Innovative Poster

If At First You Don't Succeed: A Reflection and Re-teaching Model

Thomas M. Henderson
California State University – Chico
104 Plumas Hall
400 W. First Street
Chico, CA 95929
tmhenderson@csuchico.edu

Josh Stewart
Oregon State University
130D Strand Hall
Corvallis, OR 97331
josh.stewart@oregonstate.edu

If At First You Don't Succeed: A Reflection and Re-teaching Model

Introduction / Need for Innovation

How do preservice teachers learn to teach? The idea of constructing a lesson with unfamiliar content is a daunting task. Yet we, perhaps naively, expect our preservice teachers to demonstrate a dynamic lesson, in a classroom with which they might be unfamiliar, to students whom they probably have never met. We hope they grow from the teaching experience before we assign the next lesson, which is likely centered on a completely dissimilar topic. We observed frustration among student teachers during several micro-teaching experiences, stemming from a lack of opportunities to capitalize on their successes or implement changes informed by instructor and peer feedback related to each content-specific micro-teaching experience. Our pre-service teachers were dissatisfied with the constant feeling of being unsuccessful.

Thinking about teaching is a "disciplined, systematic approach to professional development" (Bransford, Brown, & Cocking, 2000, p. 242). One might argue the difference between expert and novice teachers is experience. While time and experience may play a factor in separating the novice from the expert, the real difference is how those who have developed expertise are able to think more effectively about problems in specific content areas (Bransford et al, 2000). Similarly, an important aspect of improving instruction is the ability to recognize patterns and features, and understand and conceptualize events (Bransford et al., 2000), tasks with which novice teachers often struggle.

Teachers should possess expertise in content matter and pedagogical knowledge (Shulman, 1986). The development of the two, as well as finding their intersection, is an ongoing challenge for teachers and teacher education programs. The aim of this model is to provide a framework for developing pre-service teachers in a systematic and intentional manner. The Switchback model will aid in developing professionals who are equipped to continually inquire about their own teaching practices and who possess the aptitude and confidence to effectively reflect, adapt and re-teach in furthering the development of their pedagogical content knowledge (PCK) as they enter into their teaching careers.

How it Works

The Switchback model for micro-teaching experiences provides the opportunity to further explore the development of PCK in novice teachers. During reflection and peer feedback, gaps in content knowledge can be addressed. Additionally, the reflection and adaptation phases offer a significant opportunity to develop PCK. In a study concentrated on the development of PCK in preservice chemistry teachers, Van Driel, De Jong, and Verloop (2002) identified teaching experiences as the primary influence toward the growth of PCK.

Within the Switchback model, the chance to teach then re-teach, with various forms of guided reflection and adaptations between, provides additional teaching experience which fosters, among other things, development of PCK. Providing an opportunity for each preservice teacher to capture written and oral instructor and peer feedback, paired with watching their initial teaching experience through video recordings, can be utilized to examine PCK. This model provides the opportunity for novice teachers to adapt any element of the lesson (e.g. curriculum content), following the reflection period, and before entering the re-teaching phase. Adaptations

may include creating PCK through content knowledge exploration, improving representations, or transforming content knowledge understanding, for instance. This teaching and re-teaching experience will allow teachers to recognize meaningful patterns of information, and will be directly applicable to other teaching situations and in other content areas. Through reflection and adaptations, this model creates the opportunity for teachers to develop their expertise in a specific area. "Accomplished teachers also assess their own effectiveness with their students. They reflect on what goes on in the classroom and modify their teaching plans accordingly" (Bransford et al., 2000, p. 242).

Results to Date / Implications

We observed successful indicators among our students when they were given a chance to adapt an initial teaching experience and re-teach the same lesson after going through the reflection and adaptation stages. When re-teaching, our students often came across more poised and intentional when using academic language, explaining direction sets, guiding meaningful discussion, or sharing informative stories, which established a more robust learning opportunity for their students. Students expressed support of the model and demonstrated significant growth when we directed them through the four components of teaching, reflection, adapting, and re-teaching

At the conclusion of all students having had the opportunity to re-teach, we provided a debriefing session. During this session, students indicated the feeling of demonstrating a successful lesson solidified their intent to continue pursuing agriculture education as a career after previously questioning whether this career track was really for them. Some students voiced interest in attempting to teach additional lessons with content they with which they were unfamiliar, knowing this model allows for mistakes and does not expect perfection. They realized this model provides structure and support towards learning and advancing their own personal and professional development as incoming agriculture teachers. Our initial observed indicators began to depict a glimpse of what might possibly be an effective procedure in equipping preservice teachers in further developing and intentionally improving upon PCK.

Future Plans

We proposed a four-phase model for micro-teaching we believe teacher preparation programs should consider. This model is supported by relevant literature and through personal experiences working with several preservice teacher cohorts in different states. Results from our literature analysis, support each phase of this model. Our aim is to provide more structure to the reflecting and adaptation phases and test the model again. Eventually we would like teacher preparation programs to consider integrating the Switchback model into their own programs where they can couple each phase of the model in a progressive manner. This model affords us, as teacher educators to, prepare future teachers to employ a logical methodological tactic in problem solving, promote peer dialogue, and adaptive techniques in lesson design and curriculum – creating a more dynamic and confident instructional approach and future agriculture teacher.

Costs / Resources Needed

The Switchback model can be adapted to any content area (e.g. animal science, agriculture mechanics). Implementation of the Switchback Model poses no extra costs or resources beyond what a teacher preparation program already incurs by training preservice teachers.

References

Bransford, J. D., Brown, A. L., & Cocking, R. R. (2000). *How people learn: Brain, mind, experience, and school*. National Academy Press.

Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational researcher*, *15*(2), 4-14.

Van Driel, J. H., Jong, O. D., & Verloop, N. (2002). The development of preservice chemistry teachers' pedagogical content knowledge. *Science Education*, *86*(4), 572-590.