

Conceptions of Teaching in a Research-Intensive University:

What Effective Teachers Think

James L. Borgford-Parnell

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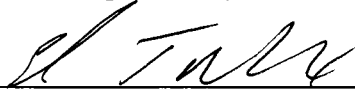
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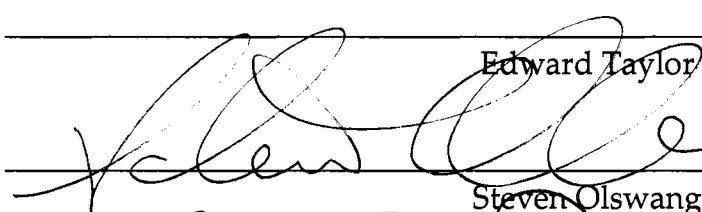
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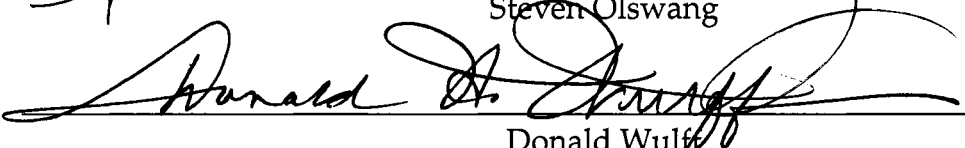
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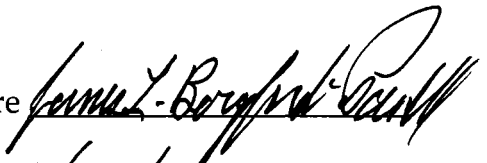


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Abstract

Conceptions of Teaching in a Research-Intensive University:
What Effective Teachers Think

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For several decades educational scholars highlighted the problematic nature of teaching in research universities; concentrating their critiques on what was missing, what wasn't working, and what needed improvement, and largely discounting the outstanding teaching that took place on every university campus. This phenomenographic case study examined the teaching conceptions of eight effective teachers in a research-intensive university. This study was based on the hypothesis that effective teachers possess a set of principles, beliefs, and values that guide their teaching, but also help them to successfully negotiate their actions within a multiplicity of faculty roles and responsibilities. Findings demonstrate that effective teachers' conceptions are characterized by their cohesive complexity, and their conceptions serve as the basis for an individual teacher's *pedagogy of larger concerns*.

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Dedication

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Rationale and Literature Review

A lot of teaching takes place in the labs and classrooms of research-intensive universities, and much of that teaching is very well done, even excellent. This statement, however, flies in the face of the numerous critiques that are critical of the overall teaching enterprise at these research-intensive institutions. Take the following statement for example: "I sit in a lecture hall with 350 other students and listen to the professor lecture about something that has nothing to do with what is in the book, or what we get tested on. There is no teaching at all, everyone knows that it's a washout course and they're just trying to fail out as many students as they can." These are the words spoken by a freshman at a large research university after receiving his disappointing fall quarter mid-term grades. His complaints probably would have been dismissed as an attempt to shift responsibility if he hadn't had an impressive academic background, and if his story wasn't supported by almost two decades of sometimes scathing criticism of the teaching at research institutions. One of the latest critiques is found in the 1998 Boyer Commission report on undergraduate education at research universities, which wrote the following:

An undergraduate at an American research university can receive an education as good or better than anything available anywhere in the world, but that is not the normative experience....Some of their instructors are likely to be badly trained or even untrained teaching assistants who are groping their way toward a teaching technique; some others may be tenured drones who deliver set lectures from yellowed notes, making no effort to engage the bored minds of the students in front of them. (p. 5)

The experience of the undergraduate student mentioned above is by no means universal. There are numerous examples of pedagogically adept faculty, learning-centered curricula, and student-oriented programs, which can be found, scattered throughout our large research institutions, but as the Boyer Commission noted, these are not the norm.

Over the preceding decades a deep and growing concern has evolved that research universities have lost their way regarding teaching. This concern has covered the gamut from vehement criticism, the majority of which was accompanied by a call for less research and more teaching, to a more level headed appraisal of the interconnectedness of these primary methods for promoting the construction of knowledge. Although the knee-jerk, polarizing reactions to teaching and research have faded, the concern for more effective

teaching in our research institutions has continued to grow. The gist of this concern is that a well-developed web of incentives, disincentives, and academic traditions are in place, which promote the scholarship of research, but that teaching has yet to acquire an equivalent focus. Yet, despite the overall negative assessment of teaching, excellent teaching and teachers can be found on any large research university campus.

Research university faculty members who are effective teachers are the foci of this study, which is intended to help address the following questions: *What conceptions of teaching do these faculty members hold that help them to be effective in their teaching while successfully interpreting and navigating within a research-intensive university setting? Secondly: How do these faculty members become effective teachers? What meanings do these faculty members construct from the multiple roles they fill, what motivations or impediments to effective teaching do they recognize in a large research university, and what constitutes effective teaching from an effective teacher's perspective?* The purpose of this study is to explore the teaching conceptions of effective teachers in a research university setting in order to improve our understanding of the basis of their effectiveness. Much of the critique of these large institutions would lead one to conclude that few mechanisms (e.g. hiring practices, promotional policies, professional

development expectations, traditions, recognition, and peer-pressure) are in place to promote anything more than minimally adequate teaching with unvoiced, unenforced, and sometimes non-existent, standards. On the other hand the mechanisms that are focused on research productivity are intended to promote excellent research with very high and well-defined standards. So if the critics are correct, how do effective teachers navigate and thrive within this seemingly lopsided environment?

Answers to that question are essentially missing from the research literature, but will probably be found by researchers who are willing to adjust their focus from the macro level (i.e. entire institutions or departments) to the micro level (i.e. individual programs, and individual instructors). In the remainder of this chapter I will examine the literature that I believe is essential for the following: first to recognize the impact that research-intensive universities have on higher education and our nation overall in order to appreciate why is it important to study teaching in these institutions; secondly to develop an understanding of the culture of research intensive universities and some of the issues that affect teaching within them; and thirdly to get a sense of the different types of research that has focused on effective teaching. Lastly, I will examine the literature on conceptions of teaching that set the epistemologic foundations

for this study. I will begin in the following section by examining the larger context of research intensive universities.

We're Just a Small Part of a Big Pie, So What's the Big Deal

There are only 125 Research Universities in the US higher education system; a system that consists of almost 4,000 institutions. They represent only three percent of the total, and yet the American public scrutinizes them, and criticizes these universities as if they were the whole shooting match. Why is this? The answer is simply that in the minds of many of our citizens they *are* the whole shooting match. Certainly this is an exaggeration, but the perception is not unfounded. Research universities are the largest institutions in the higher education system. They are the institutions that draw the most gifted students, possess the most esteemed faculties, and hold the most wealth (Geiger, 1984). Their faculty and students receive the most press in the academic, scientific and popular media. American Research universities are the models for higher education throughout the world (Bok, 1990; Carothers, 1995; Geiger, 1993, Krebs, 1995). They hold the most sought after positions to work and to study, and as the Boyer Commission (1998) noted:

Their graduates fill the legislatures and board rooms of the country, write the books we read, treat our ailments, litigate our issues, develop our new technologies, and provide our entertainment. To an overwhelming degree, they have furnished the cultural, intellectual, economic, and political leadership of the nation. (p. 5)

In their book, The Shape of the River, Bowen and Bok (1998) reiterated the overwhelming influence that the highest ranking graduate schools have on the development of leaders in our society, and why that makes it even more imperative that all of our citizens have equitable access to these institutions. The graduates of research universities not only have a profound influence on the US non-academic culture, but to a great extent they are overwhelming the entire culture of higher education (Bowen & Schuster, 1986; Graham, Lyman & Trow, 1995; Pratt, 1997). Richlin (1993) reported that “Most schools try to emulate the research universities because there are Ph.D.s teaching in all segments of American higher education who are ‘already imbued with the research ethos, from their own graduate training” (p. 4). In their study of graduate student experiences in the academy, Nyquist, et al. (1999) reported being:

Surprised to find that even some participants at the explicitly teaching-oriented Masters I institutions reported internalizing this ambivalence

about the values of teaching in faculty life, an indication that the priorities of Research I institutions have spread throughout the system. (p. 24)

These institutional priorities are explicated in the abundant literature that describes doctoral graduate student experiences as an all-consuming process that often challenges personal epistemologies, imbeds a hegemonic notion of the centrality of inquiry, creates a reliance on a more uniform, controlled, and unexamined methodology for the construction of knowledge, and instills an elitist stance toward undergraduate teaching (Boyer, 1990; Bowen & Schuster, 1986; Hauerwas, 1988; Merriam, 1986; Richlin, 1993; Schuster, 1990).

The diaspora of research institution values comes to a large extent from the hiring practices of higher education institutions that favor Ph.D. faculty. As a consequence, these faculty members spread the norms and values of the research universities to other institutions. This is borne out in a study conducted by Gottlieb and Keith (1997), who examined the nexus of research and teaching in higher education. They found that the Ph.D., or its equivalent, is a minimal requirement throughout academia. Given this level of influence, it is easy to understand why research universities are scrutinized so carefully, but what is it about these institutions that draws so much criticism? The answer lies in what the public and many people within the academy perceive as a failure to live up

to the ideals and the promise of American higher education, which includes the following:

Research of a quality second to none so that we can enlarge our knowledge, renew our culture, and eventually enhance our capacity to conquer disease, promote technological progress, and overcome our social problems. Everyone wishes to give young people an education that will prepare them to live productive lives; to be knowledgeable, critical members of our democratic society; and to appreciate, as fully as possible, the human experience and the world around them. We are also united in wanting colleges and universities accessible enough to allow all who seek education after high school to find opportunities appropriate to their talents. Finally, since universities represent our principal source of expert knowledge and highly trained people, we would like them to be responsive in offering the kinds of education, advice, and critical analysis that society needs in order to prosper and move forward. (Bok, 1990, p. 46)

Even though Bok viewed this as the mission of higher education at large, and not just research universities, he posited that unlike the more specialized missions of the other 97 percent of colleges and universities, the mission of research universities is to address all of these ideals.

Not everyone agrees with Bok, however, on the expansiveness of the research university's mission. For example Altbach and Lewis (1994) proposed that the rest of higher education should concentrate on teaching the majority of students, and leave the research universities to do what they do best, which is research. They pointed out that,

forty percent of American students study in two-year community colleges....At the same time, around 80 percent of over 2,100 four-year colleges and universities are largely nonselective. High school graduates with a reasonable academic record can attend these institutions. (pp. 33-34)

These percentages are intended to illustrate the minimal effect that research universities have on undergraduate education overall. However, as the Boyer Commission (1998) revealed, "they [research universities] confer 32% of the baccalaureate degrees, and 56 percent of the baccalaureates earned by recent recipients of science and engineering doctorates (1991-95)" (p.5). Altbach and Lewis (1994), however, didn't simply rely on numbers to make their argument. They contended that complaints about the state of undergraduate education could result in the unintended deterioration of graduate education. They argued for a better understanding of the diversity and strengths of our postsecondary

institutions and attempted to deflect what they perceived as unwarranted criticism away from research universities. "Do the critics really mean to dismantle or even significantly weaken American graduate education – one of the few areas where there is worldwide agreement that the United States maintains excellence and leadership" (p. 34)? They, and others such as Clark (1997), believe that the attention that teaching in research universities is garnering is out of proportion to the impact these institutions have on the grand scheme of teaching in postsecondary education.

What these arguments failed to take into account are the real and perceived linkages that exist between research universities and the rest of higher education, as well as the ongoing research within our universities that is beginning to show that doctoral education may not be as excellent as the rest of the world might perceive, especially in regard to preparation to teach (Golde & Dore 2001). Additionally, adherents to the status quo in research university education are failing to acknowledge that research institutions, along with the rest of higher education, is undergoing numerous changes that can have profound effects on teaching and learning. Wulff (2005) concluded:

Changes within higher education have made teaching and learning even more complex. The information explosion and revolutionary new

technologies, greater diversity among students and faculty, changes in faculty roles and reward systems, and greater emphasis on student learning and institutional accountability are a few of the many changes that have occurred. (p. 14)

Demographic changes in student populations, in context with faculty demographics, have generally increased the numbers of students who are poorly served, and amplified the need to improve teaching.

Student and Faculty Populations Have Diversified, but Not Equitably

A potent force for change throughout the history of American higher education has been the diversification of student populations. Driven in large part by landmark judicial rulings and legislation such as *Brown v. Board of Education of Topeka* in 1954, the Civil Rights Act of 1964, Title IX in 1972, and the American's with Disabilities Act of 1990, the rate of diversification in post-secondary institutions has increased dramatically over the past three decades.

For example, in their 2000 report, the US Department of Education (DOE)

National Center for Education Statistics revealed that:

The proportion of American college students who are minorities has been increasing. In 1976, 16 percent were minorities, compared with 27 percent

in 1997. Much of the change can be attributed to rising numbers of Hispanic and Asian students. The proportion of Asian and Pacific Islander students rose from 2 percent to 6 percent, and the Hispanic proportion rose from 4 percent to 9 percent during that time period. The proportion of black students fluctuated during most of the early part of the period, before rising slightly to 11 percent in 1997.

Then in 2005, the U.S. DOE, NCES reported that the percentage of racial/ethnic minorities had reached “twenty-nine percent of all students enrolled in degree-granting institutions in 2002” (p.80).

Even though the racial/ethnic makeup of student populations continued to diversify the likelihood that minority students would attend an institution with a substantial concentration of students of their own race/ethnicity continued to be low. The NCES reported that 37 percent of Asian/Pacific Islander students, 25 percent of Black students, and 22 percent of Hispanic students attend institutions that have less than ten percent enrollment of students of their racial/ethnic group (p.81). Studies by have found that

Gender diversification of student populations has also increased and there are now more women students than men in our colleges and universities.

According to NCES (2000) data, “since 1984, the number of women in graduate

schools has exceeded the number of men. Between 1988 and 1998, the number of male full-time graduate students increased by 17 percent, compared to 60 percent for full-time women" (chp. 3). Even though females are expected to continue to outnumber males in graduate education the largest numbers of graduate degrees are expected to be earned by males.

In the U.S. Department of Education (2003) report; *Projections of Education Statistics to 2013*, Gerald and Hussar reported that the numbers of graduate degrees earned by women will increase faster than those earned by men, however, in 2013 men are still projected to earn 556,000 Master's degrees compared with only 328, 000 earned by women. For Doctoral degrees the projections are even worse, with men earning 47,000 and women projected to earn 23,000, or less than half as many (p. 14).

The implications of these figures are disturbing, in that even after almost 30 years, in which women will have outnumbered men in graduate education the degree *incompletion* rate for women will be almost double the rate for men. "at the postsecondary level, women are less likely than men to earn degrees in math, physical science, and computer science and engineering" (Higher Education Research Institute, 1996). In 1997 Steele reported that in the areas of math, engineering, and physical sciences, women are leaving the fields at two and one

half times the rate of men. Nelson and Rogers reported that, “while the representation of females in science and engineering PhD attainment has significantly increased in recent years, the corresponding faculties are still overwhelmingly dominated by White men” (p. 2). Similarly, Taylor and Olswang (1999) found that, “although there are more African American students beginning college than ever, fewer complete their degrees than White students” (P. 12). Certainly gains are being made in the diversification of our higher education institutions, especially in undergraduate education, but in several important disciplines and in doctoral education more generally, minorities and women continue to be underrepresented

Faculty ranks in higher education have also made strides in diversification. Unfortunately the diversification within the faculty ranks has not kept pace (U.S. DOE, 2000), and it is increasingly the case that instructors face classrooms in which the majority of students come from different gender and racial/ethnic groups than themselves. antonio (2003) pointed out:

Although the current trend against affirmative action threatens the level of diversity in the student body, demographic change will continue to increase diversity across the nation’s campuses. This growing diversity

among students only highlights the lack of progress in the faculty ranks.

(p.1)

On its face, it could appear that this situation posed no problems so long as institutional structures and practices were equitable, instructors were adequately trained and they were committed to equal learning for all students. However, recent research findings have cast doubt on how well we are serving our diversified student body. Nelson and Rogers (2004) found in their investigation of science and engineering faculties at research universities that few female students have female role models and mentors in the faculty ranks, which contributes to fewer women joining the academy after earning their degrees:

It is likely that a woman could get a bachelor of science without being taught by a female professor in her discipline; it is possible for a woman to get a PhD in science or engineering without having access to a woman faculty member in her field; and if the student is a woman of color, it is probable she will earn her PhD without ever seeing a minority female professor. (p. 2)

In their review of research into the effects of stereotypes and prejudice on classrooms Wolfe and Spencer (1996) found that the racial and gender attitudes of instructors can have a serious effect on the academic performance of women

and minority students. Further research by Steele (1997, 1999) on stereotype threat reinforced their analysis.

Even with the profound demographic changes, the new student diversity does not yet reflect the makeup of the overall population, and that poses important questions concerning the receptivity of our educational institutions to the inclusion of all our citizens. For instance, in 1994 minorities comprised 31% of the U. S. population ages, 18-29, and earned only 17% of the bachelor's degrees, 15% of the master's and 14% of the doctor's degrees U.S. DOE, 2000, chp. 3). The question remains as to how best to respond to this situation, for respond we must if research universities are to live up to the ideals of social responsibility, which were articulated by Derek Bok (1990). As Musil (1996) posited, "The globe shrinks. The unfamiliar other is no longer at arm's length but subtly and sometimes flamboyantly woven into the ordinary details of one's day-to-day life" (p. 22). The problem facing research universities is not the diversification of the student body; diversity has simply exacerbated an existing condition in higher education. The problem is a relative decrease in the ability of faculty members in general to understand and appropriately teach and mentor a diverse group of students.

Who are the Faculty Members

Until very recently the students in our postsecondary classrooms looked very much like the professors at the front of the rooms; white, middle class, and male. As the statistics above reveal, this is no longer the case. If you add to the new racial/ethnic and gender mix an increasing number of older students and students with disabilities, the enormity of student differences is almost staggering. The change is even more profound when you consider the relative lack of diversity within the faculty ranks. U.S. DOE (2000) reports show that,

About 14 percent of U.S. faculty in colleges and universities were minorities in 1997 (based on a total excluding nonresident aliens and persons whose race/ethnicity was unknown). Five percent of the faculty were black; 5 percent, Asian/Pacific Islanders; 3 percent, Hispanic; and .4 percent, American Indian/Alaskan Native. The majority of college faculty (51 percent) were white males, while 35 percent were white females.

About 14 percent of executive, managerial, and administrative staff were minorities in 1997, compared to about 29 percent of the nonprofessional staff. The proportion of minority staff at public 4-year colleges (21 percent) was similar to the proportion at private 4-year colleges (19 percent). (Chp. 3)

When compared to the student figures, the faculty numbers illustrate a significant difference between the racial/ethnic and gender makeup of faculty and students in higher education. Rios (1996) cautions that “one fear resulting from this disparity is that Euro-American teachers will not reflectively and critically question the social, political, historical, or cultural tradition of their own educational experience and will thereby replay the “hidden” curriculum taught to them” (p. 2). As Delpit (1995) posited in her description of the influence of the culture of power, “Those with power are frequently least aware of – or least willing to acknowledge – its existence. Those with less power are often aware of its existence” (p.24).

Faculty Response to Student Diversity

Higher education faculty members teach the way they were taught, which means that far too many instructors are ill prepared for today’s students.

Marchesani and Adams (1992) pointed out that,

It is not surprising that faculty find themselves maintaining an unexamined academic culture while facing multicultural challenges from students of underrepresented racial, ethnic, and linguistic backgrounds, by women questioning the dominant cultural mode, by older adults

returning to formal schooling from family or occupational experiences.

The understandable difficulty for faculty socialized within another historical and cultural situation is to know how best to facilitate diverse student learning within an increasingly multicultural context. (p. 10)

It is easy to understand how an instructor who is prejudiced or discriminatory would fail to serve all of his or her students well. However, research indicates that even those faculty members who may be otherwise committed to the ideals of racial and gender equality, are seldom prepared to confront these issues in their classrooms. Recent research by Gutierrez, Fredrickson, and Soifer (1999) has clearly shown that within the faculty ranks, “women are more likely than men to have attitudes that are supportive of social equality and that individuals with lower status are more likely to have critical perspectives on existing structures” (pp. 417-418). Higginbotham (1996) helped to define those “existing structures” within education, and posited the following:

Structural inequalities in the larger society are reproduced in the classroom in terms of power and privilege. Classrooms are places in which ‘members of privileged groups are more likely to talk, have their ideas validated, and be perceived as making significant contributions to group tasks. (p. 205)

In his review of social science research, Banks (1998) also found that “concepts, theories, and paradigms considered neutral often privilege mainstream students and disadvantage low-income students, students of color, and female students” (p. 5). He concluded by suggesting that, “Teachers need to critically examine the value assumptions that underlie their personal knowledge, the knowledge taught in the curriculum, and the values that support the institutionalized structures and practices in the schools” (p. 14).

It's The Teaching

Up through the decade of the 80's the public held “broadly positive attitudes toward the quality of undergraduate education and toward the relevance of academic research for the economic weal” (Geiger, 1992, p. 79). The public continues to be well satisfied, or sufficiently mesmerized, with the research and scientific and technological advances that emanate at an increasingly feverish pace from our universities (Greenwood, 1995), but that is not where the real concern is concentrated. It is not the research or the service functions of higher education that are of most concern to the American people, it is the education of our youth; it is the teaching function (Hearn, 1992, p. 21). This is a concern that has not changed or diminished for several decades, but the

critique took on a much more critical tone in the late 80's and continued through the 90's. This tone may be attributed to a faster than inflation rise in tuition rates, a switch from mostly grants to mostly loans in student financial aid, and a steady tightening of the education belt by state and federal governments, which has provoked a call for more responsive, efficient, and effective organizations and for higher quality learning (Albright, 1998; Graham, Lyman & Trow, 1995; Kennedy, 1991; Patrick & Stanley, 1997). In 1994, Massey and Zemsky made the following comment:

In less than three years, colleges and universities have moved from the ambivalent affluence of the 1980's into an era of resource constraints and nettlesome public scrutiny....institutions have found themselves in the uncomfortable position of having to decrease expenditures per student while simultaneously increasing tuition at a rate that exceeds the cost of living. These actions have made it clear what many have long suspected: that students are being asked to pay more for less. (p. 1)

Unfortunately, as resources have begun to dwindle and shift, there has been an increase in public perception that our individual and national economic futures are much more tied to postsecondary education. "The percentage of people who agree that a college education is very important for success in

today's world has increased from under 80% in 1984 to over 85% in 1994" (Greenwood, 1995, p. 33). In other words, the stakes are larger, the costs are higher, and therefore the impetus to criticize has grown. The criticism comes not only from the public, but also from within our institutions as well.

More often than not the criticisms are focused on the increased attention paid to research and graduate students at the expense of teaching and the attention paid to our undergraduates. That criticism is reasonable; research has indeed taken precedence in our institutions as our national economy has changed and federal spending priorities have shifted, competition between institutions has increased, and the optimization of institutional prestige, built primarily on faculty research and scholarship, has become a major endeavor (Clark, 1987, 1997; Halpern, et al. 1998; Richlin, 1993; Tang & Chamberlain, 1997). Graham, Lyman, and Trow (1995) revealed that "in the standard vocabulary of campuses, teaching was a 'load,' research an 'opportunity.' Professors defined 'work' not as their teaching or their institutional service but rather as their research, as in 'when can I get back to my work'" (p. 12). Even status quo advocates, such as Altbach and Lewis (1994) who believe that quality graduate education is only made possible through the financial savings that stem from large undergraduate lecture classes, the use of graduate teaching assistants, and

bureaucratic undergraduate advisement systems, admit that the “obvious flaws must be corrected” (p. 40). The extrinsic rewards for both institutions and faculty have shifted overwhelmingly toward research, and initiated a call led by Boyer (1990) for a shift in the rewards systems to a new focus on the scholarship of teaching, proposed as a complementary equal to the traditional scholarship of research.

It's Research *and* Teaching

Boyer's (1990) proposal was one of the first that articulated the danger of polarizing research and teaching and pitting one against the other. Boyer and others recognized the lack of consideration that was being given to teaching, but the solutions they proposed were acknowledgements of the importance of both. Not to take from the rich (research) and give to the poor (teaching), but to enrich teaching to a level on par with research, so they could become mutually beneficial (Atkinson & Tuzin, 1992; Clark, 1997; Gottlieb & Keith, 1997; Halpern, et al., 1998; McGovern, 1994; Shulman, 1987; Tang & Chamberlain, 1997). As Clark (1997) implored, “we need to move conceptually beyond the dichotomy of research *and* teaching. Drawing a fault line between these two principal faculty activities” (p. 252). Clark called the creation of a dichotomy between research

and teaching the “incompatibility thesis” and proposed that instead of separating these two activities they should be blended. He pointed to the kind of inquiry-based teaching and learning that now occurs at the doctoral level as a model for how this could be done. In contrast, he described existing conditions at the undergraduate level as a place where “teaching and learning [are] centered on codified material and lacking an inquiring attitude....inquiry and a related research enlightenment may be the best common tools that higher education can offer its graduates” (pp. 252-253). His proposition, however, was based upon an ideal teaching-research-learning situation that other education scholars point out seldom exists even at the doctoral level (Golde & Dore, 2001; Nyquist, et al., 1999).

Clark’s comparison of graduate and undergraduate teaching and learning is accurate to an extent; undergraduate education is seen by many as weak and in need of a major overhaul (Gardiner, 1998; Lawrence, 1995). However, graduate education is also coming under increasing pressure to get its act together. Although Clark (1997) pointed out that, “in the 1990s a small national movement is underway that encourages the ‘research collaboration’ of undergraduate students and faculty” (p. 251), it is apparent that simply replicating parts of a graduate education inquiry model at the undergraduate

level is not a silver bullet, because it hasn't been so at the graduate level. The effectiveness of teaching and learning is in need of improvement at both the graduate and undergraduate levels. However, this kind of change won't happen at the undergraduate level unless it first takes place at the graduate level, because the professors and graduate assistants who teach undergraduates at research universities are deeply enmeshed in the practices and cultural realities of doctoral programs.

Institutional Culture

One of the basic organizational principles of a large research institution is its plurality of missions, interests, and contexts. This pluralism creates the possibility for individual faculty members to experience their academic work in very different ways. In his review of approaches to teacher effectiveness research Doyle (1978) proposed that an inquiry, which didn't take into account "the intrinsic patterns of events and processes" (p. 182) within a classroom, a department, or an institution, would produce results that had little generalizability or use. He noted that variables such as student behaviors, teacher behaviors, and the environmental features of the setting were all a part of the "richness and complexity" that needed to be encompassed in his "ecology

paradigm” of teacher effectiveness research. Recognition of the ecology, or context within which instructors find themselves, is important if we are going to understand how and why effective, or ineffective teaching occurs. However, within an institution as complex as a research university, it makes little sense to assume a single, or dominant, ecology might influence teaching across an entire campus.

More recently, Marsh and Hattie (2002) took an ecological perspective, when they speculated that it may well be the individual departmental “ethos and other characteristics...[that] influence teaching effectiveness, research productivity, and the relation between the two” (p. 610). In fact, in their extensive meta-analysis of the relationship between teaching and research they (Hattie & Marsh, 1996) found only a minimal (0.06) overall correlation between the two. They proposed that their conclusion of a zero correlation might be explained by the tendency of the available research to aggregate data within institutions and thus minimizing possible dramatic negative and positive correlations that could be found at the level of the departments and individual faculty members.

Marsh and Hattie (2002) noted that a symbiotic and mutually supporting relationship between teaching and research is often reported (see Andre & Frost,

1997; Neumann, 1992), but that these reports were not based on “empirical research” (p. 603). Unfortunately, as was mentioned above, the research relies on aggregated data that may mitigate the effects of intra-institutional pluralism. However, even if the differences between the ecology of one academic unit and another can help to explain why some faculty members are effective teachers and others are not, it can only be a partial explanation.

When one looks at research intensive universities as aggregated wholes the consensus in the literature is that far more excellent research is being produced than is excellent teaching. One would think that (in the aggregate) the quality of research would be affected to a similar extent by the same pluralistic mechanisms, but that does not appear to be the case. Pluralism alone then, does not provide an adequate explanation.

Effective teaching cannot be explained through a zero-sum lens either, although several critics during the last two decades attempted to do just that. Research has clearly shown that an increase in the amount of time an academic spends on teaching does not mean a decrease in the time spent on research, or *visa versa* (Feldman, 1987; Marsh & Hattie, 2002). Although the critics insist that teaching holds the short end of the academic stick, research shows that neither end of the stick is necessarily the short one. Again, this apparent paradox may

be explained by assuming less of a correlation between the teaching endeavors of individual faculty members and the larger institutional ecology.

Certainly a relationship exists between the institution and the instructor, and that relationship seems strongest in the realm of research productivity. Research institutions derive the bulk of their prestige and financial support from the quality of the research produced by their faculties. The primary mission of these institutions is to conduct research. It would be perplexing, therefore, if research institutions did not exert the majority of their institutional efforts towards maintaining high quality research productivity. Thus, the macro ecologies of the institutions may influence faculty members' research activities more so than their teaching. In fact, at those research institutions wherein teaching excellence is recognized, appropriate research productivity is often one of the first hurdles that faculty must jump before their teaching records are even considered for recognition. What all of this indicates is an institutional ecology that engenders the highest standards of quality and productivity for its research enterprise, but does not hold the same expectations for teaching. Certainly the institutional ecology allows for, and generally encourages effective teaching, however, in practical terms, this institutional attitude, when coupled with a full

workload, constitutes a disincentive for *some* faculty members to spend time improving their teaching.

Another example of an institutional double standard is the built-in transparency of the efforts that are made in maintaining high quality research versus the opacity of much of the teaching. A research faculty member must provide clear evidence of scholarly rigor and a knowledgeable foundation for the design of research and the analysis and dissemination of research results. However, the equivalent considerations are missing from the expectations on that same faculty member when it comes to her or his teaching. Freedman et al. (1979) found that few instructors could provide a theoretical basis for their pedagogies. Only rarely is a faculty member questioned as to how her or his student's learning was assessed, what learning theories and pedagogical principles were used to design learning activities or assessment tools, choose suitable kinds of data and analyze the data appropriately in order to produce a set of grades that sufficiently communicate real learning outcomes

Students hold expectations, and administrators make assumptions that faculty have sound pedagogical reasons for designing their courses as they do; that if pressed they could articulate the basis of their choices, but they are seldom (if ever) pressed. Faculty colleagues feel an unabashed obligation to question,

discuss, review, and make suggestions concerning their peer's research, but that same collegial responsibility is largely missing when it comes to teaching. It is completely understandable why this type of academic ecology produces an abundance of minimally adequate teaching. Recently, Tagg (2003) described the paradigmatic nature of this academic ecology:

An organizational paradigm conditions the way we see the organization we work in, and a paradigm that is widely, but tacitly, held by many organizations and that generates the tools and standards of organizational commerce and communication powerfully shapes perceptions. The Instruction Paradigm [the standard paradigm of higher education] has become not only the rules of the game in higher education but the lens through which many who work in colleges see their institutions and their roles in those institutions. (p. 17)

In other words, the culture of higher education, and especially the research intensive institutions, has not been to focus on the needs of the learners, but rather to focus on the needs of the teachers and, in general, the needs of the teachers have not included improved teaching and better learning precisely because of the "rules" of the culture within which they work. This brings up the

question, what is it that effective teachers know that helps them to navigate successfully in these environments?

The need for more effective teaching in research universities is greater than ever before, not only because of the pressure being applied by external stakeholders, but also from internal sources that include faculty members themselves. Research efforts have been underway for much of this past century to try to understand the variables that make up effective teaching.

Research into Effective Teaching

“It is time for us to reaffirm that education – that is, teaching in all its forms – is the primary task and that our society will judge us in the long run on how well we do it” (Kennedy, 1991, p. 9). In his plan for Stanford’s future, Kennedy proposed that we should not only begin to balance research and teaching responsibilities, but that the teaching should become more effective. Unfortunately, even when the university president recognizes the error of our ways and wants to initiate change, old hurdles continue to impede our progress. One of the most basic hurdles is simply defining effective teaching.

Where the Teaching Effectiveness Research has Taken Us

Effective teaching has been an elusive concept in the academy and through research; has undergone several iterations. The study of teacher effectiveness went through four broad phases between the 1920s and the 1980s. Wulff (1985) characterized these phases as the following: (a) "The first phase consisted primarily of efforts to determine characteristics of successful teachers aside from their actual teaching ability" (p. 4). In this phase attempts were made to link teacher's personal attributes to behavioral characteristics that were assumed to be important for teachers. However, "research from this phase is viewed as contributing little to the understanding of teacher effectiveness" (p. 4); (b) The approach that was used in the second phase "was to compare two methods of instruction to determine which produced greater student achievement" (p. 4). These experiments were also unproductive and "tended to be inconclusive or to contradict the results of other methods experiments" (p. 5); (c) In the third phase, known as "the process-product paradigm," teacher behaviors in the classroom were related to student achievement. As this paradigm developed, other significant non-teacher behavior factors were identified such as "student variables in classroom interaction, [and] more attention to subject matter and grade level" (p. 6). As other important variables

were identified, which were overlooked in the earlier research, the hypothesis that a direct causation could be found between any one variable, such as teacher behavior, and student achievement, was refuted; and (d) The fourth phase is a rethinking of the process-product research, in which factors such as mental processes and contextual factors were considered. The research in this phase tended to be ethnographic and qualitative. Underlying this research was the notion that the classroom is a naturalistic environment in which the actions of the teacher stimulates the behaviors and thought processes of students, and both of these factors are further mediated by the contexts of the classroom (pp. 6-8).

Through these four phases then, research into teacher effectiveness had moved from a focus on concrete teacher actions and student outcome measures to a close examination of the interactions between teachers, students, and the contexts of teaching and learning. The question “changed from ‘Which instructional effects are most effective?’ to ‘How do instructional effects occur?’” (Doyle, 1978, cited in Wulff, 1985, p. 9). The four research phases, which were identified by Wulff, relate closely with the evolution of research in the field of psychology, an examination of which may help us to understand where the research into effective teaching has gone.

Connections between Teacher Effectiveness and Psychology

Over the sixty-year period beginning in the 1920s, psychological research moved through three theoretical perspectives, each corresponding with research in education. The first perspective was associationism, and according to Bruning, Schraw, and Ronning (1999), “the general goal of this stimulus-response paradigm of psychology was the derivation of elementary laws of behavior and learning and their extension to more complex settings” (p. 2). Through this associationist research, very sophisticated theories were developed concerning the functioning of basic human memory and the expected response to specific stimuli applied to laboratory animals. However, as the experiments were refined, they became “more valid internally...[but] they were becoming much less valid externally. That is, they could not be easily generalized” (p. 3). The results of associationist research were very difficult to apply to more complex educational settings. Although, the theoretical perspective that assumed that all human learning stems from basic instinctive behaviors was readily apparent in the teaching effectiveness research. The first two research phases, which were identified by Wulff (1985), were concerned with identifying the teaching actions, or stimuli, that would trigger those basic learning responses. As with the

associationist research, this early educational research failed under the weight of unexplained human complexity.

