



Connecting Practice and Research
in Mathematics Education

Professional Learning Guide

Scaffolding

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Scaffolding is used to help students through a learning task that is just outside their level of competency. Scaffolding can be an effective strategy to use with all learners. Scaffolding is intended to be a short-term strategy, and is one form of differentiating instruction to meet the learning needs of individual students.

Scaffolding is most useful in situations where students are attempting to complete a rich task and are “stumped,” but could complete the task if given some assistance as how to proceed.

In your classroom, this means:

- being aware of the background knowledge and readiness level of each student;
- developing a comfortable, working rapport with each student;
- promoting higher order cognitive skills.

Considerations

One form of scaffolding is “think aloud” – a strategy during which the teacher verbalizes his/her thinking of the steps and strategies used in solving problems. Students can call upon the same processes as they work through a problem.

Furthermore, scaffolding has also been found to be effective for teaching higher-order cognitive skills.

Rosenshine and Meister describe six components that comprise successful teaching:

- presenting a new cognitive strategy;
- regulating difficulty during guided practice;
- varying the context for practice;
- providing feedback;
- increasing student responsibility;
- providing student responsibility.

Rosenshine and Meister (1992, pp. 26–32)

For more information

<http://www.edu.gov.on.ca/eng/studentsuccess/lms/files/tips4rm/TIPS4RMDevMathLit.pdf>

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My Personal Reflection and Plan

I scaffold tasks in my class:

occasionally

fairly often

at every opportunity

What I see as the value of scaffolding for enhancing student problem-solving ability in mathematics:

What are two concerns I have about scaffolding investigative tasks?

Should each student be given the same amount and type of scaffolding when solving a problem?

Explain your reasoning.

Describe what you think about providing scaffolding for assessment tasks:

Other ideas and thoughts I have after hearing the comments of my peers:

Next Steps

Lesson from TIPS4RM that I will teach to focus on scaffolding:

Lesson Goal:

Description of task:

The types of scaffolding I will provide and the characteristics of the students who will benefit:

Type of Scaffolding	Characteristics of Students Who Will Benefit
<ul style="list-style-type: none">• • •	

How will I handle differentiated scaffolding?

Other notes:

Lesson Debrief

Evidence that some students benefitted from having the task scaffolded:

Reflection

- What was effective?

- What created challenges?

- What scaffolding strategies did or didn't work?

If I were to teach this lesson again I would make the following changes:

Other ideas and thoughts I have after discussion with my peers: