Analyze: Data Variation Part 2: Share and Explore

Facilitator Guidance Document

## Why It’s Important

* Data variation can offer valuable insights during the Needs Assessment process. Teams that understand the patterns within the data can identify areas that may require additional attention and resources to drive continuous improvement.

## How This Activity Fits into the Improvement Planning Process

* ***Analyze: Data Variation Part 2: Share and Explore*** is the second required activity within the Five-Part Needs Assessment process. There are two parts to the Analyze: Data Variation process:
	+ First, the school leader will conduct Part 1: Identification
	+ Then, the school leader will meet with the school’s NYSED or District liaison to discuss the findings from Part 1 and plan for how to approach Part 2 and the rest of the Needs Assessment.
	+ Following that meeting, the SCEP Team will meet to explore the findings that came from Part 1 during the **Part 2: Share and Explore** meeting.



## Guidance for School Leaders

### Potential for Customization

* In Part 1, the principal analyzed data through various perspectives. Part 2 can be tailored to focus on the most significant aspects from Part 1 that require further exploration with the entire team.

### Prior to the Meeting

**Meeting with Your Liaison**

* Ensure that you meet with your assigned liaison before this meeting. Schools in the Comprehensive Support and Improvement (CSI) model will collaborate with a liaison from the New York State Education Department (NYSED), while schools in the Additional Targeted Support and Improvement (ATSI) and Targeted Support and Improvement (TSI) models will work with a liaison from their District or, if applicable, BOCES.

**Preparing Your Data**

* Use **Item Analysis** tools in Level 1 State Assessment Reports to identify specific gaps within the data variations.
* If Part 1 identified gaps that require further exploration, identify local data to share to assess whether those variations are also present in other datasets.
* Prepare the data in a way that is clear and easily interpretable for all team members.
* If possible, share the data with participants before the meeting.
* To make the most of the meeting time, consider:
	+ Encouraging participants to review the data beforehand.
	+ Distributing [Data Analysis worksheets](#_Data_Analysis_Worksheet) in advance so participants can note their observations ahead of time.

**If No Data Variation was Identified**

* In some cases, principals may not find variations in data between subjects (ELA vs. Math), grade levels, cohorts, or Regents Assessment trajectories. If this happens, the principal should explore the Item Analysis tools in Level 1 State Assessment Reports to check for performance variations in specific ELA and Math standards. It may also be helpful to review local assessment data to identify potential discrepancies.

## Conducting Your Meeting

### Starting Your Meeting

1. Some teams may have been meeting regularly to monitor the current year’s SCEP implementation. Since this is the first meeting focused on conducting the needs assessment and developing next year’s plan, it’s important to take time to frame the process and introduce any new team members before diving into the data.
2. When framing the process, emphasize that successful organizations take the time to understand their needs and create plans to address them. Planning should not be viewed as a mandatory task but rather as a productive and necessary practice for improvement.
3. For teams that haven’t met regularly before this meeting, especially those from newly identified schools, it may be helpful to **facilitate introductions** and provide a chance for team members to share something about themselves.
	* A prompt like “***What are you most proud of about our school?***” can help set a positive tone, encouraging open communication and framing the plan development process as an opportunity for growth, not punishment.
	* For those interested, NYSED offers an optional “Envision” activity, which helps schools reflect on their vision, values, and aspirations.
4. The facilitator should use prompts similar to the ones below to facilitate a discussion. An optional [worksheet](#_Data_Variation_Worksheet) has also been provided to help capture team members’ thoughts.

### Present Data Variations to the team

1. Share the data variations identified in the initial Data Variation activity. Start with **Noticings** and **Wonderings**.
2. Connect local data to the data variation identified (standard, the grade level, the subject, etc.):
	* *What does our local data say about [the standard, the grade level, the subject, etc.]?*
	* *Where do we see similarities in our local data?*
	* *Where do we see differences in our local data?*
3. Identify how to use the Needs Assessment to unpack root causes later:
* *How can we learn more about the factors that are contributing to this variation?*
* *Later in the Needs Assessment, we are going to analyze survey data and interview students. What should we be looking for to better understand this variation?*
* *At the conclusion of the Needs Assessment, we are going to do a root cause analysis.* ***What information do we need to gather to be able to answer questions like****:*
	+ "*Why is this [the specific data variation or other narrow issue] happening?* (What factors might be contributing to this trend or variation?)
	+ *Why do the factors within our control exist as they do?* (What school-based decisions, structures, or practices contribute?)
	+ *For internal factors, what actions can we take to create meaningful change?* (What policies, practices, or resources can we adjust?)
	+ *Why haven’t we addressed this issue before?* (What barriers—awareness, capacity, resources, or priorities—have prevented action?)
	+ *Why is this issue impacting some students/staff more than others?* (What differences in experience, support, or opportunity might be contributing to disparities?)
1. Consider positive outliers:
* *We’ve been focusing on where some of our state data is lower than anticipated. Is there anything we can learn from where our state data is higher than anticipated?*

