The Role of Scholarship of Teaching in Faculty Development: Exploring an Inquiry-based Model

Pamela Adams

University of Lethbridge, adams@uleth.ca

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of Lethbridge Lethbridge,
Alberta, Canada
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Key Words: Scholarship of Teaching, Faculty Development, Teaching Effectiveness, Inquiry, Collaborative

Introduction

> Imagine that the elementary schools in your neighborhood decided to leave the teaching of kids to university students on temporary contracts. These students have little or no experience teaching. They are unable to give full attention to their pupils because they must spend part of their time working on university courses. In addition, they have morale problems because they are paid less than half the salary of a beginning full-time teacher, and their classes contain twice -- often ten times --as many students….The situation imagined may seem so ridiculous as to be pointless. But it is not pointless. It pretty much describes the present-day character of teaching in Canadian universities.
>
> <div align="right">Pocklington & Tupper, 2001, p. 35</div>

Some would suggest that the composition of university classrooms and the goals of university teaching have changed dramatically over the last two decades (Huber, 2001) even as the scenario proposed by Pocklington and Tupper continues in many universities; this, despite Ernest Boyer's contention in 1990 that a *scholarship of teaching* model was required to more adequately prepare new and existing professors for the changing contexts of their teaching. Many professors with little pedagogical understanding and often less formal practical instructional training find university classrooms an increasingly daunting environment (Walker et. al, 2007). Moreover, when support for teaching is either sought or offered, the methods and strategies employed are often grounded in theory or practices that do not substantially impact professional learning; in short, most programs of faculty development have limited potential to enhance or advance the quality of teaching and learning (Carnegie Foundation, 2006).

This paper describes a study of nine university teachers' experiences with an *inquiry-based* faculty development process. It begins by briefly acknowledging institutionally entrenched barriers to improving university teaching. This is followed by an exploration of literature in

the areas of scholarship of teaching and faculty development. Next, professors' perceptions of and experiences with one inquiry-based program will be presented. The paper concludes with discussion about the merits and challenges of an inquiry-based model of faculty development.

Barriers to Change in University Classrooms

Efforts to improve teaching in many universities appear to have followed a cyclical pattern over the past 50 years. Typically, a study or report identifies a long list of concerns (as one recent example, see Farley-Lucas & Sargent, 2007), and presents a persuasive case for supporting initiatives that purport to increase teaching effectiveness. Universities respond by promoting a variety of interventions that may or may not be based on sound pedagogy. While well intentioned, much of this support is tenuous in terms of sustained financial commitment, faculty buy-in, or administrative zeal and, consequently, over varying lengths of time, teaching development programs fall victim to budget cuts, apathy, and -- frequently -- their own failure to produce compelling evidence of effectiveness. Almost inevitably, another public report is commissioned and, in due course, the cycle continues.

Institutional responses to the Holmes Report (1986) illustrate such a pattern. More than two decades have passed since this report described the state of North American university classroom instruction as *dreary*. Several post-secondary institutions initially reacted by defending their practice of hiring academics on the basis of their distinguished research portfolios, rather than their record of teaching effectiveness. In subsequent acknowledgement of the Report's contention that very few professors "know how to teach well, and *many seem not to care*" (p. 16), some universities created centers for teaching development. Yet, few were characterized by pedagogically defensible professional development practices of the type that have been found to positively impact classroom teaching. In fact, several years later when the Boyer Commission revisited its study on the quality of university teaching (1998, 2001), it reported that -- despite clearly outlined recommendations for improvement -- graduate students and new faculty continued to lack adequate preparation for their teaching roles, and most institutions had not made demonstrable gains in providing effective support for teaching. Many university classrooms continued to reflect an entrenched "orthodox set of ideologies" (Rogers, 2003, p.1) characterized by students' factual regurgitation or, at best, their passive intellectual curiosity.

While several factors may contribute to this lack of progress, two appear most likely to militate against improvements in the quality of university classroom teaching and in the programs that serve to support effective practice. One is the diversity of views about the essential purpose of the university; another is the perceived conflict between the two most emphasized aspects of a professor's job, that is, between teaching and researching.

Divergent Purposes
Some faculty members suggest they are ready to focus on teaching, but perceive their campuses to be less-than-accommodating to this idea (Adams, 2008). Palmer (1999) stated that, "Every faculty I have ever visited contains a wealth of wisdom about teaching that waits to be tapped (p. 8). If it is true that faculty members feel un-encouraged and unmotivated to move away from a style of teaching that has long been described as *celibate orthodoxy* (Ashby, 1958), it may be because of disparate opinions about the fundamental purpose served by post-secondary education. In early examinations of the mission and

goals extolled by most universities, Lockhart (in Pullias et al., 1963) drew support from Ortega (1946) and Whitehead (1929) in asserting that, in order of importance, the role of teaching in universities should be primary, with research and discovery fulfilling a secondary purpose. Later, Henderson (1969) outlined several functions of modern postsecondary institutions, highlighting the importance of teaching and learning above all others.

