

## Feedback Without Fatigue

Ways to Provide Students with Effective Feedback  
while Avoiding Burnout

<http://bit.ly/NCTM19feedback>

Christine Koerner

Director of Secondary Mathematics and K-12 Computer Science  
Oklahoma State Department of Education

---

---

---

---

---

---

Christine Koerner  
Director of Secondary Mathematics  
and K-12 Computer Science

Oklahoma State Department of Education  
[christine.koerner@sde.ok.gov](mailto:christine.koerner@sde.ok.gov)  
405-522-5628

Twitter: @christinegoko



<http://bit.ly/NCTM19feedback> 2

---

---

---

---

---

---

## Goals for this session:

- Define effective feedback
- Develop reflective practices and classroom activities for issuing verbal and written feedback
- Practice providing feedback

<http://bit.ly/NCTM19feedback> 3

---

---

---

---

---

---

What is feedback?

Visit  
[Menti.com](https://bit.ly/NCTM19Feedback4)

<https://bit.ly/NCTM19Feedback4>

---

---

---

---

---

---

What is feedback?

- Communication with students
- Addresses what is correct and elaborates on what students need to do next
- Helps to meet students' needs
- Connects to learning objectives/standards
- Focuses on students' work and explanation of their processes

<https://bit.ly/NCTM19Feedback5>

---

---

---

---

---

---

Why is feedback important?

- Engages students and teachers in the learning process
- Helps students make connections from process to product
- Allows students to see how close they are to achieving their goals
- Provides students with information about their math *performance*

<https://bit.ly/NCTM19Feedback6>

---

---

---

---

---

---

## Effective Feedback: John Hattie and Helen Timperley

- *Where am I going?* (Goals)
- *How am I getting there?* (Process)
- *Where to next?* (Extend and Connect)

<http://bit.ly/NCTM19Feedback>

---

---

---

---

---

---

“ The research quite clearly shows that kids **who are graded** – and have been encouraged to try to improve their grades – tend to **lose interest in the learning itself**, avoid challenging tasks whenever possible (in order to maximize the chance of getting an A), and think less deeply than kids who aren't graded.  
-Alfie Kohn

”

8

---

---

---

---

---

---

## When you look at student work, what do you see?

1. Which set of numbers is arranged in order from least to greatest?

A  $0.25, \frac{1}{3}, \frac{2}{5}, 0.85$

B  $\frac{1}{3}, 0.25, \frac{2}{5}, 0.85$

C  $0.25, 0.85, \frac{1}{3}, \frac{2}{5}$

D  $\frac{1}{3}, \frac{2}{5}, 0.25, 0.85$

A) **-3**

Greater than  $\frac{14}{3}$

Yes ☒ No ☐

Handwritten:  $\frac{14}{3} = 4\frac{2}{3}$ ,  $-3 < 4\frac{2}{3}$ , "Greater"

A) **-3**

Greater than  $\frac{14}{3}$

Yes ☒ No ☐

Handwritten:  $\frac{14}{3} = 4\frac{2}{3}$ ,  $-3 < 4\frac{2}{3}$ , "Greater"

A) **-3**

Greater than  $\frac{14}{3}$

Yes ☒ No ☐

Handwritten:  $\frac{14}{3} = 4\frac{2}{3}$ ,  $-3 < 4\frac{2}{3}$ , "Greater"

9

---

---

---

---

---

---

## Categorizing Student Work

### Activity: Formative Assessment Sort

- Thorough Understanding/Explanation (UE)
- Thorough Understanding (U)
- Misconception with Concept (MC)
- Misconception with math not directly tied to concept (MM)
- No Understanding of Concept (Ø)
- Absence (A)

<http://bit.ly/NCTM18feedback> 10

---

---

---

---

---

---

## Reflection:

How does categorizing help us provide **effective and timely** feedback?

<http://bit.ly/NCTM18feedback> 11

---

---

---

---

---

---

### Activity: Pick Three

#### Pick Three Activity Sheet

*For three students' responses:*

- Identify which type of feedback would be most helpful for this student (which question's answer would help them most?)
- Document specific feedback you might give to this student.

