Using IDEA Data Quality Reports to Drive Program Improvement

STATS-DC, JULY 24-26, 2019

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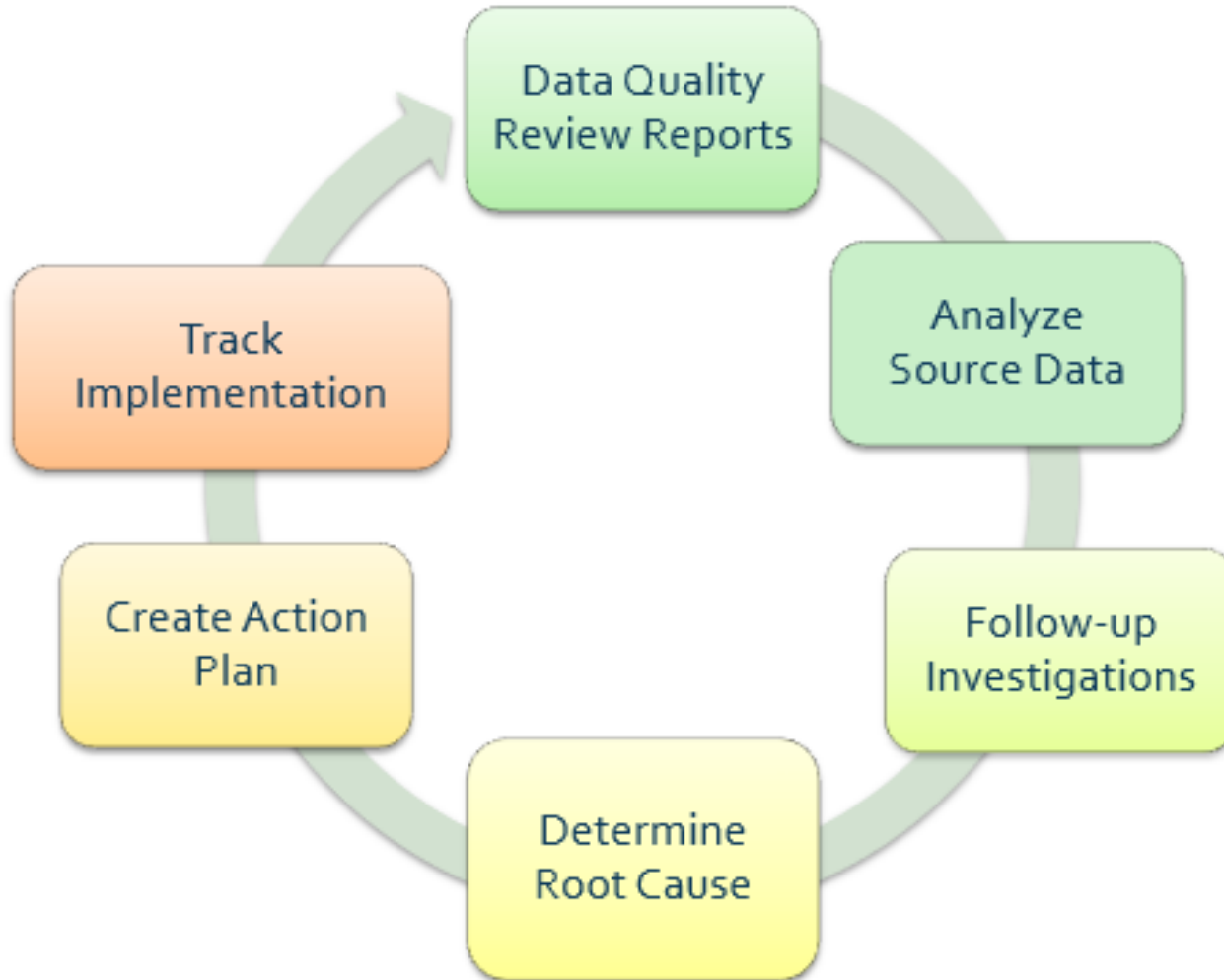
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Agenda

- Cycle of continuous improvement

- OSEP Data Quality Review process

- Tools and resources for analysis

- Using the results for program improvement

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Cycle of Continuous Improvement

The Basics

Why OSEP reviews the data

- Ensure ALL students are counted

- A variety of governmental and non-governmental stakeholders use 618 data for decisionmaking

- Bad data quality leads to bad decisions

OSEP Data Quality Review Process

1. System closes on the due date for a "snapshot" of the data; OSEP uses the snapshot for its review

2. OSEP reviews the snapshot data for timeliness, completeness, and accuracy

OSEP Data Review Process (cont.)

3. Once review is complete, OSEP posts a Data Quality Review and Year to Year Report to each State's individual OMB Max webpage

4. State reviews the report and begins preparing for reopen period

5. State may resubmit the data or provide a data note during reopen period (approx. 1 month)

6. OSEP reviews data notes and/or resubmissions

OSEP Review

- Timeliness
  - Are the data in by the due date?

- Completeness
  - Are all sections completed?
  - Is all required information provided?
  - Are all file specifications submitted?
  - Are all category sets, subtotals, and totals submitted?
  - Do data match the metadata sources?

