Balancing the Equation: Does a Ph.D. Equal Expertise in Teaching?

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"Teach or Perish"

Most tenure-line professors have heard and experienced the anxiety-causing "publish or perish" initiation rites in the world of higher education. Fresh Ph.D. graduates going into the professoriate often worry and agonize over this grueling process. However, one of the most central missions of many Tier 2 universities in the U.S. isn't expressed in the same manner: "Teach or perish." Why don't people talk about teaching in the same way as publishing, when course evaluations are often critical in getting tenure and promotion? Is teaching any easier, something that anyone can do on the fly? Do professors and administrators automatically assume that everyone who has a Ph.D. or advanced degree is an effective teacher? Do they value teaching any less? If teaching is indeed as valued, why are professors, especially new ones, largely left on their own to sink or swim, often teaching large introductory courses with historically high failure rates? Why isn't there a structured learning environment for professors analogous to the pedagogical preparation that K-12 teachers go through? These questions have puzzled me, as I have seen clusters of new faculty come and go, trying to figure out the complex nature of teaching.

Teacher Education vs. Professor Education

In the field of Teacher Education, pedagogy, as defined by John Loughran, is the relationship between teaching and learning (Loughran, 2006, 2010). Originally rooted in Greek, pedagogy literally means "to lead a child," implying leadership is embedded in teaching. Based on this definition, understanding *pedagogy* is critical to student learning. Equally important, without understanding learning, teaching cannot succeed. It is not surprising then that Darling-Hammond, Bransford, and other scholars in the field of Teacher Education report that the teacher is the number one factor in student achievement, exceeding class size, SES, and other factors (Bransford, Darling-Hammond, & LePage, 2005). Founded on this principle, university-based teacher education programs take K-12 teacher candidates through a series of structured courses and practicum experiences, starting with theoretical foundations of learning, content-based teaching methods, and culminating in supervised teaching experience in real classrooms. In particular, during the last phase in the program, teacher candidates receive continuous, immediate feedback from more experienced university supervisors and mentor teachers at the schools where they are assigned to teach. The purpose of this full-time practicum is designed to improve new teachers' teaching and prepare them for the teaching profession. In contrast, most graduate programs don't prepare future professors to teach university students with the same rigorous curriculum and supervised teaching. They are heavily content based, not pedagogically based. So, why is there such a wide gap? Do students suddenly change the way they learn once they get into college? Or are students supposed to become independent learners as soon as they graduate from high school?

The reality is that instead of participating in a structured *professor education program* to prepare them for college teaching, most new professors go through an initial orientation program, workshops, and other professional development activities. These events are often offered by the institution's central unit (e.g. Center for Teaching and Learning) that falls under Academic Affairs to support new professors joining the profession. Their experiences differ from institution to institution, many of which include workshops such as how to create a syllabus, the use of rubrics, technology in teaching, creating learning objectives, flipped classrooms, and a host of other timely topics. In addition to periodic events and workshops, faculty learning communities (FLCs) have gained popularity to meet various faculty needs and interests: Literature circles, teaching with technology, lesson study, STEM learning, assessment and evaluation, to name a few. These concerted efforts indicate higher education institutions are moving in the right direction with more attention given to sustained faculty learning with the ultimate goal to set up students for successful learning.

Teaching Academy for Professors (TAP)

In response to the urgent need to provide an effective, structured learning environment for professors and to improve student learning outcomes, I created and piloted the Teaching Academy for Professors (TAP), supported by the Faculty Center for Professional Development at Cal Poly Pomona. Informed by my research in Japan on communal teacher learning (Ahn, 2014 & 2016; Ahn, Shimojima, Mori, & Asanuma, 2018), TAP is a community of professors from multiple disciplines (e.g. biology, communication, engineering, English) who engage in a structured semester or year-long program as follows: 1) Participate in an intensive Summer Institute to learn foundations of teaching and learning and student-centered pedagogical approaches; 2) Participate in on-going seminars with a discussion on teaching observation and focal topics on learning principles; 3) Regularly observe peers' teaching in a multidisciplinary-based triad with post-observation discussions; and 4) Analyze faculty and student performance data to examine the effectiveness of instruction.

