

In Focus...

Mentor Teachers' Perspectives on Student Teaching

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As a beginning university supervisor, Ginger had limited experience and thoughts about student teaching. After three years of observing student teachers, she's come to realize that university supervisors and mentor teachers have a range of ideas about the purpose of student teaching, as evidenced by their interactions with and requirements of student teachers. In the past two years, she has observed student teachers at one school where the mentor teachers, Janet, Jeanette, and Martha, have made a conscious effort to reflect upon their mentoring strategies. The mentor teachers participated in the project Partnerships in Reform in Mathematics Education (PRIME), a component of the NSF-funded Center for Proficiency in Teaching Mathematics (CPTM).¹ PRIME is a multi-level professional development program for preservice teachers, mentor teachers, and university supervisors at the University of Georgia. Each of the three groups of educators—preservice teachers, mentor teachers, and university supervisors—investigated their own practice while participating in this two-semester professional development program. As a part of PRIME, the three groups of educators met on a weekly basis for 30-60 minutes.

This paper presents a collection of the ideas and beliefs of these mentor teachers who go beyond providing the typical student teaching experience. In a discussion Ginger had with the three mentor teachers, two major ideas regarding the student teaching experience emerged along with three questions for the education community. Through this paper we hope to stimulate discussion about the purpose of student teaching and the role of the mentor teacher.

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Two Important Ideas

First and foremost, student teachers should work in a nurturing and supportive environment that encourages them to experiment. Some have used the phrase “sink or swim” to describe the situation student teachers and beginning teachers sometimes face when learning how to teach. This idea is grounded in the belief that one learns best how to teach through experience. We believe this perspective is detrimental to the student teaching experience. We agree experience provides enormous opportunities for growth and development. Yet, giving full responsibility too early to beginning teachers will influence what they learn. For example, suppose a student teacher wants to incorporate into a lesson a paper folding activity that entails managing small groups and whole group discussions. If the student teacher has not developed the skills to observe students' mathematical thinking during this activity, then it is asking too much of that student teacher to also manage supplies and monitor student behavior.

Many times, mentor teachers and university supervisors believe student teachers need to manage an entire lesson on their own, a seemingly obvious requirement for those aspiring to be a full-time teacher. Indeed, many preparation programs require student teachers to carry a full-load of classes for a minimum of two weeks, but there is typically some flexibility. It is our belief that student teachers should not be given this full responsibility too quickly or left on their own to figure out what teaching entails. In high schools, the timeline for acquiring new classes should be determined based on the readiness of the student teacher.

When student teachers are learning to create and implement lessons, it is acceptable to divide responsibilities for the lesson between the mentor teacher and student teacher. This provides an opportunity for the student teacher to focus on a piece of the lesson instead of being overwhelmed with all aspects. For example, the student teacher could facilitate the tasks in a lesson while the mentor teacher walks around to manage behavior and classroom organization (e.g., passing out supplies and equipment,

collecting papers, etc). This allows and encourages the student teacher to incorporate various teaching ideas (e.g., a hands-on activity, use of technology, and small group work) without the pressures of managing the entire lesson. It is important for student teachers to develop strategies for managing behavior, but it is also valuable for student teachers to notice their students' mathematical thinking during activities. By removing most behavior management issues during beginning lessons, the student teacher is allowed to focus attention on instructional decisions. As a student teacher gains more experience with lessons and the ability to develop and implement portions of lessons, he or she should take on more responsibility, including managing student behavior.

A criticism against mentor teachers taking an active role with student teachers in lessons is that K-12 students may lose respect for the student teacher. We believe this can be prevented in several ways. On their first day in the classroom, student teachers should be introduced to students as a co-teacher, or as another teacher in the classroom. From that point on, they can interact with students. For example, student teachers can help students during activities, go over homework, or work with small groups. We want to emphasize that while they are not taking on large roles, they are, more importantly, interacting with students. In addition to student teachers immediately taking an active role, the mentor teachers should be conscious of the ways they interject comments while their student teacher is interacting with students. In other words, if the mentor teacher treats the student teacher as a colleague in front of the students, the students will view the student teacher as a teacher. This leads to our second major idea.

