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North Carolina Dropout Prevention Toolkit

Reviewing Data to Improve Graduation Outcomes

FEBRUARY 2016

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Introduction

> *"I think that graduating opens other doors for you. I think there are levels to it, and graduating high school is only at the beginning."*
>
> *—Student, Hyde County*

Adults who have a high school diploma are less likely to be incarcerated; less likely to suffer from poor health; less likely to be unemployed; more likely to earn enough money to support themselves and a family; and less likely to need help from government, social service agencies, and charities (Amos, 2008). Although dropout rates are decreasing across North Carolina and graduation rates are improving, State Superintendent June Atkinson, Ph.D., states in her "The Message: Graduate" campaign, "It is not acceptable for North Carolina to lose so many young people before they graduate from high school. The cost to these young men and women and their families is high. The cost is financial, but it is greater than that. The heaviest cost of all is the loss of human accomplishment, of happiness, and of satisfaction." (Atkinson, n.d.)

> *"I would say that graduating high school is the ultimate confidence booster. It's the first stepping stone, and it is just so much more than a degree. When you get to the point where you are like, Okay, I am a high school graduate, it kind of tells you, If I can do this, then I can go get my master's; I can go get my doctorate. I mean, it kind of puts you in a position where you feel like you are able to reach the goals that you preset for yourself. It's just confidence boosting."*
>
> *—Student, Hyde County*

As schools strive to ensure that every student who graduates from high school is college and career ready, they are faced with the challenging reality that students drop out of high school for a multitude of reasons (America's Promise, 2014; Bridgeland, DiIulio, & Burke Morison, 2006). In a national survey of students who had dropped out of high school, Bridgeland and colleagues (2006) found that students identified the following factors as reasons for leaving high school: a lack of interest or motivation, becoming a parent, the need to get a job, or the need to care for a family member. The majority of students surveyed believed they could have graduated if they had tried, and they later regretted not having earned their high school diploma. A 2014 *America's Promise* report, based on interviews with more than 200 students and a survey of 3,000 students who had left high school, found similar results. The report findings indicated that a cluster of factors influenced students' decision to leave or reengage with school; often, the decision was rooted in a toxic home, school, or neighborhood environment. The researchers found that students who faced more adverse experiences and events in their daily lives were more likely to leave school.

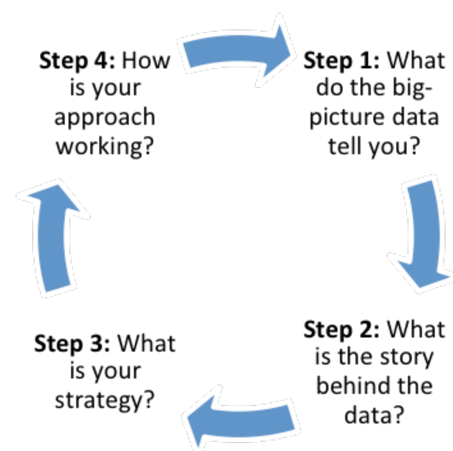
To address the various factors that influence students' continued engagement and reengagement, schools need to provide a variety of different types of support. The *America's Promise* report (2014) emphasizes the importance of relationships and connections and notes that although students were often resilient, they needed additional levels of support. The challenges faced by schools and communities can significantly impact the available supports and interventions that schools are able to offer. Schools across North Carolina are faced with different demographics, school sizes, resources, and other contextual factors that influence the supports they provide to meet the needs of their students. For instance, with more than 700,000 students enrolled in rural schools, North Carolina has one of the highest rural school enrollments in the nation (Johnson, Showalter, & Klein, 2014). Although enrollment in a rural school does not impact dropout rates (Jordan, Kostandini & Mykerezi, 2012) and academic achievement (Lee & McIntire, 2000; Williams, 2005) once socioeconomic characteristics have been accounted for, rural communities often face challenges related to transportation, technology, resources, and other factors that play a role in the types of supports that can be provided. Despite these challenges, rural communities often benefit from close connections and partnerships with communities, universities, and businesses, opportunities for personalized learning, and a strong focus on relationships that can be leveraged to ensure that students graduate college and career ready.

What Can You and Your School Do to Ensure That Students Graduate College and Career Ready?

Although the myriad of factors that affect your school and students varies depending on your community, using a coherent process for supporting students who are at risk of leaving high school before they graduate can help you to leverage your current infrastructure and target specific areas of need that you are able to address. This toolkit aims to provide a framework and tools to assist school teams to help understand the unique student needs and conditions that must be addressed to improve graduation rates and minimize the number of students dropping out of high school before earning their diploma.

The toolkit uses a multistep, continuous improvement framework for determining potential intervention approaches based on data and matching tailored interventions and supports to school and student needs. The framework consists of the following four steps:

- **Step 1:** What do the big-picture data tell you?
- **Step 2:** What is the story behind the data?
- **Step 3:** What is your strategy?
- **Step 4:** How is your approach working?



Depending on need, these steps can be used to develop strategies to support school-level changes, address targeted groups of students, or intervene to support individual students.

The toolkit is intended to be used by a team. High school dropout prevention efforts are complex and require coordinated efforts across many different school roles. In determining who might participate on the team, consider whether other relevant teams (e.g., school improvement team, multi-tiered system of supports (MTSS) team, positive behavioral interventions and support (PBIS) team, problem-solving team or data team) are already available in your school that might be coordinated with this effort. It is important that the team has broad representation and the authority to make decisions. Examples of potential team members include the following:

- School principal or assistant principal
- Representative from "feeder" middle schools from which students transition
- Counselor
- Content area teacher
- Special education teacher
- Interventionist
- School psychologist

Throughout this toolkit, you will find aligned resources and activities that teams can use as they work through the steps within the continuous improvement process.

Step 1: What Do the Big-Picture Data Tell You?

What do the big-picture data tell you?

- **What do the data say? Identifying your target area(s)**
  - What data sources are available?
  - What should you consider when reviewing your big-picture data?
- **What do the data say? Understanding your capacity to address your target area(s)**
  - What initiatives and supports do you have currently in place?
  - What does your school context look like?

The first step in this process is to review overarching data to identify a goal or area of focus. An initial thought might be to establish the goal "to have all students graduate." Certainly, this is an excellent primary goal and starting point, yet to make progress toward this goal, you might need to narrow the focus or break down the goal into more manageable and attainable elements. In thinking about your target area, consider both your areas of greatest need as well as your capacity and infrastructure for addressing the problem or need.

What Do the Data Say? Identifying Your Target Area(s)

You might have a general sense of the areas that you need to target in order to improve your graduation rate, and reviewing data will allow you to systematically understand your school's needs.

What data sources are available?

Schools and districts have multiple data sources that you can use to review their needs. One of the key resources that your school might consider as part of its review of big-picture data is an *early warning system*. Early warning systems refer to data systems or screening practices that use validated indicators for the early identification of students who are at risk of missing key educational milestones or meeting specific academic goals or outcomes (e.g., high school graduation, college readiness). Typically, early warning systems include indicators related to attendance, course performance, and behavior (Allensworth & Easton, 2007; Balfanz, 2009). In North Carolina, the At Risk Report and Diploma Assessment Report (available in PowerSchool) provide North Carolina schools and districts the capacity to execute early warning reports.

Learn more about…
To learn more about the At Risk Report and Diploma Assessment Report, visit http://www.dpi.state.nc.us/dropout/warning/.

You might also independently consider the attendance records, behavioral incidents, and academic performance of your students. In addition to early warning system data, you might review school or community data sources (e.g., school or community climate data, drug use/abuse data, benchmarking assessments), which can provide a helpful picture of your school needs.

What should you consider when reviewing your big-picture data?

Reviewing and analyzing these data sources can help you identify your target area(s). As you do this, consider the following questions:

1) What do the data say across levels (school, groups of students, individual students)?
2) What patterns begin to emerge within your data?
   a) Is there a specific group of students or individual students to whom you need to pay the most attention?
   b) Are there specific risk factors associated with dropping out of high school?
   c) Is there a specific grade level or time frame within which students are more likely to drop out?
3) Do you have initial theories to explain why the student(s) might be at risk?
4) Are there community or contextual factors that you need to consider?

One common way of thinking about all of your students is to categorize them. One method for categorizing students is to consider the following classifications: old and far; old and close; young and far; and young and close (Rennie-Hill, L., Villano, J., Feist, M., Legters, N., 2014). The "young" students are those who are similar in age to their peers and are either "close" to graduating (on target) or are "far" from graduating (at risk of not graduating). In the field of dropout prevention, many educators are using attendance, behavior, and course performance data to support the identification of "young" students who might be at risk of not graduating from high school.

Another option is to categorize students according to why they might drop out of high school. Balfanz (2007) summarizes four reasons that students might drop out. These include life events, fade-outs, push-outs, and failing to succeed. This might be difficult to do only with your EWS data. As a result, you will need to dig deeper to understand where a student falls within these subcategories.

A third option is to consider specific subgroups (e.g., students with disabilities, English language learners, migrant students, homeless students) or grade levels (e.g., ninth grade).

You might also want to consider a combination of these categorization options.

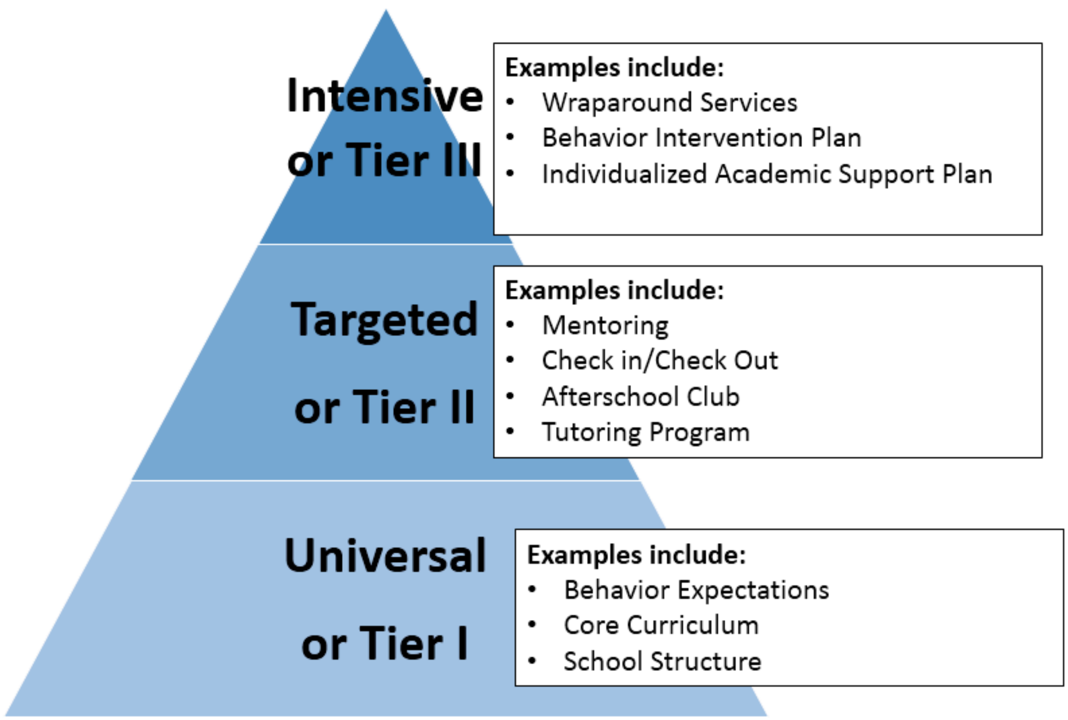
Use **Worksheet 1** (available on page 36) to identify patterns and potential areas of need based on your data. The worksheet asks you to make predictions and to confirm or disprove these predictions based on actual data sources.