<http://bit.ly/NCTM18feedback> 12

---

---

---

---

---

---

## "In the Moment" feedback

### *Before feedback, allow for:*

- Goal-Setting
- The Struggle!
- Student Reflection Time
- Peer Feedback
- Student Dialogue/Explanation

### *Avoid:*

- Too Much Feedback
- Student Dependence
- "Meaningless" Feedback
- "Pencil-Grabbing"
- Judgment

<http://bit.ly/NCTM19Feedback> 13

---

---

---

---

---

### **Activity:** 10 Minute "Quickfires"

### Let the Students Do the Work!

- Ask Questions
- Student Discussion
- Student recorded/spoken explanation

<http://bit.ly/NCTM19Feedback> 14

---

---

---

---

---

## 10 Minute Quickfire: Asking Questions/Conferring

### *Student Rules:*

- Try your best to jump into the brain of a seventh grader (scary, I know)
- You write, you explain

### *Teacher Rules:*

- You are only allowed to ask questions
- Think about what you are learning as you listen
- Do not grab for that pencil!

<http://bit.ly/NCTM19Feedback> 15

---

---

---

---

---

## 10 Minute Quickfire: Asking Questions/Conferring

### Student Math Task:

*A large pizza has a diameter of 12 inches. A small pizza has a diameter of 6 inches.*

Jasmina claims, "I get the same amount of pizza from three small pizzas as from one large pizza!"



Is Jasmina correct about the pizzas?

- If you think she is correct, explain why.
- If you think she is incorrect, replace her claim with one that is correct.

If the price for a small pizza is \$3, what is a fair price for a large one? Explain your answer.

<http://bit.ly/NCTM18feedback> 16

---

---

---

---

---

---

## 10 Minute Quickfire: Asking Questions/Conferring

### Teacher Guiding Questions:

- What do you notice?
- What do you need to know to solve this problem?
- Where do you want to start?
- Why do you think this is the next step?
- Are you confident in your answer?

<http://bit.ly/NCTM18feedback> 17

---

---

---

---

---

---

## 10 Minute Quickfire: Asking

### Teacher Guiding Questions:

- What do you notice?
- What do you need to know to solve this problem?
- Where do you want to start?
- Why do you think this is the next step?
- Are you confident in your answer?

*A large pizza has a diameter of 12 inches. A small pizza has a diameter of 6 inches. Jasmina claims, "I get the same amount of pizza from three small pizzas as from one large pizza!"*

**Student Task: Is Jasmina correct about the pizzas?**

- If you think she is correct, explain why.
- If you think she is incorrect, replace her claim with one that is correct.

If the price for a small pizza is \$3, what is a fair price for a large one? Explain your answer.

<http://bit.ly/NCTM18feedback> 18

---

---

---

---

---

---

## Reflection:

- What did you/would you learn about the student's understandings from this activity?
- What "category" would this student fit into?
- What would you suggest as next steps for this student after having this conversation?
- How would you move forward in your instruction?
  - ◆ Enhancement suggestion: Extend the concept (rather than automatically moving to the next)
  - ◆ Re-Teach suggestion: small group activity that encourages explanation

<http://bit.ly/NCTM18feedback19>

---

---

---

---

---

---

## 10 Minute Quickfire: Student Discussion

*Showdown (all of you are students for this one!):*

1. Pick one of the cards from the pile.
2. Everyone, **solo**, solves the task on their own dry erase board.
3. When everyone is ready, the group yells "SHOWDOWN!" and reveals their boards.
4. If everyone agrees, write the answer on your piece of paper (take turns writing answers) If not everyone agrees, each person explains their reasoning and debates until the group reaches a consensus!

<http://bit.ly/NCTM18feedback20>

---

---

---

---

---

---

## Reflection:

- What did you/would you learn about the student's understandings from this activity?
- What would the teacher be doing during this activity?
- What would you suggest as next steps for each student?
- How would you move forward in your instruction?

