Understanding and Improving Faculty Professional Development in Teaching

Jean Layne1, Jeff Froyd2, Nancy Simpson3, Rita Caso4 and Prudence Merton5

Abstract - Various entities within and related to higher education offer activities designed to promote professional development of faculty in the area of teaching. A critical challenge to these efforts is the lack of understanding of the actual process of faculty development in teaching. Insight into what faculty members believe about learning, assessment, and teaching, and how those views change, would assist efforts to improve faculty development opportunities. This paper will describe the current status of assessment of faculty professional development activities related to teaching. Working from this foundation, it will suggest ways of improving assessment strategies and begin the process of measuring the impact of specific program activities on faculty beliefs and practices. In addition, it will describe ways of investigating and drawing conclusions about professional development process paths in the area of teaching, variables that influence and enhance development trajectory, and roles of various types of faculty development activities in this process.

Index Terms - faculty development, learning, teaching

INTRODUCTION

Faculty development opportunities in teaching are intended to assist faculty members in their professional growth as teachers that should, in turn, lead to greater student learning. However, the process of faculty professional development in teaching is currently not well understood. Unlike most K-12 teaching professionals, faculty members in higher education typically have no formal preparation for the teaching portion of their professional responsibilities (exceptions include campuses that offer “college teaching” courses, Preparing Future Faculty [http://www.preparing-faculty.org] activities or other graduate student teaching preparation). As a result, faculty members are likely to teach as they were taught [1].

While “teaching like you were taught” seems like a simple statement, it actually reflects the complexity of the belief systems that individuals develop about teaching based on both good and bad experiences in the classroom (as student and teacher), personal preferences for taking in and processing information [2], discipline-based models of thinking, [3] and organizational/institutional paradigms about learning and teaching [4]. Belief systems form the foundation from which faculty members derive their attitudes about teaching and on which they develop as teachers; however, insufficient information is available about these belief systems or their connections to classroom practices. Although these gaps hinder evaluation of faculty development opportunities, evaluation is still necessary. The paper reviews the status of assessment and evaluation of faculty development in the area of teaching.

BACKGROUND: FACULTY PROFESSIONAL DEVELOPMENT IN TEACHING

Faculty members finish their terminal degree programs with depth and breadth of knowledge in their disciplines, but generally lack understanding of how people learn and how to effectively facilitate the learning process [5]. What theoretical knowledge they do have or acquire is transferred into classroom practice with different degrees of success. Efforts to improve teaching effectiveness often include informal faculty development opportunities such as conversations with colleagues, and formal faculty development opportunities that include those sponsored by teaching centers on campus, offered at professional conferences, or sponsored by projects that have received curriculum development grants.

Despite the ubiquity of informal and formal faculty development opportunities and dissemination efforts, relatively little is known about the degree to which such efforts facilitate adoption of new practices leading to improved teaching and subsequent student learning. One reason for this has to do with underdeveloped and underutilized methods for assessing these opportunities [6]. Another challenge is that faculty development opportunities are essentially designed in a “one size fits all” model. The reason for this is the absence of a “clearly defined supporting

1 Jean Layne, Texas A&M University, Center for Teaching Excellence & Dwight Look College of Engineering, 4246 TAMU, Blocker 232/234, College Station, TX 77843-4246, j-layne@tamu.edu.
2 Jeff Froyd, Texas A&M University, Dwight Look College of Engineering, Zachry Engineering Center, 3405 TAMU, College Station, TX 77843-3405, froyd@ee.tamu.edu.
3 Nancy Simpson, Texas A&M University, Center for Teaching Excellence, 4246 TAMU, Blocker 232/234, College Station, TX 77843-4246, n-simpson@tamu.edu.
4 Rita Caso, Texas A&M University, Dwight Look College of Engineering, Zachry Engineering Center, 3405 TAMU, College Station, TX 77843-3405, dr-caso@tamu.edu.
5 Prudence Merton, Texas A&M University, Dwight Look College of Engineering, Zachry Engineering Center, 3405 TAMU, College Station, TX 77843-3405, p-merton@tamu.edu.

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theory underlying faculty development” [7]. Faculty development professionals and faculty participants understand and can point to examples of the merit of current practice, but the lack of foundational understanding of how faculty development “happens” for faculty members means that efforts are less effective than they could be. A major hurdle in the theory development process is the lack of understanding regarding faculty attitudes, beliefs, and assumptions about learning, assessment, and teaching.

