SYSTEMIC ROOT CAUSE ANALYSIS
FALL 2017 TRAINING
School Improvement

ESC Region 20 provides a variety of services to support schools and districts implementing state and/or federal accountability interventions through the Texas Accountability Intervention System (TAIS) process in conjunction with The Texas Center for District and School Support (TCDSS), a statewide initiative that serves as a support system to schools as they move through the school improvement process.
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Objective: Identify the underlying cause of low performance

Audience: CIT, CLT, stakeholders
MATERIALS

- Campus vision (as determined in Visioning Module)
- Large chart paper or whiteboard
- Problem statements and Data Synthesis Graphic Organizer (from Systemic Data Analysis)
- Handouts for this training
<table>
<thead>
<tr>
<th>AGENDA</th>
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<tbody>
<tr>
<td><strong>Definitions</strong></td>
</tr>
<tr>
<td><strong>Data Review</strong></td>
</tr>
<tr>
<td><strong>Brainstorm Explanations</strong></td>
</tr>
<tr>
<td><strong>Narrow root cause</strong></td>
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<tr>
<td><strong>Verify root cause</strong></td>
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DEFINITIONS
WHAT IS A ROOT CAUSE?

“the deepest underlying cause, or causes, of positive or negative symptoms within any process that, if dissolved, would result in elimination, or substantial reduction, of the symptom.” (Preuss, 2013, p. 3)
WHAT IS A “SYSTEMIC” ROOT CAUSE?
WHAT IS A “SYSTEMIC” ROOT CAUSE?

System

Systemic Approach

Systemic Root Cause
WHAT IS A "SYSTEMIC" ROOT CAUSE?

- a persistent and pervasive condition
- affects most levels of a campus
- is identified as the primary factor leading to low performance
DATA REVIEW

For this section, you will need Handout #1.
**DATA DRIVEN DIALOGUE**

**Predict:**
- Surfacing experiences, possibilities, and expectations:
  - What are our assumptions?
  - What are some predictions we are making?
  - What are some questions we are asking?
  - What can we learn?

**Go Visual:**
- Display data with:
  - Pie graphs
  - Bar graphs
  - Line graphs
  - Scatter plots
  - Box and whisker plots

**Observe:**
- What important points stand out?
- What patterns/trends emerge?
- What is surprising?
- What have we not explored?

**Infer/Question:**
- What inferences and explanations can we draw?
- What questions are we asking?
- What data could confirm our explanations?
- What tentative conclusions can we draw?
## PROBLEM STATEMENT CHECK IN

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Y/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substantiated by facts/data</td>
<td></td>
</tr>
<tr>
<td>Written objectively</td>
<td></td>
</tr>
<tr>
<td>Uses concise language</td>
<td></td>
</tr>
<tr>
<td>Includes specific details <em>(who, what, when, where)</em></td>
<td></td>
</tr>
<tr>
<td>Focuses on a single, manageable issue</td>
<td></td>
</tr>
<tr>
<td>Has relevance to our campus</td>
<td></td>
</tr>
<tr>
<td>Avoids causation or assigning solutions</td>
<td></td>
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</tbody>
</table>
### PROBLEM STATEMENT CHECK IN

<table>
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</table>
Resolution of problem statement

IMPACTS

Campus Vision
BRAINSTORM EXPLANATIONS
PROCESS FLOW

Gather Problem Statement → Complete Fishbone Diagram

Complete 5 Whys → Repeat with next problem statement
WHAT IS A FISHBONE DIAGRAM? WHY WILL WE USE IT?

Teacher Quality

Family/Community Engagement

Leadership Effectiveness

Academic Performance (Curriculum, Instruction, Assessment)

Problem Statement

Other?

School Climate

Increased Learning Time

Data-Driven Instruction
GUIDING QUESTIONS

CSF 7: What keeps us from developing teacher skills to correct this problem? Why aren’t students affected by this problem placed with the district’s highest performing teachers?

CSF 6: What has kept us from being able to create a climate that matches our vision?

CSF 5: What prevents teachers from maximizing instructional time and student engagement?

CSF 4: What prevents teachers from being able to create a climate that matches our vision?

CSF 3: What effective leadership practices do campus and district leaders need to address?

CSF 2: What keeps us from using our data change instructional practices? What keeps us from collaborating?

CSF 1: What is lacking in our curriculum, in our instructional practices, or in our assessment process that leads to this problem?
WELCOME TO TAIS RESOURCES

The Texas Education Agency and the Texas Center for District and School Support have collaborated to bring you this powerful resource, dedicated to advancing improvement in education.

