

Module 2: Part 3- Root Cause (Causal) Analysis Protocol

The Root Cause Analysis Protocol to follow is designed to support Comprehensive School Improvement Team (CSIT) at each school identified for Comprehensive Support and Improvement (CSI) to understand the current conditions of teaching and learning.

This protocol is the third step in a three-step process which will ultimately result in the CSIT identifying 3-5 high-priority needs and their likely root causes.

This third protocol is intended to be used once for each of the 3-5 high-priority needs identified by the CSIT in the previous Prioritizing Needs Protocol (Module 2 Appendix ii). The protocol will have participants consider root causes for each high-priority need in the context of the Rhode Island Framework for Continuous Improvement and the logic model for educational change. Both the framework and logical model are elaborated upon in Module 2.

The protocol will begin as a whole-group and then provide participants the opportunity to break into smaller groups, each of which will focus on one root cause at a time. In general, root cause analyses are best when performed by groups of 4-6 and then presented to the entire group at large for feedback and further improvement. It may be that small groups may work on multiple root causes by repeating the protocol twice, it may require multiple meetings or both. Facilitators should consider their context carefully when planning out how to carry out this protocol.

In addition to small groups, there is a point in the protocol where participants are required to consider additional contextual data provided by the LEA. Many data will be available online, such as SurveyWorks results. But there also may be locally generated data that are useful. Preparing potentially useful data ahead of time will allow participants to move through this step quickly. However, some data that participants request may exist, but require additional time to gather or summarize in a meaningful way. When this happens, it will be important to provide that time by scheduling a follow up meeting with enough intervening time to gather the data requested. In some cases, the relevant data requested may not exist. In these cases it may be possible to gather the data for the first time, and in others, it is a limitation that cannot be avoided. In all cases, thoughtful preparation of the protocol and anticipation of potential data requests of the participants will be critical to successful analyses.



Facilitator's Guide

Participants

This protocol is meant to be performed with a CSI schools CSIT, please ensure the members of your team meet the requirements of the Education Accountability Act ([quick reference](#)).

Time

The protocol will take 60-90 minutes for each root cause analysis, potentially spaced out over two or more sessions.

Before facilitation:

Make sure all participants have completed Module 2 Appendix i: Identifying Needs, Module 2 Appendix ii: Prioritizing Needs, and have their notes with them.

You'll want a space that can comfortably fit your entire CSIT plus facilitators (up to 18 people). Ensure this space can accommodate presentations from small groups to the entire group, and everyone can see and hear clearly without distractions or background noise. You'll also want break-out space where groups of 4-6 can work independently on separate root cause analyses.

Each small group should have access to the Appendix iii: Root Cause Analyses Note Taking Document (at the end of this guide) as well as sticky notes and chart paper, and if possible, white boards and dry erase markers. Ideally, each group will have internet access where they can reference data about their school. Facilitators should also consider the priority needs identified in the previous protocol, as well as the logic model contained within this protocol to anticipate participant requests for potentially relevant data and bring that in digestible form.

Make sure all participants are informed ahead of time of the objective for this protocol:

To identify the root causes of 3-5 highest priority needs that emerged from the Prioritizing Needs protocol.

You may want multiple facilitators for this protocol.