FACULTY THEORIES OF LEARNING, ASSESSMENT AND TEACHING

The concept of faculty theories of learning, assessment, and teaching is an example of how people form theories from prior knowledge and experience. This idea connects to other large bodies of research on how people form theories to explain their experiences. Examples of research in this area include mental models [8], which, in cognitive terms, are “both the semi permanent tacit ‘maps’ of the world which people hold in their long-term memory, and the short-term perceptions which people build up as part of their everyday reasoning processes” [9], gender schemas [10] racial identities and their development, and phenomenological primitives or intuitive knowledge [11]. An additional complication in the identification and tracking of these theories is the fact that, “teaching and learning are elusive concepts, very difficult to pin down” [12]. As understood within a constructivist paradigm, faculty members construct their own theories of learning, assessment, and teaching. These are often expressed using analogies or models, some of which are seen repeatedly and can even be tracked to level of experience/place in career [12].

Those charged with faculty development and with dissemination of innovative models of curriculum and teaching seek ways in which current research on learning and teaching can get into the hands and minds of faculty so that it can be translated into practice. In other words, they seek to influence or change both the espoused theories (what they say about teaching, assessment and learning,) and the theories-in-use (what they actually do in teaching, assessment, and learning) [13]. However, just as students enter courses with prior knowledge [14] that impacts how they learn, faculty members bring their own prior knowledge to the process of faculty growth in teaching.

Prior knowledge of faculty members emphasizes the fact that faculty development activities do not occur in a vacuum. Rather, they are delivered to faculty members who have, as noted above, their own sets of attitudes, beliefs, and assumptions related to learning, assessment, and teaching. Formed by their own experiences as students and faculty, they are the product of a variety of variables including upbringing, socioeconomic status, where they are from, race, gender, ethnicity, sexual orientation, religion, disciplinary specialty, relationships with advisors/mentors, etc. [15,16] The role and scope of these and unknown variables, individually and collectively, is a mystery. Which of these are most influential? Which ones act as triggers, and under what circumstances, for professional development in teaching? Attitudes, beliefs, and assumptions that develop through interaction between these variables are the filters through which faculty members interact with professional growth activities. They mediate interactions about learning and teaching and may promote or limit professional growth. Lack of understanding of these variables and the related belief systems hinders confident construction of benchmarks that might guide planning faculty development activities. Further, while individual development paths are unique, there may be commonalities in career stage, discipline or other variables that could inform practice.

Understanding how university and college faculty members develop their teaching requires more knowledge of the theories, the attitudes, assumptions and beliefs on which college teachers base their course and classroom practices. Research to acquire greater knowledge must recognize the disjunction between espoused theories and theories-in-use, the nature of both sets of theories, and relationships between them. Also of interest is knowledge of how both espoused theories and theories-in-use change over time and the factors that participate in catalyzing those changes. This information would greatly enhance efforts to provide more knowledge to faculty members about current research in learning and teaching.

ATTITUDES, BELIEFS, ASSUMPTIONS AND FACULTY DEVELOPMENT

In his article titled “Shortcomings of Research on Evaluating and Improving Teaching in Higher Education” Robert Menges targets “faculty behaviors and intentions” as the leading area in which more information is needed. Specifically, Menges states We know a good deal about what faculty do as teachers: how they spend their time, what their goals for students are, what instructional methods they use, how method selections are influenced by other variables (such as one’s discipline), and the extent to which method choices are constant or variable over time. We know much less about why faculty teach the way they do. How do they derive their personal theories of teaching and learning? Under what condition do they act or fail to act according to their personal theories? How do they compare their actual attainments with their intentions, and what are the consequences when they do? And, most important for the field of educational research, what roles in this process, if any, are played by research findings and formal theories? If we knew more about why faculty teach as they do, we would be able to respond to the following significant and practical question: Why do faculty fail to use demonstrably effective teaching methods and other data-based information about teaching, and how can that situation be changed? [17, p. 7]
Attitudes, beliefs, and assumptions that motivate faculty choices in teaching are generally not visible to a consultant or facilitator offering a workshop on a topic like cooperative learning. They may also be invisible to faculty members – who may or may not have reflected on this information or drawn connections between these beliefs and actual practice. And, while faculty development professionals may attribute certain attitudes to faculty participants based on their questions or level of engagement, those attributions are based on the faculty developer’s own attitudes and experiences (also largely unexplored).

