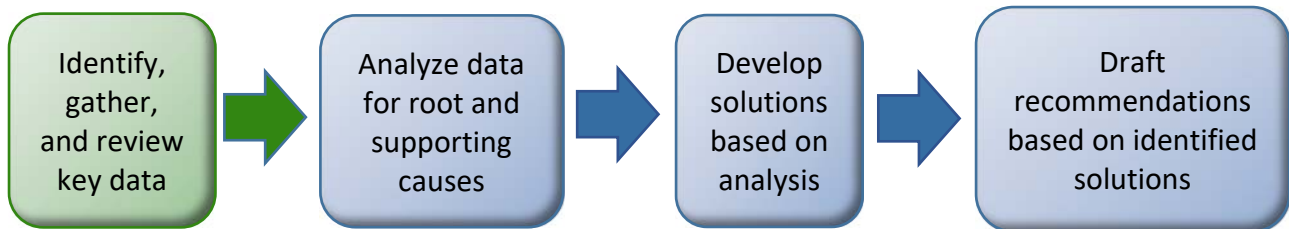


Root Cause Analysis

Nevada Teacher Recruitment and Retention Advisory Task Force
May 16, 2020

Nevada’s Assembly Bill (AB) 276 requires recommendations to address the state’s challenges with respect to teacher recruitment and retention. The Teacher Recruitment and Retention Advisory Task Force (Task Force) has been charged with analyzing relevant national and state-level data and providing draft recommendations to the Legislative Committee on Education.

The Region 15 Comprehensive Center has been asked to provide support to the Task Force with analyzing relevant data. The technical assistance provided supports the process depicted in the graphic below.



At the next meeting of the Task Force, on May 16, the members will engage in a root cause analysis. The following information provides a brief outline for this process.

Root Cause Analysis

Root cause analysis is a structured group process that assists in identifying underlying factors or causes of a challenge or issue. Understanding contributing factors or causes will help the Task Force identify needs and possible solutions to address Nevada’s teacher recruitment and retention challenges.

Conducting a Root Cause Analysis for Your Priority Needs

1. Identify clear and specific primary challenge(s).
2. Ask “Why does the problem exist?” To determine if the answer/response is the root cause of the problem, ask “If the answer identified was somehow addressed, is it likely the problem would recur?” If the answer is yes, it is likely this is a *contributing factor*, not a **root cause**.
3. If the answer provided is a contributing factor to the problem, keep asking “Why?” until there is agreement that the root cause has been identified.

4. It often takes three to five whys, but it can take more than five. So, keep going until there is agreement that the root cause has been identified.

