The Scholarship of Teaching: Identifying Expert Cognition in University Professors Teaching Diverse Students
A report on the work of the 2005-06 Teacher Scholars.

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This article reports on the research project that the 2005-06 Teacher Scholars undertook. The team was comprised of faculty from across the university, including Chris Hague, Special Education; Rona Halualani, Communication Studies; Rosemary Henze, Linguistics & Language Development; Joyce Osland, Organization & Management; Christina Peterson, King Library; Mohammed Saleem, Mathematics; and Susan Wilkinson, Kinesiology.

As the Teacher Scholars began to explore their interests pertaining to teaching and learning at the college and university level, the conversation kept ending up focusing on diversity – how they, as faculty, had become mindful of the tremendous range of experiences, preparation, learning styles, and backgrounds of their own students. The discussion invariably turned to specific examples of instances where that diversity had challenged them to be more inclusive in their teaching, and where it had immeasurably enriched their courses. They also recounted moments where they were suddenly called upon to manage an awkward, or even potentially hurtful situation in class that had sprung up because of the students’ insensitivities to one another and one another’s needs or perspectives. They shared stories about colleagues who seemed in control, and even “unflappable” in the face of these sorts of challenges. As it came time to settle on a research topic, the group quickly reached consensus that this was the realm they wanted to explore.

The research question they addressed was the following: What constitutes expert cognition in university teachers of diverse learners across disciplines? By this, they sought to identify what was distinctive about faculty recognized by their peers as “expert” in working effectively with diverse students. What did they know? What did they do? How did they analyze problems, situations or goals that pertained to potentially challenging situations? And how might the rest of us benefit from learning about their expertise? The group’s short-term goal was to build a theory that identified the cognitive processes of expert teachers working with diverse students. Their long-term goal was to make their approach and their findings available to architects of professional development programs designed to better prepare college faculty to work with increasingly diverse student bodies.

A working definition of “diverse learners”: The group arrived at the following working definition of “diverse learners”: Students whose acquisition of knowledge and skills in the classroom is shaped by their cultural background in terms of but not limited to: gender, race, ethnicity, age, physical disability, sexual orientation, political opinion, regional origin, nationality, religion, learning style, linguistic background, socioeconomic class, and family history.

Identifying “expert teachers”: The Teacher Scholars began by operationalizing the definition of an expert teacher as someone who met four criteria: (1) they have strong content knowledge organized for teaching in his/her field; (2) they address problems efficiently within their domain of expertise; (3) they reach insightful solutions that somehow don’t occur to others; and (4) they make pedagogical decisions that engage diverse students in the learning process and make the content accessible. They then sought nominations from colleagues all across the campus, and ultimately identified 14 faculty members who fit the bill. Most of these faculty were tenured. Some represented “diverse” groups themselves, in terms of their personal and cultural backgrounds. All were humbled to have been asked to participate, and genuinely surprised to have been thought of...
as “experts” by their peers. But they were also all quite forthcoming, and were very generous with their time and their insights, as they were interviewed one-on-one by the teacher scholars.

A word about the methodology. The interview technique employed by the group, called cognitive task analysis (CTA), identifies the cognitive skills or mental demands needed to perform a task proficiently (for reviews, see Hoffman, Shadbolt, Burton, & Klein, 1995; Kim & Courtney, 1988; Olson & Reuter, 1987). It identifies how experts, as opposed to novices, perform a task by analyzing and modeling the cognitive processes in specific domains (Hoffman, Crandall, & Shadbolt, 1998; Militello & Hutton, 1998). Our adaptation of this methodology includes a combination of the critical incident technique (Flanagan, 1954) and hierarchical task analysis. Subjects first identify a critical incident relating to a challenging classroom incident involving diverse students. Then they divide this incident into the chronological steps they perceive. After describing each step, they indicate which step(s) is most complex and difficult for novices. Next, they answer questions about the cues and strategies they used and identify potential difficulties for novices. The interview transcripts are subjected to content-analysis.

What did the Teacher Scholars find? There is a well-developed literature on expert cognition in general (e.g., Dreyfus & Dreyfus, 1986; Sternberg & Davidson, 1994), which concludes that experts, in comparison to novices, are better able to differentiate between relevant and irrelevant cues, to chunk data into patterns, to perceive what is not visible, to index their extensive knowledge bases using patterns, to interpret patterns and the interaction among cues more accurately, and to cross-index patterns from other country operations and cultures. When they analyzed the responses of our own “expert” faculty, they found similar strengths and skills.

