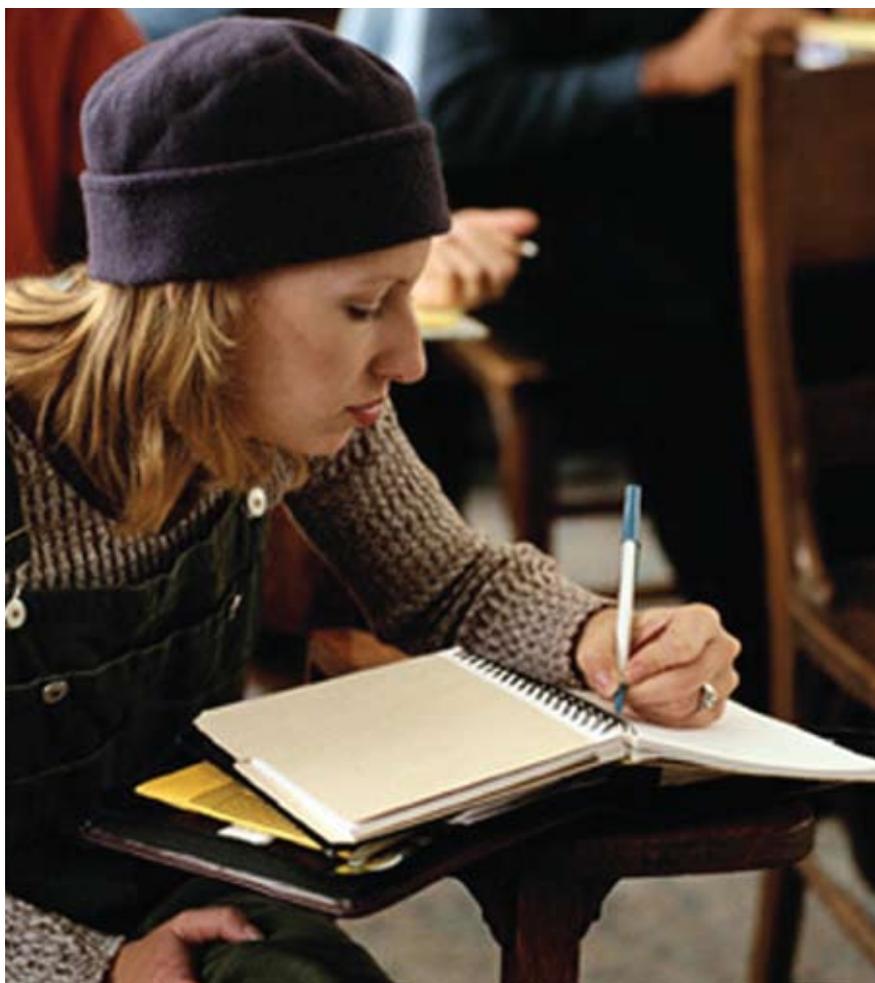


# Promoting the Development of Graduate Students' Teaching Philosophy Statements

By Elisabeth E. Schussler, Freya E. Rowland, Christopher A. Distel, Jenise M. Bauman, Mary L. Keppler, Yuta Kawarasaki, Mirabai R. McCarthy, Alicia Glover, and Hassan Salem



*Teaching philosophy statements typically improve over time with teaching experience and instructional self-knowledge. Graduate students without this experience and self-knowledge risk producing lackluster statements when applying for academic positions. This study identifies components of a biology education course that positively affected the development of eight graduate students' teaching philosophy statements.*

Despite the requirement of a teaching philosophy statement (TPS) in faculty hiring, the development of a TPS is a challenge for many graduate students. The process of creating a TPS can be complicated by the lack of guidance many graduate students receive from their academic advisors regarding this part of the application packet (Schönwetter et al. 2002). Web-based examples (see Coppola

2002) as well as dialogue with colleagues (Chism 1997) appear to be the main resource for graduate students constructing a TPS. However, these often focus on the narrowly defined aspects that are agreed on for a TPS (such as length and first-person approach) and lack information about how graduate students should develop personal teaching ideologies and or an understanding of the expectations of the different institutions who may review it.

At its core, a TPS is a highly personal document that answers the direct question: What is teaching and learning to you? However, it is also political, metaphorical, professional, and pedagogical (Coppola 2002). Every educator has a philosophical framework that guides his or her teaching, so it is ironic that putting it on paper is such a daunting prospect (Coppola 2002). Part of the problem is that students appear to lack the self-reflection necessary to produce the document. Perlman et al. (1996) interviewed and studied the application packets of 156 applicants for an assistant professor position and found that many candidates had never reflected on their teaching philosophies and/or goals. However, gathering, assimilating, analyzing, and reflecting on a personal philosophy is imperative when initiating a career in which teaching plays a major role (Schönwetter et al. 2002; Eierman 2008).

