Root Cause Analysis: Using Data to Improve Students' Outcomes

January 16, 2020

Tom Munk, IDEA Data Center, Westat

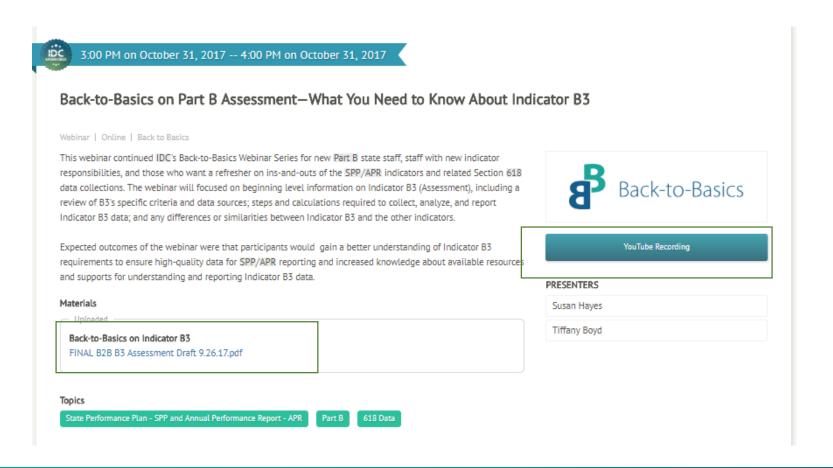
Rebecca Davis and Sandra Garner, Office of Special Education Services, South Carolina State Department of Education



Webinar Logistics

- Welcome and thank you for joining us
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Presenters

- Tom Munk
 - IDEA Data Center, Westat
- Rebecca Davis
 - Office of Special Education Services, South Carolina State Department of Education
- Sandra Garner
 - Office of Special Education Services, South Carolina State Department of Education

Agenda

- Problems special education leaders face
- What is a root cause
- Root cause analysis: The big picture
- An essential starting place: Key indicators of student success
- Root cause analysis: Key elements and techniques
- Root cause technique: IDC's <u>Success Gaps Toolkit</u>
- Root cause analysis in South Carolina

Participant Outcomes

- Understand what a root cause is
- Learn what root cause analysis is
- Know when to use root cause analysis
- Learn techniques for conducting a root cause analysis
- Learn how root cause analysis can help improve outcomes for children and families

Problems Special Education Leaders Face

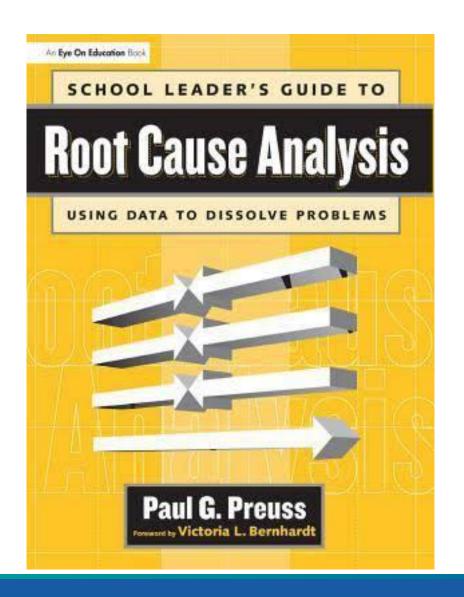
Problems Special Education Leaders Face

- Externally identified (reactive)
 - OSEP has noted concerns about your State Performance Plan/Annual Performance Report (SPP/APR)
 - Your district has been identified with significant disproportionality
 - The governor or legislature or state has required you to do something about the high rate of suspension for your students with disabilities
- Internally identified (proactive)
 - We're running into roadblocks with our State Systemic Improvement Plan (SSIP) implementation
 - Our SSIP or SPP/APR data are not improving
 - We have reviewed our state's data and noticed some success gaps