Still, regardless of historical intent or evolving policy, most universities elevate the importance of research and tolerate teaching, and Klapper's (1959) decades-old contention remains true today: most teachers are not taught how to teach and most universities do not expect other than time-honored teaching strategies from their faculty members. Pocklington and Tupper (2001) have been similarly unequivocal in their assertion that the mandate of universities is to "....re-establish undergraduate teaching as their first priority" (p. 8) and that it is the "obsession with research" (ibid) that requires re-positioning in universities' vision of their purpose and social contribution. To the extent that disagreement on this point persists, a focus on teaching and learning in university classrooms will remain relatively unexplored, pressures to re-assess the fundamental purpose of universities will remain only partially attended to, and most teachers will remain unmoved to change their classroom practices.

Divergent Reward Structures

A lingering paradox characterizes much of the evaluation of professorial effectiveness. While rigorous adherence to sound methodology is one hallmark of successful research, rarely is a process of similar quality applied to judgments about teaching. Criteria for teaching effectiveness are seldom transparent or publicly moderated, less often applied consistently, and often referred to only in instances requiring remediation. The importance of teaching is further devalued when salary and tenure processes use student course evaluations as the only measure of pedagogical success. Many course evaluation instruments are poorly designed or carelessly administered; yet, the results that are generated are often used selectively to assess teaching performance.

In effect, some of the very standards established by the scholarly community to recognize valid and reliable science are disregarded when teaching effectiveness is the theme of investigation. Derek Bok, President Emeritus of Harvard University advocates for clarifying and raising the standards by which effective university teaching is evaluated when he recognizes that, "It's not that professors don't care [about teaching], but that they don't know what they're doing. Literally. The rich irony of professors ignoring solid academic research about teaching is momentarily amusing, but ultimately frustrating" (2006, p. 37). Edgerton (1990) similarly observes that university teachers continue to

> ....come to us strong in content and blissfully ignorant of anything having to do with theories of learning or strategies of teaching rooted in pedagogical knowledge. In their knowledge of their disciplines, as the old saying goes, they stand on the shoulders of giants. In their knowledge of teaching, they stand on the ground. (p. 1)

At the point where dissonance in expectations of rigor and reliability is dismissed or promoted by administrators, tenure committee members, or colleagues, a powerful message is presented regarding the value accorded teaching. The resulting "dualistic distinction" (Rowland, 2003, p. 15) gives rise to particular practices, reward systems, and arguments that clearly support the primacy of one over the other. Fiscally well-supported, broad-based, and sustained faculty development initiatives that employ a systematic

scholarly approach to the improvement of teaching remain the exception, while research and its associated funding continues to enjoy increasing status. The view that teaching is an activity incidental to, and in conflict with, the more lucrative and esteemed profile of research serves to further validate *research opportunities* versus *teaching loads.*

Exploring the Literature

A large body of literature about cognitive development, pedagogy, and effective teaching has been relatively unaccessed by many university teachers. Perhaps improving the quality of teaching in universities is "….not a matter of acquiring new teaching techniques as much as tapping the large, research-derived knowledge base on teaching that already exists" (Biggs, 2003, p.1). This may be especially true when the notion of a scholarship of teaching is compared with and grounded in other types of faculty development whose purpose is to enhance teaching practice.

A Scholarship of Teaching
Boyer's (1990) scholarship of teaching challenged professors to become acquainted with this literature and apply it to their practice in a rigorous and disciplined way. Theall and Centra (2001) asserted that this type of sustained exploration is prerequisite in the "arena of the scholarship of discovery" (p. 20) in which there is an intersection of teaching and researching teaching. Paulson (2001) identified three major processes characteristic of researching teaching that included *synoptic capacity* or learning about content, *pedagogical knowledge* or learning about learning, and *interactive knowledge* in which the two are linked. He contended that Boyer's definition of scholarship of teaching lies closer to the latter, and referred to this "nexus" (p. 20) as comprising research about the learning process. Paulson suggested that these inter-related activities are "a form of classroom research that is solidly grounded in, well informed by, and interdependent with the existing knowledge base of traditional theory and research on teaching and learning" (ibid, p. 22). This is apparent when faculty are observed using many of the same strategies they would when examining other perplexing problems in their respective fields of study. According to Paulson, it is this shift in focus that differentiates a scholar-of-teaching from a teaching scholar.

Smith (2001) suggested that an understanding of a scholarship of teaching requires "more than knowledge of theories and technical skills, it also requires analysis and reflective critique" (p. 76). Kreber (2001) examined the activities involved in a scholarship of teaching, and similarly recognized the importance of habits of professional reflection. She found that faculty members most adept at scholarship of teaching are those most interested in *why* students learn, and the impacts of various teaching strategies on the extent of learning. Scholars of teaching understand the importance of instructional diversity, appreciating that different students learn in different ways. Kreber concluded that a scholarship of teaching "involves constant reflection of the process and outcomes of teaching and learning, and acknowledges the contextual nature of teaching" (p. 15). Heimlich and Norland (1994) proposed a spiral of teaching scholarship that involves iterations of exploration, reflection, and application in a process they refer to as "expansion" (p. 15). Silvermann and Casazza (2000) presented a framework of theory, research, principles, and practice (TRPP) that encourages "awareness of new research and new ways of viewing theories about learning, as well as the examination of long-standing practices that may need to be revisited" (p. 57).

