

Seven Ways to Prime Professional Development
For Secondary Math Teachers
By Dr. Lynnell Matthews

1. Think tomorrow.

The most valuable gift you can give teachers during professional development is a strategy, lesson or resource they can use in class the next day. Give teachers the opportunity to dive into the training as students and reflect as teachers as you model instructional strategies. They will be better able to anticipate what their own students will require and understand how best to meet their needs.

2. Keep it real.

Math teachers spend a lot of time looking for relevant math applications for their students so come prepared with good examples they can use in their classrooms. Provide problems that will help their students make connections to math in the real world now, not just prepare them for the next math course. Students want to solve problems that matter to them so include a wide variety of applications that will have universal appeal for secondary students.

3. Use power tools.

Half of the battle is getting students excited enough about math that they will be ready to learn and willing to persevere. Use every available medium to engage students immediately so they understand the context for a math concept. Video is a powerful medium to show students things they may not be able to understand abstractly. It's one of the best way to bring real world examples into the classroom and can quickly put to rest the question every math teacher dreads: When will I ever use this?

4. Practice flexible fidelity.

Quality professional development begins with a quality roadmap. However, it may be necessary to veer from the roadmap in order to meet the needs of your audience. You may have to make overall changes in the plan or slight adjustments for certain segments of the audience. Continuous check-ins during the training will dictate when you have to go off script. By modeling this as a facilitator, you will be giving teachers ready-made tools for differentiating instruction for their own students.

5. Dare to be ambiguous.

Approach professional development the way math should be approached in the classroom. That means you don't have to be quick to answer participants' questions. Instead, give others in the session a voice and tap their expertise. Demonstrate that real life and real world problems are often ambiguous and that there isn't always a neat answer or just one way to solve a problem. Model as many opportunities for participants to use their problem solving and critical thinking skills as possible so that they will know how to create the same experiences with their students.

6. Demystify digital.

Math teachers may not be teaching with devices so it's important to reinforce that while sound instructional pedagogy is still paramount, the digital transition is a reality. In addition to the ins and outs of using digital technology, provide practical classroom management ideas teachers

may not even be aware of when using devices. For example, share verbal and visual cues for when students should close their laptops and direct their attention to the teacher. Sounds simple, but for the novice digital facilitator, classroom management is one of many balls they will be juggling.

7. Connect with credibility.

You have done your homework ahead of time and determined specifics about your audience so you are prepared when you walk into the training. Make use of the 10-15 minutes before your session begins to build a rapport with participants while further assessing them as they walk in. You can find out valuable information about them that will help you customize their experience and build your credibility as a knowledgeable facilitator who can meet teachers where they are and ensure they walk away learning something new.

About the author

Lynnell S. Matthews, Ph.D, is a seasoned mathematics educator, with more than 20 years experience in all facets of undergraduate mathematics education. In her role at Discovery Education, Dr. Matthews develops and delivers mathematics and digital integration strategies with K-12 teachers and administrators across the country. She received her B.S. from Towson State University, and both her M.S. and Ph.D in mathematics from Howard University in Washington, D.C.