**Repeat these steps** for other Data Variations identified. After multiple variations have been explored, proceed to step 5. The optional [Variation Summary](#_Variation_Summary) has been provided to capture team members’ thoughts.

1. Identify trends and summarize findings:
* Now that we’ve gone through a few variations, do we notice any trends about the data we have been discussing?
* Do we notice any trends that differ across the different types of data (*e.g. both the 4th and the 5th grade really struggles with short response on the math exam but do well with short response on the ELA exam?*)?
* What questions remain that we want to explore further?

### Further Exploration

Teams may want to consider conducting a **Fishbone Diagram** to explore the Variation in greater detail.

* The [New York City Improvement Science Handbook](https://nycdoeishandbook.org/) contains a 60-minute [Fishbone Activity](https://nycdoeishandbook.org/wp-content/uploads/2021/07/activity-fishbone-diagram.pdf) with facilitator directions and fillable forms teams can use.
* The [Continuous Improvement Toolkit](https://ies.ed.gov/ies/2025/01/continuous-improvement-education-toolkit-schools-and-districts) from the Institute for Education Sciences has a Fishbone Activity beginning on page 40.

Teams may want to incorporate any existing **data review protocols** (e.g. Data Wise) the school has been using.

### High School Systems Discussions

When high school principals completed the High School Data Variation Activity 1, they not only analyzed specific Regents results but also considered key reflective questions about their school systems. For the Share and Explore activity, the principal should:

1. Bring these reflection prompts to the team for broader discussion; AND
2. Determine how the team can further explore and deepen their understanding of these systems through the Survey Analysis and Student Interview activities.

# Data Variation Worksheet

This is an optional worksheet to capture the team discussion about data variation. This is designed for teams to complete one worksheet for each of the variations reviewed.

### Understanding The Data

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| --- | --- |
| What data are we reviewing? |  |
| What does this data measure? |  |
| What population is included in this data? |  |
| Are there any limitations to this data (i.e., are there things that this data does not tell us)? |  |
| What factors might impact the reliability of this data? |  |

### Considering What the Data Reveals

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| --- | --- | --- |
| **Prompts** | **Notice:***Only Facts - No Opinions* | **Wonder:***What questions do you have?**What do you need to know more about?* |
| What variations do we see with this data?    |   |   |
| Is there anything else that stands out when looking at this data?  |   |   |

### Connecting to Local Data

*What does our local data say about [the standard, the grade level, the subject, etc.]?*

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| --- | --- |
| *Where do we see* ***similarities in our local data*** *with [the standard, the grade level, the subject, etc.]?* |  |
| *Where do we see* ***differences in our local data*** *with [the standard, the grade level, the subject, etc.]?* |  |

### Using the Needs Assessment to Unpack Root Causes

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| --- | --- |
| *How can we learn more about the factors that are contributing to this variation?* |  |
| *Later in the Needs Assessment, we are going to analyze survey data and interview students. What should we be looking for to better understand this variation?* |  |
| *At the conclusion of the Needs Assessment, we are going to do a root cause analysis.* ***What information do we need to gather to be able to answer questions about why this variation exists?*** |  |

### Considering Positive Outliers

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| --- | --- |
| *We’ve been focusing on where some of our state data is lower than anticipated. Is there anything we can learn from where our state data is higher than anticipated?* |  |

### Exploring Further

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| What insights do we have that may account for the variations identified? *(consider a* [*Fishbone Activity*](https://nycdoeishandbook.org/wp-content/uploads/2021/07/activity-fishbone-diagram.pdf) *if it would be helpful)* |
|  |
| How might we organize our student interviews to better understand this variation? |
|  |

# Variation Summary

After reviewing multiple data sets, consider the following questions:

|  |
| --- |
| Are there trends about the data we have been discussing?  |
|  |
| Are there trends that differ across the different types of data (e.g. the 5th grade really struggles with short response on the math exam but do well with short response on the ELA exam?)? |
|  |
| What questions remain that we want to explore further? |
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