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THE FOUNDATIONS OF SCAFFOLDING

LEARNING INTENTION

We are learning about the foundations of scaffolding so that we can better understand how scaffolding accelerates learning.

SUCCESS CRITERIA

We will know we are successful when

- We can define what is meant by scaffolding.
- We can identify the foundations of scaffolding.
- We can apply scaffolding to a common task in our lives.
- We can describe the reciprocal relationship involved in scaffolding.

In your own words, describe what is meant by scaffolding in your school or classroom. To support your thinking, use the following question stems to get you started.

- What is scaffolding in our schools and classrooms?

- Why would we want or need to scaffold?

- When do you think scaffolding is appropriate? When is it not appropriate?

(Continued)

(Continued)

- Who gets the scaffolds?

- How do you scaffold learning?

Hold on to your answers to these questions. They will help us later in this and upcoming modules.

Instructional scaffolding has been a part of teaching practices since at least 1976 when Wood, Bruner, and Ross coined the phrase. However, the idea of scaffolding is much, much older. We have been "scaffolding" learning experiences for students since there have been apprenticeship models of learning.

The apprenticeship model is used by teachers to support learners in a specific task. Learners work alongside teachers to develop proficiency in a specific skill that begins with the teacher *modeling* the skill. Through low-stakes tasks, the learner mimics the actions of the teacher and reflects on their own experience. This is called *approximating*. Over time, the learner begins to engage in higher-stakes tasks with the role of the teacher *fading* away. Finally, the learner performs the actual task independently, seeking assistance from the teacher when needed. This leads to *self-directed learning* and the student *applying* the learning to other situations.

Take a moment and identify specific ways you have used the apprenticeship model in your own classroom:

Modeling:

_____

_____

_____

Approximating:

_____

_____

_____

Fading:

_____

_____

_____

Self-directed learning:

_____

_____

_____

Generalizing/applying:

_____

_____

_____

Educators have always done more than simply relied on telling information to students. In other words, we scaffolded learning before the term *scaffolding* was ever used. Of course, we have learned a great deal in the years since the term *scaffolding* was first introduced.

The term *scaffolding* resonates with us because of the diversity we observe in our learners each and every day. From fractions to figurative language, physical geography to photosynthesis, or Renaissance Art to refinement cues, each of our students is at different points in their learning progression. Thus, supporting them in a way that offers them the opportunity to succeed is something we value and strive for in our classrooms. Yet, our most common experience with the term *scaffolding* is associated with construction sites or buildings.

Take a moment and flip back to the Introduction, page 3. There was a term you were asked to circle, underline, or highlight. That term is what fills in the next sentence in this playbook. Write that term in the spaces.

> A construction scaffold is a _____ structure for holding workers and materials during the erection, repair, or decoration of a building. Essentially, scaffolds extend the reach of the worker and provide access to places that would have been inaccessible without the _____ structures.

The term you just added to the previous sentences is very important to our work in this playbook: *temporary*. The point of any scaffold is to provide a temporary structure that is subsequently removed. Interestingly, contractors do not. It's also worth noting that we don't spend a lot of money on scaffolding to make them look pretty. The standards, ledgers, and transoms are not dressed up or painted. They are, however, closely monitored to ensure the safety and security of the workers.

The point of any scaffold is to provide a temporary structure that is subsequently removed.

Are you starting to see the direction we are headed in this playbook? Let's start jotting down our thinking up to this point. Using the Venn diagram below, compare and contrast construction scaffolding with instructional scaffolding. This is just the start of our thinking, and we can add to the Venn diagram later.