Associationist psychology lasted almost 50 years, and by the mid 60s it had given way to behavioral psychology, which differed in that, "learners were seen as coming to learning *tabula rasa*, subject to conditioning by their environment" (Bruning, et al., 1999, p. 4). The goal of this research was to identify the environmental triggers that could be used for predicting and controlling behavior. Both phases of Wulff's "process-product" research had the same goal, and just like the behavioral psychology research, elements of this research continue to influence education today. "For instance, behavioral features are readily recognizable in such familiar educational approaches as instructional objectives, task analysis, and the use of positive reinforcers" (Bruning, et al., pp. 4-5). Behaviorism and process-product research have largely fallen out of favor for two main reasons: First of all, they continue to be dependent upon homogeneity and a limited number of human learning responses; and secondly, they hold a very mechanistic and controllable view of both students and teachers. Although behaviorism is still evident, a third theoretical perspective, cognitivism, has come to dominate the psychological research. As Niemi (1997) asserted, "The heyday of the behaviorists in

psychology has passed, however, and cognitive science research has brought about a sea change in our understanding of what learning is and how it happens" (p. 239).

Cognitive Psychology and Education

Cognitive psychology has slowly developed over the last four decades, and has only recently been considered mainstream psychology. Research in this paradigm has gone in many different directions and has coalesced around several major themes, which have proven important for educational research. These themes were identified by Bruning et al. (1999) in the following:

1. *Cognitive psychology helps us see learning as a constructive, not a receptive process...learning is a product of the interaction among what learners already know, the information they encounter, and what they do as they learn....It is not so much knowledge and skill acquisition as it is the construction of meaning by the learner. (pp. 6-7)*

The notion that learners take active roles in the acquisition of knowledge was theorized by Piaget in the 50s and has come to form the basis of constructivism (Silvin, 2002), which has become the prevailing philosophy of learning. This theme is also a major tenet of adult education theories and practice models, within which the knowledge and experience that adults bring to

the learning environment are considered the basis for new learning (Daloz, 1986; Jarvis, 1992; Knowles, 1980; Merriam, 1991). Learners' prior knowledge was also important to the development of critical pedagogy, a teaching/learning process wherein students' prior knowledge is problematized in ways that allow for new meanings to be constructed (Freire, 1971; Giroux, 1988; Shor, 1996). The more advanced forms of multicultural education also give student-knowledge a priori consideration, and argue that marginalized students bring knowledge to the learning environment that is often at odds with mainstream academic and school knowledge, and can result in learning inequality (Banks, 1993a, 1995a, 1995b; Banks & Banks, 1995; Jackson, 1995; Nieto, 1999; Rheams & Gallagher, 1995).

2. *Cognitive psychology emphasizes the importance of structuring knowledge.*

Among the most potent concepts of cognitive psychology is the concept of schema. Schemata are mental frameworks we use to organize knowledge. They direct perception and attention, permit comprehension, and guide recall. (Bruning et al., 1999, p. 7)

The notion that students come into new learning experiences with a set of learning schemata is the basis for theories and models of transformative learning. In his transformation theory of adult learning, Mezirow (1995) called these learning structures "meaning perspectives and schemes," which are habits of

expectation that guide how we make meaning from an experience. He posited that a deliberate and self-aware process is required in order to change one's mind, or initiate a perspective transformation. Freire (1971) proposed a similar process for exposing one's schemata in order to challenge those learning structures that were hegemonically derived.

It is theorized that schemata are mainly developed in one's early childhood and are influenced greatly by one's individual parental, social, and cultural environment. As a result of these influences, it is proposed that learners not only bring their own knowledge to new learning environments, but they also bring their own ways of knowing. Examples of these relationally derived schemata are, women's ways of knowing (Belenky, Clinchy, Goldberger & Tarule, 1996), Black feminist epistemology (Collins, 2000), and the womanist perspective (Ladsen-Billings, 1996; Sheared, 1994). Even the mainstream epistemology that is often referred to as rational, objective empiricism, is in truth, relational and subjective (Banks 1993b; Code 1991). Much of the scholarship and teaching practices in the areas of ethnic studies, women's studies, and multicultural education are grounded in the concept of personal schemata, which are tied to race, ethnicity, culture, nationality, gender, sexual-orientation, age, ability, and other personal and group identities, or positionalities.

The consideration of learners' ways of knowing is often conflated with the notion of *learning style*, which is one of the holdovers of behavioral psychology. A learning style is a person's general strategy that is transferable from one learning situation to another (Claxon & Murrell, 1987). These differ from ways of knowing only in that ways of knowing are generally associated with group affiliation, cultural background, ethnicity and gender; rather than generalized, unaffiliated types. Learning style inventories have been in use for several decades now, and are modeled after Myers-Briggs personality typing instruments. These inventories have certainly become much more sophisticated and useful in recent years. For example some of the earlier style inventories grouped learners into categories dependent on whether they preferred visual, aural, tactile or kinesthetic learning methods, and dealt with learner's behaviors rather than how they process information. These inventories were developed out of associationist and behavioral research, which relied on assumptions of basic, unchanging, and generalizeable human learning behaviors.

More recent learning style inventories, such as Kolb's (1984) experiential learning model are much more influenced by cognitive psychology research and theories of learning. Kolb theorized a four-phase cycle for learning from experience; (a) concrete experience, (b) reflective observation, (c) abstract

conceptualization, and (d) active experimentation. From that theory he identified four learning styles, each of which tend to favor one aspect of the learning cycle over the others. These styles are: (a) divergers, who prefer concrete experience and reflective observation; (b) assimilators, who rely on reflective observation and abstract conceptualization; (c) convergers, who learn best from abstract conceptualization and active experimentation; and (d) accommodators, who prefer active experimentation and concrete experience (pp. 153-157). However, for practical, utilitarian reasons learning style typologies are limited in the number of categories they contain. Thus, they are unable to account for all of the factors that impact an individual's learning, especially mechanisms of power and oppression.

With due regard for their limitations, however, Sorcinelli (1991) found that research on learning style does seem to indicate that their use can increase a student's success in a course, as well as expand student's "repertoire of learning strategies, which is important to lifelong learning" (p. 22). The use of learning style inventories in classrooms can be useful tools for promoting students' metacognitive understanding and awareness of their learning. In their influential publication, *How People Learn*, the National Research Council (1999) concluded the following:

The teaching of metacognitive skills should be integrated into the curriculum in a variety of subject areas. Because metacognition often takes the form of an internal dialogue, many students may be unaware of its importance unless the processes are explicitly emphasized by teachers.

(p. 17)

Learning style inventories can be helpful in initiating the learner's inner dialogue and awareness of cognition, which is another major theme in cognitive psychology.

3. *Cognitive psychology emphasizes self-awareness and self-regulation of cognition.*

One major effect of cognitive psychology on education has been the advancement of the idea of a self-directed, strategic, reflective learner.

This idea has been supported by a large body of research in *metacognition*, which generally refers to two dimensions of thinking: (1) the *knowledge* students have about their own thinking and (2) their ability to use this awareness to *regulate* their own cognitive processes. (Bruning et al., 1999, pp.7-8)

Self-directed learning is another major theme in adult education scholarship (Caffarella, 1993; Grow, 1991; Knowles, 1980, 1984; Merriam & Caffarella, 1991). It is a natural extension of the concepts that learners come with

their own autobiographically produced stock of knowledge and ways of knowing (Spiegelberg, 1995), and thus, becoming more metacognitively aware and exerting more responsibility for their own learning is a powerful method for ensuring learners' stocks of knowledge and ways of knowing are utilized and honored in the classroom.

Several approaches have been put forward for helping learners to become more self-aware of their cognitive processes. The use of learning style inventories (mentioned above) is one of the ways learners can begin to explore how they learn. Developing the ability to be critically reflective has been proposed as an even better approach (Brockbank & McGill, 1998; Brookfield, 1995; Mezirow, 1991, 1995). The notion of reflection was described by Dewey in 1933 as "behavior which involves active, persistent, and careful consideration of any belief or practice in light of the grounds that support it and the further consequences to which it leads" (cited in Canning, 1991). Dewey was essentially describing what has since come to be known as critical reflection; a deeply metacognitive activity within which individuals revisit past learning in order to discover the hidden aspects of their ways of knowing.

Critical reflection is often assumed to be similar to critical thinking. Whereas critical thinking is a holistic process of analyzing the roots and

consequences of a problem, critical reflection is a holistic process of analyzing the roots and consequences of the *thinking* that goes into the analysis of a problem.

Brookfield (1995) called this process hunting for the assumptions that implicitly guide our thinking. Some of these assumptions are inextricably bounded by belief systems, and therefore it is important that we bring our beliefs to light.

Beliefs are another area of interest in cognitive psychology.

4. *Motivation and beliefs direct learning...*both cognitive and motivational variables need to be considered in accounting for student learning.

Successful learning involves not only comprehending content but also learning to become an active, motivated, self-regulated, and reflective learner. Cognitive activity occurs within a framework of learners' goals, expectancies, and beliefs. (Bruning et al., 1999, pp. 8-9)

Becoming more self-motivated, that is, moving from external to internal motivation for learning is considered part of the process of adult development. However, both kinds of motivators are considered important factors in learning throughout our lives. Daloz (1986) proposed that one of the underlying motives for adults who often sacrifice much to return to school or college is to make sense of their lives and to find meaning. Obversely, Ogbu (1992, 1995) argued that many African Americans who have completed high school and gone on to

college have done so by resisting a powerful social motivation not to attend institutions that are seen as replicating mainstream culture and social inequalities. Each of these is an example of how personal beliefs and motivation are inextricably tied to learning.

In her recent book on learning and motivation Svinicki (2004) proposed an “Amalgamated Model of Motivation,” which she based on the most prominent theories in use. In her model, she suggested that a learner’s motivation to reach a learning goal is influenced by her or his orientation toward two primary variables. “Motivation involves a constant balancing of these two factors of value and expectations for success. Both must be present for motivation to occur, but their relative contributions will vary from situation to situation” (p. 146). Svinicki suggested that postsecondary instructors can use their understanding of motivation to intervene in ways that elevates student motivation to learn.

5. *Cognitive psychology stresses the role of social interaction in cognitive development....Like other traits, ‘ways of thinking’ and ‘ways of knowing’ need to be nurtured in a supportive social context....Peer interaction gives students the opportunity to encounter new ideas and perceptions that differ from their own; new knowledge can be constructed out of these exchanges. (Bruning et al., 1999, p. 9)*

The thought of learning within an educational context wherein each learner brings her or his own stock of knowledge and way of knowing seems to argue against formal education settings designed for groups of learners. However, building on the work of psychologist Vygotsky, who theorized that education constitutes a *zone of proximal development* in which learners benefit “from engagements with more experienced others” (Silven, 2002, p. 347; also see Jaramillo, 1996, Wertsch, 1991) beginning in the late 80s, cognitive psychologists and others began to recognize the social aspects of cognition (Jarvis, 1987, 1992; Lave, 1988; Resnick, 1990; Winograd & Flores, 1986). They proposed that not only do individual biology and biography determine much of our individual cognitive processes, and thus the individual knowledge we create, but the social situations within which we have *come to know* are also determinants in what we know or can know. Svinicki (2004) suggested that proponents of social cognitive theory “highlight the interaction of the learner’s existing knowledge, the environmental changes that result from behavior and the influence of others’ interactions (p. 36). This idea is fundamental to the development of different ways of knowing by indigenous, marginalized, and centralized peoples, who construct knowledge in quite different social settings. As Resnick (1991) argued, “it is clear that much of human cognition is so varied and so sensitive to cultural

context that we must also seek mechanisms by which people actively shape each other's knowledge and reasoning processes" (p. 2). She called this type of knowledge construction "shared cognition."

In recognizing this important aspect of cognition, multicultural educators have argued for more than surface content changes in our classrooms. They propose that an important component of education is learning to live ethically and equitably in a multicultural society. By incorporating students' ways of knowing and stocks of knowledge into all aspects of classroom learning, students will not only have an opportunity for equal learning, but all students may develop a healthier unprejudiced understanding of each other (Banks, 1993; Banks & Banks 1995; Gay, 2000; Sleeter & Grant, 1994; Tisdell, 1995).

Integrated and interdisciplinary studies are examples of educational settings wherein the construction of new knowledge through the exchange of information and ways of knowing has proven to be viable. Socially shared cognition is a theory that underscores collaborative learning, cooperative learning theory, active learning, experiential learning theory, apprenticeship theory, and situated cognition, to name a few. It offers teachers a valuable perspective on the roles played by groups of learners in the construction of

knowledge. Related to the social aspect of learning is the learning context, which is the final theme in cognitive psychology.

6. *Cognitive psychology stresses the contextual nature of knowledge, strategies, and expertise....*The root metaphor of a contextualist perspective in cognitive psychology is not mind as machine, but rather the event, which emphasizes history and situation. Events are inherently situational, occurring in contexts that include other events and taking some or even much of their meaning from those contexts. (Bruning et al., 1999, p. 9)

Lindeman proposed the importance of learning in context as early as 1926, when he articulated the connection between authentic experience and learning. This concept has since come to be known as *situated cognition*, Lave (1988). In his review of the scholarship on situated cognition, Arthur Wilson (1993) stated:

To appreciate the significance of context, we have to recognize the importance of thinking and learning in authentic activities...cognition is a social activity that incorporates the mind, the body, the activity, and the ingredients of the setting in a complex interactive and recursive manner.

(p. 72)

The importance of authentic contexts forms the basis of several time-honored learning activities in higher education, such as medical school internships and

residencies, nursing clinicals, law clerkships, architecture and business apprenticeships, engineering cooperatives, and even graduate teaching and research assistantships. Although these have proven to be valuable learning activities, it has only been in recent years that educational researchers have begun to ask the extent to which the classroom can be an authentic setting (Wilson, 1993), and what that means for assessing learning.

A New Phase of Research on Effective Teaching

As was mentioned earlier, interest in teacher effectiveness has grown both inside and outside of the academy, and research into teacher effectiveness has not abated. However, the research has now moved into a new phase that builds on the process-product paradigm, but incorporates cognition as well. Within this new phase are two primary sectors of research.

Research in the First Sector

The first sector of the new research phase is characterized by a focus on what the learners bring to their interactions with each other and how the teacher might modify the learning process and context in response to learners' cognitive needs. Saljo (1988) posited that the rationale for this type of research is that:

People act on their interpretation of the situations they find themselves in rather than on the objective, matter-of-fact characteristics of situations....A

corollary to this assumption is that changing social settings – such as schools and universities – with the aim of improving learning, means not only modifying the objective situation, but also people’s perceptions of the activities they are involved in. (p. 36)

This research sector began with an emphasis on examining and understanding the learner. Implicitly, this first sector continues with the same assumptions about the teacher’s role as did the earlier process-product research, in that teachers simply require a more sophisticated bag of pedagogical tricks, from which they can draw the appropriate response, which matches their new understanding of their students. An example of research within this sector is Svensson and Hogfors’ (1988) study of student conceptions. They stated that conceptions “may concern anything and everything that might be thought of as something in itself, at least partly differentiated from its surroundings or context” (p. 176). They concluded from their study that teachers should be trained to understand different conceptions and to focus their course objectives on changing student’s conceptions.

Drawing from a large body of empirical research, the National Research Council (2000) suggested, “Teachers must pay close attention to the knowledge, skills, and attitudes that learners bring into the classroom. This incorporates the

preconceptions regarding subject matter already discussed, but it also includes a broader understanding of the learner” (p.23). Clark and Peterson (1990) proposed that this kind of research assumes “that causality is unidirectional, with teacher’s behavior affecting students’ classroom behavior, which ultimately affects students’ achievement” (p. 59). This sector of research, although influenced greatly by cognitive research, continues to view teaching and learning as stimulus and response, albeit with the response being cognitive rather than behavioral.

From this research has come the development of pedagogical techniques and models such as *active learning*, which is a category of teaching/learning activities that are based on the constructivist notion that learners are presumed to have something to contribute to the learning process, different learners are presumed to learn differently, and that learning is presumed to be a dynamic process (Bronwell & Eison, 1991; Frederick, 1987; Hatch & Farris, 1989).

Subsumed within the active learning category are instructional methods such as:

(a) *Cooperative learning*, a form of student-to-student interaction, which is described as “the instructional use of small groups so that students work together to maximize their own and each others’ learning” (Smith, 1996). In their meta-analysis of cooperative learning methods, Johnson, Johnson & Stanne

(2000) suggested that “The use of cooperative learning so pervades education that it is difficult to find textbooks on instructional methods, teachers’ journals, or instructional materials that do not mention and utilize it” (p. 2); (b) *case study learning*, described by Meyers and Jones (1993) as “a narrative of an actual event that brings students and teachers together in an attempt to examine, discuss, and advance solutions to a realistic problem situation” (p. 103).; (c) *peer instruction*, which is proposed by Mazur (1997) as a method for enhancing the standard lecture format by including specific student-to-student interactions, which he terms, “convince your neighbor” exercises; and more recently (d) *problem-based learning*, which was first developed in medical schools in the 70’s and has since become an important teaching/learning method in several other disciplines. It is described as an approach in which “real-world problems are used to motivate students to identify and research the concepts and principles they need to know to work through those problems” (Duch, Groh & Allen, 2001, p. 6). Each of these methods demonstrates practical and effective ways for teachers to utilize much of what is now known about learning. The only criticism of these kinds of methods is that they continue to relegate teachers to positions that are outside of the learning itself. As Flannery (1994) said of cooperative learning, “One can in fact define *cooperative learning*...as the use of student learning groups to support

an instructional system that maintains the traditional lines of classroom knowledge and authority" (p. 17).

Chickering and Gamson's (1987) development of their "seven principles for good practice in undergraduate education" is representative of the scholarship within this first sector of research, wherein behavioral process-product research and cognitive research are combined. The seven principles were the result of a review of 50 years of research on teaching and learning. Gamson (1991) stated that "these principles assert that good practice in undergraduate education (1) encourages student-faculty contact, (2) encourages cooperation among students, (3) encourages active learning (4) gives prompt feedback, (5) emphasizes time on task, (6) communicates high expectations, and (7) respects diverse talents and ways of learning" (p. 5). It is clear from these principles that elements of research that dealt with learning contexts, content, instruction, and cognition could be combined into a more holistic perspective of one's practice. What is also clear, however, is that teachers continued to be conceived as the embodiment of a set of pedagogical techniques, institutional policies, and content knowledge and expertise, with little consideration for what teachers think.

Barr and Tagg's (1995) assertion that higher education is shifting to a new paradigm is also illustrative of an adoption of this research perspective. They suggested that we are moving from the traditional instructional paradigm, in which "a college is an institution that exists to provide instruction" to a learning paradigm, wherein "a college is an institution that exists to produce learning" (p. 13). They were responding to what many educators recognize as a very positive shift in thinking about higher education as being driven by "student learning and success," rather than "a specific methodology" (p. 115). They asserted that effective teaching within the learning paradigm begins with the consideration of student learning-outcomes, and then moves to the kinds of instruction that best promotes those outcomes. The learning paradigm they described is a well-conceptualized enactment of much of the research in the first sector, in which behavioral-causes create cognitive-effects. However, the basis for Barr and Tagg's notion of a paradigm shift is a change in teacher thinking, which is a definitive acknowledgement of research in the second sector.

Second Sector of the New Research Phase

The majority of research in the most recent phase continues to focus on the student; however, within the second sector (which has become most evident over the last fifteen years) the cognitive characteristics of the teacher are added into

the mix. The importance of the conception *teacher as learner* has roots that extend back at least to 1977, when Bruner suggested the following:

A curriculum is more for teachers than it is for pupils. If it cannot change, move, perturb, inform teachers, it will have no effect on those whom they teach. It must be first and foremost a curriculum for teachers. If it has any effect on pupils, it will have it by virtue of having had an effect on teachers. (p. xv)

This perspective is illustrated in Wulff's (1985) research into effective communication of university instructors, from which he proposed a new framework for thinking about teaching and learning. He called this framework an "alignment model", and argued that in order to maximize learning an alignment should be created between the students' expectations and needs, the professor's expectations and needs, and the curriculum, or content. This research perspective defines effective teaching as a "transaction" between all participants in the process; in effect, a synergistic relationship among teacher-learners, rather than an "interaction," or straight-line back-and-forth relationship between the teacher and the learner (D. Wulff, personal communication, July 12, 2001). Since the alignment model was first proposed in 1985, Wulff, and his colleagues have

applied and extended the model to reflect the increasing complexity of teaching and learning in higher education (Wulff, 1985; Wulff et al., 2005).

The Boyer Commission Report of 1998 was also a manifestation of the teacher as learner perspective. The report emphasized that:

A university is a community of learners. Some of them are more experienced than others; some are far along the way toward academic maturity, and some are not. Still, all are committed to the exploration of defined areas of knowledge, and in the university as envisioned here, they work together. Faculty members, graduate students, baccalaureate students all bring their accumulated knowledge to bear. The divisions that have been created between them are artificial and counter-productive and must be bridged for effective collaborations to occur. (p. 23)

This view of teaching and learning has resulted in very few concrete examples on our campuses. *Collaborative learning* is one exception, wherein it is conceptualized as a learning process that often involves both the faculty member and the student (Flannery, 1994; Matthews, 1996; Smith & MacGregor, 1992).

However, more often than not collaborative learning is conflated with cooperative learning, wherein the learning is student-to-student and the faculty member is conceived of as a facilitator or guide rather than a co-learner. Even

educators such as Gerlach (1994), who stated that collaborative learning involves “both the teacher and the students in a joint intellectual effort” went on to describe the teacher’s role as “task setter, a classroom manager, and a synthesizer” (p. 10). These different notions of collaborative learning form a clear illustration of the effects of teachers’ conceptions of teaching on the methods they employ in their teaching practices. Research into conceptions of teaching is one of the more important strands of research in the second sector (described above). From this research have come several typologies and a much better understanding of the effects of teachers’ ways of knowing.

Conceptions of Teaching that Guide Effective Teaching

Research on effective teaching has changed considerably over the last two to three decades, primarily due to the ascendance of cognitive psychology. The most recent phase of research, described in the previous section, is deeply wedded to the themes of cognitive research. In the first research sector within this phase, much has been discovered concerning what students bring to learning environments, and what they need from those environments. The results of this research have provided many important teaching models and methods that faculty may employ to improve students’ learning. However, although many educators tout the practical applications of this research as being

vast improvements over the old plug-n-chug didactic lecture models they none-the-less fail to take full advantage of the cognitive research and fully consider the teacher's part in learning. Niemi (1997), for example, stated: "what we know now is that learning is influenced by an indefinitely large number of dynamically interacting individual, social, and environmental variables" (p. 244). However, in trying to take these multiple factors into account in learning situations, Niemi, and others (see Thompson, Licklider, & Jungst, 2003) continued to ascribe the influence of those multiple variables on learner's thinking and not on the thinking of the teachers. In the second sector of research, in which teachers themselves are considered cognitive beings along with their students, we can begin to see why this is the case.

In their research into the instructional behaviors and thinking of exemplary university teachers, Hativa, Barak and Simhi (2001) stated as part of their rationale, "Of all the components of teacher thinking, we are particularly interested in teacher's beliefs. The need to learn about teachers' thinking, beliefs, and knowledge results from an emerging image of the teacher as a 'thoughtful professional'" (p. 699). Their view of the teacher was delineated more fully by McCombs (2003) in her description of the work of an American Psychological Association task force that she led in the early 90's. Her task force developed of a

set of Learner-Centered Psychological Principles that embodied full consideration of the teacher as learner. She stated, "Of further significance, the research-validated principles define learners of all ages holistically – as individuals with minds, emotions, and personal, developmental, social, cultural, and other individual differences and needs that must be addressed in educational contexts" (p.94). The teachers who use those principles to guide their teaching, she suggested, "understand that they are learners along with their students. In fact, the most effective learner-centered teachers can flexibly shift their role from teacher to expert learner and share ownership of learning with their students as appropriate" (p. 96). McCombs' understanding of the *teacher-as-learner* is not a widely held conception, however.

In the expanded edition of the book, *How People Learn: Brain, Mind, Experience, and School*; for example, the National Research Council's Committee on Developments in the Science of Learning (2000) sought to publish a comprehensive integration of research up to that point, to distill broad principles, and to suggest a model for application in the classroom. A good portion of the text hinged on the constructivist theory that human actions and interactions (in this case *learning*) are driven to a large extent by prior understandings. They summed, "in the most general sense, the contemporary

view of learning is that people construct new knowledge and understandings based on what they already know and believe" (p. 10).

When the authors suggested how this *new science of learning* understanding might be helpful to teachers, they wrote that teachers should take into account that students "come to formal education with a range of prior knowledge, skills, beliefs, and concepts that significantly influence what they notice about the environment and how they organize and interpret it" (p. 10). This is sound advice, however, the notion that the same theory must also apply to teachers, who are themselves human beings and are thus as fundamentally bound by prior knowledge and beliefs as is anyone else, is completely missing from the discussion.

It is paradoxical that enlightened educators will assign full weight to the cognitive realities of students as they are developing appropriate pedagogies and learning contexts, while simultaneously they blindly ignore their own ways of knowing, which are the primary determinants for what they decide is appropriate for their students. This paradox is understandable given what is known about schemata, the mental frameworks we use to guide our thinking and to make meaning (Bruning et al., 1999). Faculty members, just as do their students, bring their own cognitive peculiarities with them to the learning

environment. They bring their biases, values, beliefs, judgments, assumptions, knowledge, and epistemologies into their work. However, since it is generally the faculty member's role to design the parameters of their courses, their knowledge and ways of knowing have a much greater potential impact on student learning. It is for this reason that one of the more important strands of research into teaching effectiveness is concentrated on identifying the conceptions of teaching that faculty members hold.

Individual Conceptions of Teaching

As our concern for teaching has increased so has our understanding of the many forces at work that shape an individual faculty member's teaching. Research in the realm of cognitive psychology has helped the academy to begin to see faculty members as learners, whose ways of knowing are bound by the same familial, cultural, and social influences as are their students'. In Fenstermacher's (1979) discussion of research on teacher effectiveness he described two schemas "for getting from research to practice" (p. 169). The nature of these schemas, he proposed, dictated the nature of the research. In the first schema, which he termed the "conversion schema" the focus was on providing teachers with "a rule or precept" and the nature of the research was to find causality or correlations between what teachers do and their students'

behaviors. Fenstermacher was referring to the behavioral research that was described earlier in this chapter. Fenstermacher found that this schema and its associated research “fails because of the way the knowledge it yields is used” (p. 169). Using the conversion schema philosophy, effective teachers would be those who simply followed the rules. The second schema described by Fenstermacher was the “transformation schema.” “The purpose of presenting the results of research as evidence is to encourage the transformation of teachers’ beliefs from being subjectively to objectively reasonable” (p. 169). He proposed the following:

If the transformation schema were to be adopted as a guide to how teachers may benefit from research on teaching, then the character of this research would have to be altered....The researchers’ attentions would turn to the subjectively reasonable beliefs that teachers hold. An examination of these beliefs and the study of evidence bearing upon them would become the initiating focus for teacher effectiveness research. (p. 169)

Research has shown that teachers’ actions are closely related to their individual beliefs and assumptions about who their students are (or should be); how students should learn; what knowledge is; how knowledge is constructed

and by whom; who controls knowledge; and what their roles are as teachers (Freire & Sanchez, 1997; Hativa, 2000; Hativa, Barak, & Simhi, 2001; Pajares, 1992). The assumptions they hold regarding these questions are outcomes and reflections of their individual epistemological conceptions. Those conceptions play such significant parts in the construction of faculty members' conceptions of teaching that it is now acknowledged that attempts at improving teaching effectiveness must take these individual conceptions into account (Kember & Kwan, 2002).

Epistemological Conceptions

Much of the research on the epistemological development of individual learners points to the notion that mature learners tend to hold conceptions of learning that are constructivist in nature. That is, they understand knowledge to be individually constructed by learners and that while some knowledge is more idiosyncratic and relativistic other knowledge is considered by many as being more objective, reliable and shareable (Baxter-Magolda, 2001; Belenky, Clinchy, Goldberger & Tarule, 1986; Kitchener and King, 1990, 1994; Perry, 1970). These researchers focused their studies on individuals as they progressed through and beyond higher education institutions, and have developed models that show similar kinds of epistemological development trajectories. In each model these

researchers described the more evolved learners as being comfortable with a mix of objective and subjective knowledge, and understanding the indivisible link between knowledge and knowledge-maker. In Kitchener and King's (1990) Reflective Judgment model they also included the element of conscience in the most mature development stages. They describe the upper-level epistemological conceptions and judgments about knowledge as being leavened by an individual's ethical concerns. Thus, as one's epistemological conception develops, the notion that knowledge is idiosyncratic to the positionality, concerns, and nature of the knowledge-maker becomes the basis for viewing and questioning all knowledge, including one's own. This more sophisticated conception of learning is a constructivist epistemology.

Characteristics of constructivist epistemological conceptions.

Constructivists hold a conception of knowledge-making, wherein the learner *constructs* her/his own knowledge – not as a passive recipient of ready-made understandings – but as an active creator of meanings from new experiences and information. The constructed meanings are dependent upon the prior knowledge of the learner, and therefore, an individual's stock of knowledge is always somewhat idiosyncratic. This is “because every person has, at least in some respects, a unique sequence of experiences from birth to

death....combined also with a unique genetic makeup (except for identical twins) that leads to the personal meanings each individual constructs" (Novak, 1993, p. 167).

Constructivist learning theory also takes into account the social nature of human meaning making. Constructivists believe that the tools we use in the construction of knowledge (e.g., words, language, symbols) are socially-derived and come with socially-negotiated meanings. They also hold that individuals construct new knowledge, or prior knowledge, in social settings, and therefore, our personal knowledge is shaped by our social experiences (Jaramillo, 1996). In this vein Svinicki (2004) proposed:

The constructivists do not deny that there is an objective reality (although some might come close); rather, they say that each learner's understanding of that reality is unique and derived from his or her world of experiences and probably not accessible by anyone else. Socio-constructivists assert that the reality to which we ascribe is one that we construct in conjunction with the world around us, particularly the people around us. We share experiences and agree to think of them in a certain way. (p. 36)

It is the socially-negotiated character of knowledge that makes it possible for individual learners to share knowledge and to construct agreed upon bodies of understandings (i.e. disciplinary knowledge, religious ideologies).

Teaching conceptions that are constructivist in nature are student-centered by definition. Teachers, who base their practices on these conceptions, acknowledge:

That their student's background knowledge profoundly affects how they interpret subject matter and that students learn best when they apply their knowledge to solve authentic problems, engage in 'sense-making' dialogue with peers, and strive for deep understanding of core ideas rather than recall of a laundry list of facts. (Windschitl, 1999, p. 752)

Teachers who hold these epistemological conceptions are thereby, much more prone to focus their pedagogical decision-making on the learning-needs of their students rather than on the teaching methods they know and the content they want to transfer to their students. Teacher's with constructivist teaching conceptions are also more likely to recognize the a priori effects of their own beliefs, values, and past experiences on their teaching decisions and thus, to be more questioning and reflective of their decisions. The descriptions of effective teaching, described earlier in this chapter, can now be seen as outgrowths of

upper-level epistemologies that mirror constructivist teaching conceptions, and are learner/learning-centered at their base. Certainly these constructivist conceptions would be necessary to bring about the shift in focus from teaching to learning in higher education institutions that was promoted by Barr and Tagg (1995), and further elaborated by John Tagg (2003).

Studies of teaching and learning in research universities leads to an understanding that effective teaching in these institutions must fit within an overarching ethic of learner/learning-centeredness. Since learner/learning-centered teaching is constructivist in nature (Thompson et al., 2003) might learner-centered teaching be indicative of faculty members with high-level (constructivist) epistemological conceptions? As was indicated earlier, there may be substantial barriers to faculty members becoming effective teachers and practicing effective teaching in our research-intensive universities. For as Nyquist, et al. (1999) reported in their study of graduate education, the prevailing priorities of research one institutions foster “ambivalence about the values of teaching in faculty life” (p. 24). However, some faculty members seem to navigate those barriers and institutional priorities more successfully than do others. The single theoretical variable that may prove to be the most powerful initiator of effective teaching in these institutions is an individual faculty

member's constructivist conception of teaching and learning. These powerful, value-laden meaning perspectives provide faculty members with the mental tools they need to teach effectively within an environment that can mitigate their efforts.

But how and where are these learner/learning-centered conceptions constructed? Is it necessary that faculty members arrive at a research institution's doorstep with these conceptions fully intact, or can they be constructed within? In other words, do effective teachers need to be hired into research universities, or can they be grown in-house? If one asks a faculty development professional this question, the answer would be that effective teachers may certainly be developed, but that different instructors respond differently to similar kinds of development activities, incentives, and disincentives. Even the barriers to effective teaching that are continuously discussed in the literature (such as the attitudes of institutional leaders and disciplinary cultures that are focused on research and publication) are responded to in different ways by different instructors.

In a similar way, rewards for teaching may be interpreted by individual faculty members as less than advantageous. Recognition for exceptional teaching may not pass as the coin-of-the-realm in some academic units or

disciplines. Effective teaching then is most certainly affected by a combination of ecological factors and individual conceptions. Both are significant considerations, but faculty conceptions must be of chief concern, since it is a combination of an instructor's attitude toward teaching and her/his personal interpretation of institutional factors that seem to lie beneath the effectiveness of her/his teaching. It is the exploration of this combination of factors that will form the basis of this research.

Research into Teaching Conceptions

Pratt (1992) defined conceptions as "specific meanings attached to phenomena which then mediate our response to situations involving those phenomena" (p. 204). Conceptions are the cultural, familial, social, and individually derived lenses through which we view the world; they color our interpretations of events, and therefore they form the basis of our actions. Freire and Sanches (1997) defined conceptions of teaching more specifically as:

A set of ideas, beliefs, understandings and interpretations of pedagogical practices concerning the nature and content of [the topic], the pupils and the way they learn, the teachers and the role they play in the classroom, and the context in which pedagogical practices occur. These include curricular decisions (the nature and form of the content) and instructional

decisions (how the content relates to the learners in the instructional setting). (p. 498)

Research into teaching conceptions began with studies that looked at pre, and in-service schoolteachers' beliefs. In the early 90s this research was very limited (Pajares, 1992), but what had been discovered was that "teacher's beliefs appear to be relatively stable and resistant to change...[and that] teachers' beliefs tend to be associated with a congruent style of teaching" (Kagan, 1992, p. 66). Furthermore, research revealed that pre-service teachers leave their college programs with their initial beliefs and biases largely intact, and that "as teacher's experience in the classroom grows, his or her professional knowledge grows richer and more coherent, forming a highly personalized pedagogy – a belief system that constrains the teacher's perception, judgment, and behavior" (Kagan, p. 74). Dirkx and Spurgin (1992) referred to these personalized pedagogies as "implicit systems or theories that are used to relate these beliefs to specific classroom practices" (p. 20). This research on teachers' beliefs began to show that schemata of which they were unaware often guided teachers' practices. As Apps (1994) posited:

Who we are (our self) contains beliefs and values that trace back to our earliest beginnings. We are not aware of many of these beliefs and values,

yet all, known and unknown, influence who we are and how we believe...Most of us have a store of unconscious beliefs and values hidden deep within us, yet often they have more influence on us than the beliefs and values of which we are aware. (p. 74)

Beliefs were seen as both foundational to, and also actively impacting, one's teaching. Therefore, researchers began to look more closely at the relationship between schemata and practice. Samuelowicz and Bain (1992) reviewed four studies that examined the educational theories held by postsecondary teachers. Their analysis led to a typology of conceptions of teaching that they described as "a continuum from information presentation to facilitation of student learning" (p. 93). Although their analysis did not lead to specific descriptions of each type or category of conceptions on the continuum, what they were able to accomplish was an initial definition of six possible constituent dimensions of teaching theories. These dimensions are: (a) "Teachers' and students' roles," or whether teachers perceive their students as being active or passive; (b) "theory of learning," or the difference between viewing learning as the accumulation of facts or as the changing of conceptions; (c) "types of understanding," or whether teachers believe they are developing students' capacities for processing information in particular ways; (d) "student's

current understanding," or whether teachers take into account what students already know; (e) "ownership of knowledge," which pertains to teachers' notions of whether their institutions or disciplines "own" the knowledge and the right to dispense it; and (f) "relationship between theory and practice," or whether teacher's think it is important to emphasize that link. Samuelowicz and Bain (1992) used these dimensions to help explain their own research into conceptions of teaching held by academic teachers.

Through interviews with thirteen postsecondary teachers they were able to discern five global conceptions of teaching, which they described as ranging from higher-order learning and a student-centered conception to lower-order learning and a teacher-centered conception. Through their study they were able to link teacher/student-centeredness and levels of learning. Those conceptions of teaching are:

Level 1. Teaching as supporting student learning. This conception of teaching....is seen as a student-centered activity in which students are not only responsible for their own learning process but also are in control of the content of their learning....The role of an academic teacher is to encourage and sustain students' own interests; to help students to organize and plan their work; to monitor students' work, give feedback on

current work; and to help with conceptual difficulties. Teaching is conducted on an individual basis, in response to particular problems. (p. 98)

Level 2. Teaching as an activity aimed at changing student's conceptions or understanding of the world. In this conception of teaching both teaching and learning are oriented more to reality than to subject matter. The outcome of the teaching and learning process is *different* knowledge as opposed to *increased* knowledge. (p. 98)

Level 3. Teaching as facilitating understanding. In this conception of teaching emphasis is on getting students to understand the subject matter of the course, ensure that they gain enough understanding to be able to apply this knowledge and understanding not only to new problems within the course but also beyond the boundaries of the course. (p. 100)

Level 4. Teaching as transmission of knowledge and attitudes to knowledge within the framework of an academic discipline. This conception of teaching is expressed in the context of undergraduate teaching which is seen as preparation for [graduate] study and ultimately as training for a future profession. The desired outcomes of learning are expressed in terms of developing competence in dealing with the subject matter presented in the

course, and the ability to manipulate both concepts and tools and to apply them. (p. 100)

Level 5. Teaching as imparting information. In this conception teaching is clearly seen as a teacher-centered activity. It is conceptualized as imparting the information or knowledge which constitutes the subject matter of a course. (p. 101)

Samuelowicz and Bain characterized these conceptions of teaching as only preliminary, but in a more comprehensive review of the research, which included those studies mentioned above, Kember (1997) made a similar link between levels and kinds of learning and teacher/student-centeredness.

Kember examined thirteen studies by teachers at the tertiary or adult education level. He found that each of these studies employed qualitative methods (mainly interviews), that terms such as teacher beliefs and conceptions of teaching seemed to be synonymous and that each of the studies resulted in a typology or categorization of findings. As a result of the commonalities between the studies, Kember was able to compare categories and arrange them on his own "multiple-level categorization model of conceptions of teaching." The two ends of his model are "teacher-centered/content-oriented and student-centered/learning oriented" (p. 264). He posited that although the various

studies differed in whether the categories were described as hierarchical, meaning that “characteristics present at a lower level should be present *at all levels*” (Samuelowicz & Bain, 1992), or ordered, meaning that each category is distinctly separate from the others. They found that the hierarchical notion was not well supported by the research. However, Kember (1997) argued that although the practicalities of categorizing phenomena dictate the establishment of distinct boundaries between them, the research reported that individuals were not always bound by a single conception, especially in cases where teachers appeared to be changing their conceptions. He therefore suggested that the “categories of conceptions of teaching are perhaps, then, better portrayed as well-established positions within a continuum” (p. 263). In other words, he suggested that teaching conceptions are distinct categories, with somewhat fuzzy borders.

Kember allowed for this seemingly vague position in his categorization model, wherein he described the two broad categories, teacher-centered/content-oriented and student-centered/learning-oriented, as “orientations” that are very distinct from each other. Within those orientations, however, are two subordinate conceptions that are much less distinct, and one intermediate conception that links the two ends of the model (see figure 1). The subordinate

conceptions identified by Kember are very much like the five global conceptions described by Samuelowicz and Bain (1992), and range from the teacher-centered, “imparting information” end of the spectrum, wherein teaching is lecturing and students are passive, to the “conceptual change/intellectual development” end, which is completely student-centered (pp. 264-270).

Samuelowicz and Bain (2001) later revised their 1992 five level teacher orientation framework to account for Kember’s (1997) model. In their newer framework they went from a five level to a nine level classification of orientations. They also drew greater distinction between the teaching-centered and learning-centered ends of their framework, and they questioned whether the boundaries separating the orientations are actually as soft as those in Kember’s model. Their new framework is an improvement, however, regardless of the number of conceptual orientations or the clarity of their edges the research on teacher conceptions continues to suggest that there is a continuum of teaching conceptions with teacher-centered and student-centered endpoints, as in Kember’s initial conception.

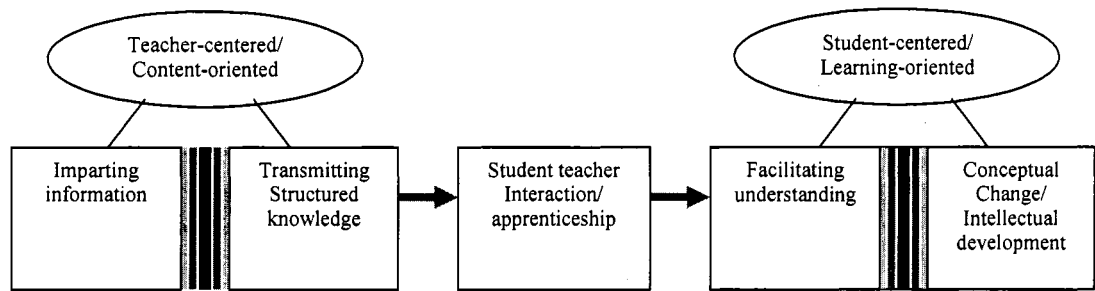


Figure 1. David Kember's multiple-level categorization model of conceptions of teaching.
Note. From "A Reconceptualization of the Research Into University Academics' Conceptions of Teaching," D. Kember, 1997, *Learning and Instruction*, 7 (3), p. 264. Copyright 1997 Elsevier Science Ltd.

The categorization model (see Figure 1) demonstrates Kember's (1997) integration of the available research on conceptions of teaching. The research he drew from was generally intended to identify and explain a range of conceptions held by teachers in general and not specifically focused on conceptions held by effective teachers. However, embedded in the research is the implication that effective teachers are more likely to hold conceptions found on the student-centered end of Kember's model.

Do Some Conceptions Lead To Effective Teaching

Kember's model (see figure 1) has a distinct unidirectional characteristic that seems to be based on two assumptions. The first assumption is that learning itself is richer and of a higher order as one moves along the continuum from teacher-centeredness to student-centeredness. This assumption comports with

the overarching concept of *kindergarten through graduate school education*, wherein virtually everything pertaining to the learning enterprise is sequenced from simple and basic to difficult and complex. Kember's model also mirrored the learning levels proposed by Bloom in 1956. Bloom's taxonomy begins with low-level memorization of specific facts and basic concepts, and builds through six levels to the highest level of learning, which involves the ability to evaluate and judge phenomena. Bloom proposed this hierarchy of learning levels as a staged movement from concrete thinking to abstract conceptualization. His taxonomy has found wide acceptance in education and most certainly greatly influences the notion that the trajectory of learning is unidirectional.

The second assumption is that when teachers change their conceptions, the direction of change is from teacher-centered to student-centered. Certainly this assumption interacts with the first, but its genesis is probably the student-centered bias that Kember (1997) found in most of the research. He stated that, "there is also an implication which is often made explicit, that the conceptions toward the student-centered end of the continuum are superior" (p. 261). One may also explain the unidirectional bias in conceptual change models as an assimilation of the developmental trajectory suggested in the prominent epistemological development models. Hoffer (2002) suggested, "Regardless of

the number of stages, positions, or perspectives, the sequence invariably suggests movement from a dualistic, objectivist view of knowledge to a more subjective, relativistic stance and ultimately to a contextual constructivist perspective of knowing" (p.7). This trajectory is also reflected in higher education's plodding attention shift from an instructional paradigm to a learning paradigm, proposed by Barr and Tagg (1995) and further developed by Tagg (2003). Murray and MacDonald (1997) also identified the same learning-centered bias, which they term the "normative view" in their survey of the literature on lecturers' conceptions of teaching.

What might be inferred by the unidirectionality of all these studies and the general trend in higher education is that effective teaching has an equivalent trajectory, which moves from teacher-centered/low-level learning and an inference of *less-effective* teaching to student-centered/higher-level learning and an inference of *more-effective* teaching. However, the research doesn't quite support those simplified relationships.

Research shows that in student-centered teaching all of the major themes of cognition are taken into account:

Students' existing conceptions are the starting point of an interactive teaching/learning process and students are helped by teacher's activities

to construct their own knowledge, to make their own sense of reality, and adopt the conceptual framework in line with that shared by the experts in the field. (Samuelowicz & Bain, 1992, p. 104).

Student-centered teaching conceptions, then, are related to higher-order learning by students. However, it is entirely conceivable for a teacher to hold a student-centered conception and simply not possess the skills or motivation to teach well. Thus a relationship between effectiveness and student-centeredness, or between effectiveness and higher-order learning doesn't necessarily exist.

Using this scenario, it is safer to say that effective teaching is related to meeting the desired learning outcomes, which could be either high-level or low-level learning. This is supported by Pratt's (1992) study in which he found that "intentions were most often the basis for making judgments as to teaching effectiveness" (p. 208). If, for example, a faculty member holds a teacher-centered conception, which accounts for few (if any) of the students' cognitive characteristics, but none-the-less that faculty member is able to promote the desired rote-memorization of facts by the students, that could be considered effective teaching. Given this example, then, teacher-centeredness and teaching effectiveness, and low-level learning and effectiveness, are not mutually exclusive. This notion, however, is a hard pill to swallow for anyone who holds

anything other than a teacher-centered conception of teaching. This idea also doesn't seem to fit with common descriptions of a learning-centered paradigm.

Regardless of this apparent disjuncture, one might conclude that effective teaching is contextual, and that within the context of higher education it is possible for faculty members of any conceptual persuasion to be identified as effective teachers. Pratt (1998) would argue that this is exactly the case. Pratt stated that:

There is no basis for assuming a single, universal perspective on teaching adults. Both the philosophical and empirical evidence argues against it. What is needed instead is a plurality of perspectives on teaching adults that recognizes diversity within teachers, learners, content, context, ideals, and purposes. Adult and higher education are pluralistic in purpose and procedure, in context and content, and in regard for what is considered effective teaching. (pp. 3-4)

Through his research on teaching in adult learning environments Pratt has identified five perspectives on teaching, which are the equivalent to teaching conceptions (see Pratt, 1992). These perspectives are "expression[s] of personal beliefs and values related to learning and teaching" (p. xii). They are: (a) the *transmission perspective* that is concerned with the effective delivery of content; (b)

the *apprenticeship perspective* that is a modeling of ways of being; (c) the *developmental perspective*, which cultivates ways of thinking; (d) the *nurturing perspective* that is concerned with facilitating self-efficacy; and (e) the *social reform perspective*, wherein seeking a better society is its purpose. Pratt argues that each perspective is "a legitimate view of teaching, subject only to variations in the quality of implementation, not the nature of their underlying values" (1998, p. xiii). Thus, a teacher that holds a transmission perspective that one would assume might be located on the teacher-centered/content-oriented end of Kember's (1997) model, could in fact be learning-oriented.

On its face, this appears to contest the accuracy of the categorical model that Kember drew from the research. However, Kember's model was never intended to describe conceptions held by *effective* teachers. His model simply describes the range of orientations and conceptions of teaching, which were identified in the research in higher education. Pratt's (1998) typology of teaching perspectives, on the other hand, although not intended to be an exhaustive list, was conceived and described as conceptions that have proven their effectiveness in actual practice. For example, Pratt stated that through experience and some evidence in the literature, one might conclude that:

All teaching within the Transmission Perspective results in superficial learning. Yet, it is my contention that this is the result of its implementation, rather than its underlying structure. There are too many examples of effective teaching that fall within the Transmission Perspective to say it is categorically, and unequivocally, ineffective. (p. 42).

Teachers holding to the transmission perspective believe that the best ways for students to learn particular kinds of well-defined content are for teachers to be:

Knowledgeable in their subject areas...experienced in their fields...[and] to know their content well enough to answer most questions, provide multiple examples, give clear and detailed explanations, and specify with authority and precision just what people are expected to learn. (pp. 40-41)

These teachers may indeed rely heavily on traditional presentation methods of teaching, but the development of their approaches is based upon a thorough understanding of the type of knowledge construction they are attempting to promote. This means that student learning underlies their teaching even though teacher expertise and well-structured knowledge are the primary foci when planning their teaching actions. These are not the faculty

members described by Kember (1997) who hold the extreme teacher-centered conception, wherein teaching is “purely presenting information [and] the student is viewed as a passive recipient of a body of content, if indeed the student appears at all” (p. 265). *Effective* teachers with a transmission perspective also understand that the content they are teaching must be integrated “with other parts of a program or curriculum, thus, implying assumptions about the hierarchical nature of the knowledge they teach” (p. 41).

The teachers holding the transmission perspective, or any of the other four perspectives described by Pratt and Associates (1998), seem to fit well on the learning-oriented end of the spectrum, because their teaching is first and foremost grounded by a concern for student learning, and secondly, their teaching helps to coordinate student learning within a sequence, a system, or a program of knowledge construction and development. These two commonalities make it plausible to define effective teaching in a research university context that isn't overly narrow and prescriptive.

If research universities are truly moving toward a learning-centered paradigm, and they accept the mantle of social responsibility that our nation expects of them, and they engender the multiple missions that were identified by Bok (1990), then within those institutions effective teaching must be linked to

student-centeredness and higher-order learning. However, more than any other kinds of institutions, research universities are characterized by the plurality of purposes and perspectives articulated by Pratt (1998). Therefore, any definition of effective teaching in a research university must fit within an overarching ethic of student-centeredness (Barr & Tagg, 1995; Murray & MacDonald, 1997; Pratt, 1998; Samuelowicz & Bain, 1992, 2001; Tagg, 2003) and a notion that teaching *ultimately* promotes higher-order learning, while also allowing for specific disciplinary, departmental, programmatic, and curricular ecologies (Doyle, 1978; Marsh & Hattie, 2002; Wulff, 1985, 2005), which may require a range of conceptions and methods of teaching.

Effective Teaching in a Research University

In the end, effective teaching in a research university is dependent on alignment, consistency, and comprehensiveness.

1. Alignment

Effective teaching is a process within the course and classroom that creates alignment between professor's expectations, student expectations, and content, which results in learning. This alignment may be achieved through rapport, structure, engagement and interaction (Wulff, 1985, 2005). Effective

teaching also creates an alignment between the kind of knowledge that is created in the classroom, the way knowledge is created in the classroom, and the larger programmatic, disciplinary, institutional, and social contexts.

2. Consistency

Effective teachers have developed instructional actions that are consistent with their, intentions, and beliefs. Pratt (1998) suggested that one's perspective on teaching is defined by a coalescence of these three factors – actions, intentions and beliefs (pp. 10-11) – into what he described earlier as “a dynamic and interdependent trilogy” (Pratt, 1992, p. 206). This dynamic interplay of factors impacting the thinking of effective teachers is congruent with Wulff's (2005) assertion that teachers need to use a “systematic and systemic approach” (such as his alignment model) to deal with the complexity inherent to a teaching practice. Clark (1995) proposed in his book on Thoughtful Teaching that within the research on teaching and learning there is a general acceptance of the idea that:

Good teacher's effective action depends as much on thoughts, plans and decisions as on efficient behavior and management ability. The mental lives of teachers are at least as important to understanding and supporting the profession as are their visible behaviors. (p. 12)

The need for consistency becomes evident when one is attempting to develop the contextual alignment mentioned above. "The extent to which a faculty member's teaching approach and conception of teaching is a reflection of the individual or the department presumably depends upon the balance of individual autonomy and departmental and institutional pressures" (Kember, 1997, p. 270). Creating this balance (or alignment) may require, for instance, that those faculty members who hold student-centered conceptions and rely heavily on interactive teaching methods may at times need to employ,

methods such as lecturing and spend a proportion of their time communicating content and bodies of knowledge. This does not imply, though, that while they are doing this they have changed or switched off their underlying beliefs. The lecturing would be just one element in a wider effort to facilitate learning. (Kember, p. 270)

Several other educational researchers and scholars have referred to the epistemic relationship between conceptions of teaching and teaching actions (see for example, Amundsen, Saroyan & Frankman, 1996; Barr & Tagg, 1995; Dirkx & Spurgin, 1992; Freire & Sanches, 1992; Kagan, 1992; McCombs, 2003; McManus, 2001; Niemi, 1997); Pajares, 1992; Rando & Menges, 1991; Samuelowicz & Bain, 1992; Thompson et al., 2003), and the need for consistency built on reflective

awareness rather than blind devotion to unexamined methods and assumptions. As Brookfield (1995) stated, "One of the hardest things that teachers have to learn is that the sincerity of their intentions does not guarantee the purity of their practice" (p. 1).

3. Comprehensiveness

Effective teaching is comprehensive in consideration of each of the elements that affect teaching and learning. Pratt (1998) proposed that, in general, five elements must be considered in teaching. These elements are the teacher, the students, the content, the context, and the teacher's ideals. He suggested that a teaching perspective is determined by a teacher's primary commitment to one or more of these elements. However, although all teachers hold primary commitments, effective teachers take all five elements into consideration. Thus, an effective teacher who holds a transmission perspective would hold primary commitments to content and the teacher, but the learners, context, and ideals would also play important roles. Comprehensiveness is also described on the basis of what teachers should know. For example, Shulman (1986) proposed that good teaching is based on a sufficiency of three categories of knowledge; subject matter content knowledge, pedagogical content knowledge, and curricular knowledge. Hollingsworth (1989) built on these categories of knowledge with

her own analysis of the research and suggested that teachers' knowledge base should include: "(a) subject matter – both content and subject-specific pedagogy, (b) general pedagogy or management and instruction, and (c) the ecology of learning in classrooms" (p. 162). She defined the ecology of learning in classrooms as, "both theories of knowledge acquisition and the social nature of learning in classrooms" (p. 163).

These three aspects of teaching – alignment, consistency, and comprehensiveness – form a common base for effective teacher thinking in a research university context, wherein a plurality of purposes, which stem from the legitimate needs of multiple stakeholders, are intended to be addressed with the highest degree of mastery and scholarship. However, it is abundantly evident from the research into teacher thinking that many faculty members are not working from that common base. Faculty members may hold conceptions of teaching that are so rigidly constructed that they cannot be aligned within a research university environment. Kagan (1992) reminded us that this is an aspect of individual cognition and stated that:

Personal beliefs function as the filter and foundation of new knowledge.

Some of the personal beliefs an individual brings to a learning situation

(the 'anchors') facilitate learning, because they are congruent with the new

knowledge to be learned; other ('brittle') beliefs impede learning, because they are inconsistent with the knowledge to be learned. (p. 75)

The anchors (beliefs) that faculty members bring to their teaching were developed in large part within their families, communities, and school systems, and as Pratt (1998) posited, "our beliefs are so rooted in core values that they represent long-held and significant aspects of who we are and how we see ourselves in relation to the world" (P. 11). Shulman (1999) warned that these sometimes rigidly anchored conceptions can be a form of "fantasia...[or] what otherwise might be called illusory understanding or persistent misconceptions" (p. 13). Fantasia, as he used the word, can both block alignment and impede consistency, and "a strategically held misconception can interfere with significant amounts of later good teaching" (p. 13).

It is also highly problematic when faculty members' epistemologies and knowledge bases are incomplete in consideration of the factors that affect learning. Dinham (1996) summarized this well when she asked and answered the question:

What does a new teacher need to understand? The content of the discipline, surely – including not only its facts, concepts, and organizing principles but also its explanatory frameworks and syntactic structures.

Also, a teacher must have the specialized understanding about learning the discipline that is specific to the field, that is, the particular context for teaching. Insight about today's students in general and in particular about students as learners is important, as is wisdom about ourselves and how our talents, styles, fears, and beliefs influence our teaching. (p. 311)

There is also ample evidence that faculty members' teaching conceptions are sometimes inconsistent with the ways they teach (Barr & Tagg, 1995; Kagan, 1992; McManus, 2001; Pratt, 1992; Rando & Menges, 1991). Teaching conceptions cannot be adequately discerned by an examination of the products of teaching (e.g. syllabi, student ratings, grade reports, peer and student testimonials), nor are they necessarily evident when observing the act of teaching, but instead, they must be discovered through an exploration into the teacher's thinking.

Samuelowicz and Bain (1992) suggested that some faculty members profess an ideal conception of teaching, whereas their actual practice reflects a different working conception (p. 110). Argyris and Schon (1978) explained this as the difference between an espoused theory and a theory in use, whereas Murray and MacDonald (1997) called this inconsistency a disjuncture between conceptions of teaching and claimed practices. They suggested that, "a way of closing this gap could be to encourage a systematic reflection on the process of learning and

teaching" (p. 345). They found evidence in their own research that suggested that even though a significant number of faculty members reported reflecting on their teaching, "reflections were found to be narrowly conceived within individual existing paradigms and the staff were only going part way round the learning cycle [see Kolb, 1984] and not closing the loop by using reflection on practice to change that practice" (p. 347).

One of the most important concepts that emerged from this research is that teachers' can change their conceptions. For without the possibility for change, teachers who hold teacher-centered conceptions of teaching, which are less effective for the promotion of higher levels of learning, and do not mesh within an over-arching student-centered ethic, would have no ability to become more effective. Wulff (2005) suggested that engagement in ongoing reflection can help instructors deal with the complexity of their practices and improve teaching effectiveness (p. 234). Pratt (1992) argued that there are two possible methods for improving a person's teaching: "Efforts to improve teaching may focus on the refinement of existing conceptions and practices or may attempt to change those conceptions. The former is more common; the latter more difficult" (p. 218). Teaching in a research university certainly requires ongoing efforts to develop the knowledge base, refine the methods and hone the skills that can

improve the alignment, consistency, and comprehensiveness of faculty members' practices. However, these efforts have little effect on faculty members' learning schemes, and therefore conceptions of teaching go unchanged. "Indeed, changing pedagogical practices will be a successful endeavor only if it is conceptualized and planned according to an understanding of both the teacher's conceptions and the practices that have a true value for them" (Freire & Sanches, 1997, p. 498). The pluralistic nature of research universities tolerates, and possibly requires, a range of different conceptions of teaching within their faculties, but there are some conceptions that are truly at cross-purposes with the dimensions of alignment, consistency, and comprehensiveness, and the promotion of high levels of student learning. Therefore, effective teaching in a research university context, unlike many other educational institutions, may require a willingness on the part of individual faculty members to transform her or his conceptions of teaching.

Teacher Transformation: How Teachers Change

Research on teaching and learning has taken on many different theoretical perspectives and pursued several directions over this last century. As the research evolved from early attempts at identifying basic predictable and

controllable mechanisms of human behaviors, to the examinations of the many autobiographical, contextual, social, and physiological factors that influence the construction of knowledge, the tendency, on the whole, has been toward adding layers of complexity, even though the motivation is a quest for simplification and essentialized understandings. In recognition of this increasing complexity Wulff (1985, 2005) suggested that teachers who wished to improve their teaching effectiveness needed to capture that complexity in their thinking through ongoing reflection (p. 234).

Clark (1995) suggested that we should give up on the notion that research on teacher thinking will result in a generic set of methods for dealing effectively with the complexities of teaching. Alternatively, he posited that educators should consider what has been discovered about implicit theories, reflection, and the uncertainties inherent to teaching, and use these as “rich food for thought (and action)” (p. 123). Essentially, Clark was admonishing educators to stop waiting for a set of guidelines that spell-out what effective teachers think and do, and to start thinking and doing something with what was known.

This is good advice if one’s conception of teaching allows for one to see it as such. It is far easier to accept research with a bias toward learning and student-centeredness if one’s conception of teaching already encompasses those

dimensions. However, the research shows that tertiary teacher's conceptions are located from one end of the continuum to the other, and that if real changes in practice are sought, they will need to be preceded by conceptual change (Amundsen et al., 1996; Banks, 1998; Brookfield, 1995; Hativa, 2000; Hollingsworth, 1989; Kagan, 1992; Kember, 1992; Paulsen & Feldman, 1995; Rando & Menges, 1991). To change conceptions one must have developed the capacity to reflect on underlying beliefs, values and assumptions. "Reflection offers the opportunity for teachers in higher education to examine their underlying philosophies, assess its usefulness in the context of higher education, and consider alternative approaches based on other philosophies or combinations of philosophies" (Brockbank & McGill, 1998, p. 31).

Reflection is a skill that may be developed, but because it can involve the examination and questioning of deeply imbedded schemata, which anchor our learning, it takes motivation, dedication and patience. John Bean (1998) made this eloquent suggestion to professors, that "only if we reimagine our work, can we serve the soul of the world" (p. 511). Reimagining, however, is the difficult part, because we are often constrained by our personal schemata from even considering particular alternatives. Mezirow (1991, 1995) proposed that we must undergo a perspective transformation if we hope to truly change our minds. He

described the process of changing our conceptions in his “transformation theory of adult learning.”

Mezirow (1991) described the internal forces that guide our knowledge construction as “meaning perspectives and schemes,” which are habits of expectation that guide how we make meaning from an experience. A meaning perspective is “a general frame of reference, set of schemas, worldview, or personal paradigm” and a meaning scheme is a “specific set of beliefs, knowledge, judgment, attitude, and feelings which shape a particular interpretation” (pp. 42-43). We learn these meaning perspectives and schemes through interaction with our parents and our culture. In other words, these are the ingrained, and often unconscious, habits and frames of reference that cause us to view, interpret, and react to our experiences in particular ways. These meaning perspectives and schemes regulate how and what we learn.

Making meaning involves the process of construal, which can be accomplished in three separate but complimentary ways. The first is “propositional construal” (p. 40), which is the process by which we make meaning of an experience by fitting that experience within language categories and words. In this process, the meaning given to the language that describes it predetermines meaning assigned to an experience. The second process is

“presentational construal” (p. 40), which is a way of making meaning without language. In this process we recognize the meaning of an experience by relating that experience to one to which we have already given meaning. Neither of these first two forms of construal involves the questioning of meaning schemes or meaning perspectives. They are a part of, and analogous to, the first type of instructional improvement described by Pratt (1992), wherein faculty members may make improvements within existing teaching conceptions, but no effort is made to change those conceptions. Indeed, Kagan (1992) found that, because of their deeply imbedded conceptions “experienced teachers are also unlikely to modify their belief systems without some dramatic disequilibrium” (p. 78). This disequilibrium is considered in Mezirow’s third form of construal.

Mezirow’s third way of making meaning, “intentional construal” involves a deliberate, analytical, and reasoned attempt to learn from an experience. Mezirow proposed that “we engage in intentional construal when propositional or presentational construal becomes problematic” (p. 41). Paulsen and Feldman (1995) referred to this problematic condition as the impetus for “unfreezing”, wherein the personal motivation for change is created. Drawing on Schein’s (1964) work in personal and organizational change, they suggested that three conditions must be met to unfreeze one’s teaching:

First, an individual experiences “disconfirmation” cues from his or her environment, that is, information indicating that the individual’s present attitudes and behaviors are not achieving the goals or producing the results....Second, the individual “compares” information on the outcomes of his or her actual behavior to outcomes that the individual desires and considers important or ideal. When this incongruence leads to a sense of guilt, anxiety, or inadequacy...a desire to reduce or eliminate such disequilibrium could lead to a motivation to change. In order to be so motivated, a third condition must also be met: The individual must feel a sense of psychological “safety” associated with attempts to change. The person must be able to envision ways to change that will produce results that reestablish his or her positive self-image without feeling any loss of integrity or identity. (pp. 11-12)

That sense of psychological safety is often difficult to achieve in a research university environment where discussing one’s teaching with colleagues is sometimes discouraged, and the act of teaching is committed in isolation. Brookfield (1995) calls this the “culture of silence” in higher education. He argued that:

Silence surrounds us as teachers. Given the noise of a typical campus, this may seem like a strange statement to make. Yet in a demoralizing though often unacknowledged way, many of us spend the greater part of our lives as teachers bound in chains of silence. This is a silence about the process and meaning of our teaching. It is a silence that acts subtly to prevent us from making talk about teaching a central part of our lives. (p. 247)

In their study of graduate school experiences, Nyquist et al. (1999) found “an overwhelming majority of comments we received regarding participation in the study indicated that respondents deeply appreciated the opportunity that our interviews provided simply to talk with an interested person in academia about teaching” (p. 25). Mezirow (1991) proposed that intentional construal is accomplished through dialogue and critical reflection (p. 44), and within a culture of silence and without the opportunity for meaningful conversations with peers this important process is seriously compromised.

Critical reflection – described earlier as a holistic method for analyzing the roots and consequences of the thinking that goes into the analysis of a problem – has come to mean, for many people, the examination of experience as it relates to

issues of power, ethics, social justice and hegemony, but for teachers it can be much more:

It can be more because it is a deeply metacognitive process that can lift the veils and reveal how and what, our students and we learn. It allows us to directly confront our implicit cognitive content and gain control of our learning. (Borgford-Parnell, 2000, p. 17)

Implicit cognitive content are the beliefs, values, assumptions and theories that support our conceptions of teaching, but are hidden from normal consciousness. We seldom question our implicit cognitive content because the normal everyday processes of construal do not require that we do so. It is only when we are confronted with a discomfiting situation that the opportunity for meaning-changing construal presents itself. Our discomfort usually comes from the cues we perceive from our environments, such as poor student ratings, classroom management problems, or when our students perform below our expectations. These cues help to create the motivation to change (Paulsen & Feldman, 1995), and to initiate a process of critical reflection.

In a research university context, however, although the multiple environmental cues may be present, there are other internal and external forces that mitigate their motivational effects. "The extent to which a faculty member's

teaching approach and conception of teaching is a reflection of the individual or the department presumably depends upon the balance of individual autonomy and departmental and institutional pressures" (Kember, 1997, p. 270). The interplay between institutional ecology and individual conceptions can heighten or lessen an instructor's motivation to change. Rando and Menges (1991) discussed the need to reflect on experience to discover our implicit theories but stated that "unfortunately, we often circumvent real reflection through superficial justification and self-defense" (p. 11).

In an educational setting in which, (a) teaching decisions are left completely in the hands of the individual faculty members (Hamilton, 1994); (b) teaching assessments are private information and seldom used for formative purposes; (c) teaching rewards are few and generally separate from the mainstay incentive programs; (d) teaching is often viewed as a deflection away from the optimal career trajectory; and (e) effective teaching is seldom defined the same way by faculty members, their departments, their disciplines, and their institutions; it is completely understandable how disconfirming cues may be circumvented and discounted when they arise.

Motivation, however, does not have to be driven by external forces, self-motivation may already be a strong aspect of one's way of knowing. Once we

are motivated to change, or as Paulsen and Feldman (1995) stated, we are unfrozen, then critical reflection on our teaching becomes a possibility. Mezirow, (1991) proposed that there are two kinds of reflection. The first is ordinary reflection, which is a thoughtful assessment of the consequences of our learning. When we reflect on the content of a problem or the process we used to solve it, we can make changes that improve our performance; we can improve within our teaching conceptions. This kind of reflection can result in the transformation of a meaning scheme. The second kind of reflection is critical reflection, which is an attempt to look at the presuppositions, or premises, that underlie our interpretations of the content of a problem or the process we use to solve it.

Critical reflection can result in the transformation of a meaning perspective, and a change in one's conception of teaching. The differences between ordinary and critical reflection may serve to explain why traditional faculty development activities that simply concentrate on perfecting teaching methods have failed to truly empower teachers, because they seldom challenge ineffective conceptions of teaching. The traditional faculty development paradigm is itself delimited by an educational meaning perspective that Smythe (1989) has termed "ensconced technicist views" that confine development to activities that deal with content and process, and fail to recognize the need to

reflect on the premises underlying our decisions and actions. Mezirow (1991) defined the technicist viewpoint as a positivistic-instrumentalist mode, he wrote:

It should be apparent how this mode of adult thought [critical reflection] has been overlooked by the behaviorists, whose positivistic-instrumentalist mode of analysis traditionally limits inquiry to the nature and consequences of an activity. This is the reason why the behaviorist mode of inquiry has served us poorly as an approach for understanding how adults learn. (p. 45)

Critical reflection requires that we look back at ourselves, that we examine our past behaviors and decisions in order to discover the internal and forces that have guided our decision-making and actions. To do this in a manner that has the possibility for exposing important aspects of our thinking of which we are unaware requires that we look back from a different vantage point. That vantage point is gained through dialogue. Brookfield (1995) suggested that dialogue could take any, or all, of three forms. A teacher can develop a dialogue with a text, much like the dialogue being promoted between this paper and its readers. Through reading the literature teachers are exposed to new ideas, and if they are motivated, those ideas may spark critical reflection. Teachers may also create dialogues with themselves, which can take the form of writing autobiographical

pieces and personal philosophy statements. However, the dialogues that are most beneficial are those that are held with colleagues and peers.

Mezirow stated that it is through our interactions with our parents and cultures that our meaning structures were formed in the first place (1995, p. 44), and that our meaning perspectives and schemes are often distorted by our “uncritical acceptance of another’s values” (1991, p.14). Consequently, one might wonder why teachers would seek out dialogue with their peers and continue involving others in their meaning structures. Why take the chance on further distortion? Brookfield (1995) answered by stating critical reflection is an “irreducibly social process.” He proposed that for many teachers having conversations with peers is their best chance of learning critical reflection. If teachers have the opportunity to present their stories and to hear their colleagues’ perceptions, they can become more aware of the taken for granted assumptions that guide their practices. They also have the opportunity to dispel the private doubts they may have about the rightness of their pedagogical decisions (p. 141). Mezirow (1991) also suggested the importance of group learning through the process of “discourse.” He wrote:

Discourse involves an effort to set aside bias, prejudice, and personal concerns and to do our best to be open and objective in presenting and

assessing reasons and reviewing the evidence and arguments for and against the problematic assertion to arrive at a consensus. When we critically reflect on assumptions in communicative learning and arrive at a newly transformed way of knowing, believing, or feeling, we need to validate the assertions we make based upon transformative insights through this process of discourse. (p. 53)

Mezirow's suggestion that group discourse is important in the transformation process was supported by Amundsen et al.'s (1993) survey of the research, from which they concluded that "changing a teaching approach is a very personal process, one which is more likely to occur and continue if the change is perceived as meeting some identified need and if the change process is supported by peer group interaction" (p. 330).

Through critical reflection we can help ensure ethical and inclusive and effective teaching. When teachers "put into question their own life-world perspectives, the likelihood that they will impose inappropriate, preconceived views of what others should or should not learn is lessened" (Spiegelberg, 1995, p. 262). Critical reflection can help reveal the real foundations of our teaching behaviors, and provide the means for understanding how we construct knowledge and thus how we can foster the same in our courses.

Chapter Summary

Research universities don't just do research, but research is where the money is, research is where most of the rewards and prestige lie, and research is generally what the faculty members in our research universities do most effectively. A well-developed system for promoting, regulating, and ensuring the highest standards in the scholarship of research is maintained in these institutions. Powerful stakeholders in government, industry, and disciplinary organizations aid this system. Few would argue against the many benefits that university research has provided to our nation and the world. However, despite the overall satisfaction with research productivity and the desire that it should continue ad infinitum, there is deep and growing concern that research universities have lost their way regarding teaching.

Over the preceding decades that concern has evolved from vehement criticism, the majority of which was accompanied by a call for less research and more teaching, to a more level headed appraisal of the interconnectedness of these primary methods for promoting the construction of knowledge. Although the knee-jerk, polarizing reactions to teaching and research have faded, the concern for more effective teaching in our research institutions has grown.

As our concern for teaching has increased so has our understanding of the many forces at work that shape an individual faculty member's teaching.

Research in the realm of cognitive psychology has helped the academy to begin to see faculty members as learners, whose ways of knowing are bound by the same familial, cultural, and social influences as are their students'. We now know that faculty members' actions are closely related to their individual beliefs and assumptions about whom their students are (or should be), how students should learn, what knowledge is, who controls knowledge, and what their roles are as teachers. Those notions play such significant parts in the construction of faculty members' conceptions of teaching that it is now acknowledged that attempts at improving teaching effectiveness must take these individual views into account.

Research on teaching and learning in research universities, combined with an acknowledgement of the pluralistic nature of the purpose of these institutions, leads to an understanding that effective teaching in a research university must fit within an overarching ethic of student-centeredness and a notion that teaching ultimately promotes higher-order learning, while also allowing for specific disciplinary, departmental, programmatic, and curricular ecologies, which may require a range of conceptions and methods of teaching. However, this review of

the literature found that even within a wide range of teaching conceptions, three dimensions are always present that help define effective teaching:

1. **Alignment:** Effective teaching is a process within the course and/or classroom that creates alignment between professor's expectations, student expectations, and content, which results in learning. Alignment is also created between learning, the kind of knowledge that is created in the course, and the larger programmatic, disciplinary, institutional, and social contexts.
2. **Consistency:** Effective teachers have developed instructional actions that are consistent with their intentions, and beliefs. In effect, these teachers understand their conceptions and their teaching reflects that understanding.
3. **Comprehensiveness:** Effective teaching is comprehensive in consideration of each of the elements that affect teaching and learning. These elements may be described as the teacher (including her or his ideals), the students, the content, the context, or on the basis of knowledge areas that cover the content, pedagogy, and cognition.

Research into conceptions of teaching has also shown that faculty members hold a wide range of conceptions, not all of which allow for the alignment, consistency, and comprehensiveness that characterizes effective teaching in a research university. Therefore it follows that to improve the

effectiveness of teaching in research universities, development activities should be in place that promote the understanding and possible transformation of teaching conceptions. Consistent throughout the literature has been the conclusion that to change one's conception of teaching requires the development of individual skills in critical reflection, and circumstances that initiate, support, and sustain the critical reflection process. The cultures and ecologies of research universities, which for decades, have developed in support of the research enterprise, are in some ways inconsistent with the needs of critically reflective faculty members or those faculty members whose less-than-effective teaching should provide the disconfirming cues and thus the motivation to initiate a transformative process.

Despite the many obstacles, however, effective teaching does take place on our research university campuses, but as has been noted, it is not the norm. The context of research universities is such that faculty members have a great deal of autonomy to choose to improve or enhance their teaching or not, but their choices will always be grounded in their autobiographically derived conceptions of teaching. Research universities need to become communities of learners who are consistently presented with the opportunities to continue to write their learning autobiographies and are rewarded for doing so.

It is for precisely these reasons that qualitative case study was chosen as the basic design for this research. Merriam (1991) argues that, "this approach aims to uncover the interaction of significant factors characteristic of the phenomenon. The case study seeks holistic description and explanation" (p. 10). This research seeks to uncover the thinking of effective teachers in a research-intensive university setting, in order to better understand how they view their roles and what helps them to be effective teachers.

Methodology And Design

This qualitative research was designed as a multiple case phenomenographic study that utilizes both “prose description” (Philipsen, 82) of individual cases and comparative analysis across cases. Cases consisted of individual faculty members, who were identified as being effective teachers and had received the Distinguished Teaching Award at the University of Washington (a large research-intensive institution). The purpose of this study was to explore the teaching conceptions of effective teachers in a research university setting in order to improve our understanding of the basis of their effectiveness. We know that the teaching enterprise in research-intensive universities can be problematic. We think we know what effective teaching is, or should be. We also think we understand many of the dimensions of knowledge that effective teachers should know, the kinds of attitudes, motivations, and philosophies they might possess, and the pedagogies they utilize. Although our understandings are far from complete and much inquiry is still required in these areas, what is missing from the research is an understanding of how effective teachers are able to be effective, especially in circumstances in which they are rewarded for other activities,

particularly research. Dunkin (2002) argued the need for this kind of research in higher education settings:

As teaching is clearly an extremely complex process, there can be no disagreement that the size and quality of the repertoire of knowledge and thought that teachers possess and have at their disposal is crucial in determining the quality of the actions and therefore, their effectiveness. There seems little or no need to argue that the study of teachers' cognitions regarding teaching effectiveness is an important thing to be doing. (p. 45).

Clark (1995) proposed in his book on Thoughtful Teaching that within the research on teaching and learning there is a general acceptance of the idea that,

Good teacher's effective action depends as much on thoughts, plans and decisions as on efficient behavior and management ability. The mental lives of teachers are at least as important to understanding and supporting the profession as are their visible behaviors. (p. 12)

This study was intended to examine the mental lives of effective teachers, and asked the question: *What conceptions of teaching do these faculty members hold that help them to be effective in their teaching while successfully interpreting and*

navigating within a research-intensive university setting? Secondly, this study addressed the following questions:

1. How do faculty members become effective teachers in a research-intensive university?
2. What meanings do these faculty members construct from the multiple roles they fill?
3. What motivations or impediments to effective teaching do they recognize in a large research university?
4. What constitutes effective teaching from an effective teacher's perspective?

Theoretical Conceptualization

This study is grounded by two assumptions, the first being that faculty members, in research universities, hold teaching conceptions that have a priori effect on their teaching practices (see Figure 2). Teaching conceptions are described by Pratt (1992) as "specific meanings attached to phenomena which then mediate our response to situations involving those phenomena" (p. 204). Conceptions are the cultural, familial, social, and individually derived lenses through which we view the world; they color our interpretations of events, and

therefore they form the basis of our actions. Freire and Sanches (1997) defined conceptions of teaching more specifically as:

A set of ideas, beliefs, understandings and interpretations of pedagogical practices concerning the nature and content of [the topic], the pupils and the way they learn, the teachers and the role they play in the classroom, and the context in which pedagogical practices occur. These include curricular decisions (the nature and form of the content) and instructional decisions (how the content relates to the learners in the instructional setting). (p. 498)

These teaching conceptions may cause teachers to view their faculty roles differently and construct different meanings from the research-intensive university environment, which in many ways can be perceived as unsupportive of effective teaching.

Secondly, the approach to this study is guided by the assumption that effective teachers in research universities are learner/learning-centered. That is, their pedagogical decisions are primarily based in a concern that students learn appropriately and effectively, and they are willing to make the effort to try to ensure that learning occurs.

Learner-centeredness is described in the literature as one of the more positive teaching conceptions, and is viewed as a manifestation of constructivism. This assumption is that effective teachers hold constructivist teaching conceptions that ground their teaching decision-making. Furthermore, when these teachers experience the confirming and disconfirming cues in the research intensive university environment (i.e. student ratings of teaching, conversations with colleagues, presence and promotion of teaching support mechanisms) their teaching conceptions guide their teaching to be more learner and learning centered and thus more effective. These assumptions are illustrated in the following conceptual framework (see figure 2).

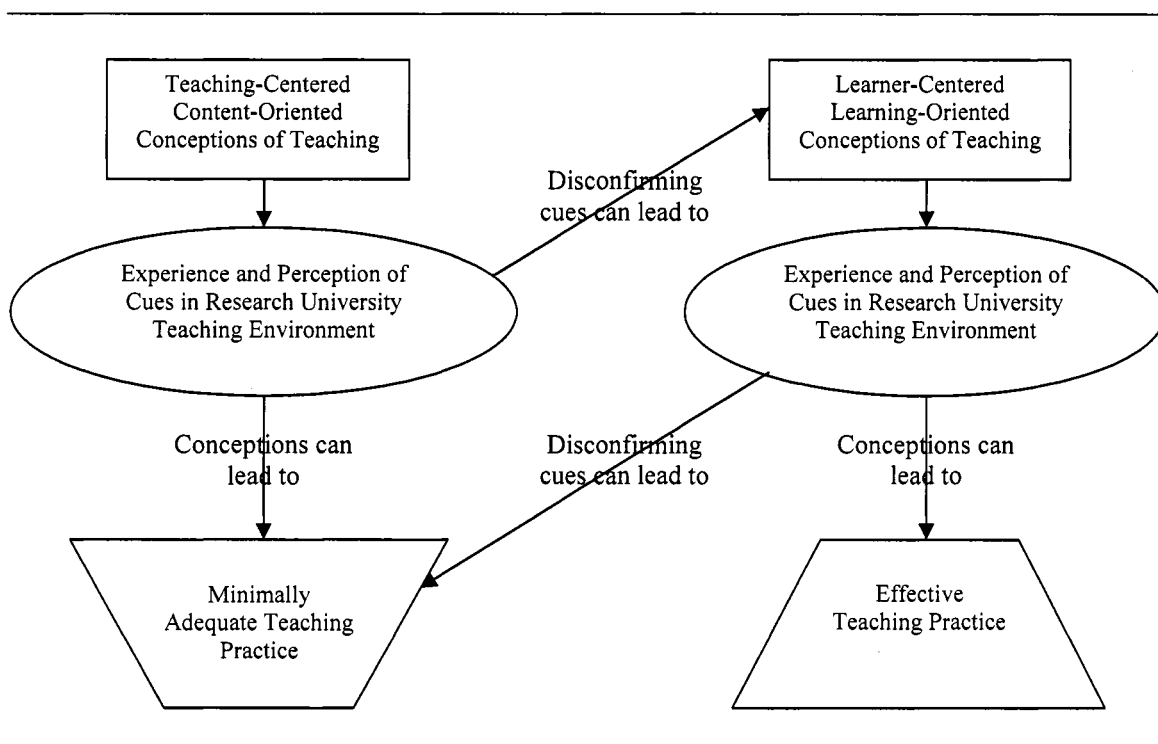


Figure 2. Conceptual Framework

These assumptions form the basis of the theoretical framework, and they also guide the choices made in terms of methodology. Constructivist learning theory places knowledge-making firmly in the brain of the individual learner, and thus what a learner comes to know can be highly idiosyncratic and relativistic. The individualized qualities of knowledge led to the selection of qualitative case study as the basic framework for this study, as the focus is on how individual faculty members *think* about their teaching roles and the particular environments within which they teach.

It is important at this point to also address a current controversy within the educational research literature, and that is the question of rigor in the teaching effectiveness research. According to Kane, Sandretto, and Heath (2002), "A critical review of research on teaching beliefs and practices of university academics revealed that the espoused theories of action of academics have not been distinguished from their theories-in-use in some studies" (p. 177). As discussed in the literature review chapter, research has shown that teachers sometimes espouse specific theories and principles for their practices, but that those theories are often not carried through into their actual teaching (Argyris & Schon, 1978; Murray & MacDonald, 1997; Samuelowicz & Bain, 1992). Therefore

the arguments made by Hativa, Barak, and Simhi (2001) and by Kane et al. (2002), that if a researcher wants to make sense of the connections between what a teacher thinks and what a teacher does, then the research must include data on both the teacher's thinking and the teacher's doing. Generally this is done with a combination of qualitative data collection methods, for example: interviews and observations.

These researchers' arguments are well reasoned and congruent with the design of their studies. Their premise was also well considered in the design of this study. However, the purpose of this study clearly distinguishes it from the kinds of research, to which Hativa et al. and Kane et al. were focused. It is not the intent of this study to reveal the effective *actions* of research university instructors. There is plentiful (though probably not enough) theoretical and conceptual literature that is focused on teaching in higher education that there is no pressing imperative for this study to join that group. By selecting instructors who have already proven their teaching effectiveness there is no need for this study to attempt to verify that proof. It is also not the intent of this study to find a relationship between their particular teaching conceptions and their teaching behaviors. As Hativa et al. (2001) discovered in their study of four exemplary university teachers, even effective teachers use strategies of which they possess

only an implicit understanding. They suggested, "We may assume that our teachers used some effective strategies by intuition" (p. 724). The purpose of this study is to gain a better understanding of what these effective teachers are thinking, and observations of their practice cannot reveal that.

Methodology

The phenomenographic case study method was chosen for this research for two primary reasons: First of all, phenomenographic research is intended to help us understand the meanings that people make from their life experiences. Unlike other kinds of interpretive research, the objective of phenomenography is to discern (as much as is possible) the participant's interpretation of her/his ideas rather than the researcher's interpretation of the participant's ideas. With regard to this intent, phenomenography has been the primary methodology for researchers examining teaching conceptions. Secondly, the case study method was selected because it is particularly well suited to the examination of phenomena that is nurtured and formed within the multifaceted context of an individual's past learning and experience and current circumstance. In other words since an individual's store of knowledge is autobiographical (Spiegelberg, 1995) then her/his teaching conceptions cannot be adequately described by an

exploration of current experiences alone, but must include some understanding of the individual's life experiences that formed the foundation of her/his epistemology. Spiegelberg wrote:

An individual's stock of knowledge is formed as new elements of knowledge (cognitions) and their implications are integrated into the layers of previously acquired knowledge. Previously acquired knowledge itself influences the manner in which new knowledge is integrated....The formation of our stock of knowledge, then, is autobiographical. It is this autobiographical dimension that distinguishes each of us from all others. Both the content and the timing of our past experiences establish our uniqueness as individuals and they have a decisive influence on the way we deal with our day to day projects. (p. 259)

At the same time, an understanding of an individual's past experience does not necessarily explain her/his current actions, since current circumstances can force one to place deeply held convictions and understandings on a back burner (Clark, 1996). This apparent conundrum was addressed in this study by first, selecting participants who were recipients of Distinguished Teaching Awards and had obviously not put their drive to teach effectively on back burners, and secondly by selecting the phenomenographic case study method.

Case Study

It is important in case study that the unit of study, which may be “a single actor, a single classroom, a single institution, or a single national program” (Stake, 1997, p. 406), may be delimited and conceptualized as “phenomenon of some sort occurring in a bounded context” (Miles & Huberman, 1994). Each of the participants may be thought of as a “bounded system” (Merriam, 1998). “The case is something deemed worthy of close watch. It has character, it has totality, it has boundaries....It is a complex, dynamic system. We want to understand its complexity....The case study tells a story about a bounded system” (Stake, 1997, p. 406). This study’s bounded system consisted of successful research university faculty members who were effective teachers. This research proposed to tell some of the stories of several of these effective teachers, in order to discern how these individuals experienced the research university context in regard to their teaching, and the interplay of those experiences with their individual teaching conceptions.

Merriam (1998) suggested that qualitative case studies fall into three general types: (a) particularistic, which focuses on a “particular situation, event, program, or phenomenon”; (b) descriptive, which develops a “thick description...of the incident or entity being investigated” and (c) heuristic, which

is intended to “illuminate the reader’s understanding of the phenomenon under study. They can bring about the discovery of new meaning, extend the reader’s experience, or confirm what is known” (pp. 29-30). This study would most effectively be defined as a combination of descriptive and heuristic case study.

Phenomenographic Case Study

This study is conceived as a phenomenographic case study, which means that it is focused on discerning the meanings participants have made from the phenomena they have experienced. In phenomenographic study the researcher’s intent is to interpret these first hand accounts from *a second-order perspective*, or the insider’s point of view. This is different from researchers’ approach in “conventional research [that] adopted a ‘first-order’ or ‘from the outside’ perspective that sought to describe the [participant] and the [participant’s] world in broadly the same terms” (Richardson, 1999, p. 57). Richardson argued that not maintaining the distinction between the two is one of several fundamental problems with the way phenomenography has been conducted. Richardson’s point is a good one, as is the solution posed by Saljo (1988, 1994, 1997, cited in Richardson, 1999) that:

The activities of phenomenographers themselves should not be exempted from phenomenographic analysis. Rather, as Saljo expressed this point,

the possibility of interpreting reality differently also applies to the activity of describing conceptions of reality...In other words, the constructed nature of phenomenographic explanations is revealed by the reflexive nature of phenomenography itself. (p. 68)

Therefore, a solution to the problem, wherein the perspectives of research participants' cannot be properly maintained and respected when analyzed, interpreted, and categorized by the researcher and therefore cannot result in a true second-order perspective, is to approach the design of the study, the gathering and analysis of data, and the reporting of the research from a constructivist theoretical standpoint. What is meant by this is that since I, as the researcher, hold a constructivist perspective regarding the nature of learning that perspective had to be recognized and taken into account in regard to the development of an understanding of the participants' own understandings of their lives. Since all new knowledge is colored by prior knowledge, anything interpreted from the participant's data was tainted by the interpreter's own prior knowledge, beliefs, and values. Therefore, it was important that a metacognitive awareness was maintained throughout the conduct of this study, and that interpretations, which were *first order* accounts, were not conflated with participants' *first hand* accounts. It was important, given the purpose of this

study, that a phenomenographic approach be maintained, which respected the accounts of individual participants.

However, even though it was vitally important to maintain the authentic accounts and emphases of the participants, it was still necessary to set some boundaries for the phenomena of focus. This study relied upon the literature described earlier to help set parameters, such as, whom the participants should be and the type of data that should be collected and examined. Stake (1997) suggested that in case studies “you need some kind of conceptual structure, some thematic foci, to give priority to some things about the case and to rule others out” (p. 408). The teaching conceptions literature, conceptual change theory, constructivist theory, and the literature on effective teaching in higher education helped to provide that foci.

Participant Selection Criteria

Participants were selected on the basis of their having been recognized as particularly effective teachers. Initially, participants were chosen from a group of approximately 140 faculty members who had received university-wide teaching awards. From this group, twelve individuals were selected on the basis of their disciplinary affiliation, their faculty rank, their gender, and whether they teach (or taught) undergraduate courses. Each criterion is explained later in this

section. As this was a case study, the selection of a small but purposive group of participants was essential. Merriam (1998) suggested that the number of participants in a case study should be “adequate...to answer the question posed at the beginning of the study” (p.64). My plan was to eventually have ten participants in the study. Although reaching a point of redundancy, or saturation, is suggested as the cutoff point for sample size, that point is much less critical in phenomenography, wherein there is no assumption of similarity in participants’ accounts of similar phenomena, and thus there can be no assumption of redundancy.

Participation was invited from the first 12 individuals. Out of that initial group, three faculty members quickly agreed to participate, five declined to participate, and the other four joined the study over the following six weeks. During those six weeks, additional faculty members were selected and invited to participate. The selection criteria remained the same, with the underlying intent of selecting as diverse a group as possible. The goal of ten participants was reached after having invited a total of 29 individuals. However, once the data collection was well underway two participants dropped out of the study.

Recipients of Teaching Award

The primary participant selection criterion was that they had each received the university's highest teaching award. These awards are given annually to the top four or five teachers, out of more than 3500 faculty members, who are eligible for selection. Each year 120-180 faculty members are nominated for the award. Their department chairs often vet these nominees before the nominations are finalized. Department chairs are then responsible for writing and submitting a nomination letter that summarizes the nominee's accomplishments in teaching and other notable achievements. Department chairs are asked to describe in these letters: (a) The way(s) in which the nominee's contribution is truly distinguished; (b) the depth, breadth, and innovation of the nominee's teaching; (c) the nominee's commitment to undergraduate and graduate students, to departmental and university efforts in teaching, and to the discipline, profession or public (cited from sample letter to department chair, internal Award Committee document, 2001).

The chairs are also asked to collect and compile a teaching portfolio for nominees from their departments. Portfolios consist of curriculum vitas (which include research and publication records, a list of courses taught, awards/honors and special recognition for teaching), all quantitative student ratings of teaching,

selected examples of written student evaluations of teaching, peer review assessments, examples of syllabi, lesson plans, and student work, philosophy or teaching principles statements, letters of support from colleagues, and support letters from current and past students. The considerations and criteria for the awards are listed in the following:

1. These are University-wide awards. Typically, the awards should reflect excellence across major faculty ranks (Full Professor, Associate Professor, Assistant Professor, Senior Lecturer) and across schools and colleges.
2. The awards are not limited to excellence in teaching both undergraduates and graduates. The Awards can recognize persons who excel at one or the other, or those who excel at both.
3. Award recipients should inspire, challenge, and be accessible to his/her students. At issue is the instructor's impact on students and their learning.
4. Recipients should be innovative in their approaches to teaching, particularly in their pedagogical technique, and in their contribution to teaching in the university community (in their departments, colleges, or campus-wide).

5. Recipients' student ratings should be high, but not because the instructor gives higher than average grades. Indeed, the ratings should be high despite average or lower than average grades and a heavy workload for students.
6. Recipients should demonstrate effective teaching in different contexts or formats, with strength exhibited across contexts. (Teaching Awards Committee internal document, 2001).

Recipients of the awards are selected by a panel made up of past award recipients, students, and alumni. Each member of the panel conducts an extensive review of the nominees' portfolios. They each develop a list of their top choices based upon the award criteria and the evidence in the portfolios. The panel then meets to compare the individual lists, debate the merits of their choices, and come to a consensus on a final list of the teachers who will receive the awards. This final list is submitted to the university president for approval.

These teaching awards have been in place since 1970, and, to date, there are approximately 140 faculty members who have received the awards.

Participants were selected from this list.

Disciplinary Affiliation

Initially an equal number of participants were chosen from the physical sciences and from the humanities and social sciences. Within those two broad areas the participants were invited from a variety of disciplines. Research has shown that disciplinary divisions within universities often treat teaching differently and thus the breadth of disciplinary representation can help to provide heuristic accounts that may be more meaningful to faculty within those, or related, disciplines. This broad disciplinary representation can also provide a more comprehensive (second-order) picture of the research university environments within which these faculty members work.

For a variety of both disclosed and undisclosed reasons, it was much more difficult to recruit participants from the physical sciences. The reasons that were disclosed by faculty in the physical sciences were, generally, the same as the reasons given by faculty members from other disciplines, with time constraints and prior commitments topping the list. Within the final group of eight participants, five were affiliated with the social sciences, two were in the physical sciences, and one participant was in the arts and humanities.

Faculty Rank

In an early pilot study (Borgford-Parnell, 1999), which was conducted at this same university, it was discovered that faculty members who held different ranks seemed to approach their teaching differently, and that tenure seemed to be a factor in their approaches to teaching. Therefore, the plan was to select participants who received the Distinguished Teaching Award while at dissimilar ranks. Within each of the two broad disciplinary divisions an attempt was made to select both tenure track (assistant or associate) professors as well as tenured professors. The final group of participants included five full-professors and three associate professors.

Gender and Ethnicity

From a constructivist perspective, people construct meanings of their experiences based upon the individual meaning perspectives and schemes they developed over their lifetimes (Mezirow, 1995). From this perspective it was therefore important that a gender mix was included in the participant group. Equal numbers of females and males were initially selected from each of the two disciplinary divisions. An attempt was also made to select females and males at different faculty ranks. Within the final group of eight participants there were five males and three females. Three of the male participants and two of the

female participants were full professors. The other participants were associate professors.

From a constructivist standpoint and with a heuristic intent, it was important to diversify the participant group in regard to ethnicity. Given the fixed ethnicity mix of the selection pool of 122 instructors, and the ethnicities of the two participants who later dropped out of the study, the attempts that were made to diversify the participant group were somewhat limited. However, the final group of participants consisted of four white males, two white females, one male of color, and one female of color.

Teaching Undergraduate Courses

Much of the criticism of research universities is focused on the teaching of undergraduate students, therefore only those faculty members who teach or had taught undergraduate courses were selected.

Types of Data and Collection Methods

Merriam (1998) suggested that in case study research, there are no “particular methods for data collection or data analysis” (p. 28), but that the appropriate methods are selected on the basis of the number and kind of variables that present themselves. The research into teaching effectiveness and the study of teachers beliefs and conceptions is overwhelmingly qualitative, and

rightly so. Interviews were chosen as the primary data collection method.

Although, documents, such as teaching and tenure statements, also provided useful data.

In his review of phenomenographic research John Richardson (1999) stated, "It is clear that phenomenography is concerned with people's experiences and with their conceptions of the world, and that the main aim of phenomenography is to characterize variations in people's experiences. These experiences are captured through "semi-structured, individual, oral interviews using open-ended questions" (p. 64). Interviews, therefore, were the primary data collection method. However, as was mentioned earlier in this chapter, one of the problems with phenomenographic research is the assumption that the researcher can actually provide a second-order (from the inside) account of a participant's experience. From a constructivist stance, which takes into account the ways of knowing of the researcher as well as those of the participants, this second-order perspective is very difficult, if not impossible, to achieve.

Therefore data was also gathered through a secondary method described below.

Reflective Narratives of Teaching Experience

Prior to interviewing participants, each was asked to write an autobiographical narrative about their teaching and related work in the

university. Much the same process and format were used as Andre and Frost (1997) used for collecting stories from professors for their book, Researchers Hooked on Teaching. They stated:

We commissioned...chapters to learn more about what professors actually do and how they think about their work....We were interested in seeing professors' work through their own eyes. We asked them to describe their jobs, keeping uppermost: teaching, research, and themselves as whole people who do both. (p. ix)

Participants in this study were encouraged to write about their teaching and how they thought about their teaching, keeping uppermost: their ideas about learning; the university and disciplinary environment; the influence and impact of other roles, responsibilities, and relationships; and themselves as whole people.

The intent of these narratives were twofold: First, they were intended to provide participant accounts that were minimally influenced by an outsider, and secondly, it was a goal that these narratives would give the participants an opportunity to think about and articulate aspects of their teaching lives that they believed were most important. Another objective was that this writing process

would improve the clarity and thoughtfulness of their responses in the interviews that followed.

While in the midst of what turned out to be a six-week participant selection process, it was discovered that the time it was taking to write the reflective narratives was extremely problematic for the instructors who had already agreed to participate. Furthermore, the potentially time-consuming task of writing the reflective narratives was often mentioned as a reason for not wanting to participate by others. Therefore the writing was presented as optional for all the participants. The other option they were given was an additional initial interview, wherein their narratives were prompted with a few questions that were focused on broad concepts, and interventions by the interviewer were used only when clarification or examples were warranted. Only two of the final eight participants chose to write the reflective narratives, and the other six chose the narrative interview option.

The written narratives and the initial narrative interviews were analyzed prior to the second interviews and interview protocols were developed that were unique to each participant. An explanatory statement of each second-order perspective was also developed. Participants were asked to read and articulate responses to the explanatory statements. This process provided member checks

that helped to clarify and explicate the individual second-order perspectives. This process helped retain the integrity of their accounts, and provided the necessary individualized focus. These second order perspective statements are reproduced in the findings chapter, and were utilized as touch stones throughout the analysis.

Oftentimes pre-interview data collection is used to provide resources for improving and focusing the interviews themselves. This is true in this study as well, however, the intent was to respect the unique characteristics of each narrative (whether written or verbal) and to not try to distill a common set of ideas that would then be explored in each of the interviews that followed.

Interviews

A semi-structured interview protocol with open-ended questions was utilized. Patton (1990, cited in Tuckman, 1999) described this type of interview as a “standardized open-ended interview...[in which] the exact working and sequence of questions are determined in advance” (p. 405). Although Patton suggested that each participant be asked the same questions, each of the participants in this study was asked questions that were derived from an analysis of that participant’s reflective narrative, as well as a basic set of common questions that had been vetted and modified with regard to their individual

narratives. With this interview design, data was gathered that not only provided a better understanding of individual conceptions, but that also allowed for some comparative analysis. During the second interviews, participants were also asked to read and respond to the second-order perspective statements, which were developed for individual participants.

Data Analysis

The main objective of the data analysis was to form a credible second-order account of the ways in which each of the participants experienced and thought about their teaching, in order to derive salient findings that may be discussed in light of appropriate literature and compared across cases. The data from each case was analyzed in their entirety before any comparative analysis was attempted. The data analysis began with a reading of individual reflective narratives. From the analysis, the individual questions and second-order perspective statements were developed that were used in the interviews that followed.

Two types of data were collected during the interviews: (a) Answers to the open-ended questions, and (b) participant responses to their corresponding second-order perspective statements. When participants pointed out errors or other problems with the perspective statements, the statements were later

corrected. These exchanges during the interviews were recorded and also treated as data, since they often led to meaningful explications of their conceptions. The perspective statements were later used to provide guidance during the analysis and interpretation processes of individual participant data. Findings for individual cases were developed, as well as findings that resulted from a comparison across cases. These two basic types of findings coincide with Philipsen's (1982) description of qualitative case studies as consisting of the following:

Two interdependent levels, qualitative description and qualitative abstraction. The former has to do with making descriptions of a case or cases, the latter with making abstractions and interpretations of within-case descriptions or of multiple cases drawn from similar contexts. (p. 6)

Data Analysis Methods

A constant comparative process was used for coding and thematizing the data. However, the constant comparative method was conceptualized differently for each part of the analysis. The first analyses were focused on developing richer second order understandings of individual participants' conceptions, or what Ashworth and Lucas (2000) called "lifeworlds." These lifeworlds contain the understandings and perspectives that individuals

construct from their experience of phenomena. In these analyses the constant comparative process was used to develop themes across the initial verbal, or textual, narrative and the second and third interviews of individual participants. A primary part of these analyses was to use the second order perspective statements as touchstones in order to remain consistent with the participant's conceptions.

Additionally, as was discussed in the data collection section, the second order perspective was maintained by asking participants to read and correct or modify their second order perspective statements. By these means, the first analysis remained true to the phenomenological perspective, described by Bogdan and Biklen (2003), that "Phenomenologists do not assume they know what things mean to the people they are studying" (p. 23).

The second analysis was interpretive and comparative across all eight data sets. This second analysis would be described by Philipsen (1982) as "qualitative abstraction." The constant comparative method was used to develop important themes that describe similarities and differences among the participants' conceptions. This analysis was accomplished in the tradition of interpretive research, wherein themes and categories emerge from the data as the researcher becomes more immersed in the data.

Findings

This chapter has two main sections, with each section corresponding to a significant part of the analysis process. As was mentioned in the previous chapter, phenomenographic studies are intended to reveal an individual's experience and understanding of a particular phenomenon. In this study the phenomenon of interest are the conceptions that both foreshadow and result from the experience of teaching effectively in a research-intensive university environment.

This research began with an understanding that each of the participants had important stories to tell, ideas to share, and data to be gathered. Furthermore, it was understood that each of the participants could provide data that was important and revealing, irrespective of the data collected from the other participants. Phenomenographic methodology was chosen because its theoretical underpinnings support these basic understandings, even though the accepted phenomenographic analysis method, which is a *cross-case comparison* (see Richardson, 1999), is somewhat problematic when the intent is to derive second-order understandings of the data (as was discussed in the previous chapter).

The analysis process was designed to serve two complementary objectives. First of all the intent was to develop a more holistic picture of each participant's thinking (their lifeworlds) regarding teaching issues and experiences. Ashworth and Lucas (2000) argued that phenomenographic research would benefit from researchers making more of an attempt at viewing the world from the participant's perspective, and in particular that "more attention should be paid to the processes of *empathy* and setting aside of presuppositions" (P. 296). This first objective was met by adhering to Philipsen's (1982) conception of "qualitative description." The second objective was to move the analysis from the particular (the second order understanding of individual participant conceptions) to the general (aspects of the phenomenon whose importance was revealed by a cross comparison of data from each of the participants). The second objective was also met through Philipsen's criterion for "qualitative abstraction," wherein the researcher looks across "their descriptions to make arguments about the class of phenomena they study" (p.10).

Qualitative Descriptions: Teaching Lifeworlds of Effective Teachers

In this section are revealed participant's individual conceptions of teaching in order to provide readers with an opportunity for understanding the

meanings participants made of significant phenomena related to their teaching. Second-order perspective statements are included for each participant, as well as more fully developed descriptions of their conceptions of teaching and other aspects of their faculty lives. Lastly, specific words of advice on effective teaching were drawn from each of the participant's data and included at the end of each section. Verbatim excerpts taken from the interview transcripts are also included to illustrate particular aspects of their individual conceptions.

Teaching Lifeworld of Professor One

Professor One is a full professor in a social science discipline. He was a full professor when he was selected to receive the Distinguished Teaching Award. He is a white male, and has taught in a research university for over 25 years. He is a well-known and respected scholar in his field, and he is actively involved in teaching improvement initiatives and activities across the campus.

Second-Order Perspective Statement

Professor One believes that teaching is a "high calling." He has close family members who are, or were, teachers, with whom he is very proud. He is also very grateful to his own former teachers, who, he said, "Made my life what it is because they excited me with ideas." Professor One understands *professorship* as being a synthesis of researcher and teacher. Although his

personal identity is invested heavily in being a teacher, his primary allegiance is to research, because that is what the university is about. However, he does not see that as a problem, because he believes that his students benefit from the depth of understanding he derives from his research and the research-generated ideas he bring to his teaching. He also believes (based on his conversations with students) that the personal interest and excitement he feels toward his research topics is evident to his students, and helps to generate student interest and motivation to learn. At the same time, he believes that his research benefits from his teaching through his having to articulate and discuss his ideas with his students. Professor One understands that there is a constant trade-off that must be made between the time and effort that he spends on one professorship activity or another. He argued that, "Both research and teaching can fill whatever space is given to them."

Professor One described his department's culture as being teaching oriented, and known for its outstanding teachers. He is very proud to be associated with his teaching colleagues and likes the fact that they are known for their teaching, as long as they are "also known for their research." Professor One has been actively involved in several teaching improvement efforts on his campus and sees his involvement as a natural extension of his teaching.

He believes that ideas, in their simplest and purest form, exemplify the research university, and therefore, they are the common engine that drives both teaching and research. He appreciates the fact that at his university, ideas are honored for their own sake, and not just because they might lead graduates to career advancement and monetary rewards.

Professor One holds an expansive understanding of the concept *ideas*, and bases his teaching on being able to develop learning opportunities wherein his students both “discover” new ideas and also develop an awareness of *how* they discovered those ideas. He views “static ideas,” or content knowledge, as important, but secondary to the thinking it takes to develop those ideas. The *process of discovery* is the premier learning activity in his courses, and an *awareness of the process* is his primary learning objective. He believes that if students understand how to “discover” ideas they can then use that knowledge in other circumstances that are beyond his classrooms. Professor One links this knowledge with being a critically aware citizen, and sees this as an important outcome of his teaching.

Even though Professor One holds that his own knowledge is the primary factor in effecting successful learning outcomes for his students, he believes that his teaching must be characterized by an understanding of the knowledge and

experience his students bring to the classroom. He states that he attempts to understand the experiences students have had so that he can help to provide the experiences they have not had. He envisions important learning occurring as a consequence of a series of poignant and individually meaningful life experiences.

His understanding of how students learn is constructivist in nature, in that he believes that new knowledge is based on prior knowledge and needs to hold some element of personal relevance for the learner. Professor One places a high value on his understanding of teaching and learning, and views this as crucial to student's learning success. Even though this may appear to foreground the teacher in his epistemology, the reality is that he holds deep learner and learning-centered convictions.

He views learning and the ability to be critically aware and self-directed in one's own learning as a long-term process. Professor One holds a critically reflective awareness of his own development as a pursuer, discoverer, and generator of ideas. As a result, he understands the need for a more advanced learner, such as himself, or what he terms "the translator, the guide, the prod," to provide appropriate expertise and interventions at critical stages in his students' development. This is evident in his approach to teaching, wherein his ability to devise "discovery" opportunities is more important than transferring "static

ideas.” The same critically reflective awareness of his personal development as a teacher is what drives him to work with his colleagues to help develop their teaching expertise.

Conceptions of Teaching and Faculty Life

After Professor One read his second-order perspective (above), I asked him whether he thought there were inaccuracies, missing elements, or aspects he would like to discuss. The following was his reaction:

This is pretty exciting. This is what I aspire to be I guess, and to have it said, and I gave you some concrete examples of what I did, to have it come back this way is pretty wonderful, because this is, I mean this is truly the person I would aspire to be. And so, you know, the only thoughts I had was that I wish I did this everyday, but then as we know, teaching isn't about that, it's about making mistakes, and I guess that would be the only thing that I would maybe add to this. And I don't know that it's really relevant to this, is that, I've been thinking about this lately, that some of my greatest successes in teaching have come as a response to mistakes I've made in the classroom.

Professor One understood that he is regarded by many people at the university as someone who can effectively juggle and accomplish the entire array

of professorship duties, and he has accepted a role on campus as a resource for colleagues who are trying to improve their teaching. It is indicative of the sense of responsibility Professor One felt to his colleagues that he viewed the second order statement as something he aspired to, or felt he had to live up to, rather than simply accepting it as an accurate description of his understanding of his teaching. He understood that other faculty members might eventually read that statement and get the wrong impression about teaching and teachers. He felt he had to add the preface that his ideas about teaching were the results of a willingness to learn from mistakes and, further, to not assume that a teacher is ever going to reach the stage wherein mistakes won't happen and improvements won't still need to be made.

Professor One mentioned several times that he continued to make mistakes in his teaching, and that they were the almost inevitable results of trying new ways to help his students "connect with ideas." Students, he stressed, were very forgiving when new methods didn't work out, as long as it was clear to them that their best interests was his intent. "The thing that has occurred most to me is that what students most want you to do is try that kind of thing; they want you to engage them." He talked about several important elements that were necessary for teachers and students to feel comfortable with

this sort of pedagogical experimentation: (a) “You can’t have a steady diet of that”; (b) “It’s got to be a safe place in the sense that people [students] can say stuff”; (c) “They are very forgiving if you respect them, and I guess that’s kind of you know, what it is about”; and (d) a willingness to learn from mistakes, because “you are only as good as your next class in some ways, or, you’re only as effective as your next class.”

As was mentioned in the second order statement, Professor One conceived of a research university as a place of *ideas*. Ideas are what create the bond between research and teaching, and ideas are the main concerns of teachers. It is the teacher’s dynamic and generative relationship with ideas, and the ability to promote that kind of relationship between students and ideas that makes for effective teaching. He stated the following concerning effective teachers:

What teachers need to do – their job, their role, their mission – bottom line, is to help people do things themselves, thinking, acting. And so that it is not so much that we are the source of knowledge, but that we *have* some. We use that, impart that, but along the way, we show them how *they* can do it. It’s that showing them how they can do it that really is probably the most important thing. I think that that’s true for the teachers I’ve had, and

I think the successes I've had have been that I think I've done that. That is, it gets you away from "you're the expert", even though you are, but what really matters is not that you're the expert, but that you got them kind of doing it. Because that's what it's all about, is them doing it, rather than them sitting at your feet and observing what you know, thinking you're wonderful.

Throughout our conversations, Professor One spoke of the many lessons he learned by reflecting on his own learning experiences in undergraduate and graduate school, as well as on the many successes and mistakes he had experienced in his more than 25 years of teaching. What was most evident throughout his narratives was that he recognized one particularly powerful lesson, which acted as a through-line and linked his experiences. As he reflected on his undergraduate experiences he described how he had "just learned things, or so it seemed," without developing a "self-awareness of the [learning] method." As a graduate teaching assistant for two professors with very different teaching styles, he had tried to understand how they could both be such effective teachers. He suggested that it wasn't so much what he came to understand about their teaching that was important, but that having to assist these two different types of teachers forced him to engage with pedagogical ideas. It was this

metacognitive realization that it was the engagement with ideas that was the important lesson and this came to characterize one of his primary teaching conceptions.

He described important learning as a process of discovery, and that the process had three interrelated objectives: that the student came to understand (metacognitively) the process itself, that the student realized the importance of her/himself in the process, and that the student learned something that was personally relevant. As he phrased it, "What is important to me is getting students to the time where they get to those *aha* moments of various kinds where they really understand things for themselves. Not because I told it to them, not because they read it, but that they really see it. That it makes sense to them at some level."

Professor One's Advice on Teaching Effectively

Professor One had the following to say about the behaviors and characteristics of effective teachers:

1. There are some, probably some personality characteristics that lend themselves to being effective in the classroom. So maybe some passion, having passion in general, for things. Thinking that those things matter, and

- that they matter to other people. I mean if you just sort of are blasé about the material you're not going to probably be very effective.
2. It's not so much about what you say (although if you say something brilliant that's great) or what seems to be working well, but it's more like you created this thing that works. It's like throwing a party where really everybody had a good time.
 3. The A students – just get out of their way, I mean just really, just don't get in their way, because they're probably smarter than you are, so you try and facilitate them.
 4. All this is based also on a sense that you have to respect them. So, how you prepare, how you engage them, what you expect them to do, it's all about some level of respect.

Teaching Lifeworld of Professor Two

Professor Two is a full professor in an arts and humanities discipline. She is a white female, and has taught at the college level for over 26 years, with 24 of those years teaching in a research university. She received the Distinguished Teaching Award when she was an associate professor. She is a well-known and respected scholar and expert practitioner in her field.

Second-Order Perspective Statement

Professor Two views teaching as a “way to be political.” Being political means that through her teaching she can work to affect the things that she recognizes as being wrong in the world. Her teaching allows her to confront intolerance and injustice in society, as well as the inequities she sees in her own discipline. She believes that her mission is to address what she recognizes as a growing passivity and an accompanying lack of imagination in the citizenry of our nation. She believes that the “connectivity” that is promoted by the technologies of the entertainment media are, at least partially, responsible for encouraging what is actually a *disconnect* from real emotional, imaginative, and active engagement with important aspects of our social lives. She believes that through her active practice and contributions to her discipline, as well as the ways in which she teaches her students, she is able to do her part in confronting this problem.

Professor Two resists the notion that she gives more than she receives from her teaching. Even though she views teaching as “being in service,” the service she is committed to is to “help people to find their best voice and their best selves.” This personal commitment places Professor Two firmly in the student-centered camp. She adheres to a concomitant ideal that learning is

ultimately focused on the individual learner, because it will be enlightened people who change the world. She also understands her service to be a balancing act. She describes expending a great deal of energy and concern on her students, but that the exhilaration she feels when she teaches seems to give back in equal measure. "I have to be given back to, so I'm not drained and I won't have to quit. It is like a renewable resource, that's the part that gives back."

Professor Two feels very lucky to be teaching at a large research university. She feels the university supports her, intellectually, and creatively. She sees her discipline as losing ground in the wider world in terms of public support. She argues that there is a distinct lack of opportunity for practitioners in her field to not only practice in their discipline but to be able to make a living.

Being both a practitioner and a teacher in an arts discipline has led Professor Two to understand the almost impossible task, faced by her students, of creating some objective distance between their personal lives and what they will be doing professionally. The problems she sees them facing are both a staggering lack of opportunities and changing professional requirements. Thus, her intent is to promote a kind of learning that is holistic, that not only focuses on knowledge and skill development, but on the development of a strong personal

sense of self as well. Professor Two identifies strongly with her students, and she views the good of her students as her primary obligation. In many ways she approaches her teaching from the standpoint of *parentis loci*, or the nearest parent. Perhaps as a result of the often one-on-one nature of her teaching, she develops very close personal and intellectual relationships with her students. She finds that the somewhat maternal relationship she feels toward her students causes her own professional life to overlap a bit too much with her personal life, which reinforces her desire to help her students to develop a healthy separation.

Professor Two believes that her teaching depends a great deal on her abilities to understand her students, to empathize with what they are feeling, and to intuit what they are trying to communicate. She believes that these innate abilities are what help to make her an effective teacher, because they enable her to understand what an individual student might need at a particular moment in time. Professor Two has a strong sense of the importance of timeliness in teaching, and in being able to respond "in the moment."

Professor two sees herself as a role model for both her students and her colleagues. She especially believes that it's important to be a role model for her female students, to help them to be mentally prepared for the ways in which they will be objectified and commodified in the more market driven sectors of her

field, wherein the majority of *working* graduates will find themselves. She is not convinced, however, that this is the only way or even the best way to teach and she therefore searches for ways to improve.

Professor Two is very much concerned with improving her teaching by understanding more about how people actually learn. Through her experiences as a student and as a colleague with other teachers in her field she feels that there are many problems with the pedagogy within her discipline. She remembers quite well the poor learning situations and the lack of support she felt as a student in her field and she is committed to not repeating that kind of pedagogy in her own courses. She stated, "One of the first things that was so wonderful about getting a teaching job was that I was allowed to teach *not* in the way that I had been taught." She thinks that too many professors teach in traditional ways, wherein they mete out information slowly without regard for the readiness of individual students. She believes that this is a waste of her students' time and can be damaging to the enthusiasm for learning that they bring to the classroom.

Although she is very supportive of her colleagues she knows that they hold very different philosophies than her own in that they are much more concerned with preparing students for the market place, which she believes has led to an intellectual and creative dumbing-down of a large part of her discipline.

She believes that these fundamental philosophical differences could manifest as potential barriers for students' learning and therefore she feels an obligation to adjust some of the language she uses in her teaching to better reflect the language of her colleagues. She states, "I'm trying to be respectful, not only of my colleagues, but the struggle for my students to have to integrate that stuff."

Professor Two holds very deep philosophical assumptions concerning the worth of her discipline to both the citizens in our society and the practitioners within the field. Although she describes a rather gloomy present situation for her profession, she retains a very optimistic outlook for its future. She sees the research university as a supportive haven within which she is able to work to help secure that future. Professor Two understands the future of her discipline as being embodied by her students and that she has been given an opportunity, through her teaching, to improve things for her students, and ultimately to improve her discipline and society as a whole.

Conceptions of Teaching and Faculty Life

I asked Professor Two to read the second order perspective I had prepared for her, and to suggest changes or topics for further discussion. After reading the statement, she exclaimed, "Wow, it sounds good. That's wonderful. Okay, I have just a couple of things." She asked me to make a few minor clarifications,

and then she directed my attention to the paragraph whose topic was how her philosophical orientation was different from most of her departmental colleagues. She stated that she had been thinking more about it since we had first talked and felt that she needed to “enlarge” on her statements. She said,

I’m coming to see that the fact that my colleagues and I are so different is forcing the students to do synthesis. I’m starting to see that that’s where a great deal of ownership comes for them; the fact that they have to, the fact that we’re not all espousing the same party line. So even though it’s more fun when you feel like everybody agrees with you – that narcissism from “we’re all on the same page” – I’m actually seeing that it’s terrific.

One of the questions I asked in the second interview was why she agreed to participate in my study. She told me that apart from the enjoying the opportunities to reflect and discuss ideas about teaching she also felt that research on teaching and learning was helping to address a much larger problem in university education. She stated,

For a long time, when I only taught undergraduates and I saw that the money went to graduate students and the undergraduates were lesser in everybody’s minds (in terms of the hierarchy of purposefulness), I often would describe it as women’s work. But what I’ve come to see is that the

big scope potential of talking about teaching and learning has to do with motor learning [a learning theory she had been investigating], it has to do with all kinds of science, all of a sudden it's not in the realm of women's work anymore. It's really, really big stuff that could change the world. So that's the parallel reason, I wouldn't say it's the second reason.

Professor Two had struggled with a traditional conception of teaching in a research university that relegated teaching to being non-scholarly and much less important to the mission of the university or the careers of the faculty. Professor Two thought of her teaching as a personal calling, and had always felt a sense of success and confidence in the classroom. Unfortunately, because of the naturalness of her teaching approach and the success and recognition she had, she worried that she would be seen as exemplifying the notion that teaching is *women's work*. When I inquired whether she thought there were teaching impediments in the university, she stated,

The impediment is in the discouragement or gloom that sort of results from thinking that the thing we're really, the enterprise we're all ostensibly involved with, this leading-out-of thing, that that would be thought of as lesser in some way to the contributions you are supposed to make somewhere else in science...I wish it were at least equal, and I don't

mean institutionally really, I mean the real deal – what everybody secretly thinks – the culture of it.

Professor Two made the point that although the university culture continued to marginalize teaching, she felt that the university administration, on the other hand, supported her teaching. She said,

I do think there is a value placed on teaching here....despite the kind of prevailing idea across America that the research is the main thing, this university does not do too badly, at least for part of the time. We respect our teachers, we believe in them, and we're proud of them and we do profiles on them.

She was much more positive about the support for teaching within her department. She felt that she was "a part of something that is encouraging...I think that my department is remarkably harmonious, colleague-wise and staff-wise, and there is an expressed dedication to excellence that we talk about and name in faculty meetings." The opportunity to talk about teaching was very important to Professor Two. However, it remained an activity she only exercised with her departmental colleagues up until she received the Distinguished Teaching Award. The content of her discussions with colleagues also had

problematic limitations prior to the award. She described the pleasure she felt when she met with other award recipients:

One of the high points about the teaching award period was the shorthand, even unspoken physical comfort we took in each other. I felt, in the gathering of those people, like one of my colleagues said when I got the award, "Now your dirty little secret is out, you're a fabulous teacher and it's out." You know, it was really funny, but I felt that with those people we could rest in what we believed in and what we were able to do well. And there was no pridefulness in it, because we were in a room full of them, so none of us was better than anybody else, and nobody was worse. We just had been recognized for something we had dedicated ourselves to and I just found this great sense of ease.

Professor Two's teaching successes, until recently, had in some ways limited the fulfillment she felt with her work. Her work satisfaction was derived from two competing factors. The first element was her drive to fulfill her innate inclination to teach, which she described as a strong nurturing motivation that wasn't necessarily *maternal*. She said that "there are ways to nourish, and it may inevitably be maternal, but there are ways to nourish and teach where intellect is balanced with heart and that is something else altogether." The concern she had

that her type of nurturing should not be interpreted as maternal nurturing, demonstrated the conflict she felt in her work, in that the faculty role she was strongly drawn to and in which she had such success, had held a marginalized position in the university culture. She concluded, "I think that it's been the province for a long time of the maternal, that the heart is stronger and then there is some mind. But then there are these women professors who are saying 'No, take me as an intellectual as well.' And so, I just want to find that, without protestation, you know?"

Professor Two believed that as long as teaching was undervalued, that women in academia would be undervalued. She suggested that, "where I work is still a boys' playground. I feel like I have some things inside me feeling like I have to do double time in order to just stay in one place." I asked her if having her colleagues consider her an effective teacher had an affect on her. She responded, "I think of it as a perk....it's just the absence of worry. It's the absence of second-guessing."

The second factor in her work satisfaction was her drive to have her work recognized as being scholarly and valued within the university culture. Professor Two reported being much more concerned with investigating the theoretical basis of teaching and learning in order to ground her practice, or as

she called it, "to move towards less and less personal teaching." She held a deep commitment to learning more about teaching theories and models in order to better address her students' learning needs. However, she also wanted to develop a firm theoretical basis for her teaching in order to help overcome lingering conceptions of teaching as not being intellectual enough.

Professor Two described her teaching as a "leading-out-of" endeavor, in which the ultimate goal was to "give the student back to him or her-self." She recognized that students often entered her classroom with their imaginations and innate abilities somewhat stunted by their experiences of the world and the educational systems they had previously encountered. "We are all up against the ghosts of previous classrooms," she argued.

So, I think that because of bad learning situations, and probably the complexities of parenting, and the cruelty of the world, and all that, there's a kind of outer-directedness in America that has not been balanced by an inner contemplation of who our true natures are, whatever that means to each person. To think that I could be an agent that could help someone have a stronger sense of self and greater confidence to move in the world with things that I hold high, certain attributes, and to be able to do that with confidence. And then to know that even if they didn't know

the answer, to go and find it someplace, and they could have a way of working on whatever it is, have a way to begin and things to seek out. And particularly that I could help ensure in all that, that particular imagination, that particular person's own piece of nature gets its just chance to express itself. And I guess that would be so that when they are away from me they are carrying on. The best way to thank teachers is to surpass them.

Professor Two knew that when learning was happening she could see it and feel it. She described some aspects of learning she sought to promote in her classrooms:

I want to see transformation, and I would want to see that this learner has a sense of freedom and a sense of being able to choose and in the business of choosing. That I have helped this learner to see that the world is the thing from which you can pull, not the computer screen, and not on television, and not an insular thing, but that there's a whole world to draw from....I'm looking for signs...that there is an ascendancy that starts to incorporate the things that are unique about them.

She proposed that, "when I'm teaching, I'm actually not teaching information as much as I'm teaching ways of learning. So, once I do that,

someone should be able to be independent of me and that is a goal.” She envisioned teaching as “ephemera,” that if it is done correctly, the teacher and the teaching simply disappear, and all that remains is the learner. She posed that, “it would be flattering if he or she thought of a few things I said, but I would love it to be so internalized that it isn’t even noticed. Then that gets passed on to somebody, and then we have people hungry to learn and change.”

As much as Professor Two wanted her students to go out into the world as fully-capable, independent people, she also regretted their having to leave.

On a good day I have a sense of a kind of grid going out across the country....The part of me that finds that hard and sad is the part that doesn’t like to say goodbye to people either, or hates the loss of anything.

But the part that is in me that accepts that, the more Zen-like part says, “it’s all change, so live with it.” That part makes me think that there’s probably not a better profession to be in the service of helping people.

Encouraging people to be lifelong learners, and to use their minds and imaginations.

Professor Two’s Advice on Teaching Effectively

Professor Two provided several specific words of advice for other instructors.

1. What I would encourage any new teacher to try to get is, as much is possible what you see happening is what should be happening. That is, there shouldn't be hidden things, and so in the sense, and this will sound surprising coming from me, but it should be as un-performative, in a way, as possible. There shouldn't be layers on layers of performance.
2. So I think an effective teacher could still be straying now and then into loving himself/herself in the art a little too much and could still be reaching people. But a great teacher, an effective teacher who could achieve greatness in his or her ability to inspire would not fall on the side of that self-aggrandizement.

Teaching Lifeworld of Professor Three

Professor Three is a full professor in a humanities discipline. He is a white male, and has taught in a research university for over 30 years. Professor Three is originally from another English-speaking country. He came to the United States to pursue a graduate degree and has been here since that time. He has gained U.S. citizenship and believes that his immigrant experience continues to provide him with knowledge and a perspective that benefit his teaching and research. Professor Three was a full professor when he received the Distinguished Teaching Award. Professor Three is a well-known and respected scholar in his field.

Second-Order Perspective Statement

Professor Three doesn't recall experiencing exceptional teachers as an undergraduate or in feeling encouraged in any way to pursue a career in academia. He had no idea that he would eventually become a teacher. However, he was interested in research, and soon after earning his undergraduate degree he went to graduate school in the United States. It wasn't until he experienced teaching at the graduate school level that he began to see the connection between a career in research and teaching. Professor Three recalls at least one of his professors encouraging graduate students to think of themselves as future teachers and to learn to make direct connections between their research and their teaching.

Professor Three thinks of the content of his teaching as being in close adherence to the focus of his research. He views this as a characteristic of his discipline more so than a personal choice or a result of his unique understanding of his topic. As is the case for many of those who pursue research interests in humanities disciplines, teaching is not only a major professional career path, it is also often a major outcome of their research endeavors. Professor Three does not think of himself as being different from his colleagues in this regard, at least at the outset. However, he does realize that after having experienced many of the

teaching, researching, publishing, and service functions that characterizes academic careers, he decided that teaching was his primary interest.

Professor Three credits the success he has had in teaching on the genuine enthusiasm he holds for his topic, and the attention to detail and “perspiration” he puts into preparing and conducting his classes. He considers that modeling an interest and a command of his topic, as well as having a well-developed curriculum to be essential to student success. However, even though success is predicated on what he knows and his actions, the primary objective of his teaching is not for students to replicate his understanding of the topic, or to become dependent on the preparations of effective teachers, but to learn how to become independent learners. He stated that, “I am not so much teaching knowledge as teaching others how to obtain and understand knowledge, how to recognize and balance the otherness and the relevance of [his subject], and become better equipped to express their conceptions, to themselves and to others.” He is especially cognizant of the fact that some of his students will themselves become teachers one day, so he intends for his teaching to also convey pedagogical models for his students. Professor Three views his teaching and learning objectives as matching both the mission of his discipline and the culture of the research university.

Professor Three appreciates the fact that teachers are well respected in his discipline and he enjoys teaching in a public research university. He feels that his personal commitment to social equality and democracy is supported by the egalitarian nature of a public institution. He also feels that the close relationship of research to teaching in his discipline fits with the culture of a research university.

Professor Three holds a social constructivist's understanding of knowledge making, wherein knowledge is a result of collective norms and shared understanding. In his case, the norms are found in the processes of empirical research and the shared understanding is disciplinary knowledge. Professor Three's conception is in keeping with basic empirical research, wherein knowledge is the result of an objective, controlled, process of information gathering and analysis. The relevance of knowledge is predicated on the validity and reliability of the process. Therefore, social relevance foreshadows personal relevance. However, although Professor Three conceives of knowledge as being objectively separate from the subjectivity of the individual knowledge maker and learner, he understands that *important knowledge* is entirely relative to individual learners. It is in the focus on this important knowledge and how it is made that

drives his teaching. As he stated, "I am teaching students how to research themselves and their world."

Conceptions of Teaching and Faculty Life

After reading over his *Second Order Perspective* statement Professor Three asked me to elaborate on the phrase, "social relevance foreshadows personal relevance." I explained, "What I meant by that was that social relevance actually needs to come before personal relevance, and that it needs to be verifiable, reliable knowledge, which is accepted in the community, as a collective, before it can then become relevant." "So knowledge is socially constructed in that sense", he asked? I stated: "Right." "I wasn't quite sure what the alternative was", he posed. I briefly described a positivistic understanding of knowledge, wherein knowledge is thought to be independent of the prior knowledge of the learner. Professor Three posed,

I suppose a scientist would say, 'there is this body of knowledge that everybody has to know,' and you know, 'you've got to know the table of elements' or something like that and that would be something that's not going to be...but even there, presumably, there would be processes of application in how those would be applied to different solutions, to different matters connected to the teacher's curriculum and so forth.

Although he did not think that I would find many effective teachers with a positivist philosophy, he did recognize that there was a problematic positivist-like aspect to lecturing, which is a common teaching method at the university, and one that he often used in his teaching. Professor Three viewed lectures as a form of “giving” students information that would be more difficult or time-consuming to give by other means. However, he fully recognized that lecturing was, as he described it, a “compromise between what one would ideally like to be doing, which is essentially leading people to discover things as opposed to just kind of dropping it into their ears. I think at a large university like this, the goal is to find some sort of compromise.”

In his opinion the university’s mission and size (approximately 40,000 students at the time of this writing) represented both a shining example of public education and an institution whose size provided options as well as problems for its students. He stated,

One of the challenges at this university is to recognize that most students have no time to see you except in class, and that most of them are working, and many of them are transfer students; they’re dropping in and out....Well, the University of Washington is doing what other sort of private schools won’t do, can’t do. On the other hand, it’s a challenge in

terms of forming any kind of learning community within a class, or for students to work with each other as opposed to just engaging with a professor. And I think that's a difficulty, you know, that this university is a kind of giant smorgasbord where people come in and choose dishes from the table, and they don't always choose them because they are the most nutritious. They choose them because they are the most convenient or sometimes because they are the most easily - that they require the least digestion for the most return of credit.

Notwithstanding the poor educational decisions that students sometimes made, Professor Three continued to believe that having options was important. He argued, "As one gets up to higher levels of education there should always be this component of choice." Choice, in his opinion, should also extend into the classroom in terms of allowing students to pick from a list of books, or study particular aspects of a topic that interests them, or even choosing their own research topic within instructor-set guidelines. He proposed that "this smorgasbord system" was useful for their learning and better than the kind of system he experienced in his birth country, wherein everyone did the same things and mastered the same topics.

Professor Three stated, "What came in at places like Harvard, in the late nineteenth century, was the idea of electives and that you could sort of put together your own program, and I think that is still very worthwhile." However, his support of students having options both inside and outside of class did not extend to students having free-reign. He suggested that setting bounds would help to make their choices meaningful:

When people choose to come into your particular elective, then they come in because they believe that you, you know, you're not just going to say "Well here you are guys, anything is the same as anything else." And so, teaching in that sense is inherently elitist and even to a degree authoritarian. In saying, you know, "You've come to me because you think I know something that is going to be useful for you, and I'm telling you *this* is my view of what it is." But within that structure there are, you know, you will have interests that certainly we can satisfy.

Professor Three viewed himself as an advanced organizer (Ausubel, 19), in that he held that he had the experience and expertise to create the kinds of learning opportunities that his students needed. He had a thoughtful and respectful conception of students in that he differentiated the kinds of learning activities he designed for use with undergraduate and graduate students based

on “what the use of the study of [his topic] is going to be for the people of different levels of my classes.” He suggested:

Some of the very best students may also be biochemistry majors or people preparing to go to law school and so on, and in that sense I think rather than getting them to learn say the [specific facts and dates] is not as useful as teaching them how to write [disciplinary]-based analytical prose, to get them perhaps to be able to interact on a responsible basis with others in discussing material. And, you know, that’s valuable for undergraduates. When it comes to graduate students, a large percentage of them are wanting to become, themselves, teachers of [his subject...So one’s teaching is sort of tailored to assisting them to do that...I feel that I’m preparing them to be themselves eventually...but ultimately, I’m preparing for the likelihood that in fact ultimately they’ll be called upon to teach.

Professor Three conceived of his discipline as somewhat different from many others in that the classroom is most often the arena where the outcomes of research in his discipline are applied. Therefore, he knew in graduate school that choosing to do research in his field also meant choosing to teach. He reflected that,

I see it as somewhat easier and less of a choice between paths pressing in different directions, to be both a teacher and researcher/writer in [my field] than in many other disciplines. There's a closer connection between the substance of what one researches and what one teaches, and a broader and more comprehending audience at all levels for one's production.

Although he joined the academic world with a clear expectation to be teaching he admitted that becoming an *effective* teacher was less of a conscious choice. "I think I am an effective teacher in the sense that I take seriously what I do and I work hard with people." He believed that it was mostly a matter of work ethic, and within his conception of work in his discipline, teaching was an essential function. In terms of his own teaching, he stated:

I don't see myself as an inspirational teacher in the sense of seeking to inculcate moral values or exciting my students to take to some particular field of action. Indeed, a student who once interviewed me to write an honors paper found me rather disappointing in these respects. I do, however, believe that I contribute perspiration in varied forms: in communicating an infectious enthusiasm for what I am doing, in inspiring confidence in my command of what I am teaching, and its value for

student learning, and in presenting courses that are visibly well integrated and demand much of both student and teacher.

Professor Three conceived of practitioners in his field as needing to engender both research and communication skills and therefore it was essential for him to promote those skills through his own teaching. He posited that, "I am not so much teaching knowledge as teaching others to obtain and understand knowledge, helping them to recognize and balance the otherness and relevance of [the topic], and become better equipped to express their conceptions to themselves and to others."

In his own development as a scholar he remembered thinking, "I hope I can communicate this, or you know, enable this in others." Professor Three found this to be an interesting and exciting aspect of his work and it has grounded his approach to teaching.

Professor Three's Advice on Teaching Effectively

Scattered throughout our conversations were words of advice on effective teaching. This advice was often couched in terms lessons learned from experience.

1. One is continually I think trying to say, "I'm telling you about this little story or this particular individual because it illustrates this larger theme, and it's

going to connect up with where we've come from or where we're going." So that one wants to give students in a large lecture course a sense of being part of a kind of integrated class. I mean that's something that I try and work on when I'm teaching large lecture courses that have sections and so on. I try very hard to make the parts sort of fit together rather than having several courses being taught kind of simultaneously.

2. Effective teaching also means careful preparation. Never winging it as it were. Setting up outlines, overheads, and so on, to do in a lecture what one says one's going to be doing and maybe running, to some degree running out of time but, you know, trying to make sure that each lecture is a coherent piece. And so there's that, that's that sort of element of perspiration that I talked about. And also being willing and able to meet the students in and out of class to, you know, hold office hours and hold other kinds of gatherings.
3. When people choose to come into your particular elective, then they come in because they believe that you, you know, your not just going to say, "well here you are guys, anything's the same as anything else" and so, teaching in that sense is inherently elitist and even to a degree authoritarian in saying, you know, "you've come to me because you think I know something that is going to be useful for you and I'm telling you, this is my view of what it is.

But within that structure there are, you know, you will have interests which certainly we can satisfy.

Teaching Lifeworld of Professor Four

Professor Four is an associate professor in a social science discipline. He is a man of color, and has taught in a research university for over six years. He has taught students at both the undergraduate and graduate levels, although the majority of his teaching is at the undergraduate level. Professor Four was an associate professor when he received the Distinguished Teaching Award. He is a well-known and respected scholar in his field.

Second-Order Perspective Statement

Professor Four teaches to change people's lives. He has enormous respect for the power that informed people have to address conditions in society that are most problematic. Through his scholarly activities, he has developed a critically informed and coherent understanding of American society, particularly in terms of race and power relationships. It is this understanding that forms the basis of his teaching, with regard to both the content and his learning objectives.

Although the content of his teaching is very much related to the focus of his research and service activities, he uses the content as a vehicle for his students to discover personal revelation and come to understand their individual and

collective relationships to the world. Professor Four holds firmly to the conviction that it takes critical-thinking and informed individuals to enact progressive social change.

Professor Four wanted to be a college professor since he was in high school. His vision of professorship has been that the teaching role is primary, and now that he is a professor, he still considers himself foremost to be a teacher. He acknowledges, however, that the mission and focus of his discipline, his research interests, and the subjects of his teaching are so intertwined that a primary focus on teaching is much easier than it may be in other disciplines. Nonetheless, his research and service endeavors have been very successful and noteworthy.

Professor Fours feels that his teaching is supported well by his department, but he gives mixed reviews to the University overall. He stated that the university does protect his ability to teach in an area that "matters to me most," but that it also conveys a clear message that the work that is done in his department is not as valuable to the university as the work done in other departments. This message is conveyed in various ways, but is most profoundly felt through the funding that is made available to his department. He stated, "I do feel the impact of that in subtle ways, not only in the ways I teach but also in

the kinds of activities we try to undertake in this department or are not able to do because we don't have the money or the support."

Professor Four stated that he received valuable teacher training as a graduate student, and that he had several excellent teachers and mentors that he has tried to emulate. Nonetheless, he said that he struggled a lot when he first started teaching. He recalled:

I still remember how awful I was, you know, the first year of my teaching. And then...it's like trial and error you know, and it's all about practice in a sense; different steps you take, different kinds of things you experiment on, trying new things here and there, listen to and observe other people teaching. And a big part of it – placing myself in students' shoes or positions. I always ask myself, "If I am a student in this class, what kind of a teacher would I expect? What would make me stay in this class and listen to this guy talk to me for like two hours?" I always think about that from the perspective of the other side.

Attempting to understand his students' positions and perspectives is the beginning point of the successful pedagogy that he has developed.