Although faculty development professionals recognize the significance of attitudes, beliefs, and assumptions, they are difficult to measure. And, they result from interactions between many variables – some described earlier in this paper, some as yet unidentified. Many questions about the professional growth of faculty are motivated by undefined interactions between these variables and the attitudes, beliefs, and assumptions that have developed from the interactions as a result of faculty experience. For example: What motivates faculty to engage in activities that contribute to positive change in their work as teachers? What attitudes, beliefs, and assumptions influence this process? What types of activities benefit faculty most at different stages in their careers? Are there disciplinary issues that influence the rate at which faculty development occurs for those in particular subject areas? How does the development of minority faculty differ from majority faculty? What is the role of the institutional and disciplinary cultures in encouraging/promoting faculty professional development in teaching? These are questions that can and should motivate research in this area.

Justification for identifying and monitoring faculty attitudes, beliefs, and assumptions toward teaching is offered in the learning literature through several constructs. For example, metacognition is a combination of “individuals’ knowledge about their own thought processes” and “their ability to use this knowledge to regulate their own cognitive processes” [18]. If faculty attitudes are allowed to remain invisible to them within professional development processes, their reflection about this process is stunted. Encouraging reflective practice in connection with faculty development has the potential to increase the benefit of such activities for faculty members and their students. In Merizow’s theory of transformational learning, learning itself is defined as “becoming aware of one’s beliefs and assumptions and revising them based on critical self-reflection.” [19, p 122] In Schon’s theory of reflective practice, faculty who practice reflection-in-action “first accept that the underlying assumptions that frame how they perceive and practice their craft should be questioned.” [19, p 122] Brookfield argues “the key to improving teaching lies in uncovering hidden assumptions.” [19, p 123] Fink articulates four dimensions of teaching: skills, decisions, philosophies, and attitudes. [20, p 10] Learning theory also supports the value of identifying attitudes, beliefs, and assumptions.

While issues such as skills at using PowerPoint or decisions about methodology seem straightforward, they are connected to the more complex issues of attitudes, beliefs, and assumptions – issues that without active reflection may remain largely invisible to the faculty member. The challenge for faculty development is well summarized by Kegan and Lahey: “it is very hard to sustain significant changes in behavior without significant changes in individuals’ underlying meanings that may give rise to their behaviors” [21, p 3].

If information about faculty attitudes, beliefs, and assumptions about teaching is recognized as significant, one might ask if there are reasons why the information has not been collected and analyzed. The reasons are practical ones. First, faculty development efforts have historically tended to focus on solving problems encountered in teaching [22]. With this focus, investigating foundational beliefs seems less important than addressing the teaching problem at hand. Second, the goal of many faculty development opportunities in teaching is dissemination of information such as new curricula or development of particular skills like using case studies or cooperative strategies. They do not necessarily plan to address specific attitudes influencing faculty teaching behaviors. Analysis of the importance of and lack of knowledge about attitudes, beliefs, and assumptions suggests that what is not known is likelyimpeding progress both for those offering faculty development opportunities and for those participating. Exploring faculty attitudes is a complex process. The key to pursuing it rests in rethinking conceptions of assessment for faculty development activities, as currently practiced.

Why is greater understanding of faculty member attitudes, beliefs, and assumptions critical to faculty development? The explanation is based on a view of learning as change. In order to become more effective teachers, faculty need to learn new ways thinking about, and practicing, teaching. If underlying beliefs are not explored, unpacked, and addressed in this process, the outcome is likely to be “change without difference” [23]. This phrase describes what is often seen with curricular and other educational reform efforts – cutting edge ideas translated to traditional outcomes. A substantial contributor to this scenario is the failure to significantly alter teacher thinking in relation to change projects [24]. Unchanged patterns of thinking mean that new information is assimilated wherever it will fit, and if it does not “fit” it is likely to be missed or even ignored. If faculty members do not learn new ways of thinking about learning and teaching – their own roles and those of students, ways of delivering content, assessing progress – they will fall back on previous knowledge and practice.