During Facilitation

1) Whole Group: Formulating Problem Statements

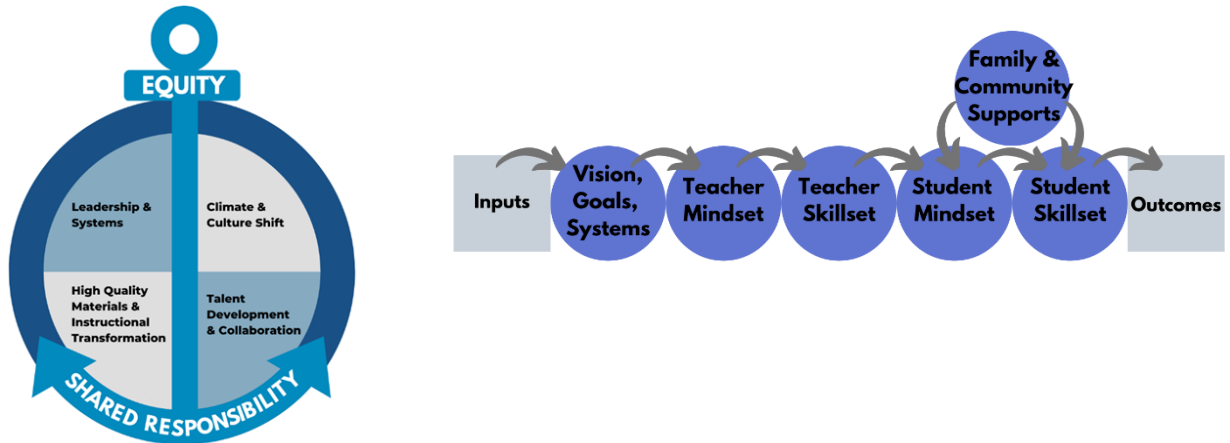
The facilitator will ask the CSIT to take each of their 3-5 highest priority indicators, and rephrase them as problem statements. Problem statements should be precise and measurable and truly speak to the major problem a school wants to understand and address. For example, a CSIT may have identified low student performance in math for multilingual learners (MLLs). They would not want to operate from a problem statement such as "Our MLLs can't do math," which isn't quantifiable or "Math performance is low," which isn't specific enough for their observed need. Rather, they would want to formulate a problem statement like the following: "MLL performance on summative math assessments is low, at XX%." For more information on formulating problem statements, consult Module 2.3.

After the 3-5 high-priority needs have been reformulated as specific, measurable problem statements, the Facilitator should determine how best to break the group down into smaller groups,



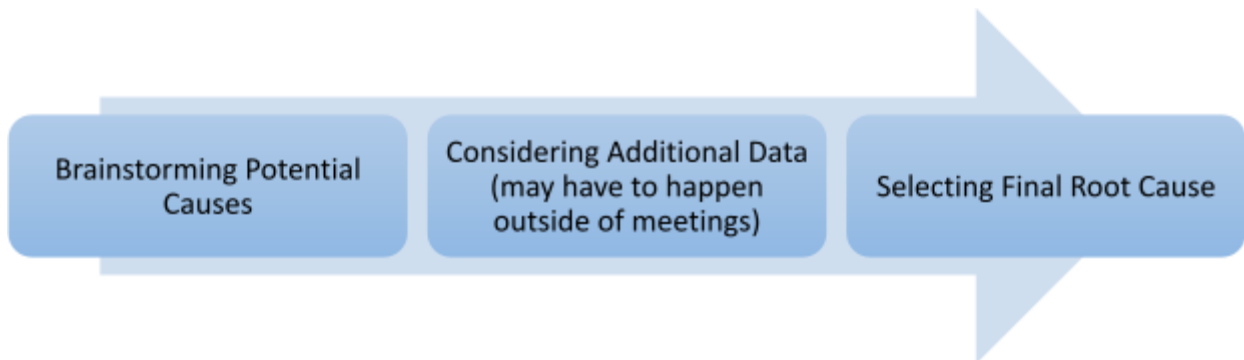
how many root cause analyses each group should be responsible for and, if necessary schedule multiple sessions for conducting all of the root cause analyses. In all cases, members of the CSIT should be working on each root cause in roughly equal numbers. No root cause analysis should be performed in the absence of these two constituent groups. To the extent possible, CSIT members should be afforded choice in which root cause analyses they participate.

