



CPM Statement about Learners who Sometimes Struggle

“Effective teaching of mathematics consistently provides students, individually and collectively, with opportunities and supports to engage in productive struggle as they grapple with mathematical ideas and relationships.” (NCTM, 2014, 48)

In keeping with NCTM’s Principles to Actions, CPM embraces productive struggle as a way to help students think and reason about mathematics. However, there is a distinct difference between *productive* struggle and *unproductive* struggle. Learners who are struggling productively are able to enter into a task or problem on some level, and view the experience as an opportunity to understand mathematics more deeply. Unproductive struggle results when the learner makes no sense of a task and has no way to proceed – no entry point -- and cannot make any progress forward with learning. Teachers need strategies to support students engaging in either of these types of struggle.

For students to successfully engage in productive struggle, certain key foundational components must be present in the classroom. A first step for any teacher is to consider the following questions:

- Are study teams used as a method of support for students?
- Have students been provided with ample opportunities and feedback to learn how to effectively work in teams?
- Does the classroom environment support productive struggle and celebrate mistakes as an opportunity to learn?
- Do students feel safe to engage in mathematical discourse?
- Are students struggling because of a learning gap or an instructional gap?
- Are lessons delivered as described in the teacher notes (i.e. using study team strategies, utilizing core problems)?
- Am I providing ongoing instructional feedback to students on a regular basis?
- Are students given processing time, both oral and written, to consolidate ideas?
- Is closure used daily to ensure all students are developing important mathematical connections?

All too often, in an attempt to give students access to challenging content, scaffolds are provided that effectively diminish the cognitive demand of the original task or problem. To successfully support students, the teacher must provide just enough intervention to help students move beyond their area of impasse, but not so much that the cognitive demand is diminished. It is also critical that students see each other as a resource, and support one another during times when they struggle.