

Root Cause Analysis

Getting to the root of a problem strengthens school improvement efforts with focused solutions.

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By the early fall of each year, instructional leaders have access to a great deal of data about their school that they can analyze: hard data—such as student academic performance, attendance, and disciplinary actions—and soft data—such as classroom observations, interviews with various stakeholders, climate surveys, and interactions between staff members and students. Simply said, more than enough information is available to guide school improvement efforts. It's organizing the available data in useful ways that is important if instructional leaders are going to make good decisions and take effective action.

The root cause analysis process is one that can guide the efforts of instructional leaders as they make decisions about where to take action. As Okes (1999) noted, people often take “remedial actions to make the problem less visible and implement a patchwork of ad hoc solutions they hope will prevent recurrence” (p. 1). If leaders instead take steps to get to the root cause of problems, they can likely prevent recurrence. Preuss (2003) defined *root cause* as “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” (p. 3).

Root cause analysis can be applied to any number of situations within a school or district, but our purpose here is to focus on high-quality instruction. Our analysis will examine common factors that prevent increases in student achievement, including student factors, external factors, organizational structure, organizational culture, instruction, and curriculum.

We use a visual tool to guide our discussion about root causes (see Figure 1). It is also important to note that there are likely to be factors identified as root causes that cannot be addressed. We think of those as factors that are in our sphere of concern, rather than our sphere of influence. We focus on factors in our sphere of influence to improve student learning outcomes.

Student Factors

Although a number of student factors are outside of the influence of school personnel—such as crime rates, access to libraries and parks, parent support, and funding—many are appropriate to consider, including attendance, poverty, disabilities, number of languages spoken, maturity, interests, motivation, and so on. For example, staff members at Harborside High (a pseudonym for a high school in San Diego, CA) noted that student



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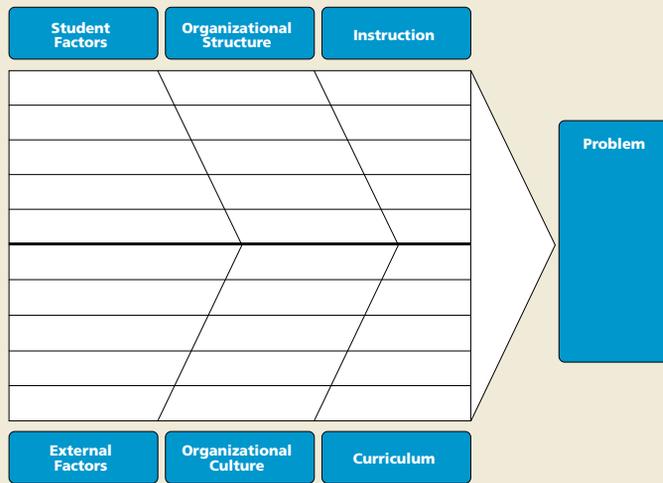
Watch the Video

Watch a lesson using reading a recipe that incorporates the basic elements of good instruction.

www.nassp.org/pl1012fisher.



Figure 1



attendance was likely a root cause of their lack of progress.

Harborside is not a failing school, nor is it a high-achieving school. It's one of the thousands of schools across the country that get by each year, not drawing much attention for either positive or negative reasons. When the Harborside leadership team closely analyzed the attendance data, team members noted that a group of students was regularly absent on Fridays. They also noted that attendance rates were not consistent across first-period teachers. Some teachers had very few absentees, and others had many. The leadership team met with the students who missed Fridays and learned that the students regarded Fridays as days when teachers gave tests that could be made up the following week or showed films. By focusing on the teachers with low attendance rates, the team realized that there were teachers who needed help with curriculum and instruction, as well as those who needed to make their content more relevant.