The “experts” recounted a wide variety of incidents that they were able to address. The most common sort of incident entailed comments that students made in class that revealed insensitivity to other students and/or world issues that might impact them (e.g., naïve comments about political situations), or that questioned the need to acknowledge cultural differences in the first place. Other incidents included how students responded to the disabilities of classmates, to classmates’ outbursts in class, to instances of cheating, and to students’ self-segregating into culturally homogeneous groups.

The “expert” faculty’s insights into their ability to manage these sorts of incidents generally fell into five categories:

1. Their ability to create a learning community

Expert teachers set about creating a classroom culture that minimized the likelihood that such incidents would occur in the first place. They made efforts to know each student’s name, and to ensure that students in their classes knew each other’s names as well. They sought to build trusting relationships with their students, by following through on expectations, by being clear and fair about grading practices. The made efforts to create a “safe” learning environment, where students could take risks, make errors, and not fear being ridiculed by their peers. The tried to create a sense of camaraderie and teamwork, where students could help each other learn and succeed. They sought to create a climate of “intellectual inquiry”, where students would genuinely engage with the material and with each other. They worked to nurture an appreciation for the diversity reflected in the class, in terms of students’ multiple perspectives and differing points of view. They modeled respect for their students and insisted on students’ exhibiting respect for them and for one another. Much like expert K-12 teachers, they managed to create a classroom culture where everyone “bought into” the class rules and expectations.

2. Their perception of their role in the classroom
The expert teachers saw themselves as role models and as coaches. They saw their primary responsibilities as guiding students through processes of inquiry and discovery. They saw themselves as “enforcers” to the degree that they needed to maintain ethical standards, or remind students of expectations in the classroom. But they wanted their students to assume as much responsibility for their own learning, and for what transpired in class as possible.

3. Teaching strategies they developed and employed

Each of these faculty indicated that they very intentionally monitored the events that transpired in their classrooms for subtle cues that might indicate students’ comfort levels, or reluctance to participate. They indicated that they used a variety of “tricks of the trade” to engage and give voice to all of their students, including humor and code-switching. They indicated that they were very quick to respond to incidents that arose in class, modeling respect for differences of opinion. They followed through after class, checking in with quiet students, asking students how they felt about comments made by classmates, and helping them find ways to express their reactions to comments made by others, whether directed at them or at the class as a whole.

4. Self management techniques they utilized

In addition to this set of strategies for handling the flow of event in the classroom, these “expert” teachers stressed the metacognitive aspects of teaching. They referred to the importance of reflecting on their own authority, on their role framing the experience of their students. They talked about recognizing their comfort zone, or knowing their limits, of having a good sense of the level of controversy or discord they felt competent to handle. They talked about learning from experience, and growing as teachers, as educators, as guides for their students. They recounted incidents that they realized they had handled poorly, and they talked about how they had modified their own behavior, so as to minimize the likelihood of recurrences of these kinds of unpleasant or hurtful situations.

5. Sources of expertise that they drew upon

When asked what they attributed their skill in handling diversity to, each of the “experts” talked about a blend of influences. They talked about formative experiences in their own lives, personally and directly involved in similar incidents, or by-standers looking on with a sense of helplessness. They talked about the formal knowledge they had acquired during their professional training, about cultural differences and about intercultural communication. And they talked about how they brought that information and those insights to bear in the classroom, every day, in routine and unexpected ways.

Summary and next steps

While it is likely that some faculty are “born educators”, “naturals” at their craft, others may begin their journey less well endowed. Through a Cognitive Task Analysis of their descriptions of challenging incidents that arose in class, the Teacher Scholars were able to identify some of the attitudes and strategies that have permitted these 14 special faculty members to be particularly effective teachers for our diverse student body. The task that remains is to share this information with the broader university community, and to work with individual faculty, to help them develop equally effective repertoires. As the 2005-06 Teacher Scholars “year” comes to a close, and as they return to their “regular” lives, they have begun to disseminate their work. They presented their project at the Spring 2006 Celebration of Teaching and Learning forum, and they have made themselves available to their departmental and college colleagues as resources.
References