- Accuracy
  - Do data meet our edit checks?

The Data Quality Report

- OSEP's way of quickly and easily communicating with the State about data quality

  - Including asking for data notes

- Gives specific information about what the error in question is so the State can go back, identify the error, and correct it

- Provides a record of past data concerns to track progress or identify systemic concerns

Data Notes

- What's a data note?
  - A way for OSEP and the State to communicate idiosyncrasies about the data to the public
    - OSEP compiles data notes and posts them with the data
- When does OSEP request a data note?
  - OSEP found a data question during review
    - State needs to resubmit data or provide a data note
  - Change in subgroup data is greater than 20% and 20 students from year to year

Data Notes (cont.)

- What does OSEP look for in a data note?

  - Discussion of any factors that could have impacted the data for the year
    - Changes to collection rules or systems
    - State statute changes

LEA Data Quality Review

- Shifting review to OSEP and IDEA data managers in Summer 2020

- Practice review starting in late July/early August 2019
  - Webinar coming soon
  - Will spend the coming year helping States prepare
- Review will mimic SEA review and address
  - Timeliness
  - Accuracy
  - Completeness

TOOLS AND RESOURCES FOR ANALYSIS

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Summary of State Findings

- Represents most recently reported Part B and C 618 data
- Zero counts
- New data element for Alternate Diplomas does not match data reported SSS-IDEA and ED*Facts* File Specification
- Year to Year changes

Tools for the Review Process

- Zero Counts and New Data Element
  - IDC's IDEA Part B *SSS-IDEA Crosswalk* tool will assist with the
    - Review of SSS-IDEA Metadata Survey
    - Review of the File Specifications
    - Review of data that the State submitted

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Tools for the Review Process (cont.)

- Year to Year Change Requests
    - IDC's *Outlier Analyses: Step-by-Step Guide* includes six different tutorials covering different methods states can use to identify and visualize outliers
    - IDC's *IDEA Data Quality: Outlier Analysis Tool* is an Excel-based tool states can use to identify outliers using the interquartile range approach described in the step-by-step tutorials

What Is an Outlier?

- "An outlier is an observation which deviates so much from the other observations as to arouse suspicions that it was generated by a different mechanism" (Hawkins, 1980)

- Outlier analyses include investigating whether the data are valid or invalid

- States define what value or combination of values is outside the expected norm

Hawkins, D.M. (1980). *Identification of Outliers*. Netherlands: Springer.

What Is an Outlier? (cont.)

- Invalid outliers are the target of outlier analysis, as they represent errors in the data

- Valid outliers may appear to be outside the norm, but investigation demonstrates that the data are not in error

- Valid outliers may occur due to random variation, which occurs due to chance and is inherent in a system

Why Are Outlier Analyses Important for Data Validity and Reliability?

- Help identify errors in the data

- Reveal systematic errors in data collection, coding, or entry

- Identify LEAs that are performing better or worse than the norm

- Provide opportunities for understanding the factors behind high performance

- Provide targeted technical assistance where needed

Investigative Questions

- Are the outliers found in just one LEA?

- Are the same outliers identified in more than one dataset?

- Are multiple outliers commonly identified in the same LEAs?

Investigative Questions (cont'd)

- Are the LEAs with outliers using non-standard data collection definitions?

- Are the LEAs with outliers using non-standard methods to collect the data?

- Are the LEAs with outliers using non-standard methods to aggregate the data?

- Did the small n size affect the analysis?

Example Outlier Analysis

- Steps to conduct analysis in the IDC Excel Tool
  - Paste Here Tab
    - Report the measures in the columns
    - Report the LEA in the rows
  - Outlier Analysis
    - Results will be displayed on this tab

USING RESULTS FOR PROGRAM IMPROVEMENT

Determine Root Cause

- Reach out to LEAs with significant changes
- Identify if there is a data quality issue or programmatic change
- Be curious; ask what changed
- Share what you learn

For more information on examining root cause, check out IDC's Success Gap Toolkit

Root Causes of Data Quality Issues

- Are they systemic?

- Have you had similar issues in prior years on your Data Quality Reports?

- Are the same LEAs having difficulty?

- Are there gaps in your current process?

Corrective Actions for Data Quality Issues

- Additional training

- New business rules

- Documentation improvements

- Additional validation steps

- Increased communication

Collaboration: ED*Facts* Coordinators and IDEA Data Managers

- Metadata surveys

- Importance of IDEA initial due dates

- Impact of late or incomplete data on determinations

- Allowing time for data quality review

- Collaborating to find errors in the data

Action Plan

- Description

- Causes

- Strategies for addressing

- Key staff

- Steps to implement

#	Action Steps	Timeline	Responsible Party
1			
2			
3			
4			
5			
6			

Questions From the Public

- How can your data notes or analysis prepare you to respond to inquiries about your data?

- What did you learn about programmatic changes that could be included in the messaging?

Business Rules Single Inventory

- Business rules for OSEP's review process are available

- SEAs can do this analysis prior to submission to catch potential issues or prepare data notes ahead of time

https://www2.ed.gov/about/inits/ed/edfacts/business-rules-guide.html

Questions?

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