In a previous graduate biology education class, the students identified crafting their TPS as one of

the more significant experiences of the course (Schussler et al. 2008). Therefore, the objective of this present study was to document the progression of graduate students' TPS through the completion of the same course. Changes in TPS throughout the semester were identified as well as what experiences contributed to those changes. We show that learning about pedagogical theory was the major factor in the changes students made to their TPS, giving them the tools to focus their philosophy on student learning. Another instrumental experience was talking with faculty members who had served on search committees, which provided the catalyst for refinement.

## Methods

Biological Science Education is a three-credit, 15-week graduate-level course at a midwestern public university. In spring 2009, the class included eight master's and PhD graduate students in botany, zoology, and environmental studies. Typical pedagogical training for graduate students at the university includes a short (10 hours or less) workshop on pedagogy the week before classes. Most students in Biological Science Education expressed a desire to teach professionally at the college level and had taught 1–8+ semesters of college laboratory during graduate school. Two students had taught classes for college students, adults, or high school students in the past; two had led K–12 field trip programs; and two had completed a university teaching enhancement program.

The first seven weeks of class included sessions on meaningful learning, motivation, metacognition, multiple intelligences, cooperative learning, intellectual development, constructivism, inquiry, and assessment. For each session, students read articles and participated in discussions and activities about each topic. Each student was also required by

the eighth week of class to conduct four teaching observations that were compiled and discussed during class. The ninth week of class included a panel discussion about the TPS with two guest faculty who discussed the value and aspects of the TPS that would make them particularly appealing to search committees at colleges and universities. During the final weeks, each student led a class session on an additional pedagogical topic and worked in a group to revise a course.

The writing of a TPS was a multistep process during the course. Students were provided with a few TPS examples, web-based resources, and articles the first week of class and wrote a first draft that week. Four weeks before the end of the semester, students submitted a revised version of the TPS and compared their initial and revised versions. Each revised statement was reviewed by four classmates and the instructor prior to student submission of a final TPS the last week of class. Each student also prepared a 300-word abstract summarizing how his or her TPS changed and why. These abstracts formed the basis of this study.

After the class ended, all eight students agreed to participate in the study and submitted their final abstracts for analysis. Students independently read each others' abstracts and identified recurrent ideas about how the TPSs had changed and what had caused the change. Five students and the instructor met and discussed these ideas until they reached consensus about the themes (Hill, Thompson, and Williams 1997). Five students independently identified quotes from the eight abstracts that supported and did not support the themes, then met to verify the support for the themes. There were no quotes that invalidated the themes. These students then selected the quotes used in this article. The students and their quotes are identified by their first names in the results.

## Results

The analysis supported the existence of two themes regarding what changed about the TPSs and three themes about why they changed. The themes of what changed in the statements were "Shift to Student Learning" and "Technical and Personal Refinement." The themes of what contributed to these changes were "Science Education Theory," "Panel Discussion," and "Peer Review."

### *What changed*

In analyzing what changed from the first to the last versions of their statements, several students identified an ideological change from a teacher-centered to a student-centered pedagogical approach. For example, Mirabai stated the following:

My original TPS was very teacher-focused and discussed various methods I use to prepare myself to teach. My revised TPS was more student-focused, and provided personal examples of the activities and teaching methods I use to promote student learning.

Yuta also identified this change, as follows:

The biggest impact that this course made on my teaching philosophy was the paradigm shift from a teacher-centered approach to a learner-centered approach for teaching: teaching is not about what I teach, but about what students learn. Although I had always identified students' learning as the goal, I failed to foster the clear idea of what learning means.

As evidenced above, this "Shift to Student Learning" often meant that the ideas contained within the TPS were completely revised from pre- to postsemester.

Almost every student in the class mentioned ideas supportive of the theme “Technical and Personal Refinement.” In “Technical Refinement,” students shortened the philosophy statement, improved its focus, and/or removed excessive jargon. There was also, however, “Personal Refinement” in which students focused on making the statement their own; this often involved adding specific examples of what they do as teachers and why they personally love teaching. For instance, Freya commented as follows:

Gone are the five separate headings, the “gobbly-goop language” our experts so vehemently opposed, and the numerous thoughts and ideas about education I often did not completely understand crammed into two pages . . . I focused on what is most important to me as it relates to teaching, eliminated jargon, and am truer to myself and what I believe rather than simply writing what I thought search committees would want to hear.

