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**Conceptualizing mathematically significant pedagogical opportunities to build on student thinking.**

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Summary: The mathematics education community values using student thinking to develop mathematical concepts, but the nuances of this practice are not clearly understood. We conceptualize an important group of instances in classroom lessons that occur at the intersection of student thinking, significant mathematics, and pedagogical opportunities – what we call mathematically significant pedagogical opportunities to build on student thinking. We analyze dialogue to illustrate a process for determining whether a classroom instance offers such an opportunity and to demonstrate the usefulness of the construct in examining classroom discourse. This construct contributes to research and professional development related to teachers' mathematically productive use of student thinking by providing a lens and generating a common language for recognizing and agreeing on a critical core of student mathematical thinking that researchers can attend to as they study classroom practice and that teachers can aspire to notice and build upon when it occurs in their classrooms.

*Classification:* D40 C70

*Keywords:* teaching methods; mathematics skills; mathematical concepts; problem solving; equations; classroom communication; classroom mathematics discourse; professional development; student mathematical thinking; teachable moments; teaching practice

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