What Do the Data Say? Understanding Your Capacity to Address Your Target Area(s)

In addition to analyzing your data to identify areas of need, it is essential to understand the capacity of your current system to support improvement of graduation results and the areas you might target. Reviewing what initiatives and supports you have in place, identifying potential barriers and strengths, and evaluating your current infrastructure can help to provide you with a realistic picture of your current capacity.

What initiatives and supports are currently in place?

Figure 1: Multi-Tiered System of Supports



One of the essential elements of an infrastructure analysis is considering what initiatives and supports already exist within your school or community. As much as possible, you will want to build from what you are already doing and align your efforts so that you are not just adding “one more thing.” By evaluating the resources and supports that are already in place, you can determine where efforts are being duplicated, where gaps exist, and where efforts might be leveraged or expanded upon. As you consider the types of initiatives and supports that are in place within your school, it can be helpful to classify these initiatives and supports across a continuum of increasing intensity and individualization. Figure 1 illustrates this continuum, or tiered framework. The bottom level represents universal (Tier I) supports that are in place for the whole school community. The next level represents targeted (Tier II) supports that are in place to assist a subset of students who might be facing similar challenges. The third, most intensive level (Tier III) aims to provide individualized support based on students' unique needs.

In addition to thinking about the level of supports that are available within your system, it is helpful to consider the content area(s) they address. For example, it might be helpful to begin by considering the following topic areas:

1) Adult–student relationships or mentoring
2) Transitions
3) Credit recovery
4) Reengagement, reenrollment, or recovery strategies
5) Academic tutoring or supports
6) Behavioral or mental health interventions or supports
7) College and career awareness
8) Personalized learning opportunities
9) Family engagement
10) Student engagement activities
11) Culturally and linguistically relevant practices

Worksheet 2, Section 1 (available on page 39) provides a place to begin brainstorming the initiatives and supports that you currently have in place. In addition, the table offers an opportunity to identify whether the supports are provided at the universal (Tier I), targeted (Tier II), or intensive (Tier III) levels and the topic area addressed. Note that some interventions or supports might be categorized within more than one topic area. There is also an opportunity to include additional topics as needed. The growth of technology and virtual supports provides another opportunity to assist students with credit recovery, exploring options that are not available within your school context, and making connections with different career opportunities. As you consider the resources available at your school, make sure to also consider available virtual supports.

Learn more about…
The North Carolina Virtual Public School is the nation's second largest, state-led virtual school. The online offerings provide flexible formats for students to access courses that might be of interest to them, supplement course offerings available within their schools, allow students to "catch up" on courses that they need to complete, and allow them to access content through a different platform. Learn more at http://www.ncvps.org/.

In addition to the supports and resources that schools have in place, communities can be important resources. Although connecting with community resources is often especially important for rural schools, all schools can benefit from analyzing potential community resources as part of an infrastructure analysis. For example, schools might be able to extend opportunities for students through community-based organizations such as community-based mental health supports or other social services, identify community members who are available to serve as mentors, connect with postsecondary institutions to provide additional opportunities, or connect with local businesses to provide career exploration opportunities.

Learn more about…
One example of a community-based organization that works closely with schools is Communities in Schools. Communities in Schools focuses specifically on connecting schools with community-based resources to support the whole child by providing support through one-on-one relationships, evidence-based programs, and community resource mobilization. Learn more by visiting http://www.cisnc.org/.

Review your intervention inventory using **Worksheet 2, Section 1** (available on page 39). Are there additional community or virtual resources that you could include? Note additional supports that you might be able to leverage from your community or through the use of technology.

What does your school context look like?

Understanding the initiatives and supports that are currently in place is a good first step; however, it can also be important to link your current practices to the larger school context. One tool that many public and private agencies use to review their current infrastructure is a SWOT analysis tool. The SWOT analysis technique is used to describe the Strengths, Weaknesses, Opportunities, and Threats that impact performance. The *Strengths* and *Weaknesses* categories focus on attributes of your school or internal factors such as financial resources, physical resources (e.g., location), human resources, and current processes (e.g., policies, practices, schedules). The *Opportunities* and *Threats* categories focus on attributes of the environment or external factors that might influence the work of the school. These might include community factors, demographic factors, political environment, or other priorities. Figure 2 provides some questions that you might consider for each of the four areas.

Figure 2: SWOT Analysis Example

Strengths: • What successes have you had that you can build from? • What has worked well for your school as you have worked to improve graduation rates? • What staff expertise can you draw on?	Weaknesses: • What could be improved? • What may cause challenges during implementation (e.g., resources, policies, schedules)? • What potential gaps do you see in your system?
Opportunities • Are there opportunities for partnerships? • Are there opportunities to leverage resources? • Are there other districts or schools you can learn from? • What other initiatives do you have in place that are aligned with improving dropout rates?	Threats: • What obstacles do you face? • What might staff and stakeholders see as barriers? • What are competing priorities?

Worksheet 2, Section 2 (available on page 41) provides an opportunity for you to conduct a SWOT analysis for your school. Use the worksheet to identify strengths, weaknesses, opportunities, and threats that you might face as you focus on reducing dropout rates at your school.

Worksheet 2, Section 3 (available on page 42) provides an opportunity for team members to delve further into the systems features that might have been identified as part of the SWOT analysis and that are critical in understanding your infrastructure. Consider the following:

1) Is there a level of readiness to address the target area or need?
2) Are leaders supportive?
3) Are resources available to support the effort?
4) Are there initiatives in place that you can build from?
5) Are there partnerships that you can develop?
6) Are there communication channels available to share information with stakeholders?
7) Are there potential barriers to addressing the target area or need?

Preparing for Step 2

The big-picture data analysis allows you to narrow your focus to areas that meet the needs of your school and your students as well as areas that you will be able to address with your current capacity. It is important to remember that you do not have to address all areas and issues at the same time. Prioritizing a manageable target area and demonstrating improvement often can help to increase buy-in from staff, students, and the community and to spur additional layers of success. Starting with a small, manageable target can also help you to understand and refine your process. Before moving on to Step 2, review the areas of need that you identified using Worksheet 1. Consider what you identified in your infrastructure and SWOT analysis. Based on your current infrastructure, are there particular areas that you think should be priorities? Do you want to target whole-school interventions, interventions to support a subset of struggling students, or interventions to support individual, at-risk students? Are there areas that you might target initially but could expand over time? Use **Worksheet 2, Section 4** (available on page 46) to record the prioritized needs that you identified through the big-picture data analysis process.

Step 2: What Is the Story Behind the Data?

What is the story behind the data?

- **What additional data do you need to consider?**
- **What have you learned from this new data or evidence? What do you now believe is the likely cause(s), or the root cause?**

Gaining a sense of overarching patterns about the percentage of students failing to graduate and the common risk factors is helpful as you narrow your focus; however, in order to identify a strategy that best supports your students or to identify an intervention for a particular student, your team will need to determine why the student(s) are struggling. The big-picture data show you the symptoms of what has occurred but not the cause, or the more complex problem that has resulted from the symptoms you identified.

Consider the following example: Johnny, a student at your school, recently dropped out. In examining the big-picture data, you notice that Johnny missed or was tardy 15 of the first 40 days of school. His poor attendance and tardiness are merely a symptom of what was happening, not necessarily the cause. After you dig deeper into the data, you might learn that Johnny wasn't able to attend school because his family had moved and his house was not on the school bus route, or you might learn that Johnny was missing school because he had to care for an ill family member. As this example illustrates, any of a number of different situations could explain the same symptom, and the different situations necessitate different types of interventions. As you think about the symptoms or big-picture trends that you identified during

Step 1, it is important to consider the interconnected nature of these symptoms. For example, a student might struggle academically as a result of missing classes, or he might skip class to avoid academic content that he finds too challenging. By focusing only on the student's attendance, you might miss the actual reason that the student is struggling.

Step 2 focuses on identifying the story behind the data to help you dig deeper. It includes the following:

(1) understanding what additional data and information you need to collect or identify in order to understand why a student, a group of students, or the school might be facing the challenges you uncovered when you examined the big-picture data in Step 1

(2) beginning to analyze the data in order to develop a hypothesis about why the challenge might be occurring or what the root cause might be

Identifying Additional Data: What Data Do You Have, and What Additional Data Might You Need to Collect?

As highlighted in the 2014 *America's Promise* report, the reasons that students struggle and drop out of school are based on a complex cluster of factors. As you begin to hypothesize why a student or group of students within your school is struggling, you must account for both individual and systemic factors. At the individual level, Eccles, Gootman, and colleagues identified physical, intellectual, psychological and emotional, and social development as the four domains that influence youth development (National Research Council and Institute of Medicine, 2002). The development of these four domains is shaped by the different systems and factors that influence young people's lives, including their families and home environments, peers and schools, neighborhoods (both physical and cultural), and local and national resources, programs, policies, and cultural norms (Bronfenbrenner, 1979).

To gather a deeper understanding of the reasons that students might be struggling across the different levels of influence, it is important to collect additional data. You probably already collect a great deal of data that can be useful as you investigate on a deeper level. Table 1 provides examples of potential underlying factors and associated data sources related to the individual student level, school/classroom level, and other factors that could represent underlying risk for a student or group of students. Using **Worksheet 3** (available on page 47) and Table 1 as references, identify data sources that your team could access.

Table 1: Potential Underlying Causes of Risk and Associated Data Sources Reference Sheet[1]

To What Extent Is Risk Due to *Student-Level Factors?*	
Potential Underlying Factors	**Potential Data Sources**
Are intellectual factors contributing to risk? ○ Academic skills or content knowledge (by subject) ○ 21st century learning skills (e.g., problem solving, decision making) ○ Learning profile (preferred learning modes or methods, information processing) ○ Language proficiency ○ Special learning needs (academic, cognitive, or executive functioning) ○ Other	○ Early Warning System monitoring indicators ○ Student attendance ○ Grades (current and previous) ○ Teacher progress reports ○ Grade retention ○ State assessment scores ○ Subject area tests ○ Language proficiency tests ○ Special education testing results ○ Additional academic assessments ○ Teacher conversations or interviews ○ Student interviews or surveys ○ Family interviews or surveys ○ Additional academic assessments ○ Afterschool or community program staff interviews or surveys ○ Other
Are emotional or psychological factors contributing to risk? ○ Attitudes and beliefs about self and personal competencies ○ Intrinsic motivation ○ Growth versus fixed mindset ○ Mental health issues (anxiety, diagnosed mental health condition or issue) ○ Special needs (emotional, psychological, behavioral) **Are social competence and relationship factors contributing to risk?** ○ Lack of social skills or competencies ○ Difficulty understanding social norms for school and classroom ○ Difficulty relating to peers ○ Difficulty relating to teachers and other adults **Are physical health or well-being factors contributing to risk?** ○ Chronic or acute health issues ○ Fatigue or insufficient sleep ○ Difficulty managing stress ○ Risky behaviors (drugs, alcohol) ○ Physical handicap or challenge	○ Teacher progress reports ○ Special education testing results ○ Results of other assessments ○ Suspensions ○ Behavioral records ○ Student attendance ○ Guidance counselor records ○ Medical reports ○ School nurse reports ○ Doctor reports or letters ○ Letters or notes from family ○ Guidance counselor, social worker, or psychologist interviews or reports ○ Teacher conversations or interviews ○ Classroom or other observation ○ Student interviews or surveys ○ Family interviews or surveys ○ Afterschool or community program staff interviews or surveys ○ Additional assessments (e.g., Youth Risk and Behavior survey) ○ Other

[1] This list is not intended to be exhaustive. It may be used as a reference as you evaluate the factors and data sources related to your school population.