Secondly, student teachers should be treated as colleagues. This may seem obvious to some, as student teachers have reached the end of their coursework and the beginning of their teaching careers. To some, this may seem surprising, as student teachers are inexperienced in the classroom and lack the knowledge gained from experience. We believe that treating student teachers as colleagues provides them with insight into the teaching profession that will support their development as reflective practitioners. Mentor teachers will also benefit, as these conversations will most likely support their own professional growth.

As teachers, we make instructional decisions in the classroom from moment to moment. To an observer, these decisions (and their underlying rationale) may not be obvious. It is important for mentor teachers to make these decisions explicit in order for student

teachers to gain awareness of issues dealing with mathematics, students, and pedagogy. Thus, mentor teachers should engage student teachers as colleagues in professional conversations. These conversations can happen through co-planning and co-teaching activities, analyzing student work, and attending and discussing professional meetings.

As educators, we believe that telling is a less effective way of teaching content to students. If we assume students learn mathematics best when they are engaged in mathematical thought, then it is only natural to assume that student teachers should learn about teaching mathematics in a similar manner. Student teachers have a thirst for knowledge about teaching mathematics. They are excited to learn and want to be successful teachers. Often, they will search for the "correct" way to teach and look to other educators for answers. It is easy for mentor teachers to fall into the trap of telling the student teacher to teach this content in this particular way. Student teachers benefit more from being involved in professional conversations about planning, implementation, and reflection. For example, when Janet discusses planning lessons with her student teacher, she tends to ask for his input. Instead of the student teacher implementing lessons that Janet or he pre-planned individually, the student teacher is implementing lessons that they jointly planned.

In order to highlight what we mean by treating student teachers as colleagues, we wish to share three additional examples from our experiences with student teachers. Last year, Janet and her student teacher regularly graded tests and quizzes together. During this time, Janet would verbalize her reflections on how her students were thinking mathematically, question particular solutions, question particular test items, and connect students' performance to classroom practices. Through these conversations, her student teacher developed similar habits of thought.

Another example we wish to share is Jeanette inviting and encouraging her student teacher to attend meetings and conferences with her. In particular, Jeanette and her student teacher regularly attended county meetings that focused on teaching AP Calculus. These meetings consisted of a group of teachers who were teaching AP Calculus and who came together for the purpose to discuss and improve their teaching practices. After these meetings, Jeanette and her student teacher had conversations in order to share and elicit thoughts. Not only did the student teacher observe and participate in the meetings, she had

professional conversations about the meetings with Jeanette.

The final example we wish to share is Martha's student teacher videotaping a lesson on synthetic division. Then, during our weekly PRIME meeting we watched a portion of the video. The discussion of the video began with the student teacher sharing her thoughts and questions about the lesson. In the conversation that followed, the mentor teachers did not simply answer the student teacher's questions or tell her how they typically teach synthetic division. Rather, the conversation focused on reflection. The group discussed the purpose of the lesson and the ways high school students engaged the mathematics found in the lesson. The group then discussed the mathematics behind synthetic division, which led to other ways to introduce it to students. We believe this kind of mathematical and pedagogical conversation can and should exist between mentor teachers, student teachers, and university supervisors.

The two ideas we presented in this section can be viewed as contrasting ideas. One may question how a mentor teacher can treat a student teacher as a colleague and protect him from becoming overwhelmed by the complexities of teaching. We don't believe a mentor teacher has to do one or the other; she can support and nurture a colleague. Teaching mathematics is complex and difficult at times. Student teachers need to have a realistic view of what teaching entails. We are suggesting that mentor teachers, as well as university supervisors, take steps to appropriately introduce student teachers to these difficulties and complexities so that valuable learning takes place.

Another critique of our two ideas is that mentor teachers are ultimately responsible for students learning mathematics in their classroom. When mentor teachers take on the added responsibility of hosting a student teacher, they must make decisions that are best for their students. In some cases these decisions may limit the extent a student teacher can be treated as a colleague. For example, there may be instances where a K-12 student's personal or medical history may prevent the mentor teacher from sharing the reasons for making particular decisions. We recognize these situations and suggest that mentor teachers use their professional judgment to manage them.