There are several features that characterize TAP. One, it is intentionally composed of faculty from different backgrounds with respect to years of experience in teaching, discipline, faculty rank, race/ethnicity, gender, age, etc. This enables professors to view pedagogy from multiple perspectives. Teaching is observed by individuals who may not be disciplinary experts, allowing them to empathize with the learning experience of struggling students. Another key feature is the emphasis on putting theory into practice. Learning the foundations of teaching and learning and student-centered pedagogical frameworks and approaches in the Summer Institute, TAP participants learn why they teach the way they teach and reflect on how they would incorporate new theories, frameworks, and approaches into their own teaching. These structured activities heavily tap into critical thinking with extensive discussions and reflections in large and small peer groups, preparing them for the academic year teaching. Perhaps the most distinctive feature of TAP is the application of a modified version of Japanese lesson study. Participants observe one another's teaching-in-action and engage in post-observation discussion on teaching. They don't merely talk *about* teaching as a hypothetical topic; rather, they actually go into classrooms to observe each other without any judgmental evaluations or punitive consequences. The focus is on formative feedback on identified areas of general pedagogy such as student engagement and formative assessment. When observing, participants take note of the words and behavior of both the instructor and students in the classroom. This represents a paradigm shift

from the focus on individualistic, performance-based evaluation associated with tenure and promotion to a *process of teaching and learning* that is constructive and nurturing. The purpose of TAP lies in creating a supportive, non-threatening, and trusting community of professors who are open-minded, passionate, and committed to improving their teaching and student learning. Other important aspects such as accountability and evidence-based practice are also embedded in this model.

Promising Student and Faculty Results

Having led two cohorts of TAP, funded by modest internal grants, promising student and faculty-based data emerged. For example, in STEM and non-STEM courses, mid-term exam scores increased as much as 20.8% and 17.3% compared with the results from the previous year. Among the same participants, course evaluations improved in the range of 6.6% to 25.97%. Most importantly, based on self-assessment, the participating instructors' knowledge grew by 44.7% overall in different areas of teaching and learning such as student-centered pedagogical approaches and assessment. With their high satisfaction rate -- 100% and 90% for the Summer Institute and overall TAP – this year's participants voluntarily chose to continue meeting with the group even after the program ended. These results demonstrate the need for this type of communal approach to improve teaching and learning.

Qualitative data are also consistent with these quantitative findings. One tenure-track faculty member summed up his experience as follows: "At the start of last fall, my confidence was severely eroded by a string of poor student evaluations and Retention, Tenure, and Promotion comments. While there were valid external circumstances that partially explained those poor evaluation scores, the pattern indicated foundational weaknesses in my teaching - not surprising since I never had any formal pedagogical training and limited professional development for teaching beyond occasional mentoring... I end the year with a whole set of new pedagogical tools and theoretical framework, stronger student evaluation scores, and renewed confidence in myself." Since completing the Academy, this participant successfully attained tenure and promotion. He credited his TAP experience as a crucial factor in this career achievement.

Opening up Closed Doors

While TAP hasn't yet been implemented on a broad scale, based on the emerging quantitative and qualitative data, it is a promising model to improve teaching and learning in STEM and non-STEM disciplines in higher education. It enables professors to break the barrier of teaching in isolation behind closed doors. Colleagues openly observe and give feedback on one another's teaching in a non-threatening environment. Their focus is solely on the *process* of teaching and learning. Admittedly, there is a place for formal evaluation associated with tenure and promotion in higher education. However, there should also be a place for structured, non-evaluative experiences where the focus is on acquiring and applying pedagogical knowledge and tools to further faculty growth that leads to improved student learning. Perhaps one step toward balancing the equation might be to listen to the authentic voices of higher education professors and meet their needs to successfully teach all students. Systematically addressing faculty needs with a small investment of time and financial resources in cultivating a bottom up, not top down, learning community such as TAP can open up doors for pleasant surprises and successes.

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