To What Extent Is Risk Due to Factors Related to *School or Classroom Context?*	
Potential Underlying Factors	**Potential Data Sources**
Classroom level ○ Subject area ○ Teacher match to students' individual learning needs (e.g., instructional approach, modality, level of challenge too difficult or too easy, relevance to student interests and abilities) ○ Teacher-to-student ratio ○ Size or composition of class(es) ○ Classroom match to student learning and social and emotional needs ○ Teacher-to-student match ○ Time of day of class ○ Volume or type of homework ○ Peer mismatches ○ Other **School level** ○ Curriculum ○ Schedule ○ Pace or transitions ○ Policies and procedures for matching students with teachers ○ Discipline policies ○ Protocols for managing students moving in, out of, and between schools ○ Other	○ Teacher or classroom assignments ○ Class size and composition ○ Teacher-to-student ratios by classroom or grade level ○ Subject area level (e.g., remedial, standard, accelerated) ○ Curriculum and lesson plans for subject or class ○ School or class schedule ○ Teacher website ○ Homework assignments ○ School policies and procedures ○ Teacher attendance ○ Classroom attendance or participation records ○ School or classroom learning walkthrough ○ Principal interviews or reports ○ Teacher conversations, focus groups, interviews, or surveys ○ Student focus groups, interviews, or surveys ○ Family focus groups, interviews, or surveys ○ Other

To What Extent Is Risk Due to *Other Factors*?	
Potential Underlying Factors	**Potential Data Sources**
○ **Pragmatic or logistical issues** such as transportation to and from school, class scheduling conflicts, lack of appropriate place or time for homework, outside work responsibilities such as caring for siblings, employment ○ **Challenges outside of school** such as mobility (home to home or school to school), foster care involvement, issues with peers, neighborhood crime or safety, family stressors (e.g., incarcerated parent, family medical issues), homelessness	○ Student attendance ○ School or class schedules ○ Bus schedule or pick-up and drop-off locations ○ Teacher website ○ Homework assignments ○ Mobility records ○ Other assessments (e.g., Youth Risk and Behavior survey) ○ Crime or police records or reports ○ Principal interviews or reports ○ Other school administrator interview or report ○ Teacher conversations, focus groups, interviews, or surveys ○ Student focus groups, interviews, or surveys ○ Family focus groups, interviews, or surveys ○ Afterschool or community program staff interviews or surveys ○ Other assessments (e.g., Youth Risk and Behavior survey) ○ Other

As the preceding tables illustrate, students and families are crucial data sources as you delve deeper to understand the root cause of student struggles. Furthermore, actively involving the student's "voice" is beneficial both to students (Mitra, 2008b; Fletcher, 2004; Soohoo, 1993) and educators (Mitra, 2008b; Cook-Sather, 2002). Students can share their perspective through different mediums. These might be advocates, researchers, decision makers or a combination of these roles. When students are invited to share their perspective, they are able to discuss the factors that influence their ability to be engaged and succeed in school and to identify areas of struggle that you might not have previously considered.

Learn more about…

REL West developed a guide—*Speak Out, Listen Up! Tools for Using Student Perspectives and Local Data for School Improvement*—that describes a number of strategies for engaging students and ensuring that their voices are heard. View the guide at http://ies.ed.gov/ncee/edlabs/regions/west/pdf/REL_2014035.pdf.

Another way to involve students is by conducting individual conferences with them. Following is an example of an individual conference sheet that can be used to guide conversations with students and document students' responses. **Worksheet 4** (available on page 48) provides a printable version of the sheet that can be adapted to meet your team's needs.

Individual Student Conference Sheet	
Student's Name: Date: Class and Period: Skill to Focus on:	
Teacher's Questions (Summarize what you ask the student to talk about.)	
Student's Responses (Summarize key points in the student's response)	
Student's Understanding (What does the response reveal about the student's understanding of the concept?)	
Implications for Instruction (What does the student's response suggest about future instructional approaches?)	
Student Goal (What is the goal for the student moving forward?)	

Note: Adapted from Boudett, City, & Murnane, 2013.

Families and other service providers can offer insights on why students might be struggling and the factors outside the school environment that might be influencing their school performance. To determine the best way to communicate with families, it is important to ask them about their preferred communication style. In some cases, the preferred communication style might be a phone call or an e-mail; in other cases, it might be a face-to-face conversation. In addition, it is important to consider cultural differences in communication styles and practices. Following is a list of resources that might be helpful as you work with families and collaborate with communities.

Parent Engagement Resources	
Parent Engagement Toolkit	The premise of this toolkit is that a community will develop a more effective plan for preventing school dropouts if the process draws upon the knowledge and perspectives of parents. This toolkit is organized by the key transitional phases that children experience in their education: entry into elementary school, elementary school to middle school, and middle school to high school. Available from America's Promise Alliance: http://www.americaspromise.org/parent-engagement-toolkit?_sm_au_=iVV5BM0mj7NPNNln
The Role of Parents in Dropout Prevention: Strategies that Promote Graduation and School Achievement	Families can play an important role in making sure their student with or without disabilities graduates. Staying involved in your teen's life during middle school and high school is critical. This brief provides information and practical tips to help you do this. Available from the National Center on Secondary Education and Transition (NCSET) and PACER Center: http://www.pacer.org/publications/parentbriefs/ParentBrief_Jul06.pdf?_sm_au_=iVVtp0532BMNRVQQ
Toolkit of Resources for Engaging Parents and Community as Partners in Education (Parts 1–4)	The Toolkit of Resources for Engaging Parents and Community as Partners in Education is designed to guide school staff in strengthening partnerships with families and community members to support student learning. Available from REL Pacific: • **Part 1: Building an Understanding of Family and Community** http://relpacific.mcrel.org/resources/~/media/RELPacific/Files/ToolkitPart1.ashx • **Part 2: Building a Cultural Bridge** http://relpacific.mcrel.org/resources/~/media/RELPacific/Files/Part%202_Jan2015.ashx • **Part 3: Building Trusting Relationships With Families and Community Through Effective Communication** http://relpacific.mcrel.org/resources/~/media/RELPacific/Files/Part%203_Jan2015.ashx • **Part 4: Engaging All Data in Conversations** http://relpacific.mcrel.org/resources/~/media/RELPacific/Files/Part4_Mar2015.ashx

Community Engagement Resources	
What your Community Can Do to End Its Drop-Out Crisis: Learning from Research and Practice	This report, prepared for the National Summit on America's Silent Epidemic, offers a three-step road map for addressing dropout prevention. Available from the Center for Social Organization of Schools at Johns Hopkins University: http://web.jhu.edu/CSOS/images/Final_dropout_Balfanz.pdf
Grad Nation: A Guidebook to Help Communities Tackle the Dropout Crisis	This guidebook contains research-based advice for addressing the dropout crisis, along with ready-to-print tools and links to additional online resources. Available from the Everyone Graduates Center at Johns Hopkins University and America's Promise Alliance: http://new.every1graduates.org/wp-content/uploads/2012/03/GradNation_All_Tools.pdf?_sm_au_=iVV5BM0mj7NPNNln
Leading by Convening: A Blueprint for Authentic Engagement	This document provides a blueprint for authentic stakeholder engagement, including tools to help teams improve engagement. The tools and information can be applied to any topic. Available from the IDEA Partnership: http://www.ideapartnership.org/documents/NovUploads/Blueprint%20USB/NASDSE%20Leading%20by%20Convening%20Book.pdf

Identifying the Root Cause: What Might Be Causing the Challenges That You Have Identified?

Having collected and reviewed additional data sources, the next step is to identify the root cause of the problem that the individual student, groups of students, or school is facing. You might also consider this root cause as the hypothesis for why the challenge is occurring.

Why is it so important to identify the root cause? Let's consider a common example of not getting to the root of a problem. If you have a weed in your garden and you pull only the stem off the top rather than dig down to pull out the weed at its root, it is very likely that the weed is going to replenish itself and perhaps even spread throughout your garden. In contrast, if you dig down and intervene at

What Is a *Root Cause*?

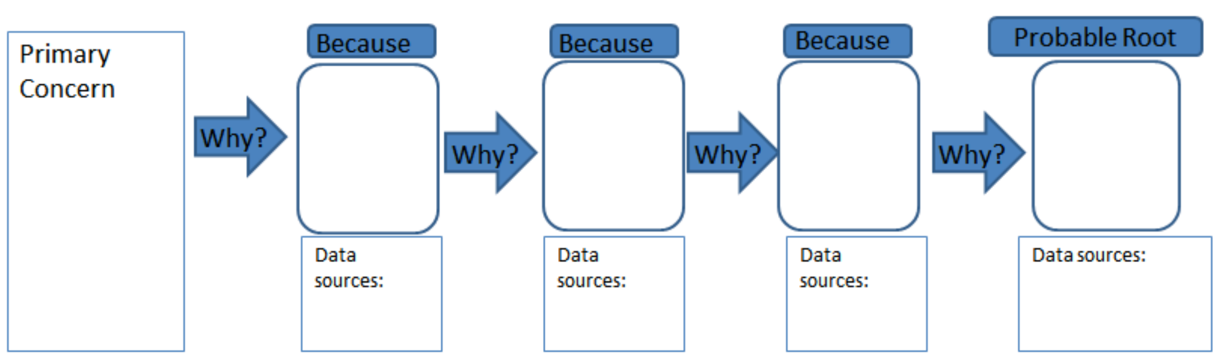
- From the Savannah River Project (a nuclear power station): Root cause is "the most basic cause that can reasonably be identified, that we have control to fix, and for which effective recommendations for prevention can be implemented."
- From *Total Quality for Schools: A Suggestion for American Education* by Joseph C. Fields: "A root cause is "the most basic reason the problem occurs."
- From Clark County School District: "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."

the root level, it is more likely that you will be able to get rid of the weed and stop the damage that it might cause in your garden. This is very similar to the challenges that might result in students dropping out of high school. If you don't get to the underlying reason that a student or groups of students might be struggling, the strategies that you employ might not reach the level necessary to eradicate the challenge that the student(s) is facing; as a result, the challenge might come back or manifest itself in a different way.

When thinking about the root cause, you need to continue to consider the multiple factors that might influence a student, a group of students, or the school as a whole. It is often easy to focus on the individual level rather than on systemic features. For example, as a school began to conduct a root cause analysis to figure out why a large number of their ninth-grade students were struggling and frequently failing science courses, they were able to determine that their ninth-grade science program demanded skills and knowledge that were not being taught until tenth grade. Working with their district, school administrators were able to change the science sequence. Two years later, they found that far fewer students were failing ninth-grade science.