2) Reviewing Frameworks and Models



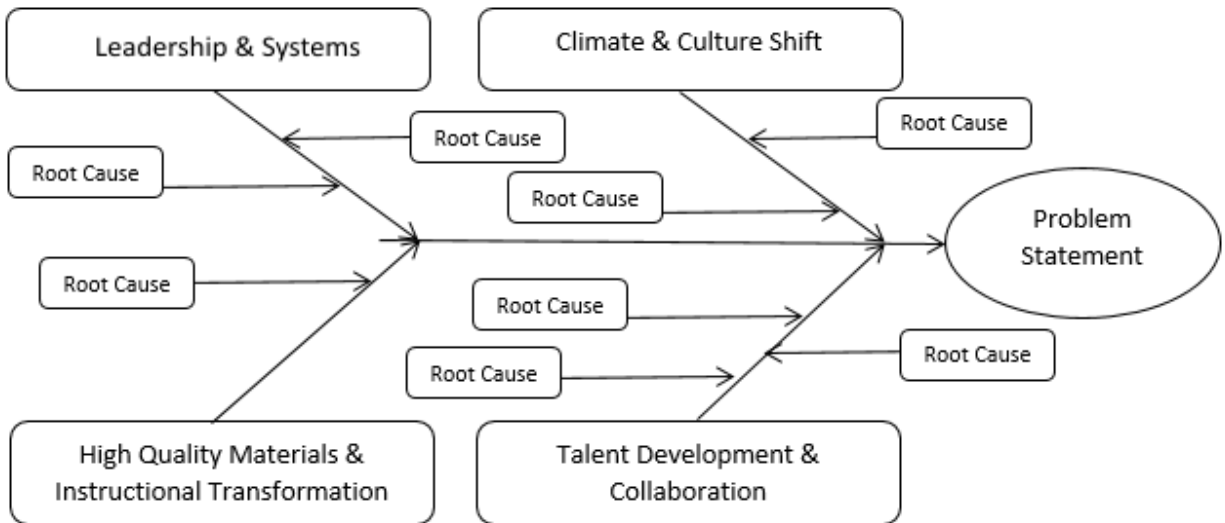
3) Small Group: Conducting the Root Cause Analysis

This small-group phase of the protocol will bring the CSIT through three distinct parts, which may occur all at once, or may have to be broken into multiple meetings:



a) Brainstorming Root Potential Causes

The second phase of the protocol will ask the CSIT to generate as many possible causes of low performance for their high-priority need as they can imagine within the framework of the logic model for educational change included in Module 2.3. The goal of this phase is to generate as many ideas as possible along the causal chain of change, organized into the different categories of the Framework for School Improvement. To organize this process, participants should use a Fishbone Diagram like the one below (also provided on a worksheet at the end of this protocol).



The way a Fishbone diagram is intended to work is to begin with a problem statement and in each category, brainstorm potential root causes that belong to that category. To revisit our example from earlier if our problem statement was: “*MLL performance on summative math assessments is low, at XX%.*” A root cause in the category of *Leadership & Systems* might be that not enough time is allocated in the schedule for adequate language support. A root cause in *High Quality Materials and Instructional Transformation* might be that the mathematics curriculum is too language heavy and not adaptable for MLLs. In *Talent Development and Collaboration* a root cause might be that Mathematics teachers and teachers that support MLLs don’t adequately coordinate. And in *Climate and Culture Shift* a root cause might be low expectations for MLLs academic abilities in general.