**ASSESSMENT AS RESEARCH IN FACULTY PROFESSIONAL DEVELOPMENT**

Methods useful for identifying and monitoring faculty attitudes, beliefs, and assumptions toward teaching can be inferred from several sources. Argyris (1982) refers to the practical knowledge that makes professional practice possible as “theories of action” [13]. For faculty in higher education,
these, “practical theories of teaching are the conceptual structures and visions that provide teachers with reasons for acting as they do” [25]. Shulman (1986) expands this idea by adding a disciplinary dimension, saying that for faculty who teach certain topics regularly, their personal theories of teaching are incorporated into “pedagogical content knowledge,” that is, “the most useful forms of representation of those ideas, the most powerful analogies, illustrations, examples, explanations, and demonstrations – in a word, the ways of representing and formulating the subject that make it comprehensible to others. . . and an understanding of what makes the learning of specific topics easy or difficult . . .” [26, p. 9]. Use of the teaching portfolio in higher education, where faculty members produce a personal narrative account of their teaching philosophy and practice along with documentation/artifacts from their teaching has demonstrated that faculty members have theories about learning, assessment, and teaching that guide their practice [27]. Indeed:

In teaching and research circles, it is now generally acknowledged that what teachers do in classrooms is an expression of the practical theories they hold. [emphasis added] Research indicates that these practical theories are personally constructed by teachers, largely from classroom experience, but also from exchanges with other professionals. Such theory-building, a basic aspect of human behavior, represents teacher attempts to make sense of classroom events and to generate frameworks to guide their planning and teaching. [28]

This further illustrates the likely relationship between changes in practice and thinking. Based on this perspective, changes in classroom practices would be preceded by revisions in theories. There are two assumptions underlying this premise. The first is that theories are explicit and well known enough to the teacher that they can be articulated. And second, that these theories always guide practice and can be demonstrated in the classroom as personal theories-in-use. Yet, some research has shown that there is a major disjunction between what a teacher says is their “theory of personal practice” in the classroom and how that translates into “theories-in-use” in actual practice [29]. For example, faculty developers who are experienced in helping faculty members prepare teaching portfolios, have noted that it is possible for faculty members to produce a teaching philosophy statement yet describe preferred methodologies and teaching strategies that are incongruent with their philosophy. Recognition of the incongruity often challenges the portfolio author to reflect on her/his thoughts and actions [30]. Argyris and others (1985) saw that when asked about their practice in the classroom in a particular situation, teachers replied with their espoused theories, speaking about aims and intentions [13]. Yet, it is theories-in-use that determine action.

Any serious attempt to characterize a teacher’s conception of the discipline he or she teaches should not be limited to an analysis of the teacher’s professed views. Thompson (cited in Kane, Sandretto & Heath 2002) also includes an examination of the instruction setting, the practices characteristic of that teacher, and the relationship between a teacher’s professed views and actual practice [29]. This type of research should rely heavily on qualitative methodologies. Design of specific interview protocols and use of stimulated recall (interviewing faculty about their thinking about teaching while viewing a videotape of their teaching) are a couple of ways to obtain critical data for analysis. The development of inventory/survey instruments comprised of behavioral questions carefully formulated from data gathered from qualitative inquiries can, subsequently, provide a more convenient means of tapping into such information.

It is clear that the research needed to collect and analyze these qualitative data is complex, as is the development of any more expedient, yet valid, means of extracting the information which is required. It involves querying faculty about their attitudes and beliefs. It also requires that their teaching practice be observed and that they be debriefed following this process. The research necessities mirror the complexity of the processes of learning and teaching.

In terms of specific faculty development opportunities, some of these concepts are easier to incorporate than others. Teaching portfolio and peer review opportunities have included activities where reflection and metacognition are part of the process. For activities like workshops, the usefulness of satisfaction surveys is questionable. One different approach would be to have participants write down the reasons they are attending the workshop at the start and then follow-up at the end by writing about outcomes in relation to those expectations. Similar self-monitoring techniques can be employed in other types of programming.

Reviewing this material can provide useful information on several fronts. First, it would be interesting to note if the types of questions/expectations of participants show commonality based on any of the process variables mentioned. For example, are certain types of questions common to mid-career faculty? Are there particular ways of stating expectations that show up more frequently in relation to certain disciplines? What conclusion can be drawn from the level to which participant expectations have been met and any lingering questions they pose? Analysis of this type of information has the potential to be useful in planning and providing professional development opportunities targeted to enhance development trajectory of specific groups on campus.