Hutchings and Schulman (1999) compared processes such as TRPP with "going meta" (p. 13). They contended that scholarship of teaching transcends remediation of ineffective teaching practice, collegial conversations, or episodic skill development workshops. It is an approach that confronts compartmentalization and departmentalization by encouraging an inter-disciplinary view of professors-as-learners; it keeps the educational experiences of students at the heart of teaching considerations; and it views teaching as a purposeful, inquisitive, and incremental process of learning. Similarly, Weimer (1996) explained that

> when faculty move beyond technique, beyond a singular conception that sees teaching and learning problems as things in need of a solution, they come to view teaching and learning as challenging, intriguing, perplexing, and profound. In essence, they are persuaded that there is in fact something here to be learned. (p. 10)

University teachers who engage in a process of continuous, sustained research about teaching may experience gains in the overall quality of teaching that are indicative of teaching and learning *transformation* (Mezirow, 1991); that is, they deepen their understanding of themselves as pedagogues, but also use as a primary indicator of effectiveness the extent to which their repertoire of teaching strategies aligns with student learning (Shulman, 2002).

Teaching Development Programs

Gaff (1975), McKeachie (1970, 1971, 1974), and Eble (1973, 1985, 1986, 1988a, 1988b) were key authors of early research linking faculty development programs with teaching effectiveness. They described these initiatives as able to "…enhance the talents, expand the interests, improve the competence, and otherwise facilitate the professional and personal growth of faculty members…in their roles as instructors" (Gaff, 1975, p. 187). Gaff further contended that programs so defined should be more developmental than remedial. That is, their most important purposes lie less in identifying and helping moderately effective teachers, and more in promoting and facilitating instructional expertise in the larger university community. Similarly, Seldin (1993) identified effective faculty development efforts as activities that:

1. Develop a wide variety of teaching skills repertoire.

2. Create links between the processes of teaching and learning.

3. Enhance interpersonal skills particularly as they are related to student/ teacher rapport.

4. Improve communication skills specific to discipline and pedagogy.

5. Encourage greater intrinsic satisfaction in teaching.

6. Improve self-monitoring and self-adaptation skills.

7. Facilitate faculty educative dialogue to assert commonality of purpose.

8. Provide sympathetic and knowledgeable feedback.

In a consolidation of research by Eble and McKeachie (1986) and Menges (1991), Seldin (1994) suggested that faculty development programs should consistently demonstrate several features. They should be designed for long-term impact, but have interjections of short-term reinforcement. They should be structured with flexible and open-ended approaches to individual schedules and learning styles, and allow faculty members to exercise significant autonomy in shaping their development plans. Lastly, they should promote excellence in teaching and learning through recognition and reward. Saroyan (1996) proposed a definition of faculty development that assesses teaching effectiveness based on increasing levels of pedagogical expertise, with personal reflection used as impetus for experimentation with various instructional strategies. In a similar vein, Amundsen (1992, 1993) described effective faculty development as characterized by reflective teaching supported by non-judgmental collegial conversation.

As processes such as these become increasingly more sophisticated, elements of other heretofore exclusive concepts influence ideas about faculty development. For example, increased consideration is being given to adult education frameworks to guide faculty development. As more professors engage in courses, certifications, and practicum experiences that enrich their understanding of teaching, they are at once *teachers-of-adults* and *adults-as-learners.* Early definitions of adult learning emphasized the liberation and emancipation processes through which chronologically more mature learners can be expected to proceed (Harrison, 1961). More recently, several authors (Heimlick & Norland, 1994; Mezirow, 1991; Wlodkowski, 1999) suggested that this type of adult education is a process of professional development, or life-long learning, through which the professor gains a progressively enhanced capacity to validate prior learning through critical and reflective discourse, and then to act responsibly with this newly-gained insight: a cycle that is, in many ways, similar to that of *action research* models of professional growth.

Background to This Study
Three years prior to this study, a research and development initiative (Adams, 2006) revealed that the purposes, structures, and curricula of teaching development programs can be categorized, in part, by the degree to which they align with the essential architecture of three key learning theories, including *rationalism, behaviorism,* and *constructivism*.

Faculty Development as Rationalism
As universities during the Enlightenment embraced empiricism and positivist methodologies of establishing valid, reliable, and credible exploration, pedagogy also reflected similar assumptions about the nature of teaching and learning. Teaching development programs that support this view of learning are often viewed as inadequate at best, punitive at worst, characterized by episodic and directive activities that emphasize a single, correct way of teaching all learners. The most commonly employed faculty development strategy in the rationalist model is the single-event: a perceived expert is flown in from a great distance to offer a one-time lecture about the most current, single best teaching practice.

Faculty Development as Behaviorism
Stimulus-response theories of teaching and learning were forwarded most notably by Pavlov (1927) and Skinner (1968). This theory assumes that the classroom environment is rich in a series of reciprocal cues, actions, and reactions between the teacher and learner. Faculty development programs that incorporate behaviorist principles are frequently observed in universities' doctoral or teacher assistant preparation activities. These programs follow an Instructional Skills model in which a specific skill is explained, participants attempt to demonstrate the skill, immediate feedback is provided by an observing expert who assesses

the level of skill completion, and successive try/re-try/feedback cycles are completed until an appropriate level of competence is demonstrated.