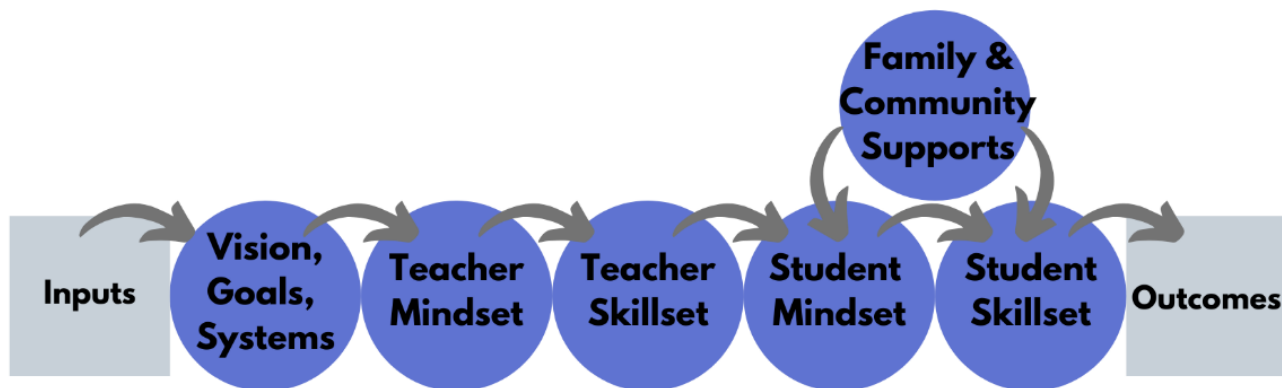
During the generation of root causes, any plausible idea should be included on the diagram, as this is the brainstorming stage. Trimming the diagram will come at a later stage. Also, some root causes may seem to belong in more than one Framework Domain. Try to find consensus on where it best fits and don’t spend too much time debating exactly where it belongs, as the Framework Domains overlap. Participants must avoid assigning blame or value judgments to root causes and also must be instructed neither to try proposing solutions nor deeming a root cause unsolvable.

Sometimes a potential root cause might have its own cause—a deeper underlying root cause. In that case, you can draw additional branches off the fishbone diagram as needed. Fishbone diagrams can get messy quickly and that’s okay. Having plenty of chart paper and whiteboard space can help.

b) Considering Additional data

Once the group is satisfied all plausible root causes have found their way onto their Fishbone diagram, it will be helpful for participants to identify the root causes they believe are most plausible, grounded in data that is either already available, or with identify the kinds of data that might not be available but would help inform the plausibility of the possible root cause. In order to support groups in thinking of the kinds of data that could help support or refute their potential root causes, participants should attempt to categorize their potential root causes into one of the links in the chain of the Logic Model for Educational Change (provided in handout form at the end of this protocol) and crosswalk the kinds of

data that might exist at that link to enrich their thinking. As with student outcome data, any potentially sensitive data should be redacted and sufficiently ensure the privacy of relevant individuals.



Inputs	Vision, Goals, Systems	Teacher Mindset	Teacher Skillset	Student Mindset	Family and Community Supports	Student Skillset ¹
Financial data	Scheduling data	SurveyWorks Teacher Responses	Classroom observations	SurveyWorks Student responses	SurveyWorks family responses	Diagnostic and Formative assessment data
Curricular quality data	Staffing data		Teacher evaluation	Attendance data	Census data	Grades
Hiring and recruitment data	Teacher and principal retention data			After school or extra-curricular participation		Pass rates
Enrollment data	Alignment of time/money to stated priorities					
Student Placement data						

In all cases, additional locally available data may be useful as well. At this stage, if the participants request data that isn't readily available or requires analysis in a different way by LEA professionals, the Facilitator should take their request and inform them that their data will be made available at a future meeting where they can complete their analysis. If all data is available to the satisfaction of participants, they can proceed to the final stage of the root cause analysis.