Root Cause Guiding Questions

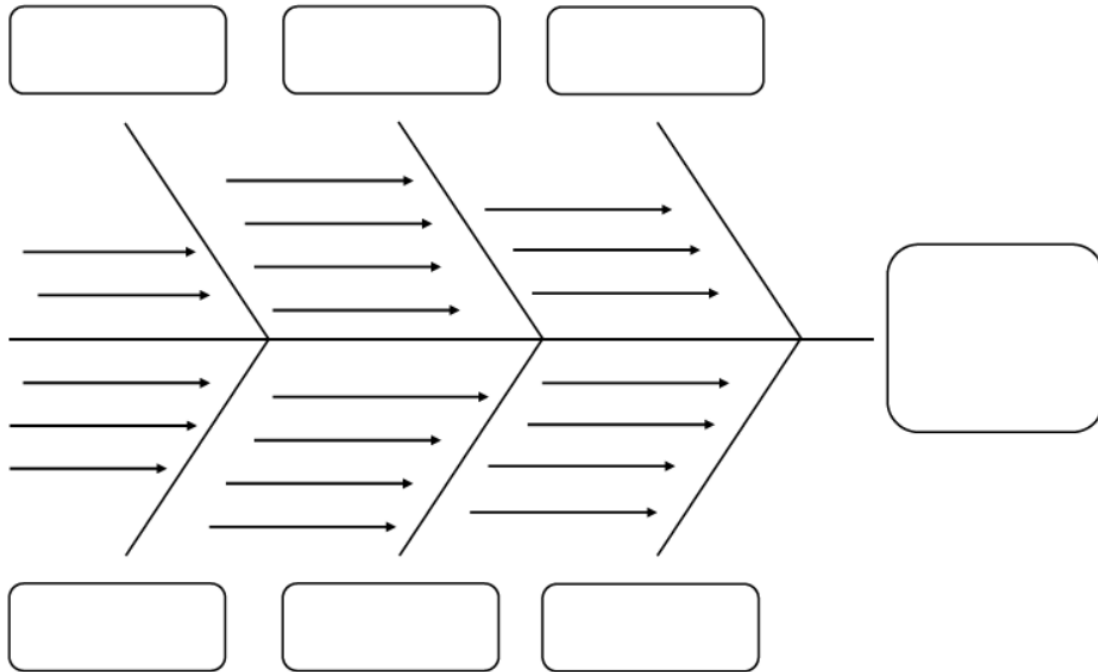
- Would the problem have occurred if the identified cause were nullified?
 - If no, then it is a root cause.
 - If yes, then it is a contributing cause.
- Will the problem recur as the result of the same cause if the cause is corrected or dissolved?
 - If no, then it is a root cause.
 - If yes, then it is a contributing cause.
- Will correction or dissolution of the cause lead to similar events?
 - If no, then it is a root cause.
 - If yes, then it is a contributing cause.

Two useful tools or methods that are used in concert in the root cause analysis process are the fishbone diagram and the “5 Whys” method. Both are useful in distinguishing root causes and contributing factors.

Fishbone Diagram

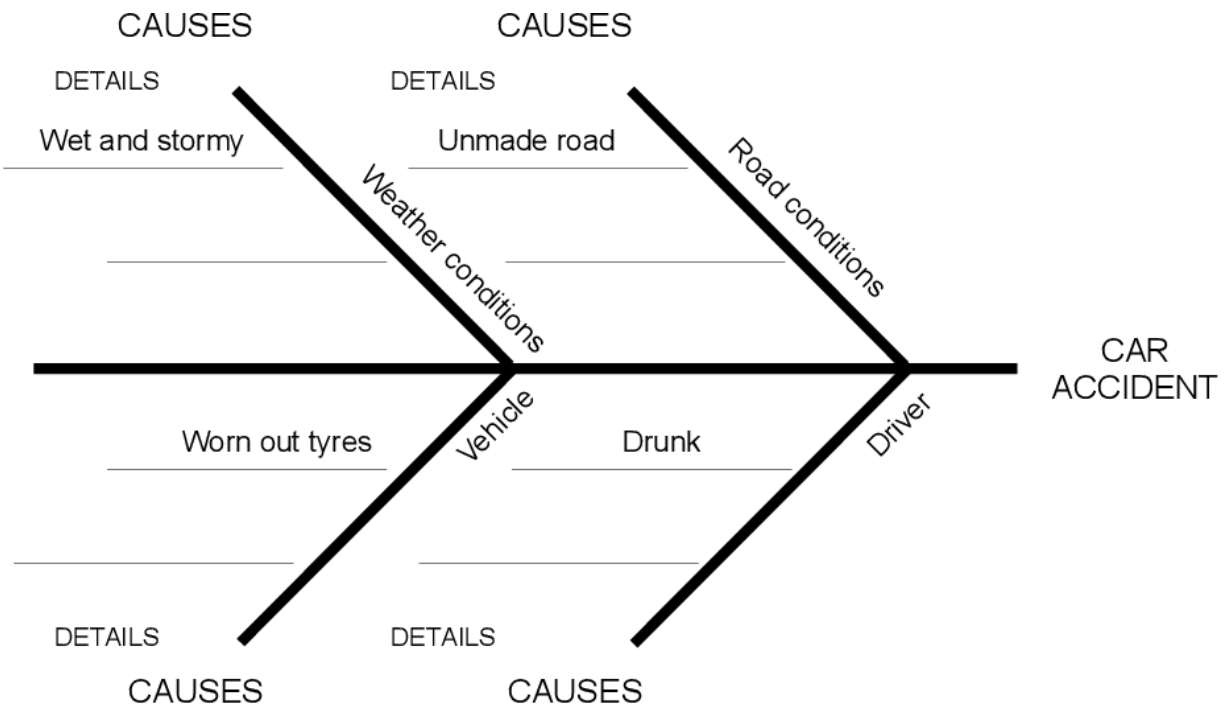
The Fishbone Diagram is useful for brainstorming and organizing causal factors identified as impacting an identified problem. The diagram allows a group or team to identify a problem, its main contributing factors, and related details.

