Discourse Moves for Fostering Confident Math Learners

We ALL speak math

North Carolina Collaborative for Mathematics Learning www.nc2ml.org

Revoicing / Asking Students to Revoice

What is it?

Restating or rephrasing a students' mathematical contribution. This can be done by the teacher or the teacher can ask a student to revoice a classmate's contribution.

Why do we use it?

Revoicing or asking students to revoice, amplifies students' ideas, positions students as competent thinkers, supports students as they learn to listen and make sense of their peers' thinking, provides an opportunity to clarify ideas for the student and others, and allows for linking ideas and advancing a mathematical discussion.

When Revoicing / Asking Students to Revoice...

Teachers are...

- restating, or asking others to restate, and then asking the student if the restatement is what they meant or not
- recording students' ideas on the board
- rephrasing students' ideas to build understanding and/or to offer precise mathematical language
- restating multiple ideas and asking students to consider their connections

Students are...

- rephrasing each other's ideas in their own words
- learning to listen
- seeing their ideas and their peers ideas as valued contributions
- considering how ideas are connected
- making connections between common language and precise mathematical language

So, I hear you saying that ...

Can someone say that in their own words?

What I think I heard Carlos say is ...

This is what I heard (points to the board), is that what you meant?

What do you understand Kendra is saying?

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Discourse Move: Revoicing / Asking Students to Revoice

To create an environment where students co-construct mathematical ideas together, we need to get students talking.

Support for Administrators

NC Professional Teaching Standards

Revoicing/Asking Students to Revoice aligns to Standard 2 and Standard 4.

2a. Teachers encourage an environment that is respectful.

4b. Teachers engage students in the learning process.

4e. Teachers help students exercise and communicate sound reasoning.

NC Portrait of a Graduate

Revoicing/Asking Students to Revoice aligns to the Communication and Empathy competencies.

- Listen to decipher meaning, values, attitudes, and intentions.
- Ask questions and synthesize messages to seek understanding.
- Share in others' feelings, opinions, and through personal and digital connections.

Standards of Mathematical Practice (SMP)

SMP1 – Make sense of problems and persevere in solving them.

- Understand the approaches of others to solve complex problems.
- SMP 3 - Construct viable arguments and critique the reasoning of others.
- LIsten to or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

COACHING UP

When working with a teacher, here are some questions to help coach the teacher to implement the discourse move of Revoicing / Asking Students to revoice in their classroom.

Consider this...

- How do you encourage students to communicate sound reasoning in an inviting, respectful and flexible learning environment? How do you, as a teacher, cultivate a respectful environment while actively engaging students in the learning process?
- How do you intentionally help students understand the approaches of others to solving complex problems?

Digging Deeper for Discourse

- How do you listen to students decipher meaning, values, attitudes, and intentions, and ask questions to synthesize the mathematics and seek understanding?
- How does the practice of asking students to restate or rephrase their mathematical contributions contribute to an inclusive classroom atmosphere?
- How does the strategy of asking students to revoice their mathematical thinking through restating or rephrasing support the goal of creating an inclusive and supportive classroom environment that advances the math standards?

Note: This resource is being co-designed by the NC math education community. We welcome feedback to inform its refinement at https://forms.gle/8PBWGsvqJQzcdtCF8 Check the website (nc2ml.org/high-school-teachers) for the most up to date resources.