

Rethinking Mathematical Tasks

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Mathematics teachers invariably use a multitude of tasks in their day-to-day practice. Indeed, “mathematical tasks provide tools for promoting learning of particular mathematical concepts and are, therefore, a key part of the instructional process” (Simon & Tzur, 2004, p. 93) Further, the National Council of Teachers of Mathematics (NCTM, 1991) postulated that tasks “convey messages about what mathematics is and what doing mathematics entails” (p. 24). Over the years, several terms have been used to describe mathematical tasks, such as worthwhile mathematical tasks (NCTM, 1991), challenging tasks (Sullivan et al., 2014), high-level tasks (Henningsen & Stein, 1997), open-ended tasks (Zaslavsky, 1995), and rich mathematical tasks (Grootenboer, 2009). While acknowledging the benefits of using such tasks, research has also surfaced some shortcomings. Stein, Grover, and Henningsen (1996) cautioned that “When employing the construct of mathematical task, however, one needs to be constantly vigilant about the possibility that the tasks with which students actually engage may or may not be the same task that the teacher announced at the outset” (p. 462). In this round table presentation, we will discuss the affordances that mathematical tasks such as those stated above offer to teachers, as well as other alternatives that are available to teachers for enhancing students’ learning of mathematics. We will provide some examples from one of our on-going projects for further discussion.

References

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