- Brainstorm and record causal factors that may contribute to the occurrence of the problem statement.
- Organize the factors into like groupings or themes and populate the fishbone for the overall problem statement.
- On the fishbone diagram, shown below, the problem statement becomes the top organizational level, or the “head”; the themes become the intermediate organizational level, represented by rectangles; and the individual causal factors (captured on notes) are represented by the arrows.



Source: Maryland Department of Education (2019)

The example below demonstrates the use of the Fishbone Diagram to organize themes and causal factors.



Source: Besnard & Hollnagel (2014)

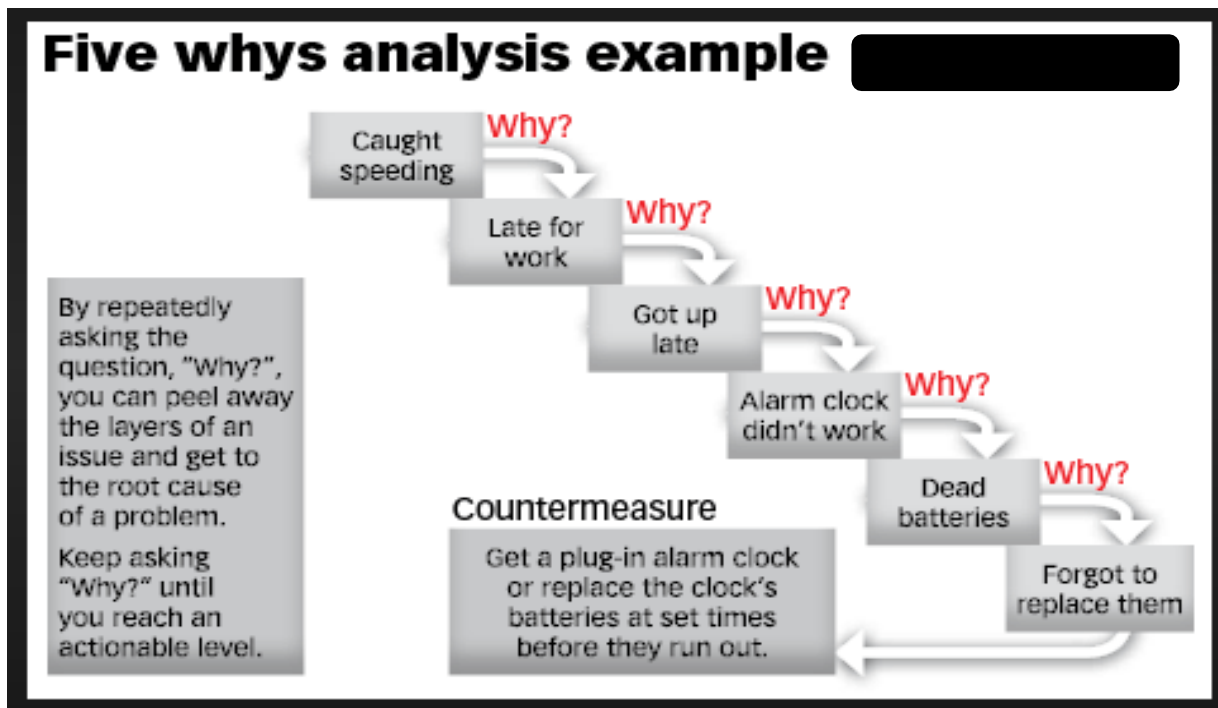
“5 Whys” Method: Analyzing Complex Issues in a Structured Inquiry