With so many sources of faculty professional development available, how can synergy be encouraged? One way is for those offering opportunities to view them as connected and plan accordingly. Individuals in departments, colleges, faculty development centers, and other organizations interested in faculty development need to work together as they offering programming. By doing so, they can learn from each other and design opportunities that have the potential for greater impact. Planning and delivering them as stand alone events decreases the chances that faculty participants will draw connections between and among planned opportunities and/or their individual pursuits. Ideally, participants should be
encouraged to talk about connections they are making as they think about activities. Much like students, they may draw unintended conclusions that could benefit from exploration and reflection.

**PRACTICAL ASSESSMENT IDEAS FOR IMMEDIATE IMPLEMENTATION**

While more in depth research on the professional development of faculty in teaching can be undertaken, how can those facilitating and participating in the process now implement changes in their practice that explore the critical area of faculty attitudes? Here are some suggestions.

*Build in and improve assessment.*

This is not a call for quizzes at faculty development events. Rather, it is a reminder that learners take their cues regarding what is important from what is assessed. This indicates that substantive questions need to be posed following faculty development opportunities to emphasize what is important and promote reflection. Ask, “Why?” Understanding what motivates faculty to devote time and energy to faculty development is critical. Ask faculty members what they want to learn. Commitment to an activity is greater when individuals believe that purposes and expectations are aligned. Ask what they have learned. Promote reflection.

*Focus on content.*

Many faculty members are drawn to professional development activities by a particular challenge in the area of teaching. Whatever the specifics of this challenge, it is often related to the issue of conveying critical, challenging content in the discipline. Because faculty members are first and foremost disciplinary professionals, this focus is a logical one. For this reason, faculty development opportunities that begin analysis of teaching challenges with a focus on content will resonate more with faculty than initially focusing on learning. The issue of student learning will surface in the process of identifying what makes critical content challenging and how to increase student mastery of that content.

*View faculty as learners and consider their prior knowledge.*

Faculty members have a long history as learners and all the prior knowledge that comes with it. It is critical to tap into this information in connection with faculty development opportunities. Pre and post activity/event surveys are one way to help faculty both unpack prior knowledge and reflect on their own learning. Asking faculty why they are attending, what they hope to gain, what they have learned and how it can be applied encourages reflection and helps planners determine what types of programs and services are most valuable.

*View faculty development as an ongoing, multifaceted activity and encourage making connections.*

Faculty members lament that students often seem to view each course and/or semester as an island in their educational experience. However, very real pressures and constraints on faculty time result in similar experiences in faculty development. Helping faculty connect a workshop and conference session from a year before, etc. can promote synergy between and among opportunities and make the professional development process visible to faculty. Again, asking well thought out questions that require responses beyond level of satisfaction with an opportunity can promote critical reflection.

*Formulate and ask behavioral questions for written response.*

While implementing each of the above suggestions construct and include questions about faculty member’s recent teaching practices. Pose specific questions similar in type to behavioral interview questions [30], targeting instructors’ recent teaching behaviors. Design questions to be answered in writing, with descriptive detail about activities as they would have been observed by a third party or camera in the classroom. Initially respondents should then be asked to generate their own open-ended answers describing their actions in a teaching activity. Over time, the accumulated responses to particular behavioral questions may be organized by the important characteristics they “demonstrate.” Repeated characteristics may be used to provide model answer choices for behavioral questions with multiple choice responses, which can be arranged to offer a choice of distinct responses, representing a range of responses on an observed continuum of past responses. Several multiple choice answer questions may be required to capture the level of information which would have been provided by an open-ended response.

**CONCLUSION**

While faculty professional development activities offered by a variety of sources are a valuable resource for participants, they have the potential to be an even greater asset to faculty and thereby to students. It is clear that much research is needed into how faculty members develop as teachers. Understanding how their attitudes are formed and what influences the process has the potential to make faculty development activities more useful to faculty by targeting specific needs based on a variety of critical variables. Ultimately, faculty development has the potential to increase professional growth trajectory and thereby enhance the student learning experience. While some of this research will be complex, and the generation of the data collection and assessment tools for this effort will require sustained and focused effort, there are steps that faculty development professionals can take now to assist participants with exploring and reflecting on their own thinking about learning, teaching, and assessment.
REFERENCES