District X Finds Success Gaps District Risk Ratios

Student Categories	% of population	Level 1 in math	Level 1 in reading	Dropped out	Identified for special education	Out-of-School Suspended > 10 days	Absent > 20 days	Failing > 50% of classes
White	45%	0.43	0.27	0.15	0.87	0.36	0.20	0.17
Black	8%	1.37	1.23	1.54	1.90	3.08	1.59	1.68
Hispanic	40%	1.91	2.63	3.00	0.64	1.26	3.75	2.25
Other	8%	1.07	1.23	1.54	2.18	1.59	0.36	2.35
Migrant	35%	2.79	3.25	3.71	0.37	0.74	4.64	3.30
Non-Migrant	65%	0.36	0.31	0.27	2.69	1.35	0.22	0.30
Free lunch	50%	2.33	1.20	0.80	2.00	2.18	1.33	1.08
Reduced lunch	25%	0.95	0.84	0.86	1.09	1.04	0.82	0.95
Full price lunch	25%	0.19	0.93	1.50	0.21	0.18	0.82	0.95
Rural	65%	2.83	2.42	4.31	1.08	1.35	3.23	2.15
Suburban	35%	0.35	0.41	0.23	0.93	0.74	0.31	0.46

What Is a Root Cause?



A Definition of Root Cause

The deepest underlying cause or causes of symptoms within a process that, if dissolved, would result in elimination, or substantial reduction, of the symptom.

Root Cause Analysis: The Big Picture

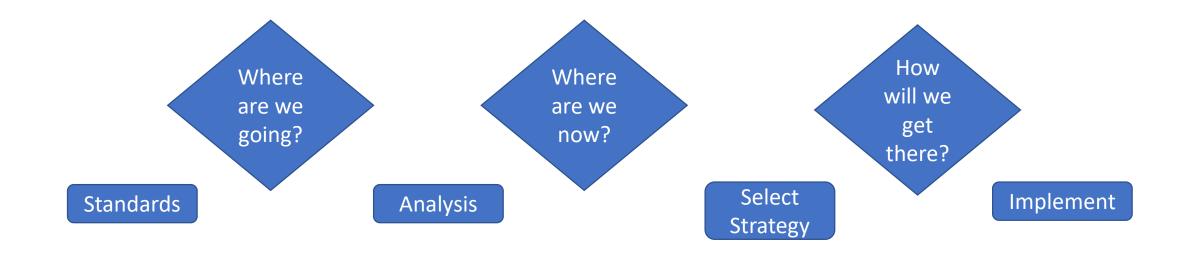
Why Identify a Root Cause?

- In education, we often identify the problem (symptom) and jump to the solution
- Then we wonder why the solution failed!

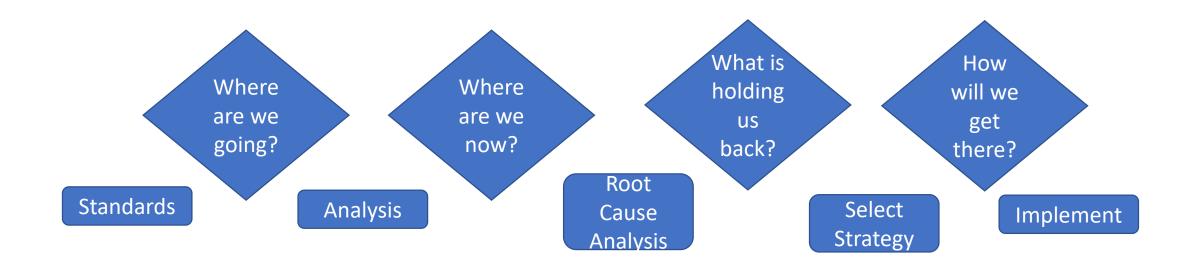




A Typical Planning Process

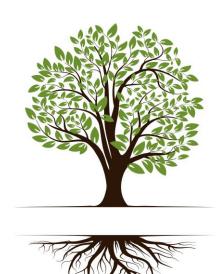


A Systems Planning Process



Root Cause Analysis...