One strategy for identifying the root cause is using a "Because…Why?" diagram (see Figure 3). In the "Because…Why?" model, you identify a primary area of concern or a problem statement and then ask a series of "Because" and "Why" questions. Often, these questions must be asked multiple times before you ascertain the likely root cause. This may also be known as the "Five Whys." Once you have developed your series of statements, check that the series of "Why" questions adds up to cause the problem statement or concern. As you go through the process, it is helpful to concurrently identify the supporting data sources that you used to make the decision. You want to ensure that your statements are supported by data and are not just opinions or guesses.

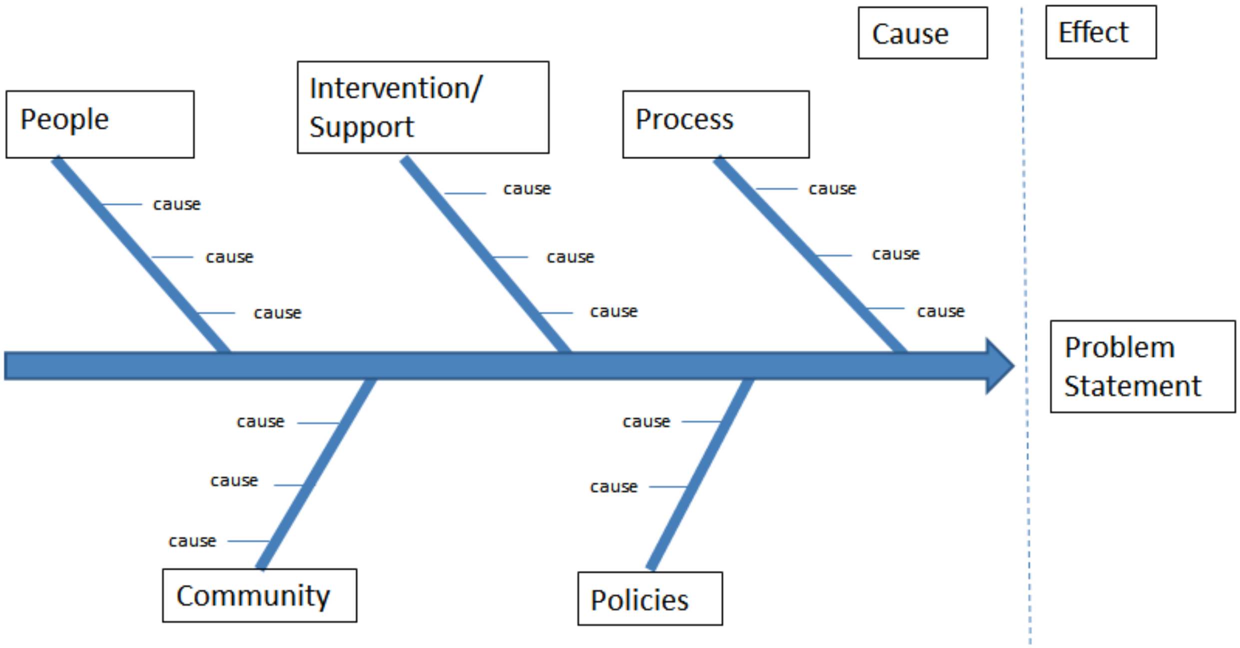
Figure 3: Because…Why? Diagram



Note. This model provides a strategy for determining the probable root cause; it might be necessary to add more steps to the process. This model was adapted from Clark County School District, 2012.

Another way to think about root cause analysis is by using the Ishikawa, or fishbone, diagram. This tool is typically used in Six Sigma processes. To construct the fishbone, first identify your primary concern or problem statement. This statement is placed at the head of the fish. The remainder of the diagram is made up of fishbones, each of which highlights specific categories. Figure 4 provides an example of the fishbone method; however, the categories may differ based on the problem statement selected. Using the fishbone diagram, you can construct a similar series of questions to perform a root cause analysis and to check your responses.

Figure 4. Example of the Ishikawa (Fishbone) Diagram



Note: Multiple Ishikawa models that are available and can be adapted to fit your context. This example was adapted from http://sixsigmatutorial.com/fishbone-analysis-download-diagrams-charts-in-excel-powerpoint/245/.

In filling out either the "Because…Why" diagram or the fishbone diagram, it is helpful to consider the following:

- What is the evidence that this cause exists? Is it concrete? Is it measurable? Are there more than two data elements that provide evidence?
- What is the evidence that this cause could lead to the stated effect? Are you merely asserting causation? (Example: If a program is identified as the reason that students are not achieving, is there evidence that the program is not aligned to the tested and taught curriculum? Have students spent the majority of the allotted instructional time using this program? Was the program implemented with fidelity?)
- What evidence exists that this cause actually contributed to the problem? Given that the cause exists and could lead to this problem, how do you know that the problem was not actually caused by another factor?
- Is anything else needed, along with this cause, for the stated effect to occur? Is it self-sufficient? Is something else needed? (Example: Are special education student schedules the only problem that precludes their exposure to a grade-level curriculum, or is another key factor at play—perhaps the level of teachers' experience in scaffolding instruction to meet the needs of all learners?)
- Can anything else, besides this cause, lead to the stated effect? Are there alternative explanations that fit better? What other risks are there?
- Are there additional data that you might need to collect to help determine the root cause?

Use **Worksheet 5** (available on page 49) to practice identifying the root cause of a problem using the "Because…Why" or the fishbone method.

Preparing for Step 3

Identifying the probable root cause of a problem that an individual student, a group of students, or a school is facing can help guide you to the strategy or plan that you will develop. As you begin to consider the potential causes, you might identify causes that are outside your control within the school environment. This might necessitate larger infrastructure changes or partnerships with community organizations who could provide your school with assistance. While it might be important to consider causes that are beyond your control, if possible, you will want to start by focusing on areas that you can address.

The "Because…Why" and the Ishikawa (fishbone) methods presented in the previous section are frameworks that you might use to develop a hypothesis for the root cause of student struggles; nevertheless, your team might prefer to employ other methods of root cause analysis. As you begin the process of identifying the probable cause, you might find it challenging and time consuming. The more familiar you become with the process and with available data sources, the more streamlined your approach should become. Spending a little extra time to ensure that your root cause has been accurately determined can also help to minimize efforts spent implementing strategies that were not a suitable fit.

> ***Learn more about…***
> **What do you see in these data?** In this video from Doing What Works, available at http://dwwlibrary.wested.org/media/what-do-you-see-in-these-data, Dr. City shares information about using data efficiently to achieve instructional improvement, including examining the data, developing questions, noting answers, and asking new questions until teachers achieve an actionable step.

Step 3: What Is Your Strategy?

Identify your stategy

- **What strategies are available to address the root cause?**
- **What evidence exists that the strategy will work?**
- **What are we able to implement effectively based on our context?**

Having identified the probable root cause in Step 2, the next step is to identify a strategy for addressing the root cause. This might be a single intervention or a series of supports. As you consider the interventions that you will implement to support those students who are at risk of dropping out of school, it is important to recognize that no single "one-size-fits-all" solution exists. Strategies that work well in one community or with some students might not work in another community with a different group of students. Selecting the strategy(ies) that you will undertake is a multistep process that includes identifying the breadth of available interventions and supports, reviewing the evidence of their effectiveness, and determining the likelihood you will be able to effectively implement the strategies based on your context.

What Strategies Are Available to Address the Root Cause?

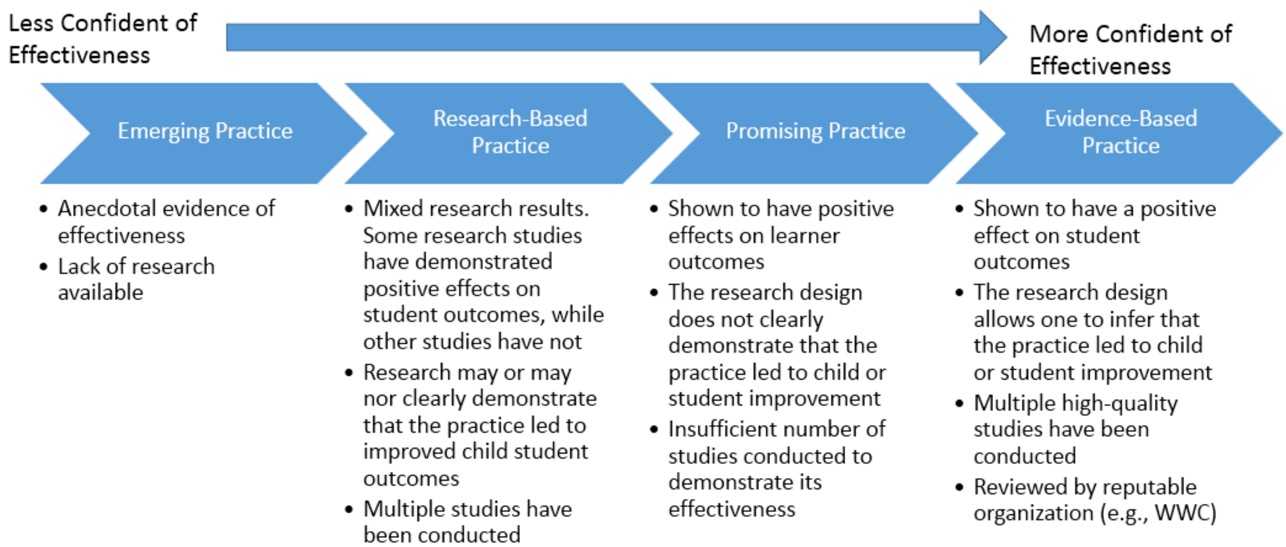
Depending on the root cause that you identified in Step 2, you might be able to use or adapt an intervention or strategy that you already have in place or make a change to your infrastructure (e.g., revise policies, provide professional development, rearrange your school schedule). Consider the interventions and supports that you identified in **Worksheet 2, Section 1** (page 39), do you already have interventions or supports in place to address the root cause that you identified in Step 2? If you are unable to identify an intervention or strategy that meets your needs, a number of resources are available to help you determine appropriate strategies and interventions. The table that follows contains examples of resource repositories and websites that provide research on strategies. Additional resources include peer reviewed journals, federally funded technical assistance and research centers, and curriculum or vendor websites.

Examples of Resource Directories and Websites That Offer Research-Based Strategies	
Best Evidence Encyclopedia	http://www.bestevidence.org/
Center on Instruction	http://www.centeroninstruction.org/
Crime Solutions	http://www.crimesolutions.gov/
Evidence Based Intervention Network	http://ebi.missouri.edu/
National Center on Intensive Intervention Academic Intervention Tools Chart	http://www.intensiveintervention.org/chart/instructional-intervention-tools
National Center on Intensive Intervention Behavior Intervention Tools Chart	http://www.intensiveintervention.org/chart/behavioral-intervention-chart
National Dropout Prevention Center/Network at Clemson® University: Effective Strategies	http://dropoutprevention.org/effective-strategies/
National Registry of Evidence-Based Programs and Practices (NREPP)	http://nrepp.samhsa.gov/01_landing.aspx
National Technical Assistance Center on Transition (focused on exceptional children)	http://transitionta.org/effectivepractices
Regional Educational Laboratory Program	http://ies.ed.gov/ncee/edlabs/
The IRIS Center™ Evidence-Based Practice Summaries	http://iris.peabody.vanderbilt.edu/ebp_summaries/
What Works Clearinghouse	http://ies.ed.gov/ncee/wwc/

What Evidence Exists That the Strategy Will Work?

