

By Marla A. Sole

ighly effective teachers continually innovate and refine their pedagogical practices through professional development. Committed teachers are interested in professional development that demonstrates best practices aligned with the content they are teaching and clearly communicates the steps, benefits, and challenges of implementing new lessons and innovative practices. Those running workshops can gain valuable insight into teachers' classroom practices, the curriculum, and potential modifications that could better help students reach their full potential.

As part of a funded project titled "PRIME: Project for Relevant and Improved Mathematics Education," I co-designed and co-ran a series of profes-

sional development offerings. Reflecting on my experience, I believe these seven tips can help make professional development more impactful and successful.

1. Time and timing matters.

Learning new pedagogical approaches or technology takes time. Therefore, when designing professional development, it is critical that the time allocated for a workshop is sufficient for participants to absorb new practices or create new activities. To facilitate effective professional development, workshop leaders also should consider when, during the school year, teachers would put into practice what they have learned, and whether there is enough lead time for teachers to successfully modify their lesson plans.

2. Create tangible products.

The comment most often made during professional development workshops was, "I want something I can use in my class." Teachers have a strong desire for professional development that is carefully mapped onto their course learning outcomes and produces an activity or assign-

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ment that is ready to use, having been critiqued and refined by colleagues. With all the time teachers spend preparing lessons, their top priority is having the opportunity to collaboratively create innovative new lessons or modify existing lessons based on constructive feedback.

3. Develop a plan for implementation.

Effective lessons marry two components: content and delivery. It is not enough to create great content without simultaneously addressing which pedagogical practices will engage students. Effective professional development should discuss best teaching practices, clearly define and model new practices, and share the benefits and challenges of the approach. For example, during professional development, do not lecture about active learning. Instead, define active learning, model how active learning looks in a classroom, and share expected gains from actively engaging students.

4. Facilitate a shared learning environ-

Running professional development, I can attest to the fact that there is enormous potential, expertise, and energy in the room. Professional development will be significantly more valuable if those facilitating the activities capitalize on participants' rich and varied experiences. Fostering a collaborative environment can have added benefits. Attendees leave knowing more about each colleague's area of expertise and interests. This can help create a network of educators with intersecting interests who can support one another throughout the school year.

5. Follow up.

During professional development, educators may believe that new activities and pedagogical practices will work seamlessly in the classroom, but unanticipated issues may arise. For example, it may be challenging to help students adopt a growth mindset or to shift the class dynamic to include more inquiry-based learning. Assignments and activities that went through a peer review process may still seem unclear to students. Highly effective professional development finds

ways to continue to support teachers when they are back in the classroom, with brief follow-up meetings or by pairing up workshop attendees who can continue to collaborate.

6. Collect feedback.

Provide time for attendees to reflect upon and share what worked and what would enhance future professional development offerings. Solicit anonymous feedback either soon after the workshop or after teachers have had time to use what they have learned in their own classes. In addition, during workshops, listen without judgment to the challenges teachers face. If a few teachers seem to be raising the same issue, consider whether you can integrate this issue into present or future professional development workshops.

7. Assess the impact in the classroom.

Professional development is not designed just to enhance and refine teachers' skills. The goal is to improve learning! Therefore, effective professional development should not end with a workshop for teachers. It should include some reflection or formal assessment of the impact on students' academic achievement and level of engagement.

Well-designed professional development can enhance teachers' skills and reignite their enthusiasm for teaching. Effective professional development empowers and supports teachers to make the concepts in their disciplines come alive. This, in turn, creates a great environment for both students and teachers. Most importantly, with newly acquired skills, teachers can better set students up to excel and perform to the best of their abilities.

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