- Means spending time to identify the causes of the problem
 - Often multiple causes
 - Requires digging deeply to get to the root(s)
- Encourages systemic thinking
- Can eliminate wasted effort on patches that will not dissolve the roots
- Encourages reflection on current practices
- Provides rationale for strategy selection





An Essential Starting Place: Key Indicators of Student Success (KISS)

Key Indicators of Student Success Defined

- A Key Indicator of Student Success is a student-focused measurable result that the school, district, or state has the ability, desire, or need to influence and for which it is willing, or required, to held accountable
- Possible sources of key indicators of student success
 - SPP/APR indicators
 - 618 data
 - 619 data

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Planning Process	Example of How a Key Indicator Drives the Planning Process
Key Indicator of School Success	Percentage of students with disabilities who are suspended or expelled for more than 10 days (calculated for Indicator 4A)
Desired Initial Condition	No students with disabilities will be out-of-school suspended for more than 10 days
Present Condition	2014 to 2018: 5.1%, 4.9%, 5.4%, 5.6%, 5.9%
Gap	Hovers around 5%
Is This a Priority?	Yes
Goal	No students with disabilities will be out-of-school suspended by SY 2021-2022
Root Cause Analysis	Data analysis to seek who is being out-of-school suspended and why
Strategy Selection	Dissolve root cause; don't patch system
Action Plan	Who will do what, by when, with what resources, to implement the strategies
Monitor	Monitor implementation of strategies and goal

Root Cause Analysis: Key Elements and Techniques

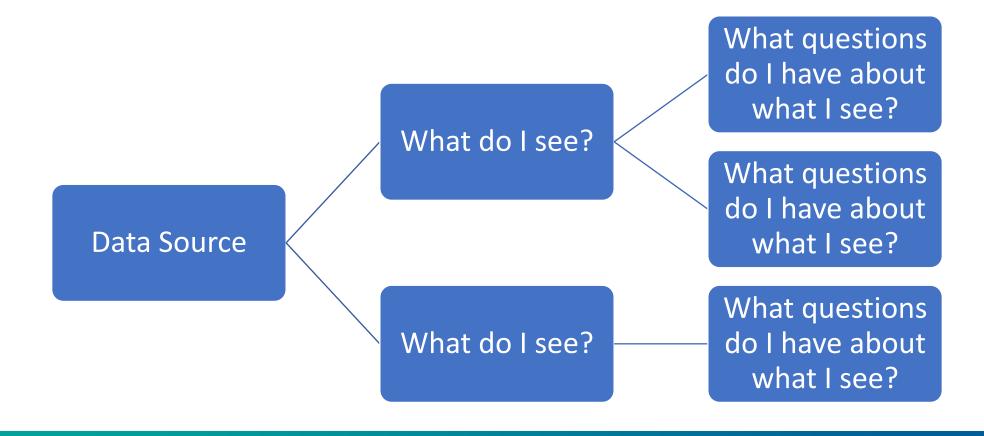
Converting Data to Wisdom

- Convene a team that
 - Can speak with authority to all angles of the problem
 - Understands the relevant data
 - Has the power to make changes (sometimes radical) to the system
- Use
 - Shared analysis
 - Contemplation
 - Reflection
 - Honesty