¹ Participants have already looked at and considered student outcome data when they looked at the report card in Module 2 Appendix I Examining Needs

c) Selecting Final Root Causes

Based on the analysis of additional support data, each small group should come to a consensus about their one or two most likely root causes. These should be causes that have as many of the following characteristics as possible:

The potential root cause should be

- ✓ ...impacting many other areas of low performance
- ✓ ... a source of inequity
- ✓ ...substantiated by multiple sources of data
- ✓ ...within the control of the state, LEA, and/or CSIT

4) Whole Group Share-out

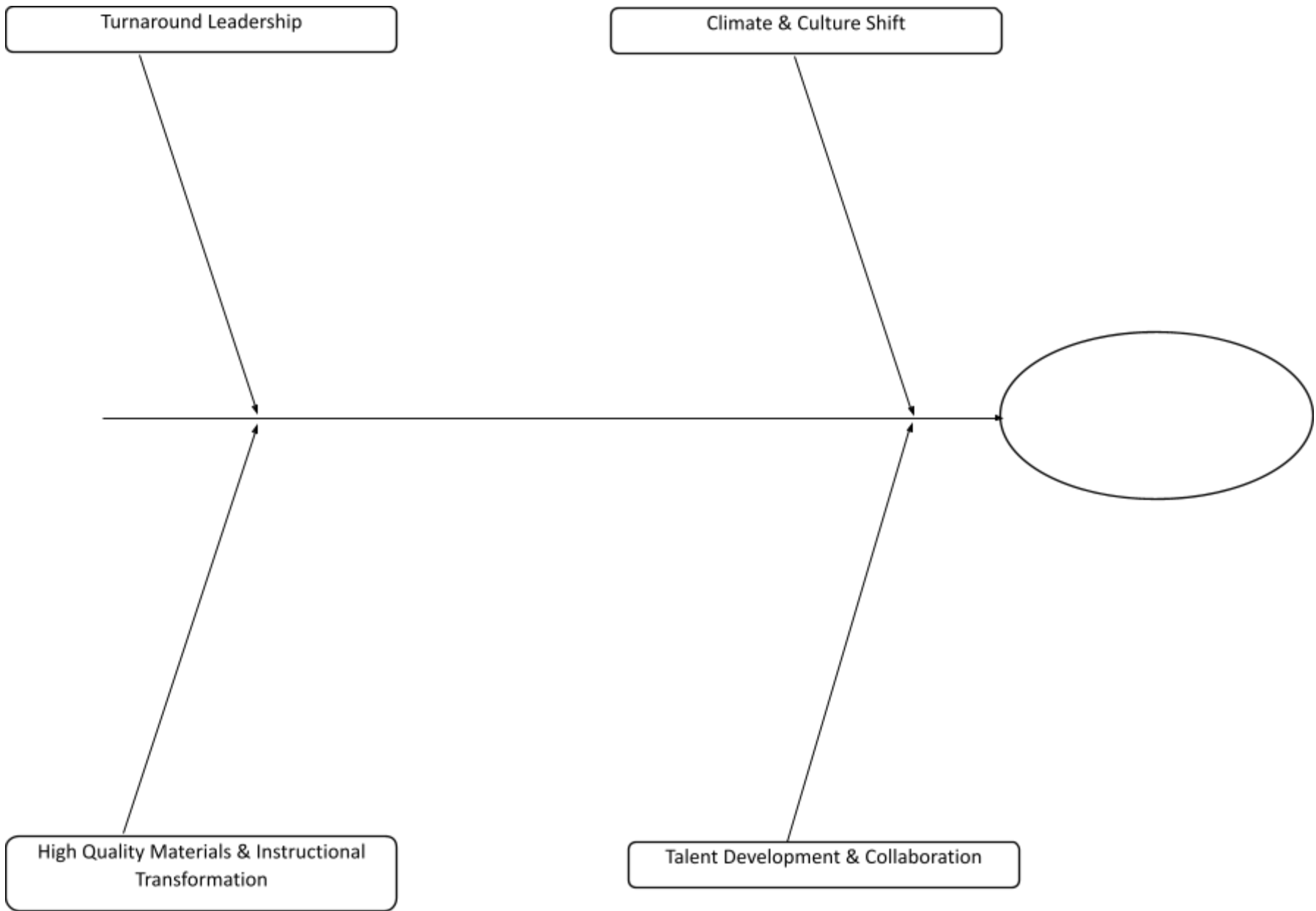
Once the top one or two root causes have been selected, each of the 3-5 small groups should reconvene as a whole group and share out the results of their analysis, including some of the challenges and questions that arose along the way. Small groups should take clarifying questions from the larger group and use that as a final moment to consider their conclusions of root causes. Again, it is important during the share out phase that participants avoid proposing solutions or assigning blame. Facilitators should take notes during this share out and record the identified root cause for each one of the 3-5 highest priority indicators.