Professor Four believes that teachers can greatly impact students' learning, and that this is done primarily by starting with what students bring

with them to the classroom. He stated, "As a teacher I try to tap into their previous knowledge and experience, because that's what I do myself, and then reinforce those previous skills or teach them alternative skills if those skills are not working for them." By *skills* he means methods for evaluating, analyzing, and otherwise critically engaging information. Engagement, or what Professor Four termed, "Having a relationship, a significant relationship with the material," is the primary learning objective of his teaching. The attention he pays to his students' prior understandings and facilitating their individual engagement with the material seems to place Professor Four firmly in the student-centered camp, with an evident constructivist epistemology.

He believes that teachers bring insights and alternative understandings to the learning environment. One of the important functions of a teacher is "Opening their eyes and minds to things that they usually take for granted or that they usually undervalue, or things that they just pass by without notice."

Professor Four characterizes his teaching approach as helping his students find pleasure in learning. *Pleasure* is a catch-all concept that encompasses many of the things he is concerned within his teaching, such as: (a) fostering interest, enthusiasm, and engagement with the material; (b) developing a safe and comfortable learning environment; (c) facilitating open and honest

communication; (d) promoting trustworthy, caring relationships; and (e) encouraging student self efficacy. Professor Four values pleasure as both a means to achieve his learning objectives and as an end in itself, in that pleasure can underlie an engaged life.

Conceptions of Teaching and Faculty Life

Professor Four suggested only three corrections to his second-order explanatory statement, and they were subsequently made. I had initially described his discipline as one of the humanities and he told me that at this university his discipline was housed in the social sciences even though some of the courses were interdisciplinary with the humanities. He also told me that helping his students to understand their *individual* relationships to the world was an important objective of his, but that their *collective* relationship to the world was equally important and needed to be emphasized. Lastly, I had quoted him as saying that his department was not as well funded as some others and that it negatively impacted teaching and other activities. He stressed that it should read, “we don’t have the money, *or the support*, because money, by itself, isn’t enough.” He was concerned that if the funding inequity was emphasized other negative “messages” might be overlooked.

Much of Professor Four's scholarship was focused on identifying and explicating the consequences of centralized and marginalized group relationships in American society and the differential valuation of some groups over others. He was well aware of the consequences on marginalized people of subtle inequalities, of which centralized people may be unaware, but are abundantly apparent to those who are marginalized. One of the outcomes of his teaching that he felt was very important for his students was to understand: "that things that you take for granted or things that escape your notice can be the most powerful means of control for a lot of people, precisely because we don't pay attention to them."

He recognized equally subtle (hegemonic) forces at play in the research university environment that tended to disadvantage faculty and disciplines that placed too much emphasis on teaching. He posed that, as an environment for teaching, the university sent mixed messages, but that it was still very clear that just being good at teaching would not advance your faculty career. He explained,

It's still a strong message that these are universities that are meant to do scholarship or research rather than teaching. And that is communicated from the very top to the very bottom. Teaching evaluations are done but

as *part* of the file, and if you get good scores it's good, but you still have to have two or three publications. If you get very bad scores, it rings bells, you know, but it's not a reason to, it's not always the sole or major reason why one doesn't get tenure or promoted.

Professor Four was clear that this was less a problem for him than it was for faculty in many other disciplines. "I'm lucky," he stated "because the things that I do teach are the same stuff that I research on. So, not all professors have that luck....Even in my own department...there are several people who are teaching content very, very different from what they do as scholars." However, even with the possibility for teaching in an area that he found intellectually stimulating, Professor Four still ran into institutional impediments for improving his teaching.

It's a big challenge to improve oneself as a teacher, because time-wise you know, you have to devote some amount of time, and that takes time from the other things, from the things that you want to do as a quote-unquote scholar. So that's big. There are no applications for sabbaticals that are on the basis of teaching....there's not a lot of funding pools to develop one's own teaching.

On the other hand, Professor Four was encouraged by the basic structure of the institution that supported “a department that specifically addresses the subject matters that I’m interested in....I think that, for the most part, this university protects our ability to do that.” This was extremely important to him because it afforded the opportunity to focus on an “essential feature of what I do as a teacher, [which] is to make them, you know, better citizens.” He stated:

I teach about [a subject] that usually has to do with race, class, gender, and those are very, very important aspects to me. I think that students need to be encouraged to think about these issues in ways that they understand. Not in a vacuum, but in historical and much more critical ways compared with what they get from the media, which is a lot of, you know, black versus white, or you know liberal versus conservative, and I try to encourage them not to. I mean to go beyond those kinds of good versus bad kinds of thinking, but rather to think about whether these things, you know, whether it’s conservative or liberal or whatever, where do they come from historically and what are the consequences of that at the present?

Dealing with emotionally and politically-charged topics, as was often the case in his classrooms, Professor Four had to make an essential ethical decision

very early in his teaching career. He had to decide whether meeting his learning objectives was worth the emotional discomfort and stress felt by his students as they dealt with those important issues. This was a tipping point in Professor Four's development as a teacher. On one hand he could develop a curriculum that presented issues of race, ethnicity, class, and gender as academic subjects that students could deal with rationally, objectively, and with minimal emotional subjectivity. This choice would have been the easiest to make, given the trepidation he felt about his ability to manage an emotionally-charged classroom, and the guilt he would feel if he couldn't.

On the other hand he knew that those were not simply academic subjects, that they were issues reaching deeply into people's lives, and that those particular issues could not be cognitively engaged at the level he felt was best for his students if they weren't allowed to bring how they felt about the issues to the surface. As he put it, "I think that a teacher ought to be someone who would enable students to have a *relationship* with the material." His choice was to fully embrace the affective dimensions of learning, to build learning activities into his courses that deliberately and thoughtfully promoted full engagement by his students. He suggested,

In the classes that I teach there are a lot of issues that we talk about that make them very uncomfortable, that make all of us in the classroom very uncomfortable. I mean oftentimes, in the first analysis, in the first reading of that discomfort, it is the teacher's fault, or you know, the teacher should not have done that. From there on only, do you realize that that uncomfortability actually was designed, or discomfort was designed, to produce a discussion environment that ended up to be productive in the long run. It's just that they have to take that first step in experiencing discomfort. At first I scolded myself, you know, I scolded myself for making the students be uncomfortable. But now I realize the more I, the more I get experience teaching similar classes with similar students time after time, I realize now that there's value in being uncomfortable given certain kinds of issues. That it's not just bad, it's not bad teaching at all if done well, done properly.

For Professor Four teaching properly hinged on putting in whatever time and effort was necessary. "I think people need to invest," he argued "you know if they want to be something, like if they want to be good teachers. I think that one should be willing to invest time and energy, but the desire has to be there too." Without the personal desire, he maintained, it was very difficult for faculty

to devote the time, because “for the most part, you go to most departments it’s not been encouraged to devote extra time and energy in their teaching.”

I asked him how he became an effective teacher, and he again credited his luck “to have been mentored by very effective and distinguished teachers, especially in graduate school where teaching college, where teacher training of college students was a significant aspect of the curriculum.” He concluded that his graduate school and subsequent faculty experiences were different from the norm in terms of preparations for teaching. “It’s not a process that I can sort of identify step-by-step, but there are sort of general kinds of strategies that people could take...and there are many kinds of effective teachers anyway.” He recalled,

CIDR [the university’s teaching and learning center] has helped me a lot, has helped me over the years. I regard them as very, very instrumental in making me a better teacher. Because they have observed me in class and they have video-taped me. I was so frazzled at first seeing myself on video camera and hearing myself too. And so, but they have been very, very helpful. I really, you know, my hat’s off to them.

As much as Professor Four appreciated and used the help that was offered by the CIDR he lamented that he saw little extrinsic motivation for other faculty

to do the same. "There is a strong message from the dean's office that the CIDR is right there, you know, you can use them for your benefit. But, again, I mean it's not like you'll be punished if you don't."

Another important and on-going source of information and ideas for improving his teaching were his students. He described several ways that he received valuable feedback from them. "What matters to me the most is what my students think, that's the biggest," he stated. "I like hearing feedback. Yeah, I do value feedback from my students. I mean, I take very seriously about what my students think and say about my classes." He not only drew from the teaching evaluations written by his student, but he also arranged direct discussions of his teaching with "students with whom I've had relationships of trust. I've pulled them aside, talked to them individually, and that helps a lot." Indicators that were less direct were also important to him, such as the way they were engaged in class:

Participation is always a good gauge. If students are proactive in class, they don't even need me to nudge them to participate, that's when I'm very, very gratified. When they seize control, or not control, but seize ownership of the material and grapple with finding meaning with the material, that to me is very, very gratifying because those are the seeds of

critical thinking, and the kinds of knowledge that will stay with them.

Actually, not only knowledge, but also application of knowledge I think.

Those are the seedbeds of how you want them to be, how you desire them to be, you know, later on in life, which is to be critical thinkers, you know, *proactive*, so students are interested in issues of social justice. When they grapple with this process that's a good sign....It's very pleasurable to me when students actually volunteer to have study groups by themselves and then they ask me to visit them if they have a question or something.

That's like, "I didn't really expect that," and so I don't expect that from students and when they do that it's a sign already that I think I'm doing a good job.

Professor Four felt that "being an agent of change in society" was the most important thing a teacher could accomplish. He told me,

I think that's the most important, Jim, the moment I sort of saw that in me. It's almost like this epiphany you know? It's like, what do you call that when people see an apparition or something? It's like this spiritual experience...I was teaching this, it's the first time my class went beyond 150. So, it's now like 180 or something and I thought "this is it, this is my moment of destruction. I'm going to fail," because it is extremely large, an

army. On one hand I was flattered because it's like "wow, you know we have numbers" ...you know, and there was an overload, and there were students waiting. On the other hand I was so stricken with fear. And then it didn't happen in a single moment, but in a series of moments in which students' faces sort of registered an "I get it" kind of thing. Then a number of those students, you know, either within that quarter or the very next quarter became very active in all kinds of stuff like student government, you know? Like little agents of change. And I said "Oh my gosh," you know. Of course I flattered myself into thinking I'm the only one responsible.

Professor Four's Advice on Teaching Effectively

Professor Four Offered the following as some of the principles he relied on in his teaching:

1. Even in a large lecture class of 90 students, finding meaning in such a discussion is not as difficult as one may assume. I find that when I as a professor show students how meaningful the subject matter is to me, they respond more actively and positively.
2. It almost sounds like a circular process and maybe it is, but they always go hand in hand. Students cannot, will not be able to understand the material if

you don't teach the skills in how to understand the material. And so critical thinking follows them, not only at the end of understanding but also at the beginning of understanding the material.

3. In the big classes I give pop quizzes, and I sort of have this narrative, I have this humorous narrative about pop quizzes to ease the students' tensions. I always tell them it's not meant to punish, it's meant to lift you up, it is actually you know. And then I always tell them "it's a harder job to fail" these quizzes, because it's all about if you've been attending a class you'll get them. It's all about lifting you up and just keeping ourselves on the right track.

Teaching Lifeworld of Professor Five

Professor Five is an associate professor in a Social Science discipline. She is a white female, and has taught in a research university for over 25 years. Professor Five was an associate professor when she received the Distinguished Teaching Award. She describes her discipline as one of the "professions" in that the development of practitioners is their main focus. She is a well-known and respected scholar in her field.

Second-Order Perspective Statement

Professor Five is passionate about teaching and passion is one of the important objectives she intends for her students. Since she teaches in a program that is dedicated to professional practice, much of the content of what she teaches is determined by the competencies of that practice. However, for Professor Five, teaching to the competencies is not nearly enough. Through her own past professional experience and close scholarly relationship to her discipline she has come to understand and care deeply about the human suffering and inequities in American society. She sees her teaching as an opportunity to directly confront social problems and to instill in her students an ethic of progressive social change. She knows that her graduates will be practicing in the midst of society's worst social problems and they will therefore be in positions to affect change. She stated, "Collectively we think here about what students need to know in order to do something in the world, and that 'something' has a deep sort of ethical frame around it....when you think competencies, they're not just for the student to have a good intellectual experience, but to feel a sense of ethical commitment."

She understands that the impact her graduates will have on society will mostly happen at the person-to-person level as they work with individuals and

their families. She therefore believes that fostering respectful, caring relationships is of primary importance. The relationship needs to be there, she insists, but surrounding that needs to be an intellectual structure, in effect an ability to do research and analysis, contextual analysis, and to critically think. One of her strengths is that she knows “how to *be* with people,” and this knowledge not only guides her pedagogy, but it is one of the important things she intends for her students to learn. Professor Five believes that modeling how to be with people in her classrooms and in her other interactions with students is the best way to promote that professional attitude.

Professor Five not only values positive relationships as an outcome of her teaching she also believes that her teaching success can be attributed to the type of relationships she builds with her students. For her, all meaningful teaching and learning in the classroom stems from the relationships that are based on respect. She believes that classroom environments must be “authentic” to the ideas and ideals that are being advanced. “Our students are very attuned to whether, how they feel and what we do matches what we say they should be doing in the world.”

Professor Five firmly believes that many students come into her discipline with goals that are too narrowly focused on learning how to do the job. “They

want tools, they want techniques, and they want to be able to go out and feel competent." She believes that her job is to help "them to acquire that which students wouldn't necessarily find on their own." She understands teaching to be primarily focused on helping her students to expand their critical thinking, and she believes that in order to accomplish that goal she has to be committed to doing the same in her own intellectual pursuits.

For Professor Five, "Teaching is front and center" in her academic life, however, she would not give up her scholarly pursuits to teach fulltime. "I would not choose a teaching school where I taught so much I had no time to think or write, because they are mutually reinforcing, even though it's hard to find the time there is a need for balance. I need both." She sees teaching in a research university as an opportunity to expand "intellectually" into arenas beyond her field. The mission of practitioners in her field is to work to achieve a "larger social good," and therefore, scholars such as herself are continuously assessing and responding to the field. She views this inward focus as somewhat limiting in terms of the opportunity to interact with new ideas and new perspectives. Professor Five addresses those limitations by seeking out opportunities for collaboration and understanding new perspectives from other

faculty members outside of her discipline. To her, the benefit to being a faculty member in a research university is its “stimulating intellectual climate.”

Professor Five has great faith in her students going out into the world and doing what is right for the people they work with, for their profession, and for the larger society, as long as they *care* and they know how to *critically think*. For her, thinking and caring are the major objectives in her teaching, and providing real substance by being a thinking and caring teacher is the best way to reach those objectives.

Conceptions of Teaching and Faculty Life

Professor Five refused to be pigeon-holed as a particular type of teacher. She viewed herself as being both a progressive teacher who would adjust her pedagogy to integrate her students’ knowledge and learning needs and tended to favor group activities and discussion, as well as a more traditional kind of teacher who didn’t shy away from a lecture and understood clearly that she brought expert knowledge to the classroom. “I just figure there are some things I know that students don’t know. That they know things that I don’t know, so I have to, the challenge is to respect that and include that and bring it in, but also not to abdicate as a teacher. I’ve increasingly learned not to abdicate.” She learned that conception of teaching as a result of listening to her students.

Professor Five relied heavily on what her students told her. She summed up some particularly poignant student evaluations of her teaching as arguing:

Do more lecturing up front...give us the handholds and then give us the form and we'll work with you on deconstructing it, but you know, we want some of what you know up front, and we don't feel dismissed by you giving what you know up front. So I think it's just that I have sort of a hybrid-teaching model I guess, which it's just grown up over the years. I've had mostly student comments saying, "Don't leave the blind leading the blind. We know some things, but we don't know some of the things you know, and we actually signed up because we want to talk about this."

She understood the forces within education that advocate experiential-based learning and dropping lecture from the lexicon, but she considered that as extreme as the old-guard notion that regarded students as passive recipients of knowledge and teachers as founts of knowing. Professor Five didn't consider either extreme as providing what students needed, because they were too wedded to their own notions of pedagogy and learning to be reflexive enough to consider context. "I increasingly think that probably just about any class that gets taught on campus should demonstrate some awareness that all of the ideas we use, all of the thoughts we use, that invariably *it's context*, and then how

you've made that real for a particular class is the challenge to your thinking."

She described her approach as being extremely context-driven:

I guess I just see the classroom as a microcosm of the larger environment, and that they learn how to be, in some ways, within their experiences there. But they also have substance of mind, intellectual stretching to do, and that some of that they can get through process-based learning, but some other comes just from contact-based learning, you know. And being exposed to things they hadn't thought about, getting beyond their taken for granted ideas. Having ideas about how the world works challenged by data and perspectives that are different from what they already know. And it's that sort of, it's different sorts of assumptions then, that the knowledge that students need to work proactively in the world they already have, and that, you know, you need to work with it to surface it. I believe that they do have knowledge that I don't have and that needs to be surfaced, but I also believe there's book knowledge or research knowledge or just views of the world that they haven't been exposed to that I have literally a responsibility to bring to the classroom. And so I'm working it as a blend of sort of some traditional ideas about teaching with some more critical, encounter-based sort of ideas.

Since professor Five viewed the classroom as a microcosm of the larger world, it was important to her that her students left her classroom better able to function as professionals in the world. She said, "I mean I want them to grow and think differently, but I do want them to have tangibles...I guess I'm just not willing to discount that. In a professional school to say, "well, we're not going to give them any skills or any tools or any sort of substance of knowledge" would be *(not in any school)* that would not be ethical to think like that. And doctoral students need to know to become scholars *and* teachers.

When I asked her how she had developed as an effective teacher, she pointed first to her experiences as a doctoral student. "By the time I came here," she told me, "I was a pretty well-established teacher actually, because I had been teaching as a doctoral student and then as an instructor at [her doctoral institution], so I was actually, for the last two years of my PhD, teaching a full load." Besides the actual classroom experience she suggested that one of the most important factors in driving her to improve her teaching during her student years was student feedback that came to her, unvarnished, via the Dean of Students. She recalled,

My very first class ever, he was on me, grabbed me within 24 hours and said "you're nervous to students, they're not sure you're in control of the

material, you need to get this together and figure it out" ... that immediate feedback, boy, God, did it, I was, you know you go home and weep the first time, and then you pull yourself together when you're done and you try to figure it out. I found it incredibly useful as a beginning teacher that I wasn't left sort-of, someone held me accountable, and supportively as well. He would report the good feedback he got as well, but if he sniffed any problem, he let you know straight away without any varnish, that he was seeing students and they would talk about whether they might switch sections or whatever, and my self esteem didn't tolerate not fixing things...I just think you keep working on it, it's a constant cycling.

A constant cycle is how she envisioned her teaching; always gathering feedback, making changes, and trying it again.

I just keep trying to do a better job of managing the stream of things that students give me in ways that I get some early warning if ideas are taking, or if they're not...and therefore, building in some early opportunities to do papers or, you know I always do things that don't carry much of a grade, but give me feedback, give me feedback on how they're doing, and them feedback on how they're doing early on.

For Professor Five, maintaining an awareness of student progress is built-in to her understanding of teaching and learning. She is well grounded in Vygotskian theory regarding the zone of proximal development (see). She described how she applied the theory in her approach to a class that combined both lecture and group-work:

So the teacherly role came in both doing a good job of setting them up, orienting them, and kind of nurturing them along without even being involved, ever being involved in any of them [groups]. They all happened away from me. But providing scaffolding through lecture and discussion in the formal classroom time for those groups and guidance to them in the form of questions or things that, you know, they wanted... Scaffold it really early and well. Some groups are not going to function optimally. So, you are teaching at a distance by the way that you design and support something that they're doing on their own time. So the facilitation, you know I think teaching is essential... You know, me being steeped in that theory, it just sort of makes intuitive sense to me that sort of figuring out what supports people need, and what the optimal middle of distance is that you can be, for what kinds of tasks. What works for them as basically

largely independent learning. And so it is thinking about that hinge-piece at the break out groups.

Her teaching approach closely mirrored the combined analytical, relational, and social orientation she hoped to instill in her students as they went out into the professional world. She described the essence of that orientation as critical thinking, but not simply critical thinking as it was usually defined. She explained:

There are some advocates of critical thinking who strip it down as pretty much scientific method. Whereas, for others of us, critical thinking is both that ability to use data and evidence and to think logically and to kind of work your way through to a well-supported decision, but also it is this critical analysis of socio-structural factors, diversity issues, sort of the critical understanding of the politics of [her discipline]. And I would say my approach to teaching is deeply grounded in building critical students who are good critical thinkers in both senses of the word, who can, whose practice will be based on social justice analysis as well as evidentially-based....You can put together a great syllabus with content, but the meta-content (that I probably attempt more than some people) to me matters.

And then that's both relational and analytic and sort of critical. And so that is, I think, the whole notion of what's critical, what is critical teaching.

I asked whether she felt her teaching was supported at the university and she said that it was, both in her department and within the larger university as well. She recalled her experience as one of the first faculty fellows at the university: "Actually that set a very good tone for me in terms of the university's commitment to teaching, and I think it's one that's being strengthened all the time. So I have always felt like this is a place where teaching mattered, even to where it was sometimes institutionally honored."

As for her department, she argued, "You can't be a lousy teacher here, and people not care about it. You can get around it in some ways if you're a lousy teacher, but people don't like it. And the deans pay attention, often because they end up with whole classes of students in their office." Although the external motivation was present, she felt that for good teachers it was mostly intrinsic:

It's sort of a self-esteem issue, not to be a teaching award winner, but just to do a good job. And I just feel lucky that somehow there's some chemistry between me and students. I'm not entirely sure why there is, or what it is. I don't think it's any great gift, and some of it is actually, is probably because there's so many swaths of mediocre teaching in the

universities that if you're, if you pay attention to it, it's kind of easy to look good. [laughing]

Professor Five's Advice on Teaching Effectively

In the following are listed some of the evocative propositions Professor Five offered when she discussed the effective teaching concept:

1. I think it's also just that students do want the goods, and they do want to feel, they want to feel that you're smart, and that you care about them, and you want them to be smart too. And that you'll, kind of, stay with them on this journey towards their own learning and growth. And it's not that you want them to be you, but you want them to kind of find their own vision and value and to feel effective when they take the next steps, and I, you know students know that I am kind of in there with them.
2. I try and create a climate where students can express, have ownership within the classroom, and what I do at the outset is say "this is ours you know, you're responsible here as well as me, and you can hold me accountable, us accountable, and then you can give *us* feedback." And they always (more than you can stand sometimes) take you up on that.

Teaching Lifeworld of Professor Six

Professor Six is a full professor in a life sciences discipline. She is a female of color, and has taught in a research university for over 25 years. Professor Six currently holds an administrative appointment in her department, which takes precedence over her teaching during certain times. Professor Six was an associate Professor when she received the Distinguished Teaching Award. She teaches students at both the undergraduate and graduate levels. Although the majority of her courses are at the undergraduate level, she also mentors graduate students in their research. She is a well-known and respected scholar and in her field.

Second-Order Perspective Statement

Professor Six describes herself as a statistical scientist and a professor. She is very proud of the fact that she is a faculty member in the sciences at a research university. She chose a career in a field that has very few females, especially females of color, and she entered the field at a time when there were even fewer female role models. She comes from a teaching family, wherein both of her parents were teachers. She also recalls spending a lot of time playing school when she was a child. For her, going into teaching was a natural fit. However, being a faculty member in a research university often seems at odds with her

teaching. She would give up some of her other faculty roles to spend more time teaching. She feels that the university reward system, which places the greatest emphasis on research, forces “a restriction on the level of one’s teaching.” For example, Professor Six knows how she could redesign one of her major courses and substantially enhance her students’ learning, but “what stops me is the amount of time I know I would have to devote....It’s just too much.”

Professor Six feels that the reward system places pressure on faculty members to limit the time they spend on their teaching. She stated, “I would love to spend more time on the classes that I teach, and if I knew that it wouldn’t negatively affect my career, I’d probably teach more.” Professor Six knows that for those who are outside of the academy, and for most undergraduate students, being a professor is synonymous with being a teacher. She would prefer it if that were true in her case. Although she would love to teach more, the culture of her department is such that increasing a teaching load is considered an “inequity” unless the “burden” is shared equally amongst the faculty. Her department is currently feeling the pressure to increase the number of courses it offers, and the faculty members are willing to do their fair share, but the teaching load has to be distributed evenhandedly. She commented that, “I think most people feel that they are meeting their teaching obligations, you know, that right now

everybody's teaching obligation is fairly equitable. And of course nobody wants to take on two extra courses unless they're going to be guaranteed some kind of compensation."

Professor Six chose early in her career to reexamine traditional ways of teaching and organizing her courses. She said that when she first started teaching she realized that her students were bored with the standard pedagogy, which was the result of a rational content-oriented approach to course structure. She saw in her students' faces that the traditional approach was unresponsive to their needs and made the content more difficult to learn. Professor Six realized that she should present material in what would seem to be an illogical order. She said, "In covering a lot of quantitative subjects, the logical order is to present the theory and then present an example....I realized that what I really should do is give the example first...and then I could challenge the students with 'Okay, now how are you going to solve this?'" The approach she used is learner-centered in that it begins with consideration of what the learners' need in order for them to learn the material. She identified those needs as "transparency and relevance"; transparent, in that learners' need to understand *why* they are doing something, and relevant, in that the material has to make sense in the real world.

Professor Six also takes a researcher's perspective to her teaching, in that she constantly gathers data, asks questions, and tests hypotheses, in order to improve her students' learning. She demonstrated this perspective when she used her observational data (the bored faces of her students) to drive changes to her course structure. She continues to approach her teaching from this perspective. She described how she was more recently working with a group of students during her office hours:

When I was going to start helping a student with a problem they were having and one of the other students (who had just gotten it) started to explain it, so I shut up because I figured it was better. I realized that what I was witnessing was pure teaching, pure learning, and from that experience, I kind of reconfigured the class.

Her observation of her students led her to place more emphasis on cooperative learning situations, such as labs and office hours, wherein, she stated, "I actually seem to be witnessing learning taking place." The understanding of learning that she developed through her observations and reflecting on her experience is akin to Vygotsky's social constructivist theory, in which knowledge is constructed by individual learners within social situations and is mediated by social norms.

Although she understands that high levels of learning are fostered when she is able to motivate interest and relevance for individual learners, and when she creates learning environments that allow for questions, discussion, and peer support, she also believes that there are places for lectures, in which transmission of information is the primary goal. However, even in lectures she tries to provide relevant examples and motivation.

Professor Six works hard to maintain an active research agenda, and she views her research as directly influencing her teaching. She is able to use her research as examples in her teaching; another way she makes her subject *real* to her students. However, she does not feel that there is a reciprocal relationship in that her teaching doesn't directly benefit her research.

Professor Six understands the importance of maintaining collegial relationships with other faculty members in her department, and the life sciences in general. She often collaborates with her peers on research and publishing, she consults on research methods with their graduate students, and she takes on onerous administrative tasks. She is well known for enhancing the overall quality of research in the life sciences. None-the-less, she recognizes the limits of collegiality when it comes to teaching issues. She states that it was only after the retirement of several of her colleagues that the department was able to begin

discussing long-overdue curricular changes. When she needs teaching support, Professor Six reaches outside of her department to organizations such as the Teaching Academy, which she sees as a safe place to talk about teaching.

Conceptions of Teaching and Faculty Life

Professor Six would have enjoyed doing more teaching, but it would have meant doing less of some other faculty work, such as research or administrative service. It is not that she was particularly fond of administrative work, but she felt a great sense of pride in being a good academic citizen, a colleague, and a scientist. To her, all of the roles she filled were part of a larger effort to strengthen the scientific and academic community and develop the next generations of scientists and scholars. Her willingness to participate in this study was an example of her fulfilling a personal commitment to her community, as well as remaining true to a strong sense of responsibility to help students in whatever way she could. When she read her second-order perspective statement, her primary concern was that it not be construed as being too critical of the university's reward system for not placing more emphasis on teaching, or of her colleagues for not being more oriented to teaching. Professor Six was well aware and supportive of the many positive things that took place at her university which genuinely balanced her understanding of the university's

teaching enterprise. She felt obliged to have me soften a couple phrases that could have seemed too harsh.

Although she was well aware that the majority of her departmental colleagues were less concerned about teaching effectively than she was, she also recognized that a shift had occurred in the teaching culture of her program. As she stated, "I think we're to the point where people are willing to do their fair share [of teaching], but nobody wants to be penalized for being a good teaching citizen." Being a good teaching citizen meant taking on a larger teaching load, but as she stated, there was little or no reward for doing so. Although she felt that her colleagues would have been willing to do more teaching, it would mean either having to do less of something else, for which they could have benefited (career-wise), or they would simply have had to increase an already full work load. So in a very real sense, too much teaching could be detrimental to one's career and professional standing. Although she sensed that her colleagues' attitudes toward teaching had improved, teaching (as a topic) still wasn't something faculty discussed much in her department. She recalled:

Years ago we tried, in faculty meetings, to discuss teaching topics, various topics, and it just fell flat. It was not the right gathering. In order to have, I think, effective conversations about teaching everyone present has to

want to be there and want to be engaged. And that's why the CIDR [the university's instructional development center] and the Teaching Academy and other workshops and gatherings work effectively.

Professor Six had a great deal of respect for and faith in the sciences and the scientific method. She was very proud of the scientists she helped to develop and the efforts she made to improve the quality of research methods at her university. She felt that it was in this regard – the strengthening of the scientific community – that she could have the most impact. She suggested:

I think I have improved the quality of science in this field by, you know, by being an effective teacher and by training good students...part of my legacy is having participated in the training and literally turning out this quality product of well-trained scientists many of whom have risen to become leaders in their field.

I asked her how she considered the relationships between three aspects of a course – the content, the students, and the teaching process – as she developed her courses. Initially, she posed that she usually began by thinking about the content, because her courses were highly technical and detailed. However, as she reflected more on her course design process she stated that she really had to “take *content* and *students* together,” because she knew that without

consideration for the students they couldn't learn the content. "I'm trying to reach my audience with content that many of them find extremely difficult, so I think realizing that I have to make the content appealing to my audience drove the particular process that I used." She explained that one thing she did was ask her students to fill out short surveys about themselves and "whether there are any issues that might affect their learning in [her] class"? Her main reason for doing so was that "students need to know that you care about their learning, and one way to care about their learning, or one aspect of that, is learning just a little bit about their personal lives."

Professor Six was student-centered in her approach to teaching, in that she believed her teaching decisions needed to be guided by how those decisions impacted her students. She stated that she was always gathering formative feedback and watching for cues as to whether students were learning the material. She described it as a "constant refinement of the process, and I'm always thinking, *how do I match the content to the student audience?*" She suggested two primary considerations for creating that match; *transparency* and *relevance*. She described how she developed transparency and relevance in her courses by letting students know *why* they should learn the material, by helping them to understand its importance, and by letting them see the applications and

concrete examples right at the beginning, or as she put it, “grab all the examples and move them to page one and that’s the motivation.”

Professor Six described teaching as “reshaping the brain.” She was aware of the scientific basis for this idea and the notion of potentially having a physical effect on her students seemed to punctuate the responsibility she felt as a teacher. “I think part of learning is literally reshaping the brain, and so I wanted to do the best job I could to help them reshape certain parts of the brain.” She told me that the most important thing she did as a teacher was,

Helping them to *think critically*, or *think analytically*. To look at data in a certain kind of way, to get to a higher level of understanding, to read the newspaper or hear quotes on the news and listen to it in a way that’s different, or it’s been shaped by what they have learned in my class.

For Professor Six, teaching was similar to performing, and as she posed:

I think every performer wants to put on a good performance....You really don’t want students walking out of your classroom talking about how awful that particular class session was. So just to avoid shame, you need to aim for a certain level of effective teaching.

She reflected that simply not wanting to be embarrassed was a motivation to improve one’s teaching, but (for her) the “main this is I just really want my

students to learn.” She held high expectations for her students and she knew that her students held high expectations of her. She said:

There are students who deliberately configure their course schedule to get into the class. So they have high expectations, because they’ve heard, you know, what a great class it is and what a great teacher I am. And so there is, and I feel this internal obligation to deliver, to meet those expectations.

I asked her how she knew if she was meeting their expectations, and she replied, “I think some of the best moments are when students come talk to you after class and they realize that a method that I’ve presented in class might be pertinent to their own research, so that’s a great teaching learning moment.”

Having taught for over 25 years Professor Six also had the opportunity to see some of the long-range effects of her teaching. She stated that:

Some of them actually realize that they enjoy this stuff and they go on to take other classes in quantitative areas that they would not have thought about before...So I turned a student on to a completely different area that they either were not interested in or thought they didn’t like before. I think in some cases it has affected their careers positively in that they started to pursue a more quantitative pathway, and that was definitely not in their original game plan.

Professor Six did believe that the university was paying more attention to teaching and proof was in the fact that the Teaching Academy and the Faculty Fellows program were now in the budget each year. She said that, “it’s nice to see what I consider to be line items in the university’s budget that allow people to take time to focus on teaching.” She felt that the teaching standards of the university were such that teaching at a “decent” level was sufficient, but that “presumably, if you’re a horrible teacher you won’t last or you won’t get promoted, or you’ll just sort of be shamed out of the university. But for the rest of us, it’s not enough to simply be a *decent* teacher. We’re really not only shaping their brains, but shaping the lives of our students and there is this moral obligation to do it right.

Professor Six’s Advice on Teaching Effectively

Professor Six offered several nuggets of wisdom regarding how to be an effective teacher and how to do effective teaching.

1. She said that one of the big problems she noticed is that some professors are actually scornful of students who don’t learn material as well or as quickly as they recall themselves learning. She cautioned:

Don’t hold your students in contempt just because they don’t know the material. There was a time when I didn’t know this material myself, and

I've been practicing this material for a couple of decades now. So don't hold people in contempt when they have difficulty learning technical material.

2. As for the time it takes to teach effectively, she argued:

I don't think I've ever met an effective teacher who didn't put time into thinking about teaching. Naturally as a course gets settled, or after you've taught it many times, there's certain things that take a lot of time in the beginning, for instance, in technical fields, writing up lecture notes and either typing them up yourself or having them typed; or today, you know, creating that first web page – that can be an enormous time-sink – but once you've got it the first time then future revisions and iterations don't take as much time, *but they still take time*. For one of my large service courses, I'm still tweaking those notes every single year. After every class I write a little note to myself, you know, "went well," or "fix this," and every summer I go through and I do a revision. You know, fix the old typos and introduce new ones, but that does take time. I don't think I know any really great teachers who somehow after many iterations just managed to make the time shrink to practically zero. Yeah, I don't know anyone who has claimed that.

3. Professor Six suggested that one of the things to keep in mind when teaching a technical topic with a lot of detail is to “always try to give them the sense of the *why* of it. The why, why do we need to go through this? So that even though they may not remember all the steps or the technical details, the why of it is clear to them.”

Teaching Lifeworld of Professor Seven

Professor Seven is an associate professor in a social science discipline. He is a white male, and has taught in a research university for seven years.

Professor Seven received the Distinguished Teaching Award when he was an Assistant professor. He is a well-known and respected scholar in his field.