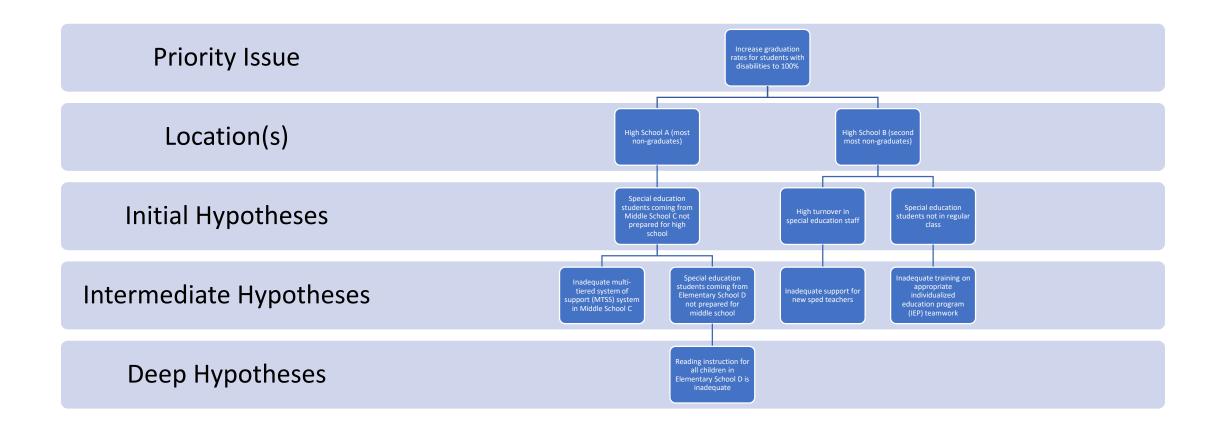
Root Cause Analysis: Key Elements

- Use data about student learning as carefully as data about dollars
- Build capacity to properly store, retrieve, analyze, and use data in all areas of decisionmaking
- Make data-based decisionmaking natural, normal, and expected
- Use detailed data behind the scenes, but make presentation data clear and to the point
- Become familiar with root-cause analysis tools and techniques

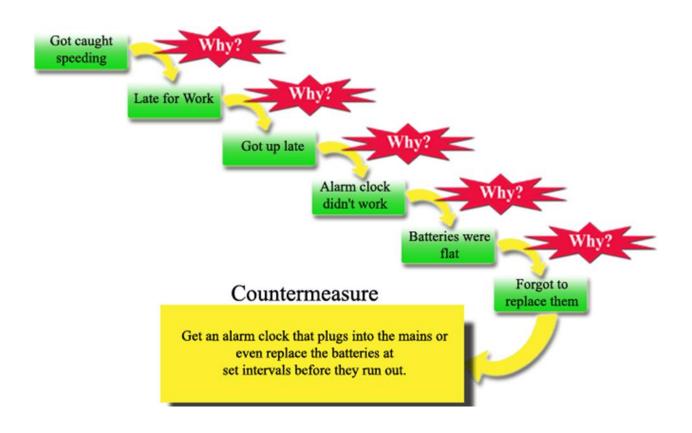
Root Cause Technique: Questioning Data Schematic



Root Cause Technique: Basic Diagnostic Tree



Root Cause Technique: The Five Whys

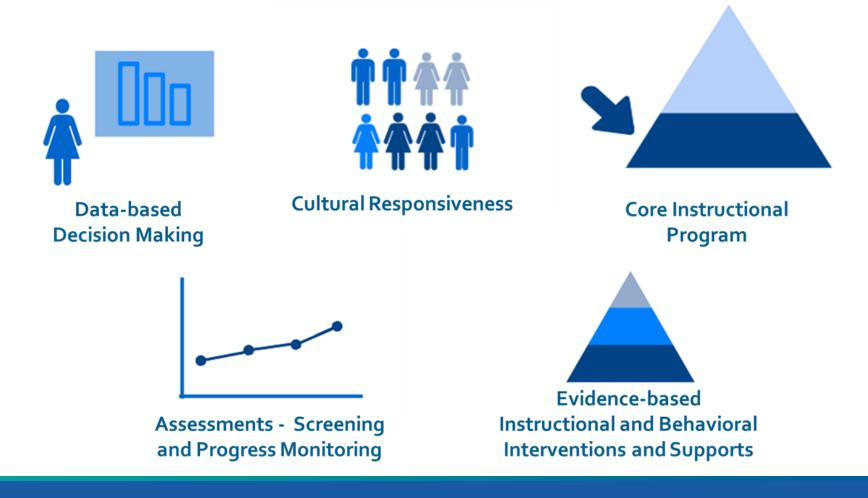


Root Cause Technique: IDC's Success Gaps Toolkit

The Success Gaps Process

- 1. Identify "success gaps"
- 2. Build a team
- 3. Identify root causes
- 4. Create action plans
- 5. Implement the action plans