Construction Scaffolding   **Instructional Scaffolding**
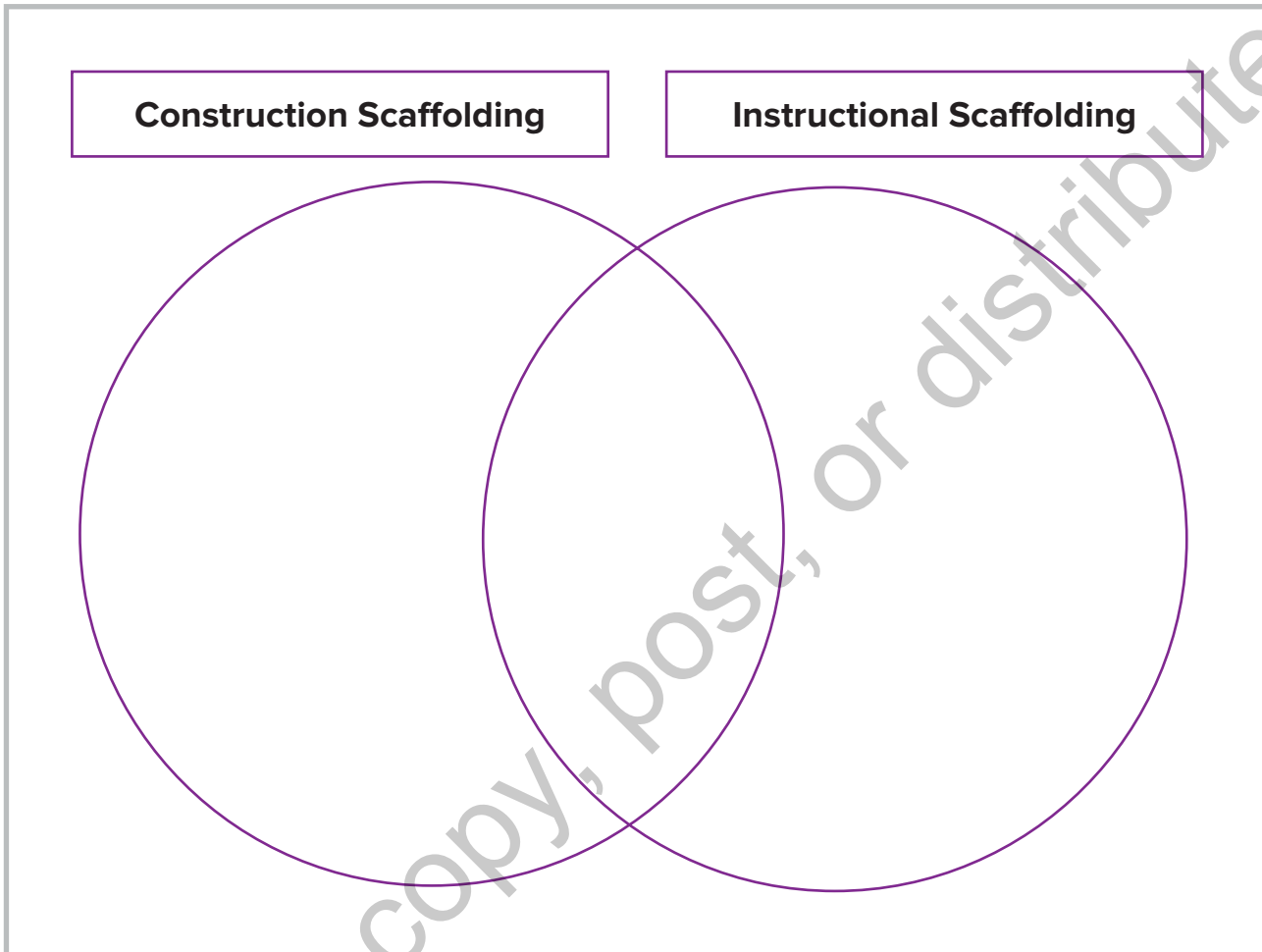
Let's consider a familiar example: teaching someone to ride a bicycle. Think about a time when you taught a child to ride a bike or when you observed another person teach a child to ride a bike. Make a list of the actions involved in this process in the following space.

Actions Taken to Teach Bike Riding

1.

2.

3.

4.

5.

6.