Three Questions

Universities and K-12 schools share the goal of providing meaningful learning experiences for prospective teachers during student teaching. Yet, a

closer look reveals possible differences in what one means by a "meaningful learning experience." These differences tie into one's beliefs about the purpose(s) of student teaching. This leads to our first question: What is the purpose of student teaching? The answer to this question might be different for student teachers, mentor teachers, and university supervisors. Possible purposes include being enculturated into schools, learning to manage students, practice ideas learned from university courses, learn how students think mathematically, and to experience all aspects of teaching. In some instances, differences in purpose for student teaching create a divide between mentor teachers and the university. For example, some mentor teachers may be concerned with prospective teachers being successful in the present moment, whereas universities maybe concerned with prospective teachers being successful over their careers. We believe a balance between preparing prospective teachers for the moment and for the future is necessary. Finding the balance is a negotiation that can only happen when the vested parties consider and communicate their beliefs about the purpose of student teaching. Through these negotiations, a common understanding for the purpose of student teaching can be developed. We are not suggesting that the vested parties agree on one common purpose, but they should be aware and understand each other's purposes.

A university teacher preparation program is the initial training experience aimed at preparing teachers. Many of these preparation programs expect student teachers to teach in a manner that differs from their prior conceptions of teaching. Likewise, mentor teachers are asked to participate in a student teaching experience that differs from their own experiences. For example, mentor teachers are asked to have professional conversations with student teachers in order to make instructional decisions explicit. In many instances, these conversations are new for mentor teachers. Mentor teachers are also asked to co-plan and co-teach lessons. The idea of co-planning and co-teaching can be interpreted and used in several ways. For example, in some co-teaching situations one teacher may be responsible for leading some portions of the lesson while the second teacher leads others. In another version of co-teaching, one teacher maintains the lead throughout the lesson while the second teacher is a helper. The helper may pass out materials and work with smaller groups of students. In a third way of implementing co-teaching, both teachers can lead by taking equal roles throughout the lesson. A way that might help one think about both teachers leading is to

consider the teachers jointly having a conversation with students. Sharing in professional conversations, co-planning, and co-teaching are new ideas for many teachers; therefore many teachers have limited views of how to implement these ideas with student teachers. Situations like this lead to our second question: How can the university support mentor teachers in their efforts to develop their own mentoring skills?

Schools are faced with the challenge of providing a high-quality mathematics teacher in every classroom. The shortage of such teachers is evident, as there are many classrooms where teachers are either not certified or have substitute status. Similarly, universities face the challenge of placing student teachers in positive learning environments supported by high-quality teachers. Though student teachers can learn from both good and bad experiences, the learning is different. Learning what not to do in a classroom is different from learning what to do. The assumption that good university preparation trumps a poor student teaching experience is unfounded, as Frykholm (1996) found mentor teachers have a greater impact on instructional practices of preservice teachers. This observation lays the foundation for our final question for teacher educators: What are some options if a student teacher is placed in an environment that is not ideal for their learning? Put another way, what options are available to teacher educators if a mentor teacher immediately gives full classroom responsibility to a student teacher without providing any guidance? We can all agree that this is not the kind of environment that we want for our student teachers. Is the best option to remove the student teacher? If so, where does the student teacher go? Are there other ways to manage the situation?

Conclusion

At first glance, the ideas we highlight in this paper do not seem difficult to implement, but there are many instances where student teachers do not feel comfortable trying new ideas or do not regularly participate in professional conversations. We feel these student teachers are disadvantaged.

When we consider the student teaching experience, we recognize the larger purpose is to prepare prospective teachers for their future work as teachers. Many times, however, mentor teachers voice their excitement for hosting a student teacher for the reason that they are interested in learning new teaching methods and technologies. We want to draw attention to the professional growth opportunities for mentor teachers and university supervisors during the student teaching experience. Mentor teachers and university supervisors can gain much more than new teaching methods and technologies. For example, when mentor teachers make explicit their instructional decisions, we believe this encourages them to thoughtfully think through and possibly reconsider those decisions. Ultimately, student teaching should be viewed as a learning opportunity for everyone involved.

In our final comments, we wish to emphasize the importance of developing strong relationships between the universities and K-12 schools. The answers to the questions posed above should come from both institutions, as both institutions make valuable contributions to the student teaching experience. It is our responsibility as educators to develop these relationships so that we may provide each prospective teacher with a worthwhile initial experience as a mathematics teacher.

References

- Frykholm, J. A. (1996). Pre-service teachers in mathematics: Struggling with the Standards. *Teaching and Teacher Education, 12*, 665–681.

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