Faculty Development as Constructivism
Theories of constructivist learning gained favor when alternate assumptions about truth, knowledge, and research emerged. Forwarded most notably by Piaget (1950) and, later, Vygotsky (1978), constructivism is based on the assertion that the integration of pedagogy into teaching practice is essentially rooted in a process of creating meaning (Van Manen, 1997). Constructivist faculty development programs (see for example Eisner, 1997; Lewis, 1991; Reason & Marshall, 1987) are most often developmental, and encourage an understanding of effective teaching that is internally constructed and socially mediated. Constructivist faculty development can incorporate discussion groups, online blogs and collegial seminars. It is most often guided by a facilitator who ensures that cognitive conflict is purposefully and carefully created as one way to engage professors in problem-solving strategies, while the collaborative environment offers an important collegial backdrop against which new understandings can be re-examined and clarified.

Table 1 illustrates several essential components of faculty development based on rationalist, behaviorist, and constructivist theories as they were observed in Canadian, American, Australian, and Mexican universities over a three year period prior to the start of this study.

Table 1. Contrasting Elements of Three Faculty Development Paradigms

PROGRAM ELEMENT	Rationalism	Behaviorism	Constructivism
Central assumption about teaching, and learning to teach	A process of knowledge disseminating activities that features one-way transmission.	A process of acquiring skills and knowledge that can be mastered, and then externally and objectively observed and evaluated.	A process of guiding activities that engender a deconstruction of previous experience and knowledge, and a reconstruction of newly acquired understandings.
Nature of the faculty development curriculum	Determined in advance by an external expert. Offered didactically through linear and often remedial strategies. Little or no data is gathered to provide evidence of teaching practice. Broader pedagogical theory is rarely considered.	Designed by an expert and offered through direct instruction with technical feedback. Knowledge or skills outcomes are assessed frequently through mastery learning cycles of try-retry. Evidence of growth is made public through the mastery process.	Built on a wide selection of topics suited to the interests of participants. Themes and activities are directed by a facilitator to encourage individual sense-making. Evidence of growth may or may not be gathered, and often not made public.
Location of ownership/ meaning	Resides with the external expert who makes decisions about content and process.	Based on the premise of accountability, most ownership of the process is held by the expert. The participant has some responsibility for taking action to master skill sets.	Ownership of the overall process is external, although the creation of meaning and understanding resides within the participant. While unique to each individual, success is often externally determined.
Key cultural elements	Individual learning guides cultural considerations. Knowledge dissemination and acquisition supercedes interpersonal considerations.	While community building is not explicitly attended to, collaboration and trust are sometimes the result of a coaching process.	When *social* constructivist methods are employed, relationship and community building is explicit and sustained.
Essential delivery methods	Didactic transfer, passive participation.	Coaching, peer consultation, individualized instruction with some emphasis on reflection.	Group investigation of issues, collaborative resolution of best practices. The reflective process is integrated throughout.
Examples of activities	Lectures, readings, memorization, episodic workshops.	Classroom observations and evaluations, instructional skills workshops, drill-and-practice, micro-teach demonstrations.	Case study analysis, group problem solving, demonstration analysis, reflection and sharing.

To initiate this study, faculty members at one small university were offered an opportunity to engage a faculty development program whose activities went beyond the rationalist, behaviorist, or constructivist strategies outline in Table 1. These results comprise the next section of this paper.

Research Methodology Employed in this Study

This research explored the process through which university professors understand and improve their teaching through faculty development. During this study, nine professors (one participant chose not to participate in the post-program interviews and results are reported accordingly) participated in a teaching-focused inquiry-based program requiring them to explore various aspects of their teaching effectiveness. At a broader level, the study examined elements of professional growth and effective faculty development in a university context.

This research was undertaken on the assumption that professors possess a unique perspective about teaching practice and that inquiry-based faculty development can influence their growth as effective tertiary educators. The study was guided by the question "To what extent, and in what ways, will a teaching-focused inquiry-based faculty development process influence the experiences and understandings of university professors' journey toward teaching effectiveness?" Other questions included:

1. What factors contribute to the degree and nature of faculty engagement in teaching effectiveness programs?

2. To what extent does the inquiry-based faculty development process facilitate an understanding of teaching practice?

Participants
In response to an initial call for professor participants in this study, nine faculty members volunteered. These participants represented faculties of math, health sciences, education, biological sciences, management, and anthropology with years of teaching experience ranging from two to 37. Five male and four female professors comprised the group.

Professors were involved in an inquiry-based faculty development program for 13 weeks. At the program orientation meeting, professors identified one or more teaching goals and negotiated questions of inquiry unique to each around which the activities for the next 13 weeks would revolve. The following three themes of inquiry emerged from this orientation as participants' choices for their professional development focus:

1. Multi-strategic teaching, including questions such as:
   How can I increase levels of student engagement?
   How can I implement more effective questioning techniques?
   What alternate delivery strategies are most effective for [my class]?

2. Assessment and evaluation, including questions such as:
   What grading instruments are more appropriate for [my class]?
   How can I use alternate assessment strategies to measure critical thinking?