7.

We asked colleagues and friends to consider the same process and gathered their responses.

1. Used a smaller bike

2. Added training wheels

3. Added safety equipment (e.g., helmets, pads)

4. Held the back of the bike and ran behind

5. Encouraged the child

You may have had other items on your list, but let's analyze the lists a bit. Note that there are actions that "right-size" the experience. The bike was smaller to fit the child. Did you have items on your list that "right-sized" the experience? If so, mark those with an "R." There were temporary supports included on our list, such as training wheels or no pedals so that the child could touch the ground. Mark the temporary supports on your list with a "T." We also had items on our list that made sure that the child felt (and was) safe. For example, the adult handled the tricky parts as the child acquired other foundational skills. Mark the safety supports on your list with an "S." Finally, we encouraged and praised the progressive learning and performance. Mark those items associated with feedback on your list with an "F." You probably also remember the first time that you let go. The child turned their head to see you, moved the handlebars to the right or left, and promptly fell over. And what did you do after you checked to make sure that there were no injuries? You encouraged the child to get back on the bike and try again.

The items on our list and your list are part of a reciprocal relationship involved in teaching someone to ride a bike. This reciprocal relationship was illustrated by Malik (2017) (see Figure 1.1).

1.1   **RECIPROCAL RELATIONSHIP IN SCAFFOLDING**
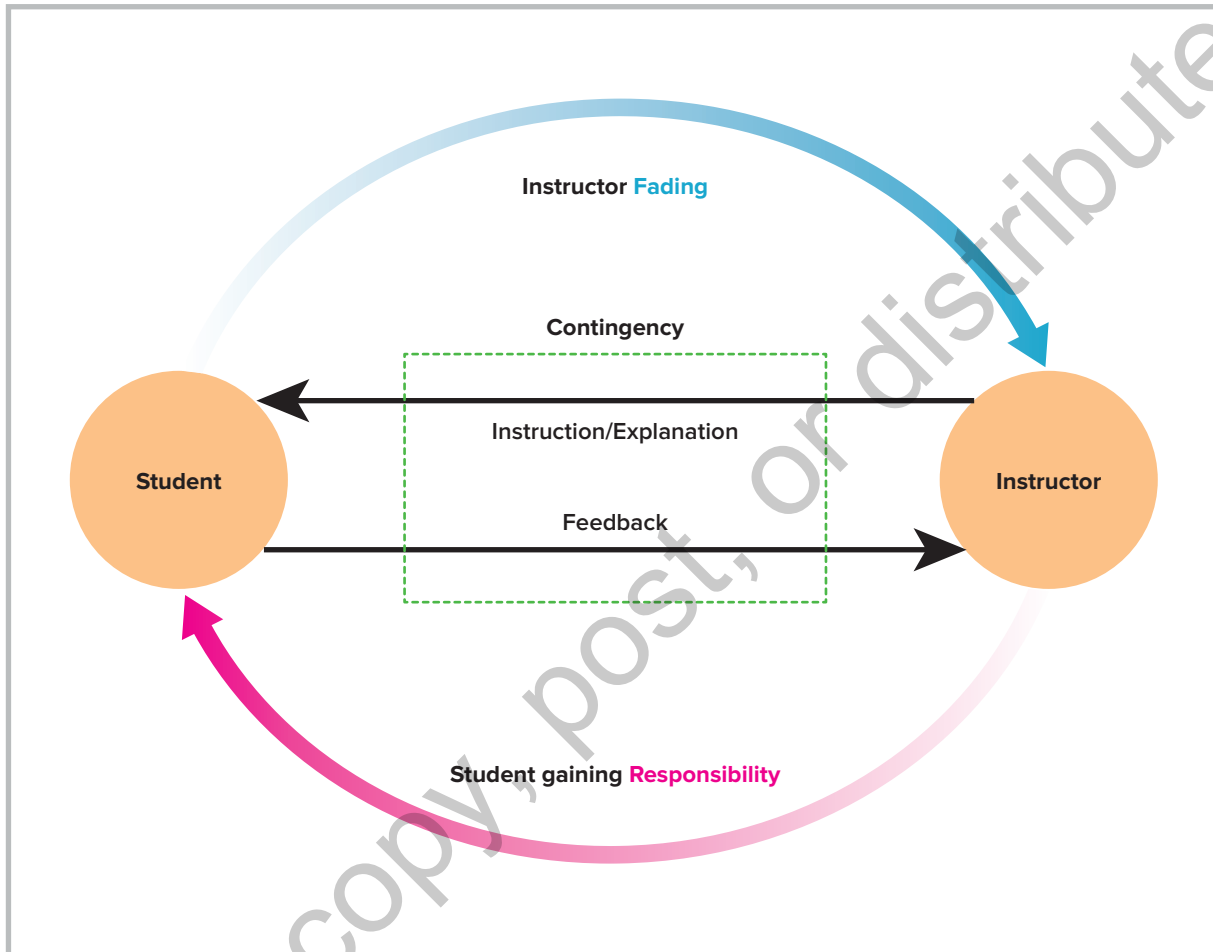
Source: Malik (2017).