Alicia focused on refinement when she said, “My final paragraph now flows with the first paragraph, reiterates the important points in the body of my statement, and conveys my passion for teaching.” Mary emphasized that, “Each revision needed to match up with my personal convictions, successfully moving my philosophy away from whimsical notions to concrete practices.” Often, students expressed ideas consistent with both technical and personal refinement, emphasizing that the process of streamlining went hand in hand with personalizing.

### *What contributed to the changes*

Students expressed that the course activity that was most important to the revision of their TPS was learning about “Science Educa-

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tion Theory.” This was mentioned by all eight students and was often accompanied by specific examples of the theories they emphasized in their statements, including multiple intelligences/learning styles, assessment, collaborative learning, Bloom’s taxonomy, inquiry, and engagement and motivation. Some students acknowledged the contribution of theory in general, such as Chris who commented that, “My teaching philosophy has benefited immensely from a working knowledge of the theory and practice of several pedagogical techniques that we learned in class.” Other students mentioned specific theories in their TPS, such as Jenise who stated, “Differentiating between rote and deep learning helped frame my philosophy with regard to meaningful learning and the assessment techniques that can be employed to encourage a greater synthesis of lecture material.” Learning about theory was critical to the students who identified a change from teacher-centered to student-centered instruction in their philosophies, but it was also critical in helping students refine and individualize their TPS.

Another important course activity was the faculty panel discussion on the TPS and academic job searches. Given that this session was only one class period (compared with the time spent on theory), its impact on the students was very high, with five specifically mentioning this activity as a factor in the changes they made. Freya said, “The advice of these faculty influenced my TPS revisions heavily—so much so, in fact, that for my second draft I started anew instead of trying to revise my old ideas.” Hassan specifically mentioned how this affected his need to refine the TPS as follows:

The panel provided us with honest recommendations regarding what is actually being read in a teaching philosophy. I found such a session to be instrumental in refining my teaching objectives into clear paragraphs void of ambiguous and indefinite statements.

It seems that the main impact the panel had on the TPS changes was in refinement. The panel members talked about length and clarity of expression, but they also stressed the importance of personalizing the statement and grounding it in reality.

Two of the students also relied on the suggested revisions they received from the instructor and classmates about their TPS. Mary said, “The bulk of revisions resulted from the feedback of several of my peers as well as a senior faculty member,” and Alicia stated that, “Peer reviews suggested I narrow my statement from mentioning many different concepts to focusing on a select few.” These students appreciated the objective comments of their peers to identify things in their TPS that might otherwise have gone unnoticed.

### **Discussion**

This study found that learning about education theories and speak-

ing with faculty who have served on search committees helped the graduate students in the course develop more meaningful and potentially effective TPSs. All of the students in the class had a strong interest in teaching, and some also had extensive and/or diverse teaching experiences. All were provided with web-based advice sheets, articles on how to write a TPS, and examples of TPS prior to their first draft. At the beginning of the semester, these students wrote their TPS with all the tools that a typical graduate student would have when writing their TPS. The documentation of significant changes in their TPS from the beginning to the end of the course suggests that students would benefit from additional experiences (such as education seminars or search committee panels) to aid them in developing these statements.

As suggested by Eierman (2008), one factor in developing a personalized TPS is an extensive amount of reflection on teaching and learning. However, in graduate programs that emphasize scientific coursework and research, self-reflection with regard to graduates' roles as educators loses priority. This study implicated education theory as one of the main catalysts for the ideological shifts in TPSs. For a science graduate student, the time required to explore the literature in this field is quickly trumped by the demands of course work, teaching, and graduate research. For science departments that strive to place graduates in academic positions, it may be a wise investment to require students to take a pedagogical course or seminar to provide them time and a faculty guide to fully appreciate the extensive literature of this field.

Last, our study indicates that students would benefit by talking with faculty who have served on search committees at different types

of institutions. Our panel included two faculty members, yet each contributed different perspectives about the TPS because they serve, or have served, different types of institutions. This allowed students to see firsthand that different institutions hold different expectations for their faculty and that the TPS needs to be tailored to the mission of each institution. Having faculty from different institutions read and comment on a student's TPS would also be beneficial to students. These interactions with faculty appear to provide the feedback necessary to produce a polished, personalized statement that would be more meaningful to members of search committees.

We recommend that all graduate science departments offer a course on pedagogy that includes basic theory and opportunities for discussions between graduate students and faculty mentors. Even the most experienced graduate students can easily become overwhelmed with the process of writing a TPS and resort to a jargon-filled generic statement that may be overlooked by members of a search committee. Knowledge of education theory coupled with faculty feedback would provide students with the tools and guidance needed for a deeper self-reflection of the student's role as an educator necessary to refine their teaching philosophy statement. ■

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