3. Planning for instruction, including questions such as:
   How do I identify appropriate learning objectives for [my course]?
   How can I align objectives with teaching strategies and assessment methods?

On a weekly basis, professors engaged in activities that contributed answers to their inquiry question. Classroom observations were frequently chosen as a vehicle to enhance conversations about teaching; others chose to examine literature, to gather resources, or to receive feedback about levels of learning and engagement during class time. Some professors refined student evaluation practices; still others developed differentiated teaching strategies.

On a biweekly basis, professors met to re-focus, discuss their experiences, reflect on their challenges, and reconstruct their growing understanding of teaching and learning. On a monthly basis, the group of nine professors met with the program facilitator to review progress, to share resources, and to re-commit to the process. The process culminated in a final large group discussion that was a celebration of learning and a commitment to future teaching activities.

Professors' journals, logbooks, and student evaluations provided evidence of progress toward answering the focus question. All professors submitted additional evidence of their reflection and engagement, several in the form of videotape analyses, two through the written critique of an educational theory article, and one in poem form.

Procedure: Data Collection and Analysis

This study began with baseline individual semi-structured (Wengraf, 2001) interviews with professor participants. While conversational in nature, the interviews followed Wengraf's (ibid) cognitive-to-affective structure to facilitate a dialogue that began with an external focus and was guided toward one that was more personal and internally focused. Each of the nine university professors then participated in an inquiry-based faculty development process and, subsequently, engaged in a final interview. The results of these individual semi-structured interviews were compared.

Neuman's (1997) four-step thematic coding procedure was used to analyze interview data. Analysis followed Neuman's (1997) suggested process for qualitative data analysis, namely (a) thematic conceptualization, (b) open coding, (c) axial coding, and (d) selective coding. He explains:

> [This process] analyzes data by organizing it into categories on the basis of themes, concepts or similar features. [The researcher] develops new concepts, formulates conceptual definitions, and examines the relationships among concepts. Eventually he or she links concepts to each other in terms of a sequence, as oppositional sets, or as sets of similar categories that are interwoven into theoretical statements. (p. 421)

Findings

The data generated by pre-program and post-program semi-structured interviews were organized into two primary conceptual categories in which participants demonstrated progression in awareness and insight, confidence in the use of pedagogically appropriate vocabulary, and preparedness to speak with authority about teaching practice. Specifically, these categories resulted from analysis of respondents' perceptions regarding:

1. The process of faculty development that contributed to respondents' professional growth

2. Dimensions and characteristics of a faculty development process they felt to be most beneficial in enhancing teaching effectiveness.

Conceptual Category 1: The Faculty Development Process (pre-program interviews)

The focus of conversations in this conceptual category centered around the notion of improving teaching effectiveness. Participants made reference to sources that indicated to them a need for change in teaching practice, and the process through which change might be undertaken. Sub-questions included:

- From what source(s) do you receive feedback relative to your teaching effectiveness?

- In what ways does this feedback subsequently impact your teaching practices?

Participants indicated five general sources of feedback regarding their teaching performance. Student course evaluations and informal peer feedback were the two sources to which they most frequently referred. No professors indicated administrator reviews as being a source of feedback regarding teaching practice; one indicated some form of self- critique, and one who had participated in a previous faculty development program indicated that formal feedback from colleagues was valuable. Several (3) indicated that they were unaware of a formalized structure for receiving teaching feedback in their institution or department. One observed that this lack of administrative involvement "often causes feelings of isolation in this part of my job." Another suggested that this may be "….because the definition of teaching varies so much here." The third contended that, "we need a center for inquiry into teaching."

Respondents were asked to elaborate on the ways in which these sources of feedback contributed to their professional growth. Four of eight participants perceived a direct connection between student course evaluations and their need to intensify preparation of content and curricular materials. For example, in this context of student feedback regarding content preparation, one professor noted that, "[With regards to what students say,] I pick the text or make a Custom Reading Package. Next, I make the course outline with topics of lectures and dates." Another said, "I just get to know the content better. Then I select the text and other materials." Another confessed that when it came to eliciting feedback from students, "Usually other things just take priority." The next most frequently mentioned process of professional growth based on course evaluations was as impetus to see the course in a holistic way; one professor spoke of undertaking "a cultural audit. I attend to student concerns from the past, then I read the text and prepare my slides." Most frequently, respondents indicated that this source of feedback was seen one through which professors focused on course content and curricular delivery rather than pedagogical awareness.

Conceptual Category 1: The Faculty Development Process
(post-program interviews)

After experiencing the 13-week inquiry-based faculty development program, participants were asked to indicate the most effective sources of feedback regarding their teaching effectiveness.

Professors indicated three general sources that provided valuable feedback regarding their teaching. The most frequently mentioned source was informal, ongoing conversations with their students regarding the success of individual classes, clarification of expectations and assignments, or negotiation of course requirements. One respondent compared course evaluations with student feedback, saying that, "I used to teach to the course evaluations. Now I don't. I am more dedicated to making real changes and improvements [in my teaching]." Another suggested that, " I really don't have a lot of avenues to get feedback. Faculty could be working more on this." In addition, professors indicated that they now sought out peers or colleagues to provide feedback about teaching effectiveness. One indicated that, "My partner videotaped one lesson, but I would like to do more of this. I have always wanted to do ongoing, daily evaluations…" Finally, three participants indicated they were more likely to engage in self-assessment as a strategy for enhancing their teaching effectiveness. One stated, "I now like to percolate…to critically think about how I will create relevance."