Take a close look at the image of the two-gradient model developed by Shoaib Malik. Use the space below to summarize what you see in the model and what you believe the model communicates about instructional scaffolding. You may even want to add additional questions to the list on page 4 in the Introduction.

Now, let's start to tie all of this together. This reciprocal relationship forms the foundation for instructional scaffolding.

SCAFFOLDING FOUNDATIONS

There are some key takeaways from the example of teaching someone to ride a bike that apply to any situation where scaffolds are provided, including

➤ Right-sizing the task

➤ Making sure learning is a safe experience

➤ Handling the tricky parts as the student learns

➤ Providing encouragement, even when there are temporary failures

The success of scaffolding depends on the intensity, frequency, and duration of the scaffolds.

If you were lucky enough to teach a child to ride a bike, hopefully you are no longer running along behind them, holding the seat, and offering encouragement. Eventually, you faded your support as skills developed.

COACH A PEER

Talk with a peer about a task that was challenging for a learner or learners. Write that task at the top of the chart below and then discuss the questions below to learn more about how we try to scaffold learning.

DESCRIBE THE TASK	
How did you make sure learning was a safe experience?	
How did you handle the tricky parts as the student learns?	
How did you provide encouragement, even when there were temporary failures?	
How did you fade the supports?	

The evidence on instructional scaffolding is strong. There have been four meta-analyses on scaffolding, with an overall effect size of 0.58, which is an above-average influence and one that should accelerate learning (www.visiblelearningmetax.com). Of course, like many other influences, the success of scaffolding depends on the intensity, frequency, and duration of the scaffolds. In the hands of an expert educator, scaffolding is a powerful way to deepen learning.

CONCLUSION

Instructional scaffolds are an important strategy to ensure students' learning. There are several foundational aspects of scaffolding, including the idea that the scaffolds are temporary and should be faded.

Before moving on to the next module, we have provided a list of concepts explored thus far in the playbook.

➔ Instructional scaffolding

➔ Temporary

➔ Fading

➔ Right-sizing

Flip back through Module 1 and the Introduction and add additional concepts to the list.

➔

➔

➔

➔

➔

Using the terms listed on the previous page, summarize your learning using *all* of the terms. Make sure your summary highlights the relationships between these terms and does not simply repeat their definitions (e.g., purposeful practice, *not* naive practice).

Scaffolding requires learners to engage in deliberate practice.

However, there is one part of scaffolding that we are missing. Scaffolding requires learners to engage in deliberate practice. We will turn our attention to the importance and role of practicing very soon. Before we do that, let's look at the history of scaffolding. Knowing the origin of scaffolding and the research behind this important aspect of teaching and learning provides the foundation for *how scaffolding works* in our schools and classrooms.

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