Second-Order Perspective Statement

Professor Seven enjoys being a faculty member in a research university. He finds a satisfying interconnectedness in the various roles he fills and the intellectual interests he pursues. He stated that teaching is the most important thing that he does, because “it is the part of my career where I feel that, you know, this is the piece that makes what I do socially meaningful, that is valuable for people, other people.” He finds his research to be more “personally edifying” and “intellectually interesting,” but that he needs to do both to feel that he is

contributing to society. He also views his teaching and research roles as positively impacting each other. He stated:

Certainly the research that I do is material I bring into the classroom, guides the topics I choose for class, gives me the depth of knowledge about topics in order to teach with knowledge and passion about them in the classroom. Going the other way in the process, the opportunity to teach, to talk to students, to hear, to see how they're learning, to look, to get to learn from them, prompts the kinds of questions I ask in my scholarship.

Professor Seven believes that the best way that he can contribute to society is through the work he does with his students. The primary objective for his teaching is to promote the development of thoughtful, informed citizens. He accomplishes this by making the students the focus in his classrooms. His personal teaching philosophy incorporates three elements: paying attention to learners' emotional needs, sustaining learners' focus through movement, and seeking content that is relevant to learners' lives. Professor Seven believes that there are only certain aspects of his interactions with students, over which he has, or should have, control, and he structures his courses "to make it clear to them things that they have, students have, control over." He posits that he can

show his students that he cares about and respects them and he can show them that he cares about the material, but that the engagement is up to them. He works hard to create a learning environment in which the students are interested in engaging with the material. He believes that far too often students reject important learning opportunities because they don't recognize the relevance of the topics to their lives. He argues:

People who see topics as *obtrusive* in their life, that is, these topics intercept in their lives on a regular basis as opposed to material that is more abstract to them, are more likely to pay greater attention and to engage in the content, particularly in a university setting where so much of what they learn feels *unobtrusive* to them.

His teaching begins with a consideration for and of the students, rather than the content. Professor Seven believes that one key to his success as a teacher is due to the attention he pays to the affective aspects of learning. "That's probably the first thing, actually, before any kind of content really. I want them to feel respected and valued in the classroom." Creating a comfortable and supportive learning environment allows him opportunities to interact with his students in ways that inform him about his students' prior knowledge and interests, and to subsequently adjust his content and pedagogy appropriately.

Professor Seven is a constructivist pedagogue. He believes that learning occurs when the learners make connections between new ideas and what they already know. He also believes that teachers should be attuned to “the psychological dynamics of the classroom, which includes emotion and cognition.”

Professor Seven views his teaching as an extension of his basic life model, an approach that places a high value on promoting open and honest exchange with others. He stated that, “I’m very big on telling them why I do what I do in the class....Because, ultimately, I think people do best when they know the entire lay of the land.” The transparency he tries to promote in his teaching fits well with his understanding of the limits of a teacher’s influence on learning. He believes firmly in the idea that there is only so much that a teacher can do to set up the opportunity for learning, and that ultimately the learners have to take control of their own learning.

Professor Seven is proud of the fact that he teaches in a department wherein teaching is valued. “There is a general sense in this department that we care about teaching, we value teaching and we take it seriously.” He feels that teachers are held accountable in his department, although there is a sense that “nobody is looking over your shoulder.” He feels supported in his teaching by both his departmental colleagues and by other faculty members across the

campus. He stated that shortly after joining the faculty he “began to get involved with the broader Teaching Academy workshops on this campus. I think I’ve been to most of them.” He has also, more recently, begun to facilitate teaching workshops himself and to share his approach with others. He values these collegial conversations as being sustaining and energizing to his academic life.

Conceptions of Teaching and Faculty Life

When I asked Professor Seven why he agreed to participate in this study he told me that doing so fit well with his general approach to thinking about and improving his teaching. He described the successive interviews as,

One great kind of process of do and think, and then do and think, and do and think, and so on. You know, I’m kind of just always updating my approach to the classroom or approach to teaching, and this is one way of kind of checking in with myself.

After he read over his second-order perspective statement, he said that most of the things he highlighted were the central claims and sub-claims and “those are the pieces that *do* put my understanding of teaching into words.” He affirmed the second-order statement, but also thought that “It is a bit different to see it written down, and not written down by me.” He said that reading the

statement brought to mind another point that needed to be emphasized about his teaching, which was:

The importance of creating a fun environment in the classroom too. One in which laughter can happen and does happen. Fun need not be contradictory to serious learning. So, that is, I wouldn't say we laugh a great deal in my classrooms, but we do laugh. And sometimes it's jokes I make, sometimes it's jokes the students make, sometimes it's just the humor of the daily, the daily world right? But that's definitely a part of the way I teach, and students consistently reflect that back to me in my evaluations that the sense of humor matters to them. And I think that is an important means of connecting with students.

Professor Seven pondered how his colleagues in the academy might interpret the attention he paid to "the psychological dynamics of the classroom" as it was described in the second-order statement? He posited:

I actually would say that it's not just *outside* the department, I would say *internally* possibly too. I think what I mean, more along the lines of, I think that the role of *affect* in people's lives is misunderstood in this highly intellectualized rationalized discourse of the academy. So the binary that operates in the, you know, the American academy is that cognition and

rationality is the highest possible good, and emotion is, by definition in this binary, irrational.

Professor Seven believed that this operational binary made for sometimes cautious conversations with colleagues. He stated that he was comfortable talking about the affective dimensions of learning with colleagues who he knew cared about teaching, however, he posited, "To talk about that around the academy – generally to a group of people who don't care much about teaching – I can see them easily just quickly marginalizing." So, for those conversations he suggested, "I would frame it differently."

As with his conversations with colleagues, knowing the audience and how they might react to particular ideas was also a fundamental consideration in his teaching, which was why he placed so much importance on helping his students to feel comfortable joining into discussions. Knowing the audience was essential for framing a discussion and Professor Seven argued that, "Teaching essentially is the framework and that's what makes teaching. Certainly there will be disagreement over what frameworks to utilize. Disagreement among teachers, disagreement among students, but to me providing the framework is essentially the imperative of teachers." He recalled that the "worst kind of teachers, I think, are the teachers who do not provide frameworks to students,

that just disseminate a great deal of information, ideas, opinions, facts without a framework, within which students can make sense.”

I asked him how he came by those conceptions for teaching and he explained:

I’ve been influenced by family, people in my family who are teachers, I’ve been influenced by my own educators, I’ve been influenced by my own failures in the classroom. Certainly I have been influenced by things that I’ve tried and haven’t worked. At some point along the way, I began to gain a distinct voice that defined who I was as an educator and the way I did it. I don’t think it’s unique. I don’t think I’m unique in that voice, but it was clearly *my* voice. And that was a very liberating time, because I began to not worry about trying something new, because if it failed it was no longer that I was not a good teacher it was just that this idea didn’t work.

Professor Seven described receiving the distinguished teaching award as another aspect of liberation, in that he then felt that his colleagues respected him as a teacher, which meant that he could try new things in his classes. He described it as having “this great reservoir, it’s a great privilege in my career to

be at this position, to not have to worry about every single day, every single class, and to just go in there and kind of be just confident and comfortable.”

When I asked Professor Seven what he thought an effective teacher was, he answered:

I think someone who empowers students; who, through whatever mechanism a teacher chooses, is able to create a student who at the end of the class, at the end of the day, or the end of the quarter or whatever, feels and thinks that they're more prepared for life and to engage in the world positively. So it's the ability to empower students as people, as citizens. That's partly through content, knowledge gained, that's partly through just the ability to inspire them. It's partly through a recognition of who they are as individuals and just recognizing that humanity in them. The ways in which these things can happen are just endless.

He stated that it was probably easier in the arts and humanities disciplines to help students to become personally engaged in their learning because they dealt with issues and ideas that were often already present in students' lives. However, he felt that regardless of the discipline, the thing that was essential was being able to create connections.

It seems to me that if you're able to connect, and seek to connect, and do the work that's necessary to connect, and you know really emphasize student learning, then it doesn't matter what discipline you're in, you should be able to identify ways to make the content relevant, interesting, useful. You know what, I happen to be in a discipline where it's much, it's probably easier than other disciplines, but I know outstanding instructors in chemistry and math and they do the same thing. And you know they're passionate about that material too, so I'm sure they can do it just fine. You know they might have an extra hurdle, two hurdles, maybe even three hurdles to get over, but they can do that, I'm sure of it.

Professor Seven was very happy being a teacher and felt that teaching fit well with other aspects of his life. He reflected that this fit helped to promote a level of naturalness with the way he interacted with students, which he felt was both helpful to their learning, and congruent with the way he conducted his life:

The great fortune of my life is that there aren't obvious inconsistencies to me between my personal philosophy and my professional philosophy. So I'm able to essentially go into the classroom as I am as a person, and to step out of the classroom as I am as a person, so that my interactions with students feel fairly seamless. My boundaries in the classroom are the

same boundaries I would generally have with them out of the classroom, unless we were to cross some kind of personal friendship threshold.

He stated that what he wanted his students to eventually gain was a similar kind of consistency in their lives. He felt strongly that he had to be genuine with his students; to treat them as he wanted them to treat others, and to not “ask my student to go through something, a process that I’m not personally willing to go through myself.” That, he proposed, was a primary motivation for his teaching:

I want students to seek that kind of personal growth, and to make the world a better place, to take themselves seriously in whatever task that they do. And I certainly do that with my own teaching, my own research. I try to convey that to students, to model it, and also to take them seriously so that they can see how you might, a person in leadership can respond to somebody else also. So is that, that’s certainly a motivating goal. Is it as good as any others? Well it might be the best. It might be the best one out there.

Professor Seven's Advice on Teaching Effectively

Woven throughout the interviews were examples of teaching methods used by Professor Seven, which he felt promoted the kinds of interactions and learning he intended for his students.

1. I have a thing that I do in one of my classes called “stump the professor”, in which they bring in questions about, that are related to course content but are things they care about. And they can ask questions and see if I can address them or not. And then they also have to address them. So it’s a little game we play with the class to get them to engage, and they get some points for it, but also it helps me to see what kind of things they’re thinking about, what they’re caring about.
2. I move around the classroom a great deal, not in a frenetic way, but I’m present physically moving around the room. You know the human mind is conditioned to pay attention to movement, and the more I can move in ways that, in rhythms that don’t interfere with the lecture content I think helps. So I try to move, I try to move and then stop, move and then stop. But it allows me to be close to them, which again I think kind of increases their engagement.

3. Student learning happens at its greatest threshold when students have to articulate their thinking, not just declare their thinking, but have to articulate it. That's commonplace at the graduate level, very uncommon at the undergraduate level at a place like this, but even with undergraduate students, I find that my general response to students is to ask them questions that get them to try to explain their thoughts. That ultimately, a phrase I'm fond of saying is, "Ultimately I don't really care what you think, I only care why you think what you think." Then I quickly follow that up by saying "Well, of course I do care what you think, but what really energizes me and I think helps you to grow as a person is to know why *you* think what you think."

Teaching Lifeworld of Professor Eight

Professor Eight is a full professor in a health sciences discipline. He is a white male, and has taught in a research university for over 15 years. Professor Eight was a full professor when he received the Distinguished Teaching Award. He has taught students at both the undergraduate and graduate levels, and at this time he teaches exclusively at the graduate level. He is a well-known and respected scholar and expert practitioner in his field.

Second-Order Perspective Statement

Professor Eight enjoys teaching and believes that “it’s as important, or more important, than anything that I do.” He is motivated by the idea that teaching has an enduring quality, that when students learn something well they will be able to teach that to others, and in that way “you can have an impact way beyond when you are around.” The other thing he enjoys most about teaching is that he feels like he learns a lot from his students.

Professor Eight believes that the main advantage to being in a large research university is that it is where most of the students are, so if you like to teach in his field it’s where you should be. He feels that the university has been somewhat neutral in terms of supporting his teaching. He states that, “I haven't felt it to be either promoted or hindered.” Although he hasn't experienced much direct faculty development help, he does feel that the university and his department have provided the opportunity for him to improve his teaching over the years. He stated that, “I feel like they're giving me a lot of freedom and flexibility to evolve and do things the way I want to do them and in that way I feel supported.”

Professor Eight believes that being reflective and critical of one’s own teaching is the best way to learn how to teach. He stated that “It’s accepting the

fact that we're going to fail, and we're going to fail miserably at times. To not be too hard on yourself, but to take extra time and say 'Why' ...To reflect back and say...'Where were my mistakes, and how can I learn from those to become a good teacher?'" When he was an undergraduate student, Professor Eight recalled having a few good teachers, who gave him both the opportunity and encouragement to try teaching. However, once he was in graduate school he "didn't have a mentor, someone I felt I could use as a model." He stated that the teaching models that were available to him were "negative models", but that he was able to recognize what wasn't working in the ways others were teaching, and to try to teach in a different way.

Over the years, the biggest evolution in his teaching has been from teaching facts to teaching process. He has developed an understanding that in his disciplinary environment, in which research changes things rapidly and information and facts become obsolete on a regular basis, what is essential is to teach students how to think critically, how to gather, evaluate, and analyze information in order to get the right answer to problems. Professor Eight believes that an important part of the information gathering process his students must learn is communicating well with the people they work with and for. He stated that, "if I teach somebody about what's the best way to ask questions,

what's the best way to listen for an answer, what's the best way to break bad news, was the best way to help explain when somebody can't read what's going on, those are the things that are not going to change over time.”

Professor Eight's pedagogy reflects the goals of his teaching, in that he regards being able to communicate with and understand his students as being his primary strategy. The primary objective in his teaching is to help students to get in touch with what they know, what they want to learn, and what they want to do. “I think that to be effective you have to figure out who is my learner and what they are ready to learn today.”

Professor Eight also holds an administrative position in his department and uses his position to support his graduate students', and colleagues' teaching, and to promote a teaching culture throughout the department. As he stated, “It gives you a feeling that everybody's on the same page and you're all speaking the same language.” The language he referred to was one that is based on learning and is attentive to the learner.

Professor Eight is entirely learner-centered in his teaching. His approach is to develop an understanding of each of his students and to adjust his teaching strategies and focus to fit the students. Professor Eight believes that the first thing that an effective teacher does is to figure out a student's readiness to learn.

He relies to a great extent on his ability to ask good questions, to listen well to each student, and “to change (on the fly) your approach to reach somebody.”

His perspective on learning is constructivist in nature, in that he understands that learning happens best when what is being learned is relevant to the learner.

With that in mind, he believes that his “main mission is to try to get learners to be who they can be, and to really get excited about something, and to learn in themselves about what they really want.” Learner’s self-motivation is an essential element in his epistemology.

Conceptions of Teaching and Faculty Life

Professor Eight agreed with what was written in his second-order perspective statement. He noted that having taught for over fifteen years had reinforced the concept that helping students to learn more about what excited them personally was an important teaching goal. He called it, “the inspirational quality of seeing people enthusiastic and excited about what their doing, and being able to see, you know, people that you’ve worked with carrying on that type of enthusiasm I think is very rewarding.”

I asked him why he was effective in his teaching and he said that one of the most important things was being able to reflect critically on the things he did, especially reflecting on mistakes. He recalled:

I look back and I think that I learned more from my failures than I have from anything else. You know, when I've done something that has flopped, when I've met with students and it just didn't go well and then I was critical about why it didn't go well, I really think that is a huge part of the whole process of becoming a good teacher. It's accepting the fact that we're going to fail, and we're going to fail miserably at times, and to not be too hard on yourself, but to take extra time and to say *why*? Talk to the students and say, "why didn't this work"? To reflect back and say, "when did this go bad, was it the first minute when I walked in the room, was it the fact that they were all really tired? Was it after they worked a long shift and they could barely keep their eyes open and I decided to have a two-hour session? Where were my mistakes and how can I learn from those to become a better teacher." I guess failure, I think, is a real important piece of becoming a better teacher. And that people who do not ever figure that they fail probably are going to be limited in how good that they will get. In other words, they have some problem with self-reflection and thinking that absolutely everything out of their mouths is wonderful.

He suggested that the same principle of self-reflection, which he described as essential for becoming a better teacher was also an important skill he wanted

his students to learn to employ. He proposed that the skill could be taught best by taking advantage of the teachable moments, or what he called “memorable moments.” He advised that it was important that teachers recognize when their students were in such a moment, and then “taking a little time to reflect on it in the moment instead of racing through it.” The teacher, he suggested, had to be aware and open to this important teaching “even though it’s a busy time, to take the extra five minutes to sort of debrief after an interaction.”

Professor Eight described the teacher’s role in those teachable moments as not only recognizing them, but knowing how to ask the right kind of questions that would guide the students to be reflective and to learn from their reflections. He proposed that the importance of teachers for student learning was akin to the importance of catalysts for chemical reactions. He stated:

If there’s somebody there to ask the questions of them that they need to be thinking about I think it helps the learning processes. It’s not necessarily what causes all the learning, but it helps the learning that’s possible to happen. Just like catalysts, you know, in a reaction will take something that wouldn’t happen, that could happen but may not, and it will make it happen. And there are definitely formats of teaching where without that teaching, nothing would happen....we really offer the questions that help

them learn from what's available. You know the substrate that's available to learn from, we just help them along with it. So, I'm not sure it's as much of an intervention as it is just that we catalyze the reaction.

Of course, knowing the right questions to ask and the right sort of feedback to offer students is another important aspect of Professor Eight's teaching. He argued that this can be accomplished best when instructors have developed appropriate levels of rapport with their students. Often a student's readiness to learn was dependent upon whether she/he felt accepted by the instructor, He proposed:

The better you know a student and the closer you are to a student, the more effective you can be at pushing them to be their very best. They seem to have a lot more resilience with getting feedback [when] you've already proven to them that you accept them as a person and you are impressed with them as a person and you know they're smart.

Although he reported not having had the opportunity to benefit from faculty development activities when he was a junior faculty member, Professor Eight reported that things had changed for the better in his discipline. He recalled that, "For many years in [his department] people who taught, it was the *kiss of death* for your career....and, you know, the department has really come a

long way at recognizing excellent teaching and saying this is as important for us as research.” There was now a recognized practitioner/teacher pathway that students and faculty members could pursue in his discipline. He stated that having “funded positions where people can keep their career up by doing teaching and [professional practice]” demonstrated the commitment his department had to teaching. His own faculty role was an example of how his department had changed. He posited that now “I just have more time when people ask me “can you do this course, can you help me with this”? I have more options to say “yes.” And I said yes always before, it’s just now I don’t have to get home at ten o’clock at night.

When I asked him what motivates teachers to improve their teaching practice, he said:

I really believe that for your very best teachers, it all comes internal, at least most of it does. And you know, the external things are nice rewards for people that are, that you can show and put up on the wall, but really your very best teachers, the teachers who are going to win those awards have to have internal motivation. I don’t think you can get somebody to be such a great teacher because he wants to win a teaching award.

Professor Eight's internal motivation was linked to what he envisioned as the enduring character of teaching. He described it in this way:

I think when you teach and you educate, and you help people learn, that is something that goes on forever, that it's passed down generation to generation. And so the effects, you have a ripple effect over many generations long after you're gone. As you teach people in a style that they teach and then there are people that they teach, they pick up the same things that are important and hopefully the same things that are enduring. So that's something potentially that may never end.

Professor Eight's Advice on Teaching Effectively

Professor Eight provided several words of wisdom that were derived from his experiences.

1. I never took any courses in learning theory or teaching theory, or any of that, for me it's just been spending a lot of time with students over the years, and reflecting back, as I mentioned before, on my failures and what works and what doesn't work. Recognizing that the more active you have a learner and the more invested you have *them* in their learning, the better they're going to do. And the more passive they are, where they're just sort of sitting back and

just shoveling things in, you know, just eating all the stuff you shovel them, they're not going to do as well.

2. I think that one mistake people make when they're trying, you know they want to be a teacher, is very early on being so protective of their time that they don't, that they say "these are my little opportunities here that I've agreed to", and when new things come up, they're so protective of their time, they don't envelope themselves in opportunities. I think the more chances you get, the better, you know. We've talked before about reflecting on your failures, being able to understand what the learner needs, and the more you do that the better you get at it. So I think just saying "yes" to teaching opportunities and spending a lot of time doing that. I think that all comes down to more time devoted to teaching, but it's not in studying and preparing for one individual lecture. I think it's in actually making yourself available to teach more.
3. It amazes me when I watch people teach, how often people seem so bored by what they're teaching. It's like how are you getting the students excited if you don't care about it, or if you come across as like "oh my, why am I teaching this?" No student is going to get excited about it. So I think really, one of the real keys things about getting a message across is to be enthusiastic

about it, to feel good about it, to feel like “I really want, I’m excited I know this, I want them to know it”, and so they can be, because you know the more excited they get, the more they’re going to learn.

Qualitative Abstractions: Conceptions of Effective Teachers

The intent of this study was to develop a better understanding of the teaching conceptions held by effective teachers in a research one institution. That is, conceptions which help them to be effective in their teaching while successfully navigating within the research-intensive university setting. More specifically, this study intended to understand: (a) How these faculty members became effective teachers; (b) the meanings these faculty members constructed from the multiple roles they filled; and (c) the motivations or impediments to effective teaching they recognized in a large research university?

In the descriptive analysis of participant data, which was documented in the previous section, the teaching lifeworlds and conceptions of individual teacher participants were displayed in order to provide the reader with an understanding of the meanings the participants made of significant phenomena related to their teaching. In this section is documented the interpretation or abstraction of participant data and a comparison of findings across cases. The

intent of this interpretive analysis was to identify important categories and themes that cut across the eight participant cases. Two types of interpretive analyses were performed. The first was a *bottom-up* analysis described in the following:

To the extent that it was possible only the major research question was considered to frame the bottom-up analysis. It was hypothesized that findings related to the secondary research questions would emerge from the data. However, rather than searching the data for findings that fit the predetermined themes of the secondary questions, findings were allowed to emerge from the data through interpretation. Given the constructivist philosophical orientation of this research, it was understood that the researcher's own knowledge and experience would factor into the interpretation of the data. Therefore, a deliberate effort was made to analyze the data without the use of predetermined codes and categories. Codes were developed using the constant comparative analysis method across the individual case data sets. With this method emergent codes were developed, refined, and eventually reconstituted as themes and categories.

The second interpretive analysis was deliberately guided using the initial research questions as categories. This analysis was done by looking across both

the descriptive findings and the findings that resulted from the bottom-up interpretive analysis. As a result of both of these abstractive analyses several important categories and themes emerged from the data that are defined in the following sections.

Bottom-Up Qualitative Abstractions

Table 1 provides an overview of the two major categories and subcategories of the bottom-up findings.

Table 1. *Schemata of Findings*

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|----|--|
| 1. | A Pedagogy of Larger Concerns <ul style="list-style-type: none"> • Teacher's Power is Leavened with Responsibility • Students are Synonymous with Positive Vision of Future • Learning to Learn Takes Precedence • Teachers are Essential to Student Learning • New Learning Fits to the Student's Lifetime of Learning |
| 2. | Building a Pedagogy of Larger concerns <ul style="list-style-type: none"> • Teaching is a Personal Choice and Commitment • Work Ethic as Core to Teaching • Teachers Get as Much as Their Students • Effective Teaching has a Reflective Foundation • Maintaining a Metacognitive awareness of Students' Learning • Collegial Support is Important |
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In this section the major findings are defined and excerpts from the data are included that illustrate and explain each finding.

A Pedagogy of Larger Concerns

When I looked across the data from these eight very different but very effective teachers the principal common thread was that they conceived of their

teaching as being both driven by as well as substantiating a set of fundamental human interests. These teachers were not bound by notions of content coverage or conveying uninspiring understandings of subjects that are abstracted out of their worldly contexts. These extraordinary teachers were effective because they understood the enormity, the seriousness, and the meaningfulness of the teaching endeavor.

These teachers described teaching as being inherently powerful; a potent tool or a vehicle that afforded them (and their students) the possibility of affecting the world and connecting to the world in ways that were uncommonly influential. This recognition gave rise to a thoughtful and serious consideration of the content of their teaching, their students' potentials, and the ethical questions raised by their positions of power in the classroom. In Kitchener and King's (1990) reflective judgment model of epistemological development they also included the element of conscience in the most mature development stages. They describe the upper-level epistemological conceptions and judgments about knowledge as being leavened by an individual's ethical concerns. It is clear the participants grounded their teaching in ethical reasoning. As Professor Six stated, "I feel I have a moral obligation to make sure that the students learn as effectively as they can."

Teacher's Power is Leavened with Responsibility

These teachers witnessed their students' learning as being directly affected by their actions as teachers. Their experiences helped to instill a sense of responsibility to do right by their students and to hone their respect and enthusiasm for their roles as teachers. Professor Two spoke of the latent energy she sensed in her students that invigorated her teaching. She stated, "You look at this group and you see something in it, and it's a rush, and a challenge to say "what can we do with that," there is a raw human energy." Professor Two conceived of her teaching as utilizing the potential she saw in her students to, as she put it, "try to make things better for people....So I guess my job is to help kindle imaginations and then people can do from there what they need to do. So that motivates me a lot." Professor Five also reflected on the impact she had on her students:

At the deepest level, what students will learn about practice would be from how I am with them. That I can talk about empowerment practice, for example, until the cows come home sort of, and if they feel that my classroom is a disempowering environment and a disrespectful environment, that's what they will learn and that's what they will take out the door with them and do with other people. (Professor Five)

Professor Five's understanding of the potential influence she had on her students translated into a deeper consideration of her responsibility to meet their learning needs. She posed:

Students need to work proactively in the world they already have, and that, you know you need to work with it to surface it. I believe that they do have knowledge that I don't have and that needs to be surfaced, but I also believe there's book knowledge or research knowledge or just views of the world that they haven't been exposed to that I have literally a responsibility to bring to the classroom. (Professor Five)

This same sense of *power leavened with responsibility* caused Professor Four to consider the kinds of relationships he had with his students; realizing that he could not fulfill his sense of responsibility without breaking down the formal barriers that often exist between teachers and students. He said:

I encourage and maintain close mentoring relationships with as many students as I can. Close individualized mentoring is one of the most significant aspects of my work here because I am able to witness how much of a difference we as academics can make in students' lives.

(Professor Four)

Professor Six reflected that it was when she began to see her former students at science conferences that the inherent power of teaching became evident.

When I started seeing my former students give talks, I realized how much of an impact a teacher can have. I think that really drove home the fact that I was, I was training, I was really training these students and if they were going to succeed in their chosen careers that the way I taught them or what I taught them had a direct impact on their future careers. So I think that was when that really started to hit home. (Professor Six)

Students are Synonymous with Positive Vision of Future

For these teachers the possibility of helping to develop thoughtful, critical thinkers who could go on to be positive forces in their communities, nations, and the world was a strong motive in their teaching. Professor One spoke of the vision he maintained of his teaching:

So I'm not just teaching people to be good [practitioners in my field], I'm not just about [my field]. I think I'm trying to teach people about something broader, well, what [Woodrow] Wilson called "citizenship of the world", which is not just voting, but it is being kind of an engaged

person. That is probably what we are all about and that is why you teach people how to discover things for themselves. Or you give them the opportunity to discover things for themselves. (Professor One)

Professor Two held a similar goal for her teaching, she offered:

I think that when I'm teaching, I'm actually not teaching information as much as I'm teaching ways of learning. And so once I do that, someone should be able to be independent of me and that is a goal, so that person can be a lifelong learner. And it would be flattering if he or she thought of a few things I said, but I would love it to be so internalized that it isn't even noticed. And then that gets passed on to somebody, and then we have people hungry to learn and change and that's the political part of it. (Professor Two)

These teachers maintained the student-centered focus of their teaching, because of the potential they knew their students embodied. As Professor Two further suggested, "There's probably not a better profession to be in the service of helping people, encouraging people to be lifelong learners, and to use their minds and imaginations. And I understand that each of those people are going to touch hundreds." Professor Five also illustrated that conception of a positive future in the following:

If you're thinking about education as a practice of freedom, you're sort of looking at the, at an empowerment or liberatory process with the student as an end point. Versus what I think actually happens in [her field] where our social justice prospective is about service. More that the student we work with is a vehicle to service to others beyond the university. And so for me, the larger value in teaching is that I get to work with people who share that commitment to, if you want to be very abstract about it, sort of *public good*. To making a change, not just in whom that student is and how they think or what they do, but what they do with it, around issues of poverty or social problems or inequity. So for me I just think that is the larger thing that teaching attaches to, is the feeling that your students go, leave here and go do something; that sometimes you get to be part of that other something as well. (Professor Five)

Professor Seven described what he strove for was "empowering students," and that the most important thing he could accomplish as a teacher was,

To have students become people of substance, people who take their lives and their learning and their impact on the world seriously. I really don't care if they're in [my discipline], you know, or what they do, but that they

leave my classroom challenged to take themselves seriously as people.

And I think that's what college has become for many Americans, is a place in which they begin to take themselves seriously for the first time. That's really what my goal is, is... not counter to having fun in life, it's just that your impact in the world is real, it's substantial in every single individual. And so it doesn't mean you can change the world, but it does mean that your impact is important. (Professor Seven)

Learning to Learn Takes Precedence

As was illustrated in each of the previous data excerpts, these teachers viewed their teaching as primarily concerned with helping their students learn how to learn and to think critically. The emphasis placed on developing their students' metacognitive skills and understanding is a direct outgrowth of their awareness of the inherent power of teaching. They understood that to simply focus on teaching the content without preparing their students for a lives as creative, critically thinking learners would be a misuse of power, could squander the possibilities inherent to their courses and teaching, and diminish the potential they recognized in their students. After having taught for over fifteen years, Professor Eight summed it up in this way:

When I started out I taught a lot of facts. I new a lot of facts, and I taught them, and I thought they were important to know and, over time, I learned that all those facts change. In [his field] everything turns over every five years, and most facts that I learned when I was a[student] are probably not that important. And so, I've learned that it's probably more important to teach people how to think, and to teach people how to use what they have, as opposed to "there's a list of facts that you need to know." (Professor Eight)

Professor One stated that he wanted his students to go on to have "good lives" and that a part of the good life results from being "actively engaged, not just in voting but in a whole range of activities that you have helped to shape. You discover information, you process it, and you know what to make of it...you can be critically aware of the world. Borrowing an adage from her former graduate mentor, Professor Five suggested, "First teach them how to think, and I think that at the end of the day, that's the bottom line for me. You know I really want to see dimensionality and critical thinking and depth."

Teachers are Essential to Student Learning

These eight teachers demonstrated in multiple ways that they ascribed to the principles of constructivist pedagogies. However, they did not view this in

any sense as a simple zero-sum equation, wherein increased student activity and responsibility for learning was offset by teachers being less active and decreasing their own responsibility. Instead, they saw constructivist pedagogy as meaning more (and different) activities and responsibilities for everyone involved, which placed teachers in a crucial position. Professor Two described the importance of teaching in regard to countering other, less-positive elements in the lives of her students:

I think right now with the more callow influences of this, all this technology and all this computer stuff, I think that it is desperately needed, because I think we're the humanizing aspect. And I don't know if we'll ever go back to a time where we don't have this computer, internet, fast-foods way of getting seeming information. So in that setting I say absolutely it's necessary. (Professor Two)

Professor One conceived of learning as a series of poignant experiences and the teacher's place was to supply the further-experiences needed by the students and cause them to be poignant and meaningful. He posed that "the teacher is to draw out the lessons from the experiences, because for most of us, we aren't asked to move beyond the experience. Teachers ask students to do more than merely experience something." He explained:

I think the role of the teacher is the prod, is the catalyst, is the person who is the strategist, traffic director....You've got the structure and at some point they figure it out, what you're up to, but you pull them down the road and teach them some things that I think they might not know they wanted to know. And you, I mean you, you kind of, you trick them. I don't mean in a snotty way, but you set traps for them, and some of them can be very transparent. They're okay with that. They like traps at some level. I remember once doing one exercise and the student came up to me and said "I know exactly what you were up to. All the way through that thing, you were going to do this, this and this, but I still liked it, I still got something out of it." Because it forced her to think through this process.

(Professor One)

Professor Five stated that teaching is most critical to learning when a teacher becomes "passionate about something, and the students (sometimes despite themselves) become passionate about it too. Often despite themselves in fact, and that often causes them to acquire that which students wouldn't necessarily find on their own" (Professor Five). This sentiment was echoed by Professor Six, who posited:

Extremely bright people, you could probably just sit them in the corner with a book and a paper and pencil and they could probably just do it on their own, that's rare though, that's extremely rare. And I think that an effective teacher can, in addition to presenting the material in a transparent and relevant way, can really help students gain insights that they may or may not have gotten on their own. Part of it is, and this is one place where research does enhance teaching, is by using your research, is by bringing the research into the classroom. In other words, taking research experiences and turning them into effective classroom examples and that will allow students to gain insights. (Professor Six)

New Learning Fits to the Student's Lifetime of Learning

Embedded within the participants' understanding of their importance in promoting new learning was an acute awareness that theirs was only a small, albeit important, part in a lengthy process of learning and development that was embodied in each student. This was an important understanding because it helped them to think about their efforts in ways that helped account for their students' pasts and futures.

Professor Three spoke of how college students had reached a point in their development that education had to respond to who the students were. He told

me that in his teaching he began with the premise, “as one gets up to higher levels of education there should always be this component of choice built in, in terms of, you know, saying to students “what interests you in this particular aspect of the course”? This point was further illustrated by Professor Four, who drew from his experience:

Of course one doesn't enter the class with a blank slate. There is this universe of experience and information that they already have once they enter the classroom. And as a teacher I try to tap into their previous knowledges and experiences, because that's what I do myself. (Professor Four)

He then expanded on the relationship he saw between a student's prior knowledge and new learning. He stated:

Making sense to me means finding meaningfulness in coursework. From personal experience as a student and a teacher, I know that when students are able to find meaning in whatever it is that they study, they become invested in the class, take ownership of their schooling, and responsibility in fulfilling course requirements, and eventually succeed in it....Finding meaning in schooling paves an easier and more successful road to the

development of critical thinking and to a more well-rounded way of understanding. (Professor Four)

Professor Five cautioned about the consequences for students when teachers failed to account for prior knowledge:

I think often we make people feel inadequate in our classrooms as though what they bring is not sufficient or that they've got to meet our goals and that there's only one way to do that. Versus trying to really support and endorse and be embrative in who they are and where they are now, but with an absolute expectation that they're not going to stay there.

(Professor Five)

Professor Seven recalled how he tried to use material in his courses that fit with the kinds of issues and media that his student's experienced:

I try to do material that seems to be part of things that they engage with on a regular basis; so shows, television shows, news events that I think would be tied to their world. I try to speak a language that I think is accessible to them. Sometimes I, you know there's a generation gap, and I mess up words that, you know, I don't get them, and words that they're using and I don't understand them, and so I misuse them. But they think

that's funny, because I'm, they know I'm making the effort. (Professor Seven)

Building a Pedagogy of Larger Concerns

These Teachers came from a wide range of backgrounds, some with extensive experiences with good teaching models, opportunities to think about teaching issues, and time to envision themselves as teachers. However, none of these teachers felt adequately prepared when they began teaching, and all of them spoke of on-going efforts to improve their teaching practices, even though they recognized little external motivation to do so.