The “5 Whys” tool is often used with the Fishbone Diagram as a simple brainstorming tool that can help identify the root cause(s) of a problem. Once a general problem has been recognized, participants ask “why” questions to drill down to the root causes. Asking the “5 Whys” allows teams to move beyond obvious answers and reflect on less obvious explanations or causes. The “5 Whys” process is best used in a group setting to avoid a narrow focus or bias. The graphic below provides a “5 Whys” example.

“5 Whys”: Step-by-Step

1. State the problem you have identified as a strategic problem.
2. Start asking “why” related to the problem. Like an inquisitive toddler, keep asking why in response to each suggested cause.
3. Ask as many “whys” as you need to gain insight at a level that can be addressed (asking five times is typical). You will know you have reached your final “why” because it does not make logical sense to ask “why” again.

The graphic below provides a “5 Whys” example.



Source: Arizona Department of Education (2017)

The “5 Whys” Process

Causal Factor Statement Shared

Example: *High rates of absence during the testing window in grades 3-5 impact student preparation for state testing.*

Guiding Questions

Why do we have the challenge identified above? (Note: During this phase of the process, ask the question “why” until arriving at the underlying cause.)

First response shared: Students and families appear to undervalue the state test.

To the first response, ask, “Why is that the case?”

Response given... Ask, “Why is that the case?”

Response given... Ask, “Why is that the case?”

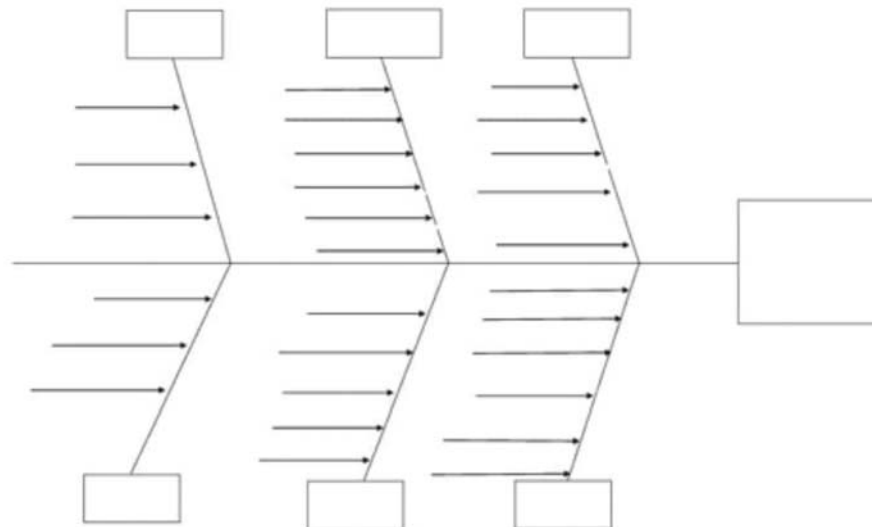
Response given... Ask, “Why is that the case?”