Conceptual Category 1: The Faculty Development Process
(comparing results)

Results of the pre- and post-interviews indicate changes in several areas of professors' views of sources of feedback useful in improving their teaching. Prior to the faculty development experience, several professors saw formal, standardized student course evaluations as the primary means by which they could receive information about their teaching; in the post-interviews, none perceived this as of greatest importance. A majority of post-program respondents (7) viewed less formal, ongoing student feedback as more useful to them in their professional growth process. One commented that this "makes it easier to deal with problems rather than waiting for the rant at the end." Another commented that taking this approach to elicit student feedback offered more opportunities to "incorporate social activities." Several indicated that weekly or monthly feedback forms were helpful in highlighting student anxieties and concerns, and allowed professors to act immediately on re-focusing student learning. Table 2 compares participants' perceptions of the sources of feedback through which faculty development most effectively occurs.

Table 2: Pre and Post-program Perceptions of Valuable Sources of Feedback of Teaching Effectiveness

Source of Feedback	Number of Participants making Reference (Pre-program)	Number of Participants making Reference (Post-program)
Formal student evaluation	4	0
Informal student feedback	2	7
Peer evaluation	4	2
Peers/colleagues	1	5
Self-assessment	1	3

In post-program interviews, five participants saw discussions with peers and colleagues as useful, and self-review was mentioned in pre-program interviews by one professor and in post-program interviews by three professors. One realized that:

> I'm now certain that I'm not a big believer in the text. It does not allow me to achieve the transformation that I wanted. I need to improve my methods of delivery to get this. I have started taking daily notes on my practice.

Conceptual Category 2: Characteristics of Effective Faculty Development (pre-program interviews)

Respondents were asked to reflect on the question "What does an effective university faculty development program look like?" The most important perceived quality prior to professors' participation in the study was a program's ability to translate particular skills into classroom practice in an immediate and efficient way. Eight of nine interview respondents felt this to be most necessary for them to improve their teaching. One stated that, "We need some must-dos and some technical how-tos." Another contended that, "all instructors need a mandatory year-long introduction to effective teaching strategies," while another explained that faculty development programs "….need to be an experience where I can take away something that will impact my classroom performance so that I can adopt some form of new practice." Respondents also identified collaboration as an important element of effective faculty development opportunities. One said that the process must be "interactive"; one claimed that "We need the involvement of more support groups and more input from all faculty." Another professor commented that, "This is the single most important element. We need more opportunities to talk to each other as equals, and to engage in a critical and creative dialogue. More of this brings more energy and more success."

Participants also indicated that involvement in teaching-focused professional development should contain an element of external recognition and reward. One believed that this must be accompanied by "institutional support as part of the fabric of the institution. Teaching must be given status so that it is sustained and receives political power and proper financial support." Similarly, another respondent suggested that faculty development programs must have "a high profile in policies like the mission statement that recognizes the value of teaching." Two participants indicated that workload incentives would send the message that would "reflect and encourage teaching excellence" and one felt the recognition of involvement in faculty development programs could be potentially useful in salary, tenure, and promotion considerations.

Conceptual Category 2: Characteristics of Effective Faculty Development (post-program interviews)

During post-program interviews, participants identified eight characteristics that they perceived as important elements of effective faculty development programs. The most frequently identified characteristic cited was the sharing, collegial conversation, socialization, and collaboration necessary to promote effective teaching. All eight participants referred to these elements. One said that "….collegial focus groups provide time for a self-generated series of insights." Another suggested that, "These conversations should happen within faculties to promote higher levels of relevant teaching, and could be an issues-based structure around themes such as evaluation and lesson-planning," while another asserted that, "This is at the top of the list!" Three of the eight respondents suggested that "reciprocal peer observations" were essential to this collaboration. One

insisted that these observations "provided valuable feedback about teaching to facilitate questions such as *why is this happening in my class*?"

Of the eight post-program participants who responded to this question, only one identified immediate transferral to practice as being important. This professor identified "regular and ongoing meetings with the purpose of looking at demonstrations and immediate practice" as one characteristic of effective professional development.

Conceptual Category 2: Characteristics of Effective Faculty Development (comparing results)

Results of the pre- and post-interviews indicate that most professors felt the collegial and collaborative nature of faculty development efforts were very important. Prior to the faculty development program, most professors perceived practicality (8) and external recognition (7) as elements most helpful and effective in improving their teaching. Post-interview responses did not reveal those same priorities. One respondent indicated practicality, and one identified external recognition as being important components of faculty development. Prior to the faculty development experience, few (2) perceived a sustained educative dialogue as important, while all (8) post-program respondents saw this as contributing to effective teaching-based professional development. One explained that, "Teaching conversations need to be facilitated to encourage a peer conversation that can lead to personal reflection."; another made reference to "dialogical relationships that [are] like a sounding board."; yet another described this process as "....genuine, job-embedded blocks of time for groups of teachers to talk and work together." Several respondents made reference to the importance of a trusting environment that, according to one professor, would accommodate "a non-threatening conversation about improvement, not punishment." One suggested that, "We need access to people who have substantial amounts of time for help in and out of the classroom. Ultimately, I would like to have someone willing to be up-front with me about assessing my teaching, supporting me, and laying the truth on the line."