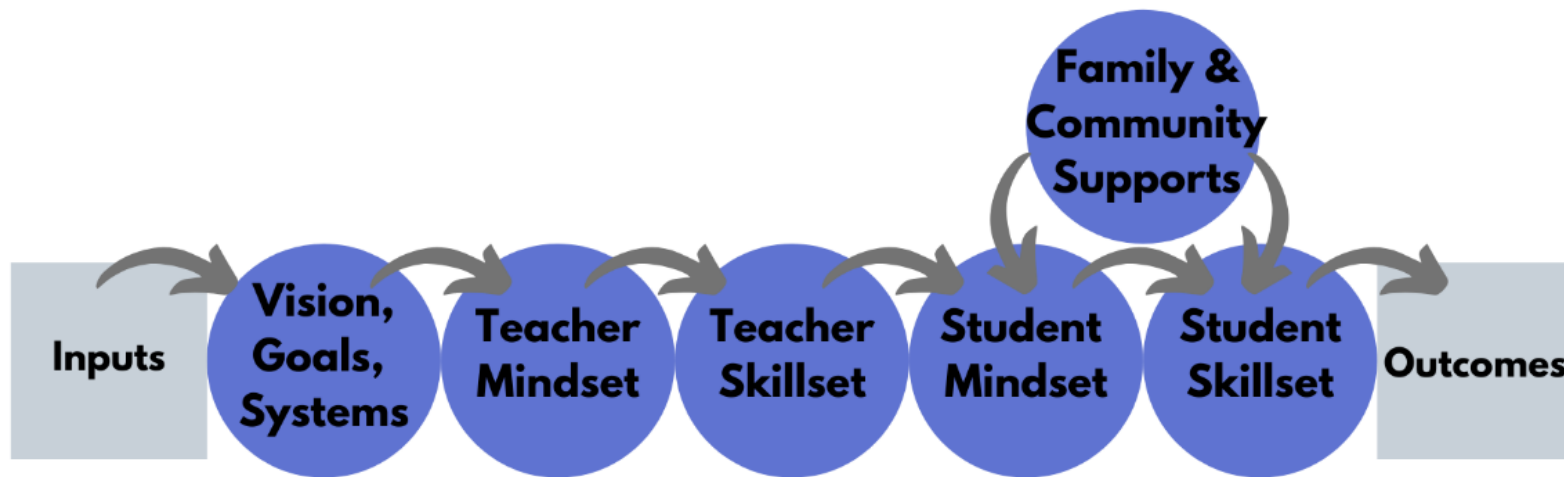
A note on determinations of factors outside of the control:

The nature of the school improvement process is intended to elevate not only schools that are low performing, but also underlying systemic and societal issues which contribute to low performance in schools. To that end, RIDE's Office of School and District Improvement (OSDI) believes that some root causes which may traditionally have been thought of as "outside the control of the school" are not, in fact, beyond the control of the joint efforts of the CSIT, LEA and RIDE. OSDI encourages CSIT members to think critically about what root causes are truly unsolvable, versus those that have merely historically been deemed so. For example, if there are root causes that are deemed unsolvable because of political obstacles, perhaps the CSIT could work to launch an advocacy campaign on behalf of the affected students. In honor of our Framework's value of Shared Responsibility, OSDI believes much more is subject to change in our education system than historically has been considered possible.



Module 2 Appendix iii: Root Cause Analysis Note Taking Worksheet





Notes: