

FIVE STRATEGIES DESIGNED TO DEVELOP METACOGNITION IN THE CLASSROOM

When I began prioritizing the development of metacognitive skills in my classroom, students pushed back. They were not used to thinking about their skills and progress. Teachers had always done these tasks for them. At first, students found it uncomfortable, mentally taxing, and time-consuming to think metacognitively about their learning. They had a hard time putting into words why they used specific strategies, articulating what they were struggling with, and evaluating the quality of their work. On several occasions, I heard comments like, “Why do we have to do this?” “Isn’t this *your* job?” “This is hard. I don’t know what to say.” Instead of caving in the face of their frustration and resistance, I reminded myself that a partnership model is grounded in a common purpose, reciprocity, and shared commitment to learning. If I wanted to cultivate a student-centered, student-driven learning environment, students had to get comfortable thinking about their learning.

In this chapter, I review five strategies that I designed to help my students develop metacognitive skills. Ideally, I suggest that teachers dedicate time in class to these tasks, so students view them as central to work happening in the classroom. I know teachers are crunched for time, but we make time for the things we value, and prioritizing metacognition in the classroom will

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help students develop skills that are necessary if they are going to be our partners in the learning process. Learning must be a shared responsibility between the students and the teacher, but students require support and structure when developing metacognitive skills.

#1 Plan Your Attack

Students are often told exactly how to execute tasks in the classroom. They need opportunities to plan their learning and think about how they want to approach a complex assignment or project. Students must practice thinking about what they are going to do before they do it and planning the necessary steps to accomplish a task. This planning time can help students develop self-regulation skills, which are a critical component of metacognition.

Prior to beginning a multistep task or assignment, teachers can give students the Plan Your Attack document, pictured in Figure 4.2, which prompts

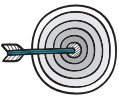



them to think about how they intend to complete the parts of the task. The Plan Your Attack document asks students to articulate a goal they have for themselves in relation to the assignment. Their goal might be academic, such as “I want to develop my analytical skills, develop my use of modeling to solve problems, or incorporate more detail into my description.” Alternatively, their goal may be personal or related to study habits, such as “I want to manage my time better, avoid getting distracted by my phone, or ask for help when I get confused or cannot figure something out.”

Once students have stated a clear goal for the assignment, they must think through and describe the process they plan to use to complete the various steps of the task or assignment. At this stage, students will need to consider the strategies they will use and explain why the strategies they’ve selected will help them to accomplish their goal.

Finally, students are asked to identify the parts of the task that may be challenging. Instead of being embarrassed or feeling like they are not capable of the work when they struggle, this question helps prime them for the reality that challenges are a natural part of learning. They are encouraged to think about what resources are available to them if they get stuck (e.g., peers, teacher, online resources).

Teachers can collect valuable formative assessment data at the start of a multistep assignment by reviewing the sections where students describe their

FIGURE 4.2 Plan Your Attack Document

PLAN YOUR ATTACK		
	What is your goal for this assignment? What do you want to accomplish?	
	Describe what you plan to do and how you plan to do it. What do you need to do first, second, and third?	
	What strategy or strategies do you plan to use? How will these strategies help you to accomplish your goal?	
	What aspect of this assignment may be challenging for you? If you get stuck, where can you go to get help?	



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process and identify the strategies they plan to use. These sections can help teachers to identify potential problems or issues early on in the students' work. Instead of waiting until a finished product is submitted, teachers can skim through the Plan Your Attack documents and get a sense for which students have a solid plan and which students might benefit from an intervention or support.

#2 Learning Log: Guided Reflection

The school day is a blur of activity for students; they are inundated with information, instructions, and assignments. Most students do what they are asked to do, but they probably do not spend time contemplating the value of particular tasks. The learning log is designed to guide students in a detailed reflection of a particular assignment.

After completing an assignment, students are asked to think about the skills they employed as they worked through that assignment. This requires that they reflect on the various parts of the assignment and think about *how* they completed those parts. What specific skills did they use? Did they have to conduct a close reading, analyze or synthesize information, ask questions, collaborate with peers, build a model, describe a process, use context clues to define unfamiliar vocabulary, or conduct research online?

The learning log prompts students to identify the challenges they encountered and how they worked through those moments of struggle. Eventually, students should begin to embrace the reality that facing and overcoming challenges is a natural part of the learning process. This practice is designed to help them develop an awareness of the strategies they can use in the future when they encounter challenges.

Students are asked to articulate something they learned as a result of completing this assignment. Even though most teachers know it is best practice to begin an assignment by explaining the “why” or purpose, it’s easy to neglect this when we are tight on time or distracted by the multitude of tasks we juggle on any given day. Unfortunately, if we don’t explicitly state the value or purpose of an assignment, students tend to label it “busy work.” The learning log reinforces the value of an assignment by prompting the students to identify something they learned as a result of working through the assignment. The goal is to help students understand the value of the work they do in class.

The last two sections of the learning log are invaluable for the teacher. They ask the students to write down any questions they have about the assignment and identify any aspect of the assignment that they want to go over with the teacher. This encourages students to advocate for themselves as learners. Instead of feeling like an assignment is done and they are mentally moving on, students are invited to say, “Actually, I have a question about [fill in the

FIGURE 4.3 Learning Log: Guided Reflection

LEARNING LOG	
Which assignment are you reflecting on?	
What skills did you use to complete this assignment?	
Did you struggle with any aspect of this assignment? If so, what part? What did you do when you found yourself struggling? Did you access a resource that helped you work through the challenging part?	
What did you learn from completing this assignment?	
What did you find interesting or surprising as you worked on this assignment?	
What questions do you have as a result of completing this assignment?	
Is there an aspect of this assignment you would like to revisit with the class or the teacher?	



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blank] or I still need help with [fill in the blank].” As teachers plow through curriculum, students are not always afforded the luxury of asking for help. The learning log creates an avenue for students to request additional support, clarification, instruction, or practice.

#3 End-of-the-Week Exit Ticket

Exit tickets are a useful strategy for collecting formative assessment data and checking in with students. They can also be used to build a metacognitive routine into class. The end-of-the-week exit ticket, pictured in Figure 4.4, encourages kids to think about what they learned, how they learned it, what questions they have, and how they might teach a concept they learned to a classmate.

End-of-the-week exit tickets encourage a quick, reflective practice while also providing teachers with valuable information about what their kids *think* they are learning. If several students identify a specific concept or skill they are struggling with or have questions about, the teachers can design a station for the following week focused on that specific concept or skill.

FIGURE 4.4 End-of-the-Week Exit Ticket

End of the Week Exit Ticket

* Required

Name *

Your answer

What did you learn this week? Identify at least one concept or skill. *

Your answer

How did you learn it? Describe your process. *

Your answer

What questions do you have about your learning this week? Which concepts are unclear? *

Your answer

What goal do you have for your learning next week? *

Your answer

If you could design an activity to help a classmate to learn the concept or skill you learned this week, what would you have them do? *

Your answer

SUBMIT

Never submit passwords through Google Forms.

Source: Created in Google Forms.

Teachers can use the last question, “If you could design an activity to help a classmate learn the concept or skill you learned this week, what would you have them do?” to identify students who can act as a peer coach for a classmate who is struggling. In my class, I will occasionally ask students who have mastered a particular skill or concept to design and lead a station during a Station Rotation lesson. This way, the students have the opportunity to learn from one another in class. It always surprises me how effective it can be for students to lead the learning. Figure 4.5 shows the lesson template I share

FIGURE 4.5 Student-Designed Station Template





STATION ROTATION: LESSON DESIGN

Your mission is to design an engaging and informative activity for your peers! Below is a sequence you can use to organize your station. Please include detailed directions and any links that your peers will need to complete this lesson. Once you’ve completed a draft of your station using the template below, share it with me and I’ll provide you with feedback.

Time:

Materials needed:

Learning objectives—What do you want your peers to learn/do in this station?

Engage		
Explore		
Explain		
Apply		



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with students when I ask them to design a station. Typically, we collaborate on this shared document for 2–3 days before they lead their station. Student-designed stations are a fun way for teachers to co-construct learning experiences with students.

#4 Think-Aloud Video Reflection

Think alouds are a strategy most teachers use to make their thought process visible for students. In essence, a teacher doing a think aloud is providing students with a window into their metacognitive process. I have conducted think alouds when we engage in close reads, analyze a text, or brainstorm for a

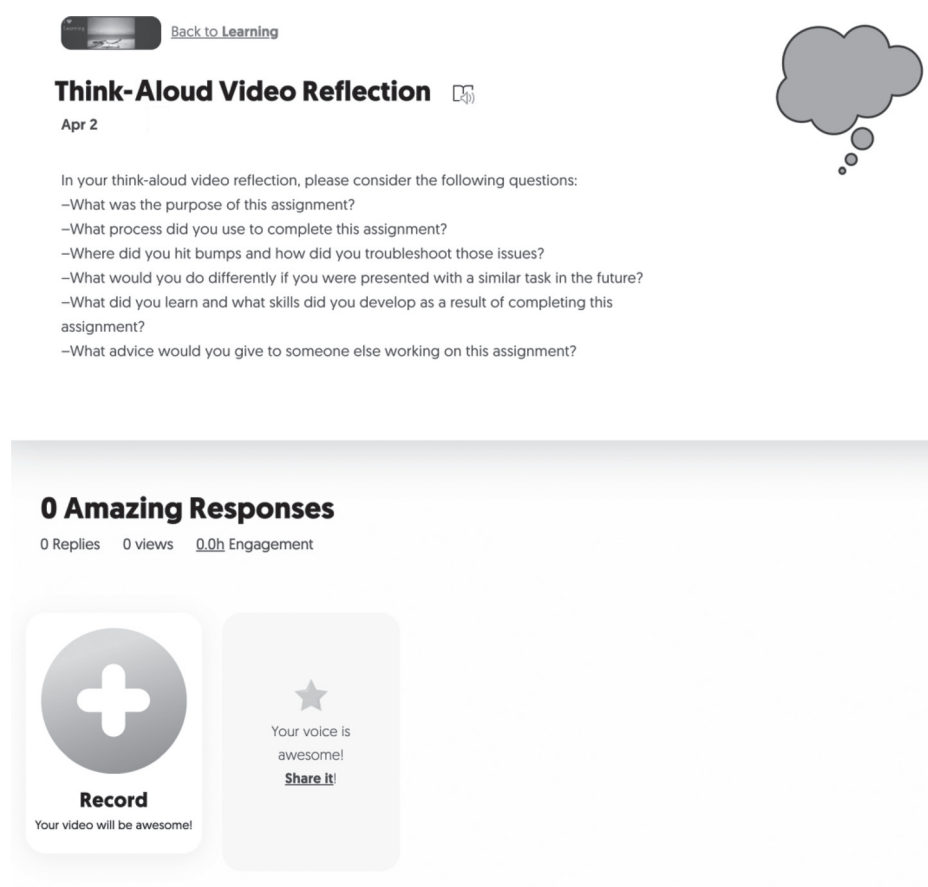
project, so students can hear the thoughts going through my head as I work. During a think aloud, I verbalize the questions, inferences, moments of confusion, connections, and predictions that come to mind as I work. In Chapter 9, I will describe the benefit of doing think alouds during side-by-side assessments.