Table 3 compares participants' perceptions of the components of faculty development most essential impacting teaching effectiveness.

Table 3: Pre and Post-program Perceptions of Qualities of Effective Faculty Development

Characteristic	Pre-program Interview	Post-program Interview
Easily translated into practice	8	1
Collaborative and collegial	7	8
Recognized and rewarded	7	1
Based on reflective practice	0	3
Flexible and individualized	3	1
Linked to research and inquiry	1	1
Involvement of students	1	0
Guided by an ongoing conversation	2	8

Discussion: Extending Faculty Development Through an Inquiry-based Model

When guided by an attitude of authentic curiosity made public in a clearly articulated research question, the professional growth of university teachers may extend beyond rationalist, behaviorist, or constructivist paradigms. Inquiry-based faculty development is characterized by a rigorous process of individual inquisitiveness, discovery, guided integration into practice, evidence of growth, and public dissemination of contributions to pedagogical theory (Dewey, 1933; Zuber-Skerritt, 1992).

An inquiry-based teaching development model such as the one employed in this study combines the rationalist knowledge of content with the technical skills attained in behaviorist models and the collaborative analysis and synthesis characteristic of social constructivism. In addition, it incorporates transformational strategies (Brookfield, 1984, 1986; Mezirow, 1990) such as reflection and collaborative discourse that promotes among participants high levels of decision making in an environment that acknowledges unique readiness and awareness levels of professors. Emphasizing professional responsibility in combination with social responsibility, this model features ongoing iterations of goal-setting, data collection, reflection, and action that are aligned with the differentiated issues, challenges, and competencies of each professor. Figure 1 presents the relationship between the four types of faculty development models discussed in this paper. Of particular relevance is the area of unitas (Edwards, 2004) in which characteristics of rationalist, behaviorist, and constructivist models contribute to inquiry models .

Figure 1. The Relationship Between Rationalist, Behaviorist, Constructivist, and Inquiry Faculty Development
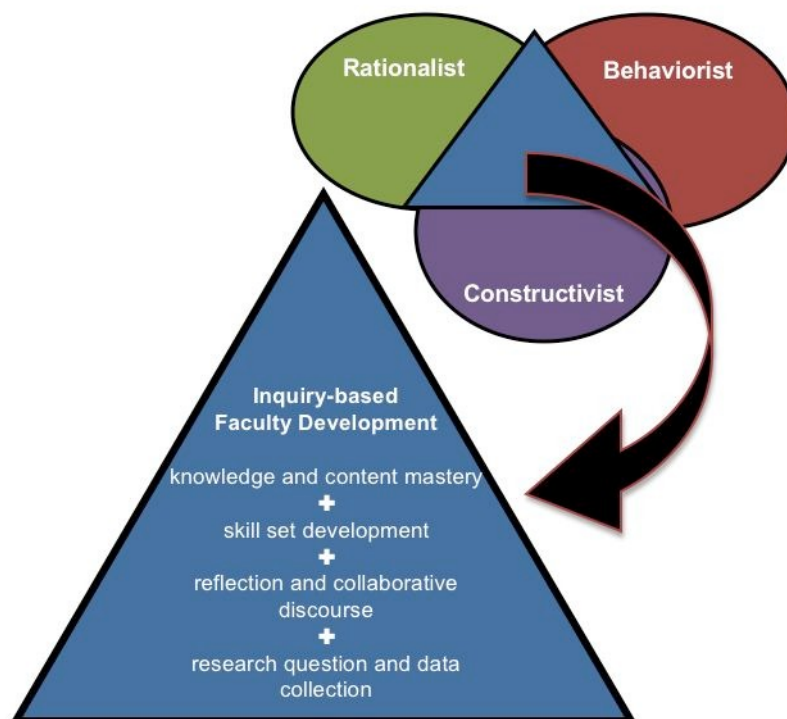
This inquiry-based model integrates the concept of evidence-based responsibility, rather than document-based accountability that is often characteristic of rationalist and behaviorist models. Specifically, accountability models tend to encourage activities such as inappropriately weighted use of student course evaluations, episodic and terminal professional development events, formalized record-keeping of participation in professional development activities, relatively low levels of interaction and relationship-building opportunities, and high levels of dissonance between institutional goals and individual professional aspirations. Alternately, study participants made reference to the importance of reciprocal or joint responsibility (Ridley, 1996) in effective professional development programs. They highlighted the need for programs to be job-embedded with sustained opportunities for individualized and differentiated activities emphasizing *learning* rather than *change.* In inquiry-based models this can be demonstrated by recognizing professional growth through individually developed professional learning plans that are aligned with institutional or faculty goals, principles, values, and vision.