What’s inside?

- The Texas Accountability Intervention System overview video
- Expert Voice: Interviews that provide a theoretical overview of the TAIS Framework
- From the Field videos, that provide a look into campuses across Texas
- Tools to help you implement the TAIS Framework

http://www.taisresources.net
Students who are English Language learners have a 60% pass rate in reading.
YOUR TURN!

- Teacher Quality
- Family/Community Engagement
- Leadership Effectiveness
- Academic Performance (Curriculum, Instruction, Assessment)
- School Climate
- Increased Learning Time
- Data-Driven Instruction
- Other?
PROCESS FLOW

Gather Problem Statement

Complete Fishbone Diagram

Complete 5 Whys

Repeat with next problem statement
THE 5 WHYS

Problem Statement → Explanation (from fishbone) → 5 WHYS

For this section, you will need Handout #2.
Problem Statement: Students who are ELLs have a 60% pass rate in reading.

Explanation (from fishbone): Teachers not trained in ELL instructional strategies

1. Why weren’t teachers trained in ELL instructional strategies?
   • Because we didn’t have time to train them.
2. Why didn’t we have time to train teachers?
   • Because we used all the dedicated PD time for classroom management strategies.
3. Why did we use all the PD time for classroom management strategies?
   • Because our data shows that teachers were spending too much time redirecting behavior and not enough time teaching.
4. Why were teachers spending time on behavior instead of teaching?
   • Because students were not engaged in learning.
5. Why weren’t students engaged in learning?
   • Because the lessons did not feel relevant to them.
SOME CAVEATS ON THE 5 WHYS

Repetition is OK

There are no bad explanations… yet
YOUR TURN!

Problem Statement → Explanation (from fishbone) → 5 WHYS
NARROW ROOT CAUSES
HOW DO WE NARROW THE CAUSES?

Identify
- Identify what causes we can control

Separate
- Separate contributing causes from root causes

Evaluate
- Evaluate the quality of the root causes
### WHAT CAN YOU CONTROL?

| Causes *within* the team’s control | Causes *outside* the team’s control |

For this section, you will need Handout #3.
CONTRIBUTING CAUSE VS. ROOT CAUSE

Contributing
- Influences the outcome
- Elimination of contributing cause does not eliminate the problem (but it might lessen the problem)

Root
- Causes the outcome
- Elimination of the root cause eliminates the problem
CONTRIBUTING CAUSE VS. ROOT CAUSE

Using the list of causes in your control, let’s figure out which are “causal factors” and which are “root causes.”

1. Would the problem have occurred if the cause had not been present?
   If no, then it is a root cause. If yes, then it is a contributing cause.

2. Will correction or dissolution of the cause lead to similar events?
   If no, then it is a root cause. If yes, then it is a contributing cause.

For this section, you will need Handout #4.
EVALUATE THE QUALITY

<table>
<thead>
<tr>
<th>Does our data logically explain the cause?</th>
<th>Is the cause specific and testable?</th>
<th>Is the cause plausible?</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Does the cause describe a real situation that is NOT related to our data?</td>
<td>• Is the cause specific enough to make sense to someone who is not on our team?</td>
<td>• If we were to start planning a strategy to address this cause, is it possible to achieve meaningful results?</td>
</tr>
<tr>
<td>• Can we explain how the cause is related to the patterns in our data?</td>
<td>• How would we test the explanation?</td>
<td></td>
</tr>
</tbody>
</table>

For this section, you will need Handout #5.
<table>
<thead>
<tr>
<th>All explanations</th>
<th>In our control</th>
<th>Root causes, not contributing causes</th>
<th>Root causes that pass quality check</th>
</tr>
</thead>
</table>

**PROCESS RECAP**

All explanations

In our control

Root causes, not contributing causes

Root causes that pass quality check
CREATING A SYSTEMIC ROOT CAUSE

How are the root causes related? (by CSF) → Which root causes should be prioritized? → Write systemic root cause(s)

For this section, you will need Handout #6.
VERIFY ROOT CAUSE
FINAL CHECK: DISCUSSION

1. What is the proof that this cause exists? Is it measurable? Are there more than two data elements that provide evidence?

2. How do we know that addressing the cause could lead to achieving the vision?

3. How do we know that this cause actually contributed to the problems?

4. Can anything else, besides this cause, lead to the problem statement(s)? What other risks are there?

5. Does the statement meet the definition of a systemic root cause:
   - Persistent/pervasive condition
   - Affects most levels of a campus
   - A primary factor for low performance
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