External Factors

Although many of the external factors that influence student achievement remain in the sphere of concern, some of them rightly fall under the influence of school leaders. At Harborside, the leadership team recognized that lack of parent support was a major cause of their inability to realize achievement gains. As a teacher noted, "They pretty much trust us and leave us alone. The parents are involved in sports and extracurricular activities, but not academics." The leadership team at Harborside decided to focus on community engagement, specifically in the area of career exploration. Team members hypothesized that students would be more engaged with learning if they understood the connections between high school, college, and careers.

Organizational Structure

Every organization has a structure, and that structure is designed to facilitate work. Schools typically have leaders, support staff members, teachers, and students. Sometimes the people

inside the organization work at odds with one another. Although everyone is working hard, their efforts are not coordinated. For example, some Harborside teachers focused on Cornell note taking, but others required the students to outline. The result was that some students failed to develop a habit of note taking that they could use across their day.

At other times, organizational structures can get in the way of learning. That was also the case at Harborside. The teachers were organized into planning teams, but some groups viewed that arrangement as "just another meeting," while others actively engaged in curriculum development, reviewed common formative assessments, and focused on intervention and reteaching efforts.

Organizational Culture

Every school also has a culture, a shared way of doing business, interacting, and treating people (Lindsey, Robins & Terrell, 2009). Sometimes the school culture doesn't support learning: a laid-back attitude may communicate that learning is not vital or urgent; a punitive culture can make students feel uncared for. Under either condition, students do not try very hard.

Harborside culture, as measured by several climate surveys, is positive and relaxed. The leadership team is proud of the positive culture that has been created. Team members recognize, however, that the culture may be too relaxed and that students do not feel the need to focus or try to achieve. As part of its improvement plan, the team at Harborside wants to

create higher expectations and help students meet those expectations. The goal is a vibrant culture in which the stakeholders are kind to one another and respectfully express their expectations, values, and beliefs.

Instruction

Students in every school deserve high-quality instruction in every class, every day. Often, a school's data point to highly effective instructional routines that build students' competence and confidence. In other cases, the data suggest that instructional interventions are ineffective and need to be changed. At the very minimum, students should know what they are expected to learn each day and have access to expert thinking, engage in collaborative learning tasks that require academic language and problem solving, and be held accountable for that learning. The video that accompanies this article provides a glimpse inside a classroom in which those factors are present.

Classroom walk-through data can be analyzed to determine whether those instructional minimums are occurring. If they are not, instruction may be one of the root causes of poor student achievement. As noted in the discussion about attendance, some teachers at Harborside need to improve their instruction. As part of the school improvement plan, those teachers must receive professional development and coaching as well as administrative feedback.

In addition, the walk-through data at Harborside suggest that students do not know what they are expected to learn or why. As a result, the leadership team decided to focus the professional

development and coaching efforts for the year on establishing purpose with students (Fisher & Frey, 2011).

Curriculum

The content of the lesson is as important as how the lesson is delivered and experienced by students. If students are taught content that is below their grade level—even in a superior instructional format—they are not going to perform well on summative assessments. In essence, teachers must teach the expected standards if students are going to learn at high levels. Data analysis showed that the weakest area of student performance at Harborside was in world history. After analyzing the root causes for that weakness, the leadership team realized that the pacing guide for the class included six weeks of content that was not included in the standards. As part of its improvement efforts, the team provided resources that enabled teachers to redesign the course over the summer.

In addition, the team recognized that students struggled with vocabulary and theorized that their lack of word knowledge was affecting achievement in all classes. To remedy that, team members decided to launch a vocabulary-learning initiative in which students were taught specific general academic and domain-specific words and phrases and then practiced using them in class in peer discussions and in writing.

Taking Action

As members of the leadership team at Harborside took actions that were based on the identified root causes,

they did not get bogged down in discussions about factors that they could not influence. Instead, they acknowledged some causes within their sphere of concern, but then moved on to causes that they could affect. In doing so, they focused on their sphere of influence and understood that they had the power to create a more comprehensive and engaging learning environment for students. **PL**

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