Whether you are starting with an intervention or strategy that is already available at your school or identifying a new strategy, you will want to select an intervention or approach that has proved to be effective. By grounding your efforts in programs and practices supported by research and evidence, you can be more confident that the program will have an impact on your students. All practices and strategies fall along a continuum, from those that have little or no research or evidence suggesting that they are effective to those supported by a number of high-quality studies showing a positive impact. Figure 5 shares one set of definitions reflecting this continuum (IRIS Center, 2015).[2] As you move along the continuum, your confidence that the intervention or strategy will be effective increases. Ideally, you would be able to find practices and strategies that meet the criteria for evidence-based practices described in Figure 5; however, the research might not be available for all topics and populations. In these cases, it might be necessary to move back along the continuum to practices with less rigorous levels of evidence.

Figure 5. Levels of Evidence



Note: Definitions based on IRIS Center (2015, Perspectives & Resources, 1)

As you consider potential strategies and review available interventions, it is important to critically review research and to be wary of claims made by publishers or websites. Although reputable, evidence-based repositories are available (some examples are provided in the table on page 20), Test and colleagues (2015) found that of the 47 websites related to evidence-based practices that they reviewed, 43 percent of the sites were identified as untrustworthy. Even within those websites identified as trustworthy, both the presentation of information and the use of criteria vary significantly. As a result, you might find that a tool is considered evidence-based on one website but not on another.

> ***Learn more about…***
> **Evidence-Based Practices (Part 1): Identifying and Selecting a Practice or Program.** This module, available at http://iris.peabody.vanderbilt.edu/module/ebp_01/, is the first in a series of three modules. This module focuses on the importance of identifying and selecting evidence-based practices.

[2] There are many different definitions related to the levels of evidence. This is only one example to illustrate the continuum.

What Strategies Are You Able to Implement Effectively Based on Your Context?

In addition to evaluating the evidence, you need to consider the impact of the infrastructure analysis that you conducted in Step 1 to ensure that your school has the capacity to implement the approach as it was intended and developed. As you reflect on the interventions that you have reviewed, you might want to consider the following:

- Is the cost reasonable?
- Can the strategy be implemented within a reasonable timeframe?
- Is implementation feasible within your school context?
- Does the strategy require any specialized expertise of training to implement?
- Is access to training and technical assistance support readily available?
- Does the approach build upon initiatives that you already have in place?

To understand implementation requirements, you might need to request more information. You might find it helpful to contact the vendor or program developer and ask them to share additional details that are not publicly available. Alternatively, you might want to identify other schools that have implemented similar strategies and whose experiences you can learn from. Considering the threats and weaknesses that you identified in your infrastructure analysis, along with the barriers that you identified when you evaluated your infrastructure in Worksheet 2, can help to prepare you for implementation challenges.

Learn more about…
The Importance of Contextual Fit When Determining Evidence-Based Interventions. This guide, available at https://aspe.hhs.gov/pdf-report/importance-contextual-fit-when-implementing-evidence-based-programs, assists users in determining whether or not a specific intervention will fit the needs, resources, and values of the target population.

Preparing for Step 4

Worksheet 6 (available on page 51), provides a place to review and compare the intervention programs that you have identified to help you select the approach that best addresses your root cause, has a strong evidence base, and can realistically be implemented within your school context. Once you have selected a strategy, it is important to develop a clear plan that outlines the approach you are taking. The plan might describe the person(s) responsible for delivering the intervention, materials and curriculum that will be used, group size, frequency and length of sessions, additional resources that you might need, and how you will know whether the strategy is successful. **Worksheet 7** (available on pages 52–53) provides examples of a plan than could be used at the individual student level or for groups of students participating in the same intervention as well as an action plan that could be used to outline the steps for implementing the strategy. Clearly delineating your approach will help you to know whether you have implemented the strategy as it was intended to be implemented and to continue implementing the strategy with fidelity over time. Without this documentation, it will be difficult to measure whether or not the approach is working.

Learn more about…

Evidence-Based Practices (Part 2): Implementing a Practice or Program with Fidelity. This module, available at http://iris.peabody.vanderbilt.edu/module/ebp_02/, discusses implementing an evidence-based practice or program with fidelity.

Step 4: How Is Your Approach Working?

Is it working?

- **What data do you collect to determine whether the strategy is producing the intended impact?**
  - What data do you collect to measure implementation fidelity?
  - What data do you collect to measure student progress?
- **How do you know whether the strategy is effective or whether you need to make a change?**

Having identified a strategy in Step 3, you can now approach Step 4 with the goal of determining whether the strategy that you selected is yielding the intended impact. This step focuses on identifying the data that you can use to measure impact and determining how to analyze the data to understand whether you need to make changes.

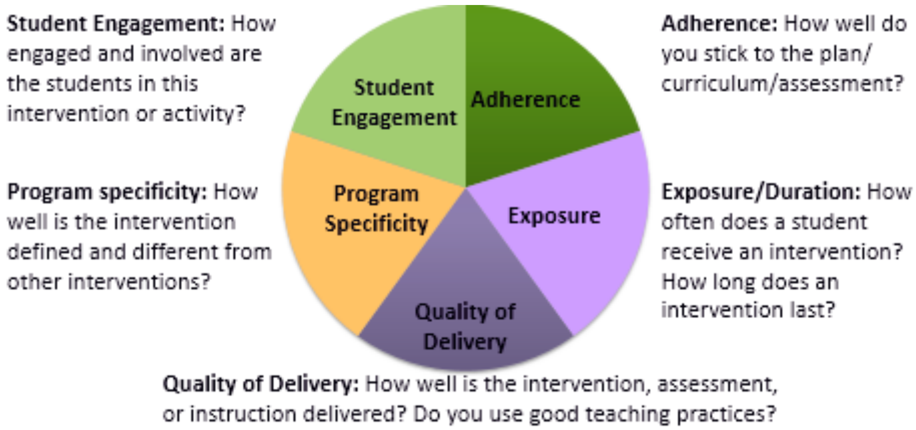
What Data Do You Collect to Determine Whether the Strategy Is Producing the Intended Impact?

Two types of data sources are important to consider when determining whether your strategy yielded the impact that you anticipated. The first type is data that can be used to measure fidelity of implementation. Without this piece, you will not know whether the results are related to the strategy you implemented or whether other variables have influenced the outcomes. The second type is data that shows student-level progress to help you ascertain whether students are demonstrating sufficient growth over time. Collecting and reviewing data over time allows you to make decisions about whether the practice is producing the anticipated impact and to make midcourse corrections when it is not.

What Data Do you Collect to Measure Implementation Fidelity?

Measuring fidelity helps you to understand whether you have implemented the strategy as outlined in your plan. You might consider whether you implemented the strategy with the frequency, duration, training, and key components that were identified. Figure 6 presents five components to consider when evaluating implementation fidelity (Dane & Schneider, 1998; Gresham et al., 1993; O’Donnell, 2008).

Figure 6: Five Components of Implementation Fidelity



Source: National Center on Response to Intervention, 2011.

There are a number of ways to monitor implementation fidelity. Examples include self-reporting, observations, and document review. Commercially available interventions include fidelity checklists that could be used as self-reporting or observation tools, or you might be able to develop an observation tool or checklist based on the key components of your plan. One simple monitoring approach is to track whether students received the intended intervention dose (i.e., number of sessions and session duration). For example, a student failed to show progress in the tutoring program that you selected as your strategy; however, in reviewing the fidelity data, you noted that the student had missed half of the tutoring sessions. Therefore, you would not feel confident in judging whether this tutoring program was ineffective as a result of the intervention program or because of the student's lack of participation. **Worksheet 8** (available on page 55) reviews some of the popular methods for monitoring fidelity and the reliability of the measures being used, and it provides a place for you to consider what you are currently doing to measure fidelity and how you could monitor implementation fidelity in the future.

How do you measure student progress?

As you discovered in Step 2, you already collect a large amount of data, and these data can help you understand whether your students are making progress. In the book *Data Wise: A Step-by-Step Guide to Using Assessment Results to Improve Teaching and Learning*, Boudett and colleagues (2013) outline a strategy for evaluating the types of data sources that you might have within your school by classifying them as short-term, medium-term, or long-term data. When identifying whether an approach is working, it is important to examine data across each of these levels. If you relied only on long-term data, for instance, you might lose too much time before you are able to make adjustments when your approach is not working. As Table 2 illustrates, each of these data sources has a different purpose and conveys different information.

Table 2: Classification of Data Sources Used to Measure Progress

Type	When?	Purpose	What?
Short-Term Data	Daily, weekly, monthly	Formative in nature and drives instruction	Formative assessments, student work, and/or office discipline referrals, direct behavior ratings
Medium-Term Data	Periodic intervals (e.g., three or four times a year)	Formative assessments administered multiple times within a year, which allows tracking of student progress within a single school year	Early warning system tool; benchmark or interim assessments; school or district assessments
Long-Term Data	Annually	Summative assessments that help evaluate progress over longer periods of time; less useful for providing individual student data	Student performance on statewide tests, summative assessments

Note: Adapted from Boudett et al., 2013

Because short-term data is collected more frequently, it allows you to gather enough data to make decisions more rapidly, which is important in making individual, student-level decisions. The types of short-term data that you collect will vary according to your focus. If, for example, you are focused on monitoring academic outcomes, you might consider using formative assessments or curriculum-based measures (CBMs). At the lower grade levels, a number of CBMs are available, but as students move to higher grade levels, the availability of research-based CBMs is more limited. For some students who are missing foundational skills, the use of off-grade-level CBM assessments might be a possibility. Teacher-developed probes, homework, classwork, quizzes, or tests might also be used; however, these methods lack validity and reliability. For behavior, observation tools such as the Direct Behavior Rating (DBR), or systematic direct observation, can be used to monitor student progress.

Learn more about…

- **Evidence-Based Practices (Part 3): Evaluating Learner Outcomes and Fidelity.** This module, available at http://iris.peabody.vanderbilt.edu/module/ebp_03/, examines how to evaluate whether an evidence-based practice is effective for the students with whom you are working.
- **National Center on Intensive Intervention.** This website (http://www.intensiveintervention.org/) offers resources related to academic and behavioral progress monitoring:
    - National Center on Intensive Intervention — Academic Progress Monitoring Tools Chart: http://www.intensiveintervention.org/chart/progress-monitoring
    - National Center on Intensive Intervention — Behavioral Progress Monitoring Tools Chart http://www.intensiveintervention.org/chart/behavioral-progress-monitoring-tools
    - Learn more about DBR at http://www.intensiveintervention.org/video-resource/direct-behavior-rating-overview.
- **Center on Response to Intervention at American Institutes for Research.** This website (http://www.rti4success.org/) provides additional resources related to academic progress monitoring:
    - Dr. Kristin McMaster shares emerging research on CBMs at the secondary level in the webinar The High School Tiered Interventions Initiative: Progress Monitoring available at http://www.rti4success.org/video/high-school-tiered-interventions-initiative-progress-monitoring

Worksheet 9 (available on page 56) provides a place for you to classify the data sources that you use across these levels. As you complete this worksheet, pay particular attention to those data sources that you list as short term and medium term. It might be helpful to look back at the data sources that you listed in Worksheet 2. When you review the list of data sources that you identified, consider the following questions:

- Are some data sources looking at the same information?
- Are some data sources likely to yield more or better information than others?
- Should some data sources be collected and reviewed before others?
- What are the most valuable or efficient sources that you can use?

