

Scaffolding Structured Inquiry Learning Through ‘Spotlighting’

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When implementing challenging tasks through structured inquiry pedagogies, concerns are sometimes raised by teachers about the level of support provided to students during task exploration (Sullivan et al., 2010). Enabling prompts can be employed to augment tasks and scaffold the learning experience (Sullivan et al., 2009), however such prompts may not always be sufficiently utilised and appropriately interpreted by students to be effective (Russo & Hopkins, 2019). In fact, the issue of sufficiently scaffolding mathematical thinking when students are exploring a challenging task is one of the reasons why some teachers are hesitant to utilise task-first lesson structures when teaching with such tasks, preferring instead to use more teacher-directed approaches (Calleja et al., 2023). Although structured-inquiry pedagogies do emphasise experience before instruction, this should not be taken to imply that the teacher’s role is passive. However, a teacher’s lack of clarity about their role during key stages of the explore phase, particularly just after a problem-solving task has been launched, could be a further reason why a teacher may resort to premature ‘telling’ beyond concerns about struggling students. One potentially useful practice for providing more structure, support, and clarity to this phase of the lesson, for both teachers and students, is that of spotlighting.

A spotlight can be described as the practice of “calling students to a momentary pause in order to share and briefly discuss an example of student thinking that will be of benefit to the rest of the class” (Hubbard et al., 2023, p. 32). Spotlighting generally involves the teacher facilitating the sharing of the spotlighted student(s)’ mathematical work with a particular purpose in mind. These purposes include but are not limited to: how the student has chosen to represent the problem mathematically, a partial solution or first step in the problem; highlighting a misinterpretation or misconception; or contrasting two different student approaches. In this short communication, we share some of the preliminary findings of our recent research into spotlighting such as how frequently teachers use the practice in a given lesson, how many students are the focus of a typical spotlight, and the reported affordances and constraints of this pedagogical move for supporting the learning of mathematics through structured inquiry. We conclude by discussing potential future research directions, as well as considering implications for teacher professional learning and classroom practice.

References

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