program/ecids-toolkit>.

Image source: Center for Integration of IDEA Data

Data Integration: A Holistic View



Data integration impacts all aspects of the data life cycle and use

- Collection
- Validation and cleansing
- Monitoring data quality
- Presentation and use



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Poll Questions

To what degree are IDEA data integrated with general education student data in your state? (select one)

Which IDEA data sets are integrated with general education student data? (select all that apply)



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Describe How Data Are Integrated in Your State and Any Future Plans You Have for Data Integration



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Data Quality in an Integrated System



- A single authoritative source for each data element
- Consistent definitions of source data
- Easier to identify where data quality issues originate
- Collect data once; use multiple times

All of which leads to more confidence in the data.



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Benefits of a Single Source of Information



- Reduces confusion about which source to use
- Reduces the need to resolve discrepancies between sources
- Stores data for students with and without disabilities in the same location
- Updates each data element one time in one location
- Allows for more automated processes



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Role of Data Governance

- Establishes roles and responsibilities
- Develops consistent processes
- Increases transparency in processes
- Develops common understanding of data
- Identifies stakeholders and data users affected by changes



Examples of Data Governance at Work



- Data stewards
- Roles and responsibilities
- Documentation of processes and standards
- Identification of authoritative data sources
- Coordination of timelines
- Documentation of dependencies between data elements



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Please Type Your Response in the Chat



Using one or two words, tell us what is one contributing factor to high quality data?



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What Impacts on Data Quality Have You Seen With Data Integration?



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IDC's *SEA Data Processes Toolkit*



What is it?—A collection of templates to document all state-level IDEA data collection and reporting procedures and activities



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Resources Included in the *SEA Data Processes Toolkit*

- *SEA Data Processes Toolkit* overview
- State landscape protocol
- 618 data collection protocols
- 616 SPP/APR protocols
- Part B LEA Determinations
- Business rules documentation protocol
- Significant disproportionality protocol
- Data collection calendar



Basic Structure of the Protocols



- *Essential Elements* captures basic background information (e.g., description of collection or indicator, due date, contact information)
- *Processes* captures specific steps for data collection, validation, analysis, submission, governance, and public reporting



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Data Processes Documentation



- Establishes a well-managed process for data collection, analysis, reporting, and submission
- Establishes and supports consistent practices for producing valid and reliable data
- Builds capacity of data stewards and staff



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Poll Question



Which processes has your state documented? (select all that apply)

- One or more 618 data submissions
- One or more 616 SPP/ APR indicators
- Significant disproportionality
- LEA determinations
- Business rules
- Other



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What Data Processes Documentation Do You Have in Place or in the Works?



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CIID *Data Integration Toolkit*



What is it?

- The toolkit is a collection of resources that outline the major steps and supporting tasks required to complete any data integration process
- Each task has a corresponding guiding document detailing its purpose, suggested activities, timeline, previously learned lessons, and available resources



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Data Integration Toolkit Steps

- Step 1. Define the goals for integration
- Step 2. Establish project plan and structures for data integration work
- Step 3. Locate and organize all potential data elements and associated attributes for integration into a data repository
- Step 4. Complete master integrated dataset
- Step 5. Implement and perform extract, transform, and load (ETL) procedures
- Step 6. Conduct review and validation of data integration
- Step 7. Conduct post-integration supports and activities



Selected Resources From the CIID

Data Integration Toolkit



- Data Integration Use Case Exercise
- Communication Plan Template
- Common Education Data Standards (CEDS) Align Tool
- Data Flow Ideograph Tool
- Extract, Transform, Load (ETL) Checklist
- Sustainability Plan (Sustaining Generate: Roles and Responsibilities)



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How Do Resources—Such as the *Communication Plan*, *ETL Checklist*, and *Sustainability Plan*—Support Maintenance of Quality Data?



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Impact of Data Integration on Data Analysis



- Enables multiple program areas to use the same data to analyze outcomes
- Supports greater understanding of dependencies and linkages between programs and outcomes
- Provides holistic view of the outcomes for all students



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Please Answer in the Chat Box



What types of data analysis are possible when IDEA data are integrated with general education student data?



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How Does Integrated Data Open Doors for More Data Analysis?



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Breakout Room – Discuss Two or More Questions

1. What data are integrated in your state? What data are not integrated?
2. What challenges do you face working with data from sources that are not integrated currently?
3. How does your data process documentation support your data quality efforts?
4. If you could integrate your data with a snap of a finger, what data would you integrate first? Why?
5. What types of analysis might be possible with integrated data that are not possible now?
6. How could process documentation support your integration efforts?



Share Out

Please share one highlight or insight from your breakout session.



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Resources

- IDC's *SEA Data Processes Toolkit*
<https://www.ideadata.org/sea-data-processes-toolkit>
- CIID's *Data Integration Toolkit*
<https://ciidta.grads360.org/#program/toolkit>
- Common Education Data Standards <https://ceds.ed.gov/>

Contact Us



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For More Information



Visit the IDC website

<http://ideadata.org/>



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