Recognizing that resources are limited and that data collection takes valuable time, you will want to (if possible) limit instances in which you collect data for the same purpose. If you have data sources that appear to convey the same information, consider whether you might streamline your approach to eliminate duplication.

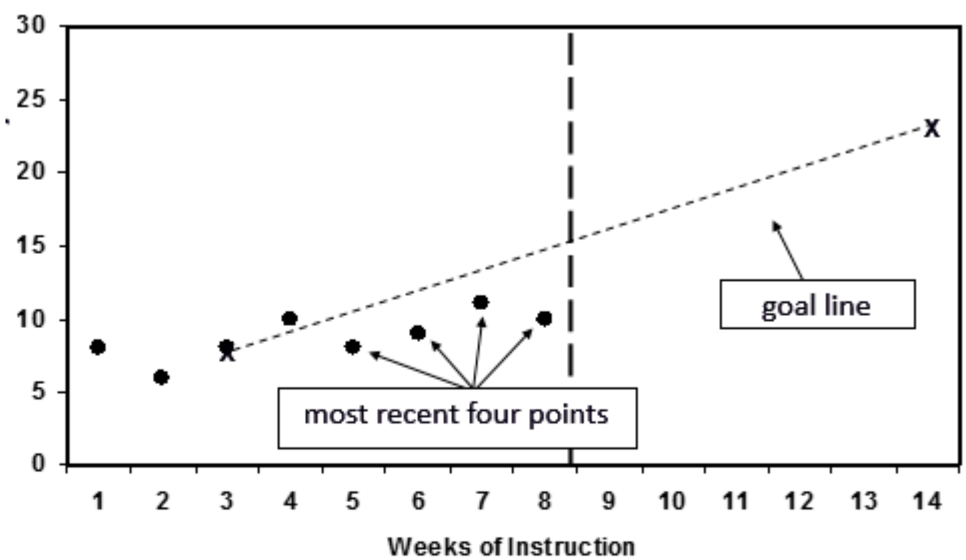
How Do You Know Whether the Strategy Is Effective or You Need to Make a Change?

To get the most from the data that you are collecting, it is important to set clear decision-making rules, develop processes for data meetings, ensure that relevant staff are included, and hold regular meetings. The decision-making rules and processes that you establish will vary depending on the data sources that you are using.

Plotting student data on a graph and setting a goal that outlines what you hope the student(s) will be able to achieve as a result of the strategy implementing allows you to compare the student's actual outcome with the intended goal and to ascertain whether the student is on track toward accomplishing that goal. If you are using a formal progress-monitoring tool such as a CBM, you might be able to establish the goal using benchmarking, rate of improvement, or the intra-individual framework (National Center on Response to Intervention, 2011).

Figure 7 provides an example of a progress-monitoring graph that illustrates student data compared with the student goal. In this example, the student's four most recent data points fall below the established goal line. This is an example of a decision rule that could be used to determine that the student is not on track to make progress toward an established goal.

Figure 7: Example Student Progress-Monitoring Graph With Goal Line

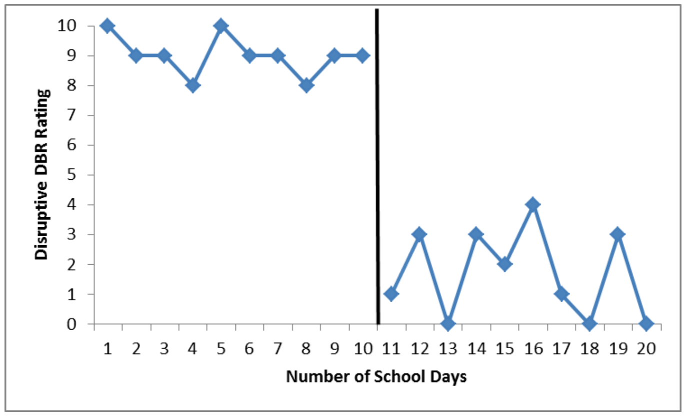


Note: Adapted from National Center on Response to Intervention (2011).

Learn more about…
To learn more about goal-setting techniques and associated decision-making rules (e.g., the four-point rule or trend line analysis), visit http://www.rti4success.org/video/implementer-series-using-progress-monitoring-data-decision-making.

Conducting a visual analysis of preintervention data compared with postintervention data is another option that might be used when measuring behavioral progress. Figure 8 provides an example of graphing instances of disruptive student behavior data that has been collected using DBR. In this example, it is apparent that the student's disruptive incidents decreased after the intervention was implemented—a good indicator that the intervention is producing the desired effect of minimizing instances of disruptive behavior for the student.

Figure 8: Disruptive DBR Rating Comparing Preintervention and Postintervention Data



Source: National Center on Intensive Intervention, 2013

If the student is not making progress over time to reach his or her goal, as evidenced in Figure 7, the progress monitoring data provides you with a solid indication that the intervention you selected in Step 3 is not providing the support that you anticipated. In this scenario, it might be necessary to adjust or adapt the intervention. In some cases, you might determine that the student appears to be making progress, but the level of growth is not what you had hoped or is not substantial enough to meet the goal that you established for the student. In this situation, it might be necessary to tweak or intensify the approach that you are using. In other situations, you might determine that selecting a new intervention might be necessary because the current approach is producing a minimal or negative effect on the student.

Learn more about…

Data Rich, Information Poor? Making Sense of Progress Monitoring Data to Guide Intervention Decisions. This webinar, led by Dr. Lynn Fuchs of Vanderbilt University and Dr. Lee Kern of Lehigh University, addresses a challenge faced by many teachers: feeling inundated by data while struggling to find useful information to guide intervention decision making. The webinar focuses on (a) common progress monitoring measures in academics and behavior, (b) key considerations for optimizing data collection, and (c) structured questions for analyzing graphed progress monitoring data patterns. The webinar is available at http://www.intensiveintervention.org/video-resource/data-rich-information-poor-making-sense-progress-monitoring-data-guide-intervention. Although this webinar is not specifically focused on the topic of dropout prevention and on the secondary grades, it provides a framework for reviewing and asking questions about the data that you collect to make intervention decisions.

Students are a valuable resource during the progress-monitoring process. Encouraging students to set goals for themselves and to monitor their own progress is one of the recommendations in the Institutes for Education Sciences practice guide, *Using Student Achievement Data to Support Instructional Decision Making* (Hamilton et al., 2009). Although the number of research studies that meet the What Works Clearinghouse criteria were limited, Hamilton and colleagues suggest that inviting students to monitor their own progress can help motivate students. Students can be involved in developing their goals, tracking the data, and graphing the data so they can see their growth over time.

Learn more about…
Taking Ownership. In this video from Doing What Works, available at http://dwwlibrary.wested.org/media/taking-ownership, a school shares the value of students developing their academic and behavioral goals and monitoring their progress. The accompanying **Academic Goal Reflection Worksheet**, available at http://dwwlibrary.wested.org/media/academic-goal-reflection-template, provides an example of a tool that could be used with students to support their goal setting and progress monitoring over time.

As you consider the growth of groups of students or of school improvement over the medium and longer term, you might consider reviewing data trends to answer the following:

- Percentage of students who graduate on time
- Percentage of students who graduate but not with their cohort group
- Percentage of students who drop out
- Number of students served in a dropout prevention program
- Percentage of attempted credits that are completed using credit recovery
- Percentage of graduates who recovered credits (through credit recovery) to graduate on time
- Percentage of students who increase their average daily attendance
- Percentage of students who decrease their number of office referrals per semester
- Percentage of students who will be able to stay on track in earning credits
- Percentage of students who will withdraw before completing the program
- Percentage of students who are promoted to the next grade level

The data collected when monitoring progress is not only important for educators and students but also can also be used to communicate with families and other service providers. You might consider sharing student progress graphs with parents or using them to ground conversations at parent-teacher conferences.

Learn more about…

Center on Response to Intervention Brief #4: Common Progress Monitoring Omissions: Reporting Information to Parents (PDF). This brief, available at http://www.rti4success.org/sites/default/files/RTI%20ProgressMonitoringBrief4-Reporting%20Information%20to%20Parents.pdf, shares information about reporting progress monitoring data to parents.

REL Pacific Part 4: Engaging All in Data Conversations. This toolkit, available at http://relpacific.mcrel.org/resources/~/media/RELPacific/Files/Part4_Mar2015.ashx, provides a section on presenting student data in a meaningful way.

How to Share Data With Families. This article, available at http://www.ascd.org/publications/educational-leadership/nov15/vol73/num03/How-to-Share-Data-with-Families.aspx, outlines considerations for sharing data with families.

Tips for Administrators, Teachers, and Families: How to Share Data Effectively. This article from the Harvard Family Research Project, available at http://www.hfrp.org/publications-resources/browse-our-publications/tips-for-administrators-teachers-and-families-how-to-share-data-effectively, provides information for teachers, families, and administrators about sharing and discussing data. The article is available for download in PDF in both English and Spanish.

Worksheet 10 (available on page 57) provides examples of tools that can help you guide your discussions as a data team and follow up on progress monitoring meetings. These tools may be adapted based on your team's needs.

Conclusion

Many factors influence whether a high school student is on or off track to graduate college and career ready. This toolkit provides strategies and methods for implementing a continuous improvement process to increase graduation rates and minimize the number of students who drop out of high school before earning their diploma. The multistep framework used within the toolkit aims to help teams accomplish the following objectives:

1) Understand student data and the current infrastructure on a big-picture level.
2) Dig deeper to understand why a student, group of students, or school might be struggling.
3) Identify strategies and develop a plan to address the needs identified in Step 2.
4) Measure whether the intervention and supports are working.

This work is challenging and relies on a shift in how you review and use data to inform your practice. Although a four-step, cyclical process has been delineated in this toolkit, your team might find, in practice, that it is necessary to move backward a step or two before moving forward again. For example, if you find that a student is not making progress based on the strategy that you selected, you might need to reconsider the approach selected in Step 3, or you might need to reconsider the root cause that you determined in Step 2. As discussed in Step 1, your team might choose to tackle one of your identified needs first and then reassess your needs over time to determine additional areas that require intervention.

One of the important elements of a continuous improvement process is periodically reviewing and understanding how the process as a whole is working. As you work to improve your ability to use this multistep process to improve dropout prevention efforts, the *North Carolina Implementation Rubric: Using Early Warning Systems to Identify and Support Students at Risk of Dropping Out of High School* and accompanying worksheet (available at http://www.ncpublicschools.org/dropout/resources/), can provide your team with a mechanism for evaluating your process and identifying those areas in which you might need additional focus and support.

References

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Worksheets

Worksheet 1: Identifying a Focus

Section 1: Predictions versus Actual

Directions: Answer the guiding questions that follow as a team.