Equity, Inclusion, and Opportunity Can Lessen Success Gaps Between Groups of Students



Two IDC Tools Help Schools and Districts Find Root Causes of Success Gaps



1. Data-based Decision Making

Probing Questions:

Does our school or district identify data elements or quality indicators that are tracked over time to measure school effectiveness? What are those data elements? Are the data valid and reliable? Are data disaggregated by student demographics such as race/ethnicity, gender, disability, etc. to identify gaps in achievement and performance and trends with over- or under-representation in identification, placement, and discipline? Are data reviewed at regular intervals to determine progress or change? Are data used to make policy, procedure, and practice decisions in our school? How regularly do we use these data to inform our decisions?

Indicator 1	■ Planning	Partially Implemented	■ Implemented	■ Exemplary
curriculum, instructional programs, academic and behavioral supports, and school improvement initiatives are based on data	Decisions about the school curriculum, instructional programs, academic and behavioral supports, and school improvement initiatives are rarely based on systematic data.	Some teachers and programs consistently use systematic valid and reliable data to inform decisions about curriculum, instructional programs, academic and behavioral supports, and school improvement initiatives.	The data used are valid and reliable. A schoolwide formalized and systematic process is in place to monitor and reinforce the continuous improvement of individual learners, subgroups of learners, initiatives, and programs within the school. It is implemented by some but not all staff.	The data used are valid and reliable. The schoolwide process for data-based decision making is implemented and evident for all students and subgroups of students, in all classrooms, and is used in decisions about school initiatives or programs, as well.

IDC IDEA DATA CENTER

Success Gaps Toolkit Includes—

- Guidelines
- Meeting agendas
- Materials for pre-reading
- Videos
- Sample action plan formats
- Meeting evaluation formats
- Examples of work in other states or districts

(Toolkit—https://ideadata.org/toolkits/)

Root Cause Analysis in South Carolina

The How and Why for SC

- Ready to address results
- Recognition of gaps in performance
- Equity, inclusion, opportunity
- Honest look at contributing factors
- Sustainability, usability, applicability



LEA Determinations and the Success Gaps Rubric (SGR)

- State required districts identified as Needs Intervention to gather a diverse team of stakeholders and attend all meetings
- Required meetings
 - 1 virtual
 - 2 face-to-face
 - 1 virtual progress update presentation
- State gave districts a timeline

- Districts started the SGR with OSES staff at first face-to-face meeting and finished on their own
- Districts started the action plan with OSES staff at second face-to-face meeting and finished on their own
- State assigned each district an OSES contact for immediate assistance and follow-up
- Districts ended the school year with a final progress update to OSES

Our Process



One LEA's Success Story Using the Success Gaps Rubric

- Large, diverse, urban school district
- Struggled to get its team assembled
- Did not attend the first face-to-face meeting
- Attended the second face-to-face meeting with a well-represented group of stakeholders
- Went through the process and created a great plan of action
- Implemented plan and moved from Needs Intervention to Meets Requirements



Lessons Learned

- Districts with great needs need faceto-face time with knowledgeable staff
- Involve all stakeholders not just special education stakeholders
- This process takes time but the payoff is worth it
- They may grumble about the process at first, but deep diving and reflection are necessary to make real change
- Not one district complained about the SGR once staff completed it. They all saw the value.

Are You Interested in Additional Opportunities to Have Deeper Conversations About Root Cause Analysis?

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Contact Us

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Evaluation

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Project Officers: Richelle Davis and Rebecca Smith