Thinking out loud is a versatile strategy that students can also use to surface their thought process. Recording a think aloud can be a powerful strategy that gets students to slow down, think about what they know, describe the decisions they are making, identify the aspects of a task they are struggling with, and reflect on how they might manage those moments of challenge.

Using a video-recording tool, like FlipGrid, to record and share a think aloud has three clear benefits:

- It encourages students to engage in a metacognitive practice.
- It provides the teacher with a valuable insight into their student's thought process.

FIGURE 4.6 Think-Aloud Video Reflections With FlipGrid



Source: FlipGrid.com.

- It creates a culture of learning because students can watch each other's videos and learn from the thinking and strategies shared by their peers.

Video-recorded think alouds can be used for setting goals at the start of a unit. They can be used at the start of a process or project to get students to think about what they plan to do. For example, instead of writing out responses on the Plan Your Attack, students could record their responses. Think alouds can be used as a “check-in” during a process or project so teachers can gauge how students are doing. It can also be used at the end of a process or project to encourage students to reflect on the work they did, where they succeeded and struggled, and how they might improve moving forward.

#5 Track Your Progress With Ongoing Self-Assessment Documents

Tracking one's progress can help learners to appreciate their growth and identify areas where they need to invest more time and energy to improve. One of my favorite metacognitive routines is the ongoing self-assessment document. It is an ongoing reflection that spans the length of a unit, which for me typically runs 6 weeks.

At the start of each unit, I select 10 target standards/skills that I plan to prioritize during the unit. Identifying my target standards for each unit ensures that I am covering all of the standards I am responsible for over the course of the year and repeat those standards which tend to be more challenging and require more time and practice. I use the template pictured in Figure 4.7, copy and paste the language describing each target standard into the first column of the self-assessment document, and share the document via Google Classroom so every student has a copy.

At the beginning of the unit, students work collaboratively with a group of peers to rewrite the standards in their own words. It is crucial that they understand what the standards are saying if they are going to assess their work in relation to them. Often, this will be an offline station activity in a Station Rotation lesson or an offline collaborative task at the start of a playlist. Once students have rewritten the standards in language that makes sense to them, then they can begin to select pieces of work to evaluate in relation to those standards.

Once or twice a week during a unit, students are given class time to work on their ongoing assessment document. They select a piece of work they have completed that week and do the following:

- State the title of the assignment and include documentation by either linking to online work or inserting a photo of offline work.
- Reference the rubric for the standard and assess their work giving themselves a score from 1 to 4, depending on their level of mastery.

(In Chapter 8, we will review the role of rubrics in assessment and discuss strategies for designing user-friendly rubrics for students).

- Explain their self-assessment score using details from their work and language from the rubric to support their explanation. Students should also reflect on their strengths, as well as the areas that need improvement.

FIGURE 4.7 Ongoing Self-Assessment Document

Ongoing Self-Assessment Document

Unit:

Think about the work you have completed this week. Select a specific piece of work to analyze and reflect on in depth.

- Identify the skill or standard to which this particular piece of work aligns.
- What is the title of the assignment you are assessing? Provide a link to online work or insert a photo of offline work.
- Evaluate your work and give yourself a score based on where you think you are in relation to mastering this skill/standard.
 - Use the rubric for the skill you are assessing to evaluate your level of mastery (1–beginning, 2–developing, 3–proficient, 4–mastery).
- Explain your self-evaluation score.
 - Why did you give yourself a particular score?
 - What details in your work support the self-evaluation score you assigned to this piece?
 - What does this piece show about your strengths as a student?
 - What aspects of this skill or standard are you still working on or struggling with?
 - What specific support would help you continue to develop this skill?

STANDARD/ SKILL	TITLE OF THE ASSIGNMENT AND DOCUMENTATION (LINK OR IMAGE)	SELF- ASSESSMENT SCORE (1–4)	EXPLANATION/ REFLECTION



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