1. Before reviewing data, what do you think your top three needs are in order to improve your graduation rates? The needs you identify might be focused at the school, subgroup, or individual student level.
   1.
   2.
   3.
2. Complete the table below. First, enter your predictions for each of the questions. After entering your predictions, review your big-picture data to identify the actual answers.

	Predictions	Actual
How many students do you think dropped out of last year's graduating class (compared to the freshmen cohort)?		
What percentage of your students would you place in the "old and far" category?		
What percentage of your students would you place in the "old and close" category?		
What percentage of your students would you place in the "young and far" category?		
What percentage of your students would you place in the "young and close" category?		
What percentage of your students show attendance risk factors?		
What percentage of your students show behavioral risk factors?		
What percentage of your students show academic risk factors?		
What percentage of your students have more than one risk indicator?		

Section 2: Reflecting on Big-Picture Data

Directions: Answer the guiding questions that follow as a team, reflecting on the table that your team completed in Worksheet 1.

3. What did you learn, and how did your predictions compare with your actual data?
   - About your school?
   - About groups of students?
   - About individual students?

4. Which students are flagged as being at risk? Is there a group that you are most concerned about? For which indicators are they flagged? In your high-risk group, identify the following:
   a. Number of students
   b. Grade levels
   c. Language skills
   d. Special education status
   e. Demographic information
   f. Attendance rates
   g. Academic results
   h. Current involvement in interventions

Guiding questions to consider (questions from Therriault et al., 2013):

- *Are students coming to the school with risk indicators?*
- *Are students who are flagged for attendance indicators also flagged for failing mathematics or English language arts courses? Do some students show risk because of absences only? Do other students show risk because of poor course performance only?*
- *Do some students show risk because of performance in mathematics only or in English language arts only?*
- *What are the demographic characteristics (e.g., disability, disadvantaged status, English language learner [ELL] status) of students who are flagged and not flagged?*
- *If you have multiple years of data, were students who are currently flagged previously flagged (e.g., flagged during the previous year in middle school or based on incoming indicators)?*

5. What are the most prevalent indicators among the students identified as at risk?

6. Did the data reveal any surprises?

7. Were there any findings that raised questions or were confusing?

8. What do your findings suggest about areas of need for your school? What data are you using to justify this decision? Use the table that follows to identify areas of need and mark whether they are focused at the school, subgroup, or individual student level. You may select more than one category if necessary.

Areas of Need Identified Through Data	School Level	Subgroups of Students	Individual Students

Worksheet 2: Infrastructure Analysis

Section 1: Interventions Inventory

Directions: List the existing dropout prevention interventions/strategies in your school or district in column 1. In columns 2 and 3, use the codes to indicate which best captures the intervention. In columns 4–16, mark an “X” in the column(s) that the intervention addresses.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
School/District: **Date:**	**Tier (I = Universal, II = Targeted, III = Individualized)**	**A = Attendance, B = Behavioral, AC = Academic**	**Reengagement, Reenrollment, or Recovery Strategies**	**Credit Recovery**	**Behavioral/Mental Health Interventions and Supports**	**Academic Intervention/Tutoring**	**Culturally and Linguistically Relevant Practices**	**Engagement Activities**	**Adult-Student Relationships/Mentoring**	**Personalization (e.g., small learning communities)**	**Transitions**	**Career and College Awareness**	**Family Engagement**	**Other___**	**Other___**	**Other___**
Example: Ninth-Grade Transition Initiative	I	B, AC									X					

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

Note: Adapted from Therriault et al., 2013.

Section 2: SWOT Analysis

Directions: Use the table below to identify strengths, weaknesses, opportunities, and threats related to addressing dropout prevention. If you identified multiple priority areas in Worksheet 1, section 2, question 8 on page 38, it might be helpful to perform a SWOT analysis of the different priority areas to help you identify which area you might prioritize first.

Strengths:	Weaknesses:
Opportunities:	Threats:

Section 3: In-Depth Infrastructure Analysis

Directions: Use the tables that follow to review your current infrastructure across the elements of leadership and policies, resources, professional development, partnerships, and communication.

School/District:	
Date Completed:	
Analysis Team:	
Name	**Position**

<table>
<tr><th colspan="2">Leadership/Policies</th></tr>
<tr><td>Consider addressing the following questions in the analysis of the leadership component:
1. Are leaders invested in tackling dropout prevention work and supporting the implementation of the focus-area improvement strategies?
2. What is the decision-making structure?
3. What policies/procedures are in place to support dropout prevention work and your focus area?
4. What policies/procedures are in place that might challenge dropout prevention work and your focus area?</td><td>Describe your current leadership and decision-making framework:</td></tr>
<tr><td>How can the leadership component be leveraged to improve results for students?</td><td>What improvements to the leadership and decision-making component will need to be addressed to improve results for students?</td></tr>
</table>

Resources	
Consider addressing the following questions in the analysis of your current resources: 1. Are fiscal resources available to support the implementation of the focus-area improvement strategies? Specify funding sources. 2. Are there other fiscal resources that could be leveraged to support the implementation of the focus-area improvement strategies? Specify funding sources. 3. Who will be responsible for approving allocation of fiscal resources needed for implementation of the focus-area improvement strategies? 4. Are there any specific purchasing policies or procedures that could negatively impact acquisition of resources (e.g., equipment, materials, personnel, etc.)? 5. Who will be responsible for documenting expenditures related to the implementation of the focus-area improvement strategies?	Describe your current resources:
How can the resources be *leveraged* to improve results for students?	What *improvements* will need to be made to available resources to improve results for students?

<table>
<tr><th colspan="2">Professional Development</th></tr>
<tr><td>Consider addressing the following questions in the analysis of the professional development system:

1. What professional development is available to support initial and ongoing implementation of your focus-area improvement strategies?
2. What forms of professional development might you use? Will there be provisions for ongoing coaching?
3. Who will provide the professional development?</td><td>Describe your current professional development:</td></tr>
<tr><td>How can the professional development system be leveraged to improve results?</td><td>What improvements will need to be made to the professional development component to improve results?</td></tr>
</table>

Partnerships	
Consider addressing the following questions in the analysis of your current partnerships: 1. What community partners are currently available to support implementation of your focus-area improvement strategies? 2. How have you been able to successfully engage with community partners? 3. What challenges have you faced when engaging with community partners? 4. What gaps exist that community partners might be able to support?	Describe your current partnerships:
How can partnerships be *leveraged*?	What *improvements* will need to be made to partnerships to improve results?

Communication	
Consider addressing the following questions in the analysis of your current communication strategies: 1. What is your communication strategy for engaging with families, students, and staff regarding progress toward graduation? 2. What communication strategies are in place for school-based strategies and initiatives? 3. How do you keep families, students, and staff informed on an ongoing basis?	Describe your current communication strategy:
How can current communication strategies be *leveraged*?	What *improvements* will need to be made to communication strategies?

Note: Adapted in part from Dughman, R. & Massanari, C. (2014). State Infrastructure Analysis Tool – Part B: Using Implementation Drivers to Tell the Infrastructure Story. Mountain Plains Regional Resource Center. Office of Special Education Programs. Available at http://ectacenter.org/~docs/calls/2014/ssip/StateInfrastructureAnalysisToolPartB4-8-14.docx.

Section 4: Prioritizing Your Needs

Directions: Review the needs you identified in Worksheet 1 section 2. Considering your infrastructure analysis conducted above, identify your area of need that you will target.

____
____
____
____
____
____

Worksheet 3: Brainstorming Data Sources: What Additional Information Could You Collect to Better Understand Underlying Causes of Risk?

Directions: Document the different data that you currently collect that could be used to identify the root causes of risk. Use the Potential Underlying Causes of Risk and Associated Data Sources Reference Sheets available in Table 1 as a reference.

Data Source	Related, Underlying Factor	How Is the Data Collected?	Who Is Responsible for Collecting Data?

1. Are there gaps in the data that you have available? Add possible, additional data sources to the list in a different color and explain how the additional data would be collected.

2. Review the list that you brainstormed in question 1 and answer the following questions about avoiding too much information:
   - Are some data sources looking at the same information?
   - Are some data sources likely to yield more or better information than others? Should they be prioritized? What are the most valuable or efficient sources that you can use?

Worksheet 4: Individual Student Conference Sheet

Directions: Customize this conference sheet to meet your needs.

Individual Student Conference Sheet	
Student's Name: Date: Class and Period: Skill to Focus on:	
Teacher's Questions (Summarize what you ask the student to talk about.)	
Student's Responses (Summarize key points in the student's response.)	
Student's Understanding (What does the response reveal about the student's understanding of the concept?)	
Implications for Instruction (What does the student's response suggest about future instructional approaches?)	
Student goal (What is the goal for the student moving forward?)	

Note: Adapted from Boudett et al. (2013)

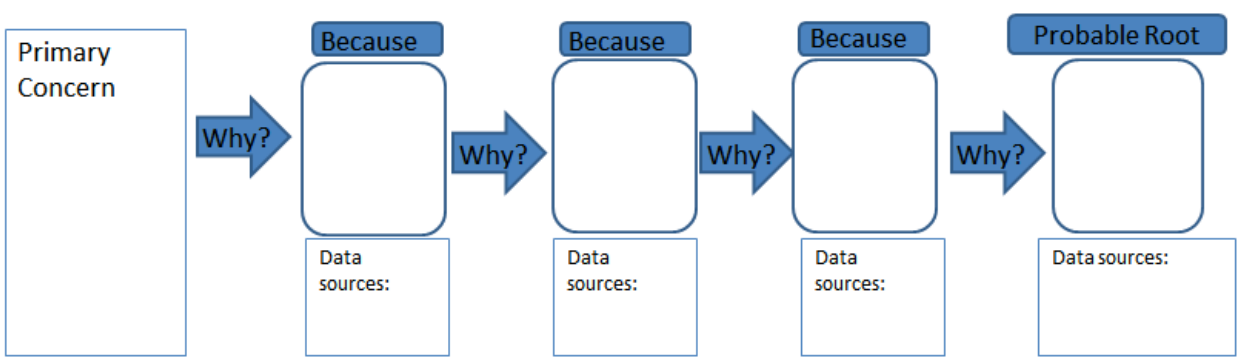
Worksheet 5: Use Evidence to Confirm Likely Underlying Causes and Student Needs