Underlying Cause Identified

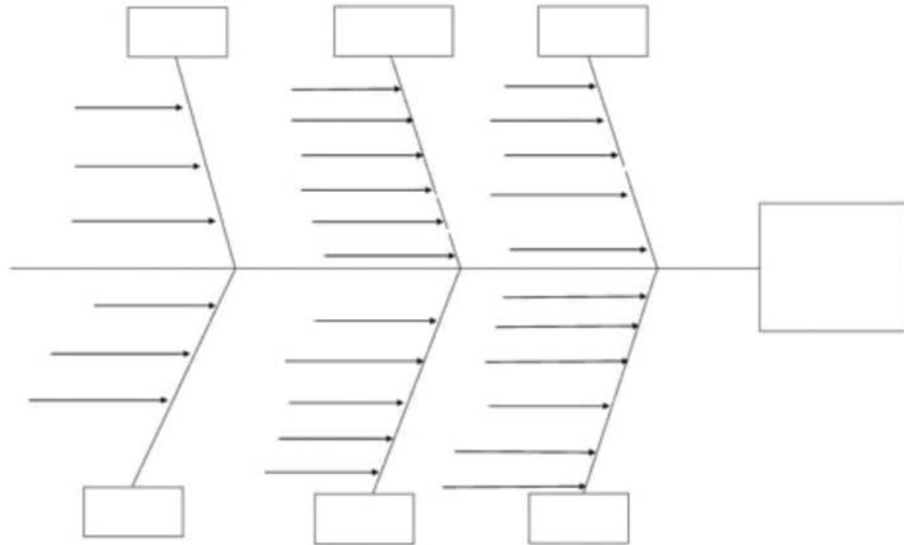
The school does not publicize the importance of testing and adequately prepare families.

Nevada Task Force on Teacher Recruitment and Retention Fishbone Diagrams

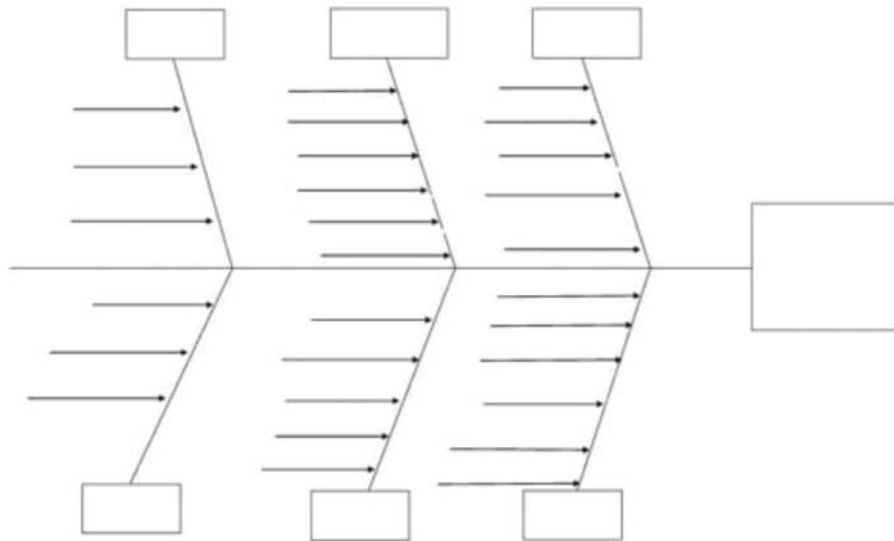
What are the major causes of Nevada’s recruitment-to-profession challenge? (Head of fish and spine)



What are the major causes of Nevada’s recruitment-to-employment challenge? (Head of fish and spine)



What are the major causes of Nevada’s retention challenge? (Head of fish and spine)



Adapted From

Arizona Department of Education. (2017). *Comprehensive Needs Assessment Guidance, Tools, and Resources*. <https://cms.azed.gov/home/GetDocumentFile?id=59010bd01130c00aac6612c3>.

Besnard, Denis & Hollnagel, Erik. (2014). I want to believe: Some myths about the management of industrial safety. *Cognition, Technology & Work*. 16. 10.1007/s10111-012-0237-4.

Maryland State Department of Education. (2019). *Root Cause Analysis Facilitator Guide*. <https://www.marylandresourcehub.com/root-cause-analysis>.