<http://bit.ly/NCTM18feedback21>

---

---

---

---

---

---

## 10 Minute Quickfire: Student Spoken/Recorded

Digital:

→ [Blabberize](#)

Unplugged:

→ [Sage-N-Scribe](#)

→ Pick one of the math problems from the category sort.

→ Use the student's work to guide your explanation on Blabberize or in the Sage-N-Scribe activity (or come up with your own!)

<http://bit.ly/NCTM19feedback> 22

---

---

---

---

---

## 10 Minute Quickfire: Student Spoken/Recorded

Digital:

→ [Blabberize](#)

Unplugged:

→ [Sage-N-Scribe](#)

→ *Digital:* Trade your "Blabberized" picture with another person; provide feedback to this "student"

→ *Unplugged:* Scribe should determine what type of feedback the Sage should receive

<http://bit.ly/NCTM19feedback> 23

---

---

---

---

---

## Reflection:

- What did you/would you learn about the student's understandings from this activity?
- What would the teacher be doing during this activity?
- What would you suggest as next steps for each student?
- How would you move forward in your instruction?

<http://bit.ly/NCTM19feedback> 24

---

---

---

---

---



## Activities Geared Toward Providing Instant/Timely Feedback

### Digital:

- [Desmos](#)
- [Quizlet](#)
- [Kahoot](#)
- [Socrative](#)

### Unplugged:

- Sage-N-Scribe
- Showdown
- Pairs-Compare
- Setting Weekly Goals

### Remember:

Discussion and questions  
are key!

"The power of teaching is in  
the art of listening."  
-John Hattie

<http://bit.ly/NCTM19feedback> 25

---

---

---

---

---

## Additional Ways to Provide Feedback

- [Rubrics](#)
- [Peer Review](#)
- Student Self Reflection
  - ◆ [General/Quarterly](#)
  - ◆ [Content Specific](#)
- [Google Forms](#)
- Post-Its
- Student-Input Rubrics
- [Observation Data](#)
- [Progress toward SMART Goals](#)
- Ask your students!

<http://bit.ly/NCTM19feedback> 26

---

---

---

---

---

Christine Koerner  
Director of Secondary Mathematics  
and K-12 Computer Science

Oklahoma State Department of Education  
[christine.koerner@sde.ok.gov](mailto:christine.koerner@sde.ok.gov)  
405-522-5628

Twitter: @christinegoko



<http://bit.ly/NCTM19feedback> 27

---

---

---

---

---

Bright, G.W., & Joyner, J.M. (2016). *Informative Assessment: Math Solutions*.

Dean, C.B., Hubbell, E.R., Pitler, H., & Stone, B.J. (2012). *Classroom Instruction that Works*. McREL.

Clarke, S. & Hattie, J. (2019). *Visible Learning: Feedback (Volume 2)*. New York: Taylor & Francis.

*Getting Feedback Right: a Q&A with John Hattie* (2018, June 19). Retrieved from Education Week:  
<https://www.edweek.org/ew/articles/2018/06/20/getting-feedback-right-a-qa-with-john.html>

*John Hattie & Helen Timperley: Visible Learning and Feedback* (2019). Retrieved from Visible Learning:  
<http://visible-learning.org/2013/02/john-hattie-helen-timperley-visible-learning-and-feedback/>

Long, C. (2015, August 19). *Are Letter Grades Failing Our Students?* Retrieved from neaToday:  
<http://neatoday.org/2015/08/19/are-letter-grades-failing-our-students/>

*Peer Assessment*. (2015). Retrieved from MindsetKit: <https://www.mindsetkit.org/practices/DP0qqsQz1tctvb>

The Australian Society for Evidence Based Teaching. (n.d.). *Feedback*. Retrieved from The Australian Society for Evidence Based Teaching:  
<http://www.evidencebasedteaching.org.au/crash-course-evidence-based-teaching/how-to-give-effective-feedback-to-your-students/>