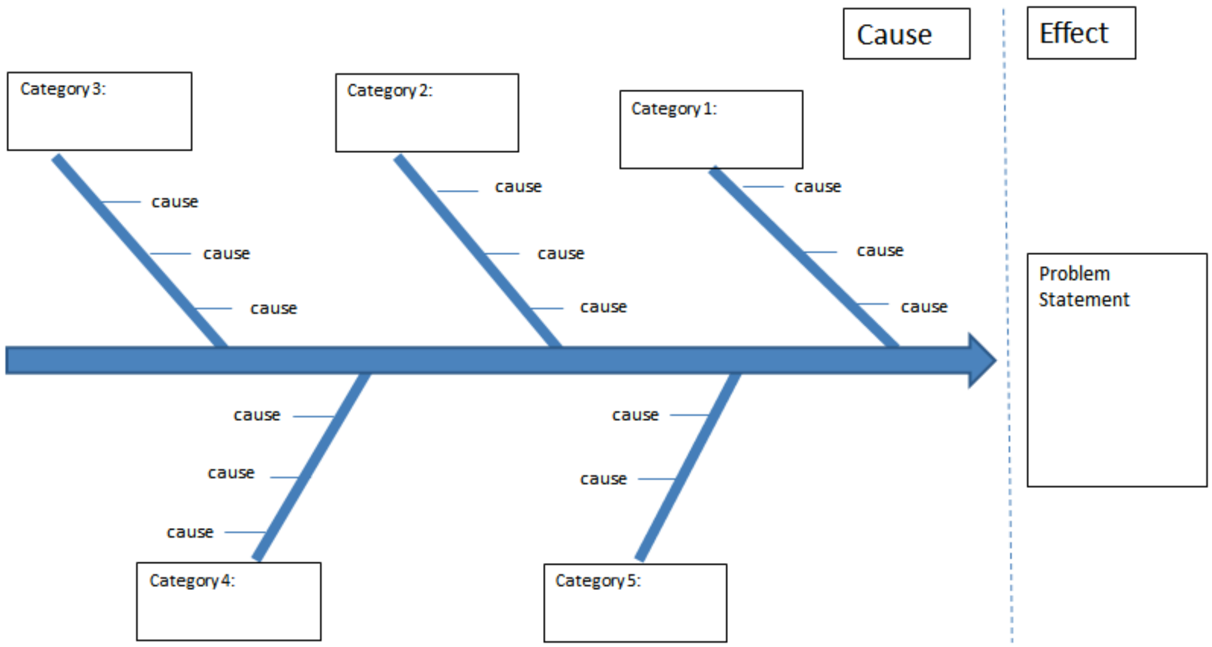
Directions: Based on the big-picture data and additional data that you have identified for the purpose of digging deeper, what are some likely underlying cause(s) of risk indicated by the evidence that you have collected thus far?

1. Brainstorm possible explanations for, or causes of, your target concern.

2. Categorize similar causes together and circle those that are actionable by the school.

3. Use the “Because … Why?” or fishbone diagram that follows as a model to work on identifying the root cause. Be sure to identify the related data sources that you used to make the decision. You may want to use chart paper for additional space.




Cause
Effect
Category 3:
Category 2:
Category 1:
cause
cause
cause
cause
cause
cause
cause
cause
cause
Problem Statement
cause
cause
cause
cause
cause
Category 4:
Category 5:

Worksheet 6: Identifying Potential Strategies

Directions: Use the table below to compare potential strategies that you have identified to address the root cause that you established in Step 2 based on the levels of evidence and implementation requirements.

Name of Intervention or Support	Level of Evidence	Target Population (e.g., grade level, ELLs, SWD)	Cost (e.g., materials, training)	Program Requirements (e.g., frequency, training, materials)	Fit With Identified Student Need

Worksheet 7: Student Plan

Description of Student Plan: Person(s) responsible for delivering intervention, including any adaptations: Materials of curriculum used: Group size: Sessions per week: Minutes per session: Additional resources or support needed: How will progress be monitored? How will fidelity of implementation be measured? How will you know whether the intervention is working (is there a clearly defined goal)? Goal:

Directions: Use or customize the example student plan or action plan below to document the strategy that you have selected.

Note: This tool was adapted from the National Center on Intensive Intervention. For additional resources related to these tools, visit http://www.intensiveintervention.org/tools-support-intensive-intervention-data-meetings.

Worksheet 7: Action Plan

Area of Focus/Goal	Current Status	Strategy/Action Item	Timeline	Person Responsible	Monitoring and Evaluation	Notes
Example: Develop and disseminate vision statement	Began drafting vision statement	• Finalize vision within district team. • Disseminate to stakeholders (school staff, families) for feedback. • Revise vision statement. • Develop communication outreach strategy.	July 29, 2015			

Area of Focus/Goal	Current Status	Strategy/Action Item	Timeline	Person Responsible	Monitoring and Evaluation	Notes

Worksheet 8: Measuring Implementation Fidelity

Directions: As a team, use this handout to track information on implementation fidelity. Determine your current practices for measuring implementation fidelity, and make plans for measuring fidelity in other ways. As you work through the handout, keep your selected strategy in mind.

Ways to Measure Fidelity	Examples of Tools That Can Be Used	Reliability/ Efficiency	What Are We Doing?	What Could We Be Doing?
Self-Report	• Interviews • Surveys • Questionnaires • Other:	• Often unreliable when used alone • Efficient		
Observations	• Spot checks • Peer/administrator observations • Peer coaching • Checklist for evaluating adherence to lesson components • Other:	• Least efficient, but most reliable		
Logs/Lesson Plans/Student Work	• Logs • Lesson plans • Student work samples	• Moderately efficient • Moderately reliable		
Other:				

Note: Adapted from National Center on Response to Intervention, 2011.

Worksheet 9: What Data Are You Currently Collecting?

Directions: Use the Data Collection Plan to reflect on the types of data available in your school to measure the strategy that you identified. Organize those data by short-, medium-, and long-term data sources, referring to the frequency with which you are able to use these data to inform instructional decisions. For example, your review of the At-Risk Report and Graduation Progress Report available in Home Base might be classified as medium-term data. Complete the corresponding columns for each type of data identified.

Data Collection Plan for ____________________					
Data Type	**Data**	**Person Responsible**	**Schedule for Gathering Information**	**Schedule for Interpreting and Sharing Data**	**Decisions Made (e.g., instruction) and Actions Taken**
Short-term data					
Medium-term data					
Long-term data					
Other					

Note: Adapted from Boudett et al., 2013

Worksheet 10: Sample Data Meeting Tools

Directions: These three tools are intended to help guide your data team meetings for individual, student- level conversations. The initial meeting template and progress-monitoring meeting template could also be used to support decisions related to groups of students participating in the same strategy. The tools can be customized based on team need.

Example: Student Background Form

<table>
<tr><th colspan="4">Student Information</th></tr>
<tr><td>Student name:</td><td colspan="2">Parent/guardian:</td><td>Parent/guardian contact info:</td></tr>
<tr><td>Primary Teacher:</td><td colspan="2">Grade:</td><td>DOB:</td></tr>
<tr><td>IEP or 504 plan? ________

If the student has an IEP or a 504 plan, who is the case manager?

______________________________</td><td colspan="2">If the student has an IEP or a 504 plan, has the case manager been invited to the meeting? ______</td><td>Is the student an English language learner?</td></tr>
<tr><td colspan="2">Has there been consistent communication with the parent/guardian? ________

Will they attend the meeting? ________

If they do not attend, how might you involve the parent/guardian?</td><td colspan="2">If the referring teacher is not the general educator, has there been consistent communication with the classroom teacher/general educator? ________</td></tr>
<tr><th colspan="4">Challenge Area (Identify all that apply)</th></tr>
<tr><td colspan="2">€ Coursework

□ Core Content

□ Electives

Describe challenge:</td><td colspan="2">€ Attendance

Describe challenge:</td></tr>
</table>

€ Behavior/social skills *Describe challenge:*	€ Other *Describe challenge:*

Current Support *(Complete this section for each intervention in the primary area of concern that has been previously attempted.)*		
Describe current support provided:	**Who provides the support:**	
Length and Frequency:	**Group size:**	**Setting:**
Has the support been delivered as planned? Have any challenges or barriers prevented the student from receiving the support (e.g., scheduling, behavior, absences)?		
How has progress been monitored? Frequency?	**Goal (must be quantifiable):**	
Is the student on track to meet the goal?	**How do you know whether the student is on or not on track to meet the goal?**	
Student Performance Summary *(Describe student performance in relevant content areas only, including strengths and areas of concern.)*		
Description of strengths:	**Description of challenges:**	
Describe motivators/preferences:		

Note: This tool was adapted from the National Center on Intensive Intervention. For additional resources related to these tools, visit http://www.intensiveintervention.org/tools-support-intensive-intervention-data-meetings.

Example: Initial Meeting Note-Taking Template

(DATE)

Meeting Attendees	
Facilitator	
Referring Teacher	
Timekeeper	
Scribe	
Note Taker	
Other Attendees:	

1. Introduction and purpose
Student/Group of students:
Purpose of meeting:
2. Describe student/group of students and share data
Description of student/group of students (strengths and area[s] of concern):
Current intervention and supports:
Review of student/student group's data:

3. Ask clarifying questions to create hypothesis
Summary of questions and responses:
Hypothesized factors that are contributing to insufficient progress:
4. Review evidence-based strategies for intensification
Summary of evidence-based strategies and/or adaptations to address student/student group's need:
5. Prioritize and plan

Prioritize:

1 = Will try immediately

2 = Will consider trying in the future

3 = Have already attempted

4 = Need to research further

Rating	Strategy or Adaptation	Person Responsible	Timeline

Description of Student Plan: Person(s) responsible for delivering intervention, including any adaptations: Materials of curriculum used: Group size: Sessions per week: Minutes per session: Additional resources or support needed: How will progress be monitored? • Person responsible for collecting progress-monitoring data: • Frequency of data collection: • Progress-monitoring measure or tool: How will we know whether the intervention is working (is there a clearly defined goal)? Goal:
6. Wrap-up and next steps
The team will meet in _____ weeks on (DATE) at (TIME). Where will the plan be documented? How will the plan be distributed to teachers? Plan for teacher check-in with parent:

Note: This tool was adapted from the National Center on Intensive Intervention. For additional resources related to these tools, visit http://www.intensiveintervention.org/tools-support-intensive-intervention-data-meetings.

Example: Progress-Monitoring Meeting Note-Taking Template

(DATE)

Meeting Attendees	
Facilitator	
Intervention Provider	
Timekeeper	
Scribe	
Note Taker	
Other Attendees	

1. Summarize Student Plan and Discuss Implementation of Plan	
Student/Group of Students:	**Intervention provider:**

Summary of student plan:
Note: You may choose to attach or refer to the plan from the previous meeting.

Discuss implementation of plan:
Describe any factors that have impacted the implementation of the plan (e.g., scheduling, attendance, resources, behavior, and so on).

2. Review Progress-Monitoring Data and Additional Data

Review of progress-monitoring data:
Is the student/group of students making adequate progress toward his/her/their goal(s)?

Were additional data collected? (If so, note below.)

3. Group Questioning and Hypothesis (If progress was not sufficient, why?)
Summary of questions and responses:
Hypothesized factors that are contributing to insufficient progress:

4. Problem-Solve, Prioritize, and Plan
Summary of evidence-based strategies and/or adaptation to address student need:

Prioritize:

1 = Will try immediately

2 = Will consider trying in the future

3 = Have already attempted

4 = Need to research further

Rating	Strategy or Change	Person Responsible	Timeline

Description of adapted student plan:

Person(s) responsible for delivering intervention, including any adaptations:

Curriculum materials used:

Group size:

Sessions per week:

Minutes per session:

Additional resources or support needed:

How will progress be monitored?

- Person responsible for collecting progress-monitoring data:
- Frequency of data collection:
- Progress-monitoring measure or tool:

How will we know whether the intervention is working (is there a clearly defined goal)?

Goal:

5. Dates and Communication

The team will meet in _____ weeks on (DATE) at (TIME).

Plan for teacher communication with parent:

Note: This tool was adapted from the National Center on Intensive Intervention. For additional resources related to these tools, visit http://www.intensiveintervention.org/tools-support-intensive-intervention-data-meetings.