A second element highlighted by participants in this study was a purposeful inculcation of various reflective habits. Activities that encourage reflection attend to the conditions and opportunities through which practitioners can better understand both the theoretical and practical elements of their teaching *as they are engaged in them (Heidegger, 1999; Neilson, 2008)*. In addition, this inquiry model recognizes the value of collaborative opportunities for guided conversation and sense-making to encourage action. Through successive cycles of goal-setting, re-visioning, and the integration of new research and knowledge, professors can engage with their teaching growth in an active way. This is a process that does not happen on demand, or through a checklist approach to prompting insight. In the model used in this study, the process involved a certain amount of personal disclosure within a continuing dialogue in which questions were raised and answered over time to make clearer the bridges between the research process, the faculty development process, and teaching.

Another characteristic noted by participants was the extent to which this type of faculty development diminishes the strength of *departmental silos of classroom practice* by promoting interdepartment and intra-faculty examination of the value accorded university teaching and research. This cross pollination is evident in Weston and McAlpine's (2001) Continuum of Growth for effective faculty development programs, as well as in Sergiovanni's (1994) contention that inquiry helps,

> overcome the chasms caused by various specializations of....subject matter. Inquiry forces debate among teachers about what is important. Inquiry promotes understanding and appreciation for the work of others. Inquiry empowers teachers by promoting greater understanding of their own work. (p. 154)

Professors engaged in this inquiry model followed a process consistent with other forms of social science research (Glesne, 1999; Hunt, 1992; Patton, 2002) and most closely related to an action research methodology (see as examples, Berg, 2001; Kemmis & McTaggart, 1988; McKernan, 1996; Zeichner, 2003). Specifically, they explored curiosities about their teaching by crafting a research question, collected and analyzed preliminary baseline data, and familiarized themselves with literature surrounding the theme of their question. Either alone or collaboratively, they established a plan for answering their research question. One critical activity of the inquiry model occurred when, over the course of several months, professors collected and shared evidence of the impact of their new strategies. These included mid-semester student surveys or daily feedback slips, classroom observations by colleagues, reflective journals, reconfigured exams, or student results or grades. After

synthesizing this evidence and linking it with other sources such as relevant literature or the expertise of colleagues, professors evaluated the effectiveness of their efforts, and provided a provisional answer to their original question of inquiry. This process enabled them to answer some queries about their teaching, to formulate other questions and to begin another cycle of inquiry.

It could be argued that this inquiry-based program encouraged professional responsibility and empowerment rather than institutional accountability and compliance. Its collaborative nature promoted interdepartmental learning that characterize communities of practice (Blackwell & Blackmore, 2003; Wenger, McDermott, & Snyder, 2002). In addition, its cyclicity established conditions for sustained and continuous progress that may not always be evident in other models. It encouraged courses of action for changing teaching practice based on evidence of student learning. Table 4 compares the elements of this inquiry-based model with those identified in Table 1.

Table 4: Assumptions of Inquiry-based Faculty Development

	Inquiry-based Faculty Development
Central assumption about teaching and learning to teach	A process of developing increasing sophistication of teaching practice through sensing, examining, collecting evidence, and taking action.
Nature of faculty development curriculum	Negotiated with a facilitator based on professor's past teaching experiences and future goals. Made public with a guiding question of inquiry, the answer to which results from data analysis during the growth experience.
Location of ownership and meaning	Directions of exploration and determinants of success reside predominantly with the participant.
Key cultural element	Explicit attention is paid to collaboration, interpersonal interactions, trust, and community building.
Essential delivery method	Collaborative action research, generative goal setting based on continuing iterations of involvement and exploration of teaching practice.
Examples of activities	Peer dialogue, reflective journals, collaborative video analysis, mentorships, and partnerships that are reciprocally exploratory.

Conclusion

Pocklington and Tupper's analogy cited at the outset of this paper points out several areas of form and function to which universities need pay careful attention. Pragmatically, researchers and teachers working together have learned a great deal about what makes teaching effective, and what is needed to improve teaching in universities. Yet, institutional and individual obstacles remain, and perceptible changes in university teaching practices are rarely documented or appropriately recognized at the broader level of reward structures.

Inquiry-based teaching development, while not a panacea for the many challenges that confront efforts to improve of teaching, can help forge clearer links between research and teaching effectiveness. It embodies a process that requires high levels of trust and good will on the part of participants, and even higher levels of ethical commitment on the part of

facilitators. It is most effectively collaborative and, therefore, employs a form of investigation to which many professors are unaccustomed. The inquiry-based model requires an unusual combination of discipline and suspension of judgment, and may not be appropriate for those whose preferred style of problem solving is more linear. It expects participants to gather and use evidence of teaching effectiveness that allows them to grow in ways consistent with their individually-chosen career paths. Lastly, it allows administrators and other leaders to restructure dimensions of organizational policy and practice to recognize a greater range of teaching effectiveness indicators.

Teaching *is* important. Teaching *is* the primary reason why most universities receive public funding. Teaching *is* the reason most students attend university. A purposeful focus on teaching effectiveness, teaching inquiry, and teaching scholarship might allow universities to respond to Parker Palmer's (1999) challenge:

> When I imagine the community of truth gathered around some great thing---from DNA to *The Heart of Darkness* to the French Revolution---I wonder: Could university teachers gather around the great thing called "teaching and learning" and explore its mysteries with the same respect we accord any subject worth knowing? (p.11)

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