Teaching is a Personal Choice and Commitment

These participants made the choice to become effective teachers. They took enormous pride and satisfaction in their teaching and therefore, they were mindful of trying to do it well, and willing to put in the time it would take them. Their individual experiences within the university, their departments, and their disciplines regarding policies and attitudes toward teaching varied. However, each felt that the teaching ecology – whether good, bad, or mixed – did not have much impact on their commitment to their teaching. Professor One argued that choosing to put a lot of effort into one's teaching was generally not something

that would garner one a national, discipline-wide reputation. As Professor One stated, he had to make a choice:

I think what happens in academia is that, at some point along the way, you make a choice about what kind of career you're going to have. You're going to make a career, have a career here at the University of Washington or you're going to have a career in the field that you're in nationally. For a variety of reasons, some by choice, some you just happen into, I have made a choice, probably not consciously most of the time, to have more of a University of Washington career than a national career. Although, I have enough of a presence that colleagues know who I am, but I haven't been active in national offices and don't go to every conference that comes along, and I haven't been active in those national organizations. So...the point is I'm trying to make here, well, the kind of career you choose to have purposefully or by default probably has a lot to do with how you engage in things. (Professor One)

Professor Three argued that it was the personal autonomy built into the job that enabled him to choose to fully engage in teaching:

One of the appeals of the job is that you're responsible to yourself. You can to some degree choose how you, how and when you want to work

and the kinds of things you can specialize on. And so in that degree I've certainly made some choices. And, you know I can't imagine myself where I would say, "well I'm just choosing to finish this paper and therefore I won't get ready for class." (Professor Three)

Being engaged in their teaching did not mean, however, that they let their other faculty roles slide. As professor Six explained:

I think I could do a lot less and still be a decent teacher, but I wouldn't be as effective as I am now. So I want to be well above decent; I really want to be effective. And I'm trying to be as effective as I can without placing too onerous a time burden on myself that it really starts effecting the other parts of my job that I have to get done. (Professor Six)

Each of these teachers was known for, and took pride in their scholarship. Professor Seven reflected, "I don't think I'd be satisfied being a professor who didn't do research or a researcher who didn't teach. I think I need both of them to be professionally satisfied." He described his faculty roles as a necessary "whole package," much like the complete package he tried to provide his students. He called it,

The desire to teach to the whole individual, and that wholeness, seeing the whole package of learning, of the way that knowledge is gained and... but

wanting to respect the whole individual also prompts me to want to feed the whole individual in myself in terms of the intellectual gain that comes from the research, the pursuit of knowledge and then the kind of creation and framework then dissemination of it through teaching. So the whole part of me, I wouldn't be satisfied, I think I said the first time, with just a part of that (Professor Seven).

In order to fulfill all of their faculty commitments these teachers simply put in the time and effort that was necessary. Professor One put it this way:

I'm probably not the kind of person who would've ever worked a 40-hour week as a career kind of thing. I do things, I just get engaged with stuff and so I, I don't think of it as "I've gone an extra mile." If you had a 40-hour week mentality, sure, but then if you have a 40-hour week mentality you're not going to be in academia. (Professor One)

Work Ethic as Core to Teaching

These participants were well aware that choosing to teach well meant putting in many hours in preparation prior to each course and before individual classes. A portion of their efforts was on improving courses they had already designed and taught, because they were not satisfied unless they could improve what they recognized as needing further development. As Professor One

maintained, "You're only as good as your next class." Professor Three revealed that some of his motivation to put in the extra time came "from within, I think. I mean I don't like to lose face. I mean in the sense of I don't like to be caught short as you all might say. And I'm sort of proud of my knowledge of the field, that's why I'm sort of, maybe overly prepared, you know" (Professor Three). His point was reiterated by Professor Five, who stated "I think a lot of it is intrinsic. It's sort of a self-esteem issue, not to be a teaching award winner, but just to do a good job."

Professor Four described his course preparation as possibly overly meticulous so that his teaching wouldn't appear as such. He suggested:

The trick there is to give an impression to the students that you are not that meticulous. Not that you are not that careful, but you're not anal, anally meticulous. But very few students know how much prep I do in terms of, you know especially in big lecture, I do a lot. I devote so much time and energy right before a class, that part of that preparation is to train myself how to execute that, giving the impression that I just thought about it right now, you know. (Professor Four)

It wasn't just the time they put into preparation, they were also committed to quality interactions with their students, which weren't always thought to happen during class times. As Professor Five Revealed:

I know that I put additional time into feedback to students or availability to students, which are two of the big time consumers. I think as you get more experienced preparation is less the issue than the kind of conversations you make yourself available for, or the willingness that you have to spend time so that students really master the material. And the fact that they keep coming back for conversations. I mean, I've spent several hours today with doctoral students from my class last term who are not formally signed up with me, but they're just wanting to use me as a sounding board. It would be probably strategic to say no to that and focus on writing at this point, but it's a part of my philosophy of teaching has been trying to be present to students in a particular way. (Professor Five)

Professor Four argued:

For me it's just there isn't enough time, you know. There's not enough time to do everything I want to do, and I tend to, more than most, allow my teaching to be a priority.... It's just, I don't know if it's my teaching

style or the courses I teach, I end up with a lot of work behind the scenes with students, so that's where the time crunch comes into it, I think.

(Professor Four)

Professor Six understood exactly why she put in additional hours, so learning could happen. She stated:

I actually do believe that the real learning and the reshaping of the brain, I can sort of see it happening in office hours.... And it's a big commitment on the part of myself and the TAs, but we're willing to do it, it's fun, and the student's really seem to like it. So, and I actually seem to be witnessing learning taking place. So, some of it takes place in class, but a lot of it takes place working through homework problems and exercises right in this room. (Professor Six)

Teachers Get as Much as Their Students

Even with all the time, and thought, and caring these teachers put into their teaching, they did not view their efforts as selfless endeavors. These people were fulfilled by what they did with and for their students. As Professor Two declared: "I can't believe my good fortune. I think that teaching gives back so much, it is so interesting. I mean, if you are half awake you can't go dead in this

job.” Professor Eight reiterated how personally rewarding teaching could be; he declared:

It keeps you young and it keeps you learning. If you teach, you really have to be on top of things, you have to double-check what you are saying. Your learners are always teaching you as well. They're bringing good questions and they're often teaching you about things that you may not know. So, I think it does a really nice job of keeping you up-to-date with things and it doesn't allow you to get to place where you stagnate.

(Professor Eight)

Professor Five also told of the pleasure she got from teaching:

And suddenly a conversation emerges that is, well, your learning things and their learning things and it's, there's nothing better and sometimes nothing harder to get to. So I love that, that possibility of... the possibility in teaching people and watching growth, and having it myself, because the students teach me all the time. (Professor Five)

She explained that “there's something about the immediacy of teaching that keeps drawing me back to the classroom.”

Professor Six spoke of the pleasure she felt when she encountered former students:

I just call it the *mother hen and her little chicks*, and as I said, when I go to some professional meetings and I see all my little chicks, they've hatched, they've flown, they're successful, and they're using what I taught them, and that is a very good feeling.

Effective Teaching has a Reflective Foundation

One of the themes that cut across the participant data, was that they based their teaching decisions on holistic and congruent systems of conceptions; philosophical frames that helped them to perceive their teaching in larger contexts. The data indicate that these systems were developed through consistent reflection on, and adjustment to their experiences. These teachers were skilled at viewing their teaching from different perspectives. Professor Two described her point of view on maintaining a balance when she put so much into her teaching:

There is the danger of that burnout for some of us...I think that's why I think people might codify, you know, get out that old lecture and use it. That's because it's almost a visceral recollection of the exhaustion....Self-management and good use of time is not just for you. Ultimately it's for the students, because if you do burnout they won't have you anymore, and I've been in danger of that more than once....This is a lifetime work,

and as you grow in your own understanding and maybe wisdom and it is starting to further influence the way you teach you ought to have as much energy as you can so that you can keep working. (Professor Two)

"I always ask myself," Professor Four recalled:

If I am the student in this class, what kind of a teacher would I expect?

What would make me stay in this class and listen to this guy talk to me for like two hours? I always think about that from the perspective of the other side, you know both in preparing for a class as well as evaluating myself after a class, or even during class. (Professor Four)

Professor Four held a conception of teaching and learning, wherein *pleasure* was the affective dimension that enabled both. He posited:

I think the most important element about teaching for me would be a combination of pleasure with learning or learning with pleasure. I really believe that, and it's not to say that I want to treat students like kids, like little children, but to me pleasure produces a lot of things. It's very infectious when students see us as the teacher who's deriving pleasure out of the material, they get infected by it. And I really do observe that when students take pleasure in the course material they become more successful learners. It produces a lot of interesting material and therefore they get to

engage the materials in much more, not only pleasurable ways, but much more effective ways. So I think those are the most important parts for me.

(Professor Four)

One of Professor Five's teaching principles was the result of reflecting on her own student experiences. She held that,

If you set up expectations, you need to meet them....Part of it is also having a somewhat foremost belief in covering what you say you will. Or being open with students about when you abandon and not just sort of meandering because you don't really have a plan, a lesson plan, if you're going to put it in those terms. I hated that as a student, and I think students hate it in general. And they hate people who are wedded to a binder of notes, and who don't pay attention to the way students want to dig into something in a different way, or a conversation that's sort of an unexpected one, and who can't get off the script. (Professor Five)

Maintaining a Metacognitive Awareness of Students' Learning

The importance of staying attuned to cues and clues while in the act of teaching afforded these teachers the opportunities to recognize whether learning was happening and when to make adjustments in the classroom. This awareness also figured into their post-class assessments of their teaching. For example,

Professor One recalled how he felt when he finished a class: "Every day when I leave the class, I know how I did that day. I just have a feeling, and it's the sixth sense, and there are lots of measures to it." Professor Six described what she observed when she held an after-class study session for her students. She said:

That's where I saw real learning take place. When, and I think I almost observed it accidentally, when I was going to start helping a student with a problem they were having. And one of the other students, who had just gotten it, started to explain it, so I shut up. Because I figured it was better, I realized that what I was witnessing was pure teaching, pure learning, and from that experience, kind of reconfigured the class. (Professor Six)

For Professor Seven, maintaining an awareness of his students' learning in the classroom was part of doing the job right. He stated:

I think there's an ethical principle involved here, as an educator that you should be, that it's my job, and I mean (I use that word intentionally) it is literally what I'm paid to do, and also it is my, I believe, responsibility.

Here I mean it more ethically, to be both present for the person who I am interacting with as well as the entire group. And also, at the same time all that is going on, to be aware of my own reactions to the dynamic. So that happens through just developing essentially norms for how I engage in all

conversations. It's, it seems to me an issue of respect. I respect the student who is speaking, or I'm speaking to, by listening and by tailoring comments to that person's comments. I respect the entire class by being, as much as possible, in tune with what's going on with them. (Professor Seven)

This concept was also proposed by Professor Eight, who related metacognitive awareness to effectiveness, he suggested:

I think one of the most important things is being able to receive feedback from the person you're teaching. That even in the middle of a lecture or in the middle of talking with somebody, recognizing if they are understanding what you are saying or even listening to you, and being able to change (on-the-fly) your approach to reach somebody. I think that is crucial. I really think that is the key to being effective. (Professor Eight)

Collegial Support is Important

Feeling inhibited from freely discussing their ideas and enthusiasm for teaching was noted as a common concern for these eight faculty members.

Although much of the intellectual work that occurs in the academy necessitates individual and even solitary effort, support and validation for that effort comes

from a valued collegial community. These teachers recognized the need and importance of a collegial teaching community.

Even for teachers such as Professor One, who described his department as having many excellent teachers and leadership that was supportive of teaching, there were particular conversations about teaching that didn't take place. He offered that:

Colleagues are the last people to sort of say anything nice to your face. That just not the nature of the work. But then you also, if you, I mean this has worked for me, I have networks of people I deal with. I have created, I am part of, I haven't created, I am part of networks, outside of this department, of people interested in teaching. And those are very meaningful on a personal level, but also they're very reinforcing....I know some pretty sophisticated people on this campus who are known as good researchers, who are also known as good teachers, and that it's a large enough cohort that it matters. (Professor One)

Professor Two described the situation in her department in much the same manner, in that she felt that there was attention paid to teaching, but the meaningful conversations weren't happening. She described her feelings when

she won the Distinguished Teaching Award and discovered other teachers like herself:

I think one of the high points about the teaching award period, was the shorthand, even unspoken physical comfort we took in each other. I felt like, I don't know if that was just me, but I felt like, and my friendship with [another award recipient] has lasted. I really love her presence and her spirit, and she's come to a class. I felt, in the gathering of those people like, one of my colleagues said when I got that award, "now your little dirty secret is out, you're a fabulous teacher and it's out." You know, it was really funny, but I felt that with those people, we could rest in what we believed in and what we were able to do well, and there was no pridefulness in it, because we were in a room full of them, so none of us was better than anybody else, and nobody was worse. We just had been recognized for something we had dedicated ourselves to, and I just found this great ease in it. With her and with [name deleted] particularly, but that we could just, I don't know, so that would be something I would seek out if I had a way to do it, but I don't know how to do that. (Professor Two)

Professor Six spoke of the conversations she had with university colleagues at events such as the annual summer teaching institute, she stated:

One of the reasons they're happy to be at a formal event (where the sole focus is on improving your teaching and communicating with colleagues about, you know, different ways of teaching and different ways of engaging the students, etcetera) they're happy to be in that kind of a place, because they know that it's safe to talk about teaching and they won't be viewed as, or in the light of, "oh, you're spending so much time on improving your teaching that you must be letting your research slip," or something like that. The notion that I got is that there are departments on campus where people are really afraid to, or they won't, they won't bring up teaching issues, because they're afraid that they will be perceived that way. That the response will be that "hey, this is a research university, you know we need to teach decently, but don't spend or don't waste any more time trying to be a more effective teacher, because that will take time away from research." And I know that obviously there's a need for a balance, but my heart goes out to those who feel it's unsafe to talk about teaching in their own departments. (Professor Six)

Top-Down Qualitative Abstractions

I set out to gather data that might provide answers to the following questions: (a) *What conceptions of teaching do these faculty members hold that help them to be effective in their teaching while successfully interpreting and navigating within a research-intensive university setting?* (b) *How do faculty members become effective teachers in a research-intensive university?* (c) *What meanings do these faculty members construct from the multiple roles they fill?* (d) *What motivations or impediments to effective teaching do they recognize in a large research university?* (e) *What constitutes effective teaching from an effective teacher's perspective?*

I mentioned in the previous chapter that I did not use these questions as a categorization scheme for the findings so as to permit the participants' viewpoints, as to which conceptions are most meaningful, to emerge. Therefore, answers (in varying degrees of completeness) to these questions are drawn from both the descriptive and abstracted findings.

What conceptions of teaching do these faculty members hold that help them to be effective in their teaching while successfully interpreting and navigating within a research-intensive university setting?

I believe the findings reveal a complexity of conceptions, the interplay of which seems to provide these teachers with the means for success as faculty

members in their particular ecological niches within a research intensive university. Some of their individual conceptions were very much akin to conceptions held by the others. For example, each of these teachers recognized the innate potential to be a positive force beyond the classroom that was embodied by their students. This powerful concept drove their teacher decision-making down student-centered pathways, and seemed to underlie much of the pleasure they drew from their teaching.

Another example of the similarity of some of their conceptions is the idea that effective student learning requires the help of an effective teacher. These participants revealed lessons drawn from their own experience as students and teachers that without the interventions of teachers (and the domains they represent) the possible quality and completeness of student learning is extremely truncated. This concept helped them to weight the importance of teaching among their multiple faculty and personal roles and to achieve a role-state that supported teaching effectiveness.

As a constructivist perspective would lead one to expect, there were many conceptions (revealed in the second order statements and lifeworlds of the participants) that were not congruent across the participants, but were nonetheless important to their effectiveness within their unique ecological niches. For

instance, Professor One spoke of the wonderful teachers in his department and the cultural expectations of good teaching, and yet he felt the need to go outside of his program to actually hold meaningful conversations about teaching.

Professor Six felt that conversations about teaching were even more constrained in her department and she had to bide her time until some of the old guard retired before certain teaching topics could be discussed. Professor Two's experience of her environment, in terms of feeling that she shouldn't reveal too much about the importance she placed on teaching and the sense of fulfillment she derived from it, isn't that different from what some of the other participants revealed. However, her conception of teaching in a research university led her to a sense of the inevitability of a lesser position for teaching and teachers and to be much more cautious in reaching out for the collegial support she wanted. As she revealed, it wasn't until she received the Distinguished Teaching Award that she found herself amongst a group of teachers with whom she felt able to be her teacher-self. The point here is that some of the participants' teaching conceptions were amazingly congruous, but they were still unique to the individual. Each of the teachers indicated a desire for collegial support of their teaching, and their particular circumstances led them down different paths to fulfill those desires.

My review of the literature led me to assume these effective teachers would hold constructivist conceptions with regard to the a priori importance they placed on their students' prior knowledge in the construction of new knowledge. This assumption proved to be accurate. Many of the teachers in this study had only a cursory understanding of constructivism as a philosophy or as a theory of learning, but even so they developed conceptions of learning and attendant pedagogies that were constructivist at their core.

How do faculty members become effective teachers in a research-intensive university?

Participants revealed that there really was no particular process or track or model for becoming an effective teacher. They entered the research university environment with varying amounts of teaching experience and understanding of teaching issues, pedagogies, and themselves as teachers. Several had experiences with past professors, from whom they drew ideas, and several had the opportunity to teach when they were graduate students. A few of these participants were attracted to teaching very early in their lives, and some were influenced by their parents who were teachers. Still others discovered their interest in teaching while they were in the act. The number of dissimilar experiences and motivations that helped them to develop the effectiveness of their individual teaching far outnumbered the similarities. However, as the

findings demonstrate there appears to have been at least one essential similarity that each of the participants relied on to ground the construction of their teaching conceptions. That similarity was their deliberate use of reflection as a way to make their past and current teaching experiences meaningful.

I assumed that these teachers would be reflective learners, well able to delve deeply into their own prior knowledge in light of new experiences and develop important new understandings. This assumption held up well with these exceptional teachers. Each of these teachers revealed they developed their teaching conceptions by reflecting on their past learning and teaching experiences and then continuously monitoring and adjusting those conceptions as they interacted with students and faced new information.

In an academic system that presumes teachers will develop their pedagogies on their own, it isn't a stretch to assume that most teachers will base their teaching on what they retained from past experiences as students. More often than not those past experiences do not involve formal teacher development, course work on learning theories and pedagogical models, or structured opportunities to examine teaching concepts. Without those enriching experiences, wherein they have the chance to learn about other ways of teaching, instructors generally have limited resources to do more than repeat standard

teaching practices and reproduce past outcomes. I assumed that repeating standard practices would not result in effective teaching and those instructors who did so would not be recognized as effective teachers. Therefore, I assumed the teachers in this study would have developed their abilities to reflect on and improve on their teaching conceptions. Based on my findings, that appears to have been the case.

Revealed throughout our conversations were their reflections on ideas and events from which they accumulated their stocks of knowledge. This, of course, is congruent with what much of the literature on knowledge and conceptual development reveal about how people come to know. However, what these participants showed was that the reflectively derived understandings that were most meaningful helped them to reveal and assess their prior conceptions.

These teachers conceived of teaching as being far more important than simply promoting the construction of content knowledge. They maintained conceptions of teaching that encompassed facilitating personal and social good and therefore saw their decisions and actions as including ethical and value judgments. They used their reflective skills to search beyond an evaluation of one teaching method versus another and the degree to which learning goals were

met. Certainly that level of evaluation was important to them as they each spoke of ongoing cycles of feedback and data gathering, analysis, and improvement. But what they also revealed was a concern that they were doing the right thing for their students and that their actions were sustaining a larger set of value commitments.

Drawing from the professional behavior theorists, Svinicki (2004) posited that “what distinguishes a professional in a field is his or her ability to engage in reflective practice. Reflective practice involves examining assumptions that underlie your actions and making them consistent (p. 5). These teachers used reflection as a primary means for developing their teaching and their courses. Reflection helped them to examine their experiences from the perspectives of the others who were involved, and to maintain an ongoing conversation with their underlying beliefs and values.

What meanings do these faculty members construct from the multiple roles they fill?

This question was deliberately imprecise in conveying its intent, and was first asked with the assumption that the meaning of the question itself would be clarified by the sorts of things the participants chose to reveal concerning their roles. With this in mind, the question is best answered with a reading of the descriptive findings, which reveal the relative weight these teachers assigned

particular roles and how roles were related. Each of the participants spoke about the importance they placed on their teaching. Several, such as Professor Three and Professor Eight, chose to concentrate the bulk of their faculty roles on teaching, and other's mentioned that they would teach more if they could. Still other participants, such as Professor One, Professor Four, and Professor Seven argued for the synergy they saw between their teaching and research/practice roles. Professor One conceived of the whole of the university as a place of ideas and each of his faculty roles was bound to the others by that conception.

What motivations or impediments to effective teaching do they recognize in a large research university

Findings demonstrate that these teachers were intrinsically motivated to teach effectively and to continue to improve their teaching. Although they appreciated the merit pay, the teaching awards, and the limited university recognition that was tied to teaching, these extrinsic factors were not thought to exert much influence in terms of motivating them or other teachers to improve beyond teaching adequately, let alone to strive to become effective. Although they reported the normal teaching rewards had little influence on their teaching, the one factor that several of them recognized was that the university's

expectation of faulty autonomy and self-directedness enabled the level of attention they paid to their teaching.

What constitutes effective teaching from an effective teacher's perspective?

I asked each of the participants if she or he agreed with the conclusion that they were effective teachers. They each agreed, some forcefully and some with a bit of hesitation. However, it was clear that each had pondered the many factors that helped them to be effective, and they recognized that it wasn't a method, a technique, or a standard formula. Quite often the things they identified as being integral to their own effectiveness would extend with little adjustment to the advice they offered to others, however, that was not always the case. They also revealed insights, to which they ascribed profound personal value and influence on their teaching, that they none-the-less did not offer as advice for others.

Chapter Summary

This chapter consists of two different types of findings: qualitative descriptions and qualitative abstractions. The descriptions, or teaching lifeworlds for each of the eight participants, help provide an understanding of their individual conceptions, character, and circumstances. These descriptive findings are intended as windows into the thinking of these effective teachers

with the possibility of enabling heuristic meaning-making for those who look inside.

The second types of findings, qualitative abstractions, are interpreted themes and categories that arose from a cross-case analysis of the data. From this analysis emerged several important categories and one primary theme that seemed to encompass them all. As a result of an additional top-down analysis, answers to the primary and secondary research questions were also revealed. In the following chapter these findings are discussed in light of the literature and in regard to their potential effects on the larger teaching culture.

DISCUSSION

Why is it important to examine the teaching conceptions of effective teachers? I believe that Professor Five revealed the answer in the second interview. I asked her what her motivation was for participating in this study, and she stated the following:

I think it's because I, outside of being a participant in it, I actually am really interested in what the ingredients or the intangibles often are around good teaching. I mean there are all those teaching tips and teaching techniques, but it seems like there's also really good teachers. There are just things that they do that are incredibly hard to communicate and distill, and yet they probably are things that can be, if through this kind of research, understood better. I want to learn from it actually, at the end of the day....I don't find it necessarily any easier than I ever have to communicate about what those might be, but the process of sort of thinking about it and attempting to distill it for myself, I have actually been very interested in, yeah.

The intangibles she spoke of are the teaching conceptions held by the "really good teachers." The purpose of this study was to identify some of the

conceptions that led these teacher-participants to effective teaching practices within a research intensive university. It was not intended to discern a causal relationship between the participants' teaching conceptions and particular teaching actions. However, I believe the literature and the findings demonstrate that there is a causal relationship between what one knows and thinks and how one behaves in general, but finding one-to-one relationships (if at all possible) are beyond the scope and intent of this research. The intended outcome of this research is to provide a window into the meaningful experiences, values, beliefs, knowledge, and perspectives that hold a priori position in the teaching lifeworlds of the participants.

The argument can certainly be made that the window, provided by this research, isn't sufficiently wide enough or transparent enough. My rebuttal is, "it depends." It depends on your own a priori conceptions of teaching and research on teaching. It depends on whether the findings and my conclusions help you to better understand the conceptions of these effective teachers and whether that better understanding affects your own conceptions.

Professor Five's answer (above) reveals what I understand to be the most important aspects of phenomenographic research and why it was chosen for this study. Professor Five articulated the importance of trying to discern phenomena

that is mostly hidden – the meanings effective teachers have made of their experiences and their thinking – meanings that are seldom laid out in the open for the benefit of others. Phenomenographic research is intended to expose those meanings for others to view, but in that exposition, not to separate those meanings from the contexts (the lifeworlds of the participants), which is why they are meaningful to the participants in the first place. This, it seems to me, is the fine edge that phenomenographers must walk, the edge that separates their research from other interpretive (qualitative) studies. This is also where phenomenography, as it is generally conceived, often pushes phenomenographers over that edge.

The second reason I chose this type of research is also revealed in Professor Five's statement. She said it was important to her to think about the intangibles of effective teaching and distill them for herself. The heuristic opportunities afforded by glimpses into the lifeworlds of these effective teachers make phenomenographic research particularly valuable. I believe that at this point it is important to heed the advice of Saljo (cited in Richardson, 1999) who posed, "The activities of phenomenographers themselves should not be exempted from phenomenographic analysis" (p. 68). In the following section I

will look more closely at some of the things I have come to understand about the methodology in light of my experience conducting this study.

Insights into Phenomenography

Phenomenography is the methodology of choice for many researchers interested in studying conceptions of teaching (see Smith, 2006). For the reasons discussed in the previous section, I agree that it is the appropriate choice.

However, as I argued earlier I believe that the standard approach to phenomenography is flawed. This research has helped me to understand better the character of that flaw. This is not intended as a critique of the reliability of phenomenographies, and I haven't discovered a solution other than for phenomenographers to face the flaw head-on and come to an appropriate articulation of their thinking.

Standard phenomenography is intended to gather multiple second-order understandings of a phenomenon and then compare them in order to develop an expansive understanding of the *essence* of the phenomenon in light of multiple realities (see Merriam, 1998; Patton, 1990). Marton (1986) described phenomenography as "a research method for mapping the qualitatively different ways in which people experience, conceptualize, perceive, and understand

various aspects of, and phenomena in, the world around them" (p. 31). This I believe is a laudable quest, but there is an easily overlooked methodological shift that occurs when the researcher begins the "mapping" of people's experience. What I have come to understand is that this standard approach is actually two different qualitative methodologies with their attendant methods and theoretical and philosophical underpinnings. Now I do *not* think the dual methodology of phenomenography is really a flaw. The flaw is in researchers not recognizing it as such, and assuming a single methodology and then not remaining sensitive and sincere to that methodology. I will explain my reasoning in the following.

One of the gross similarities between most types of human subject research, whether qualitative or quantitative, is the process of collecting data. Not that the collection methods are necessarily alike or that the data are analogous, but simply that data *are collected* in the research process. Additionally, they are similar in that during the collection process or during the analysis of the data the connections between the data and the human subjects, from whom the data were collected, are severed. With this severing, the data (whether in the aggregate as data sets, or separately as data points) are expected to become new entities or texts, and these texts are expected to convey to the resourceful research analyst ideas that the human subjects could not. These new

data texts might be said to be *from* the participants, but they are no longer *with* the participants.

Phenomenographic data collection attempts not to sever the participant from the text. As Webb (1996, drawing from Marton, 1981) suggested, phenomenography “considers only the second order or conceptual thoughts of people. Phenomenography attempts to aggregate ‘modes of experience...forms of thought’” (p. 2). I mentioned in the methodology chapter I believe it is a failing of phenomenographic research when standard qualitative analysis methods are used, which sever the subject/data relationship. Standard descriptions of phenomenography infer that this severing either doesn’t occur, which would be disingenuous and would cast a pall on the validity of the research, or that the phenomenographer could maintain allegiance to the theory that underlies the data collection, while at the same time making first-order meanings from the data. That theory suggests that second-order meanings may be captured and portrayed accurately by someone other than the meaning-maker.

I contend that interpretation of data, or “mapping” as Marton (1986) called it, is synonymous with severing both the participants from the text as well as the phenomenographer from her or his methodological anchor. Adawi,

Berglund, Booth, and Ingerman (2001) characterized this severing process as what occurred when a researcher “deliberately strips away contextual features of the data in order to focus clearly and exclusively on the phenomenon as experienced” (p. 82). They referred to the data in phenomenographic research as a “pool of meaning” and suggested that the quality of phenomenographic data depends on the retention of the *context* as it is “experienced by the participant, that is, what the participant experiences as being relevant for making sense of the situation at hand, this being interwoven with the experience of the phenomenon under consideration” (p. 84). In qualitative studies, data collection methods often leave the participant behind, and if not, then it is in the *interpretation* of data by the researcher whereby the context experienced by the participant is severed from the data.

When the researcher becomes so immersed in the data that codes, and categories, and themes begin to emerge, that is when the participant goes missing. Clandinin and Connelly (2000) posed that when trying to create categories, with which to generalize aspects of participants’ lives, the “nuances in each person’s life fragment the categories” (p. 140). In other words, something has to give, and if categories are to be maintained then it is the nuances in participants’ lives that end up on the cutting room floor. When this happens in a

phenomenography and the phenomenographer's analytic behaviors begin to mirror those of most other types of qualitative researchers, then the study is no longer true to the philosophical assumption that the conceptions being mapped are still second-order conceptions and not the first-order understandings of the researcher. Webb (1996) discussed this problem and asked himself, "What are the 'prejudices' of phenomenographers as they construct and interpret categories of understanding: what is the 'something theoretical' which informs their observations? What else can it be but their own historically and socially informed understanding" (p. 2).

Qualitative research has at its core an interest in understanding what other people think about things in order to come to better socially derived understandings of those things. This is in essence the concept *verstehen*, which means to understand in a way that accounts for multiple subjectivities.

Qualitative researchers understand and account for the effects of their own prejudices on the entirety of their studies, from design to discussion.

Phenomenographers rightly believe they have done a better job at limiting the effects of their prejudices on the data they collect. Unfortunately that leaves them methodologically vulnerable when the full force of their "historically and

socially informed understanding” comes into play in the analysis of data and their creation of verstehen.

This is exactly what I attempted to address in this study, which is why a clear distinction was made in the analysis between the descriptive phenomenographic findings and the interpretive abstractions. Bogdan and Biklen (2003) identified this difficult position held by phenomenographers and explained it in this way:

Intrusion of the researcher on the informants’ world, however, is inevitable in research. After all, the researcher is making interpretations, and must have some conceptual scheme to do this. Qualitative researchers believe that approaching people with a goal of trying to understand their point of view, while not perfect, distorts the informants’ experience the least. There are differences in the degree to which qualitative researchers are concerned with this methodological and conceptual problem as well as differences in how they come to grips with it. Some researchers attempt to do “immaculate phenomenological description”; others show less concern and attempt to build abstractions by interpreting from the data on “their point of view.” Whatever one’s

position, qualitative analysis has to be self conscious in regard to this theoretical and methodological issue. (pp. 23-24)

I contend with the design of this study that *interpretation* of phenomenographic data is indicative of a theoretical perspective that is not commensurate with phenomenography. So why have I continued to characterize this study as phenomenographic? I believe the data collection, the data, and the descriptive analysis (although I would not characterize it as “immaculate”) fit well within the phenomenographic framework. I also believe that the qualitative abstraction (interpretive analysis) of the data, although not phenomenographical, is heavily characterized by the phenomenographic nature of the data. Lastly, by attempting to balance the phenomenographic intent of this research against a personal philosophical stance that all research design and conduct are tainted by a priori decisions of the researcher, I believe that I was much more aware of the fragility of the phenomenographic construct and thus better able to protect the phenomenographic nature of the data where possible. As Adawi et al. (2001) suggested, “Since the analysis takes its starting point in the pool of meaning thus constituted from the data, the quality of the data is crucial for what might emerge from the analysis” (p. 83).

What I discovered in the midst of this research was that when one is intent on collecting second-order *pools of meaning* and then switches to constructing a comparative analysis of those pools then the severing of the participant from the data has begun and first-order meanings become the researcher's defacto intent. However, as long as one is aware of this and retains the phenomenographic intent (to keep the participant in the data) as a goal to shoot for there is a much greater probability that, as Bogdan and Biklen argued, it "distorts the informants' experience the least" (pp. 23-24).

Making Meaning with the Findings

What can I say was learned? I learned that this study barely reached the surface of my participants' teaching lifeworlds. I learned that it would take a larger manuscript than this to fully explore even one of my participants' conceptual bases for teaching effectively. Each successive interview held with these teachers revealed new layers and networks of different ideas and feelings and intentions, the abundance of which consistently challenged the notion that understanding could be achieved by an outsider. The oft heard proposition that qualitative research in general and phenomenography specifically is concerned

with developing a better understanding of the meanings that others make of their experiences seemed a bit flippant when faced with the actual task.

I had to periodically remind myself to guard against premature attempts at understanding. Understanding is not an object like a ball that can be tossed back and forth in a game of catch with no perceptible change to its character. Understanding doesn't work that way. If it were a ball, each successive catch could result in some distortion, perhaps imperceptible, perhaps profound, because to catch it would mean to ascribe meaning to it. What I had to do (I reminded myself) was to play catch without actually catching the balls the participants were throwing, and to not concern myself with understanding the meaning of what they were revealing. I had to encourage the throwing while I delayed the catching for as long as I could. The understanding that might eventually be achieved would be done at a time when my own view point could be taken into account. That understanding would be my own and not my participant's, just as the view points of readers of this study will affect what they take from this study.

My intention from the beginning has been that this research might benefit other teachers, future teachers, and the faculty developers who assist them. The beneficiaries would be those individuals whose own interests, values,

knowledge, or circumstances provided them with the heuristic essentials for connecting with what was written.

Hativa et al. (2001) examined the research on exemplary university teachers and concluded:

In sum, exemplary university teachers are well prepared and organized, present the material clearly, stimulate students' interest, engagement, and motivation in studying the material through their enthusiasm/expressiveness, have positive rapport with students, show high expectations of them, encourage them, and generally maintain a positive classroom environment. (pp. 701-702)

This is an excellent summary of the research, and the findings from this study support those conclusions in as much as my research participants held conceptual affiliation with this list of exemplary teacher actions. Prosser and Trigwell (1999) found in their study of teaching conceptions that the relationship between teaching and teaching conceptions was generally quite consistent. Based on my data, I can not affirm the conception/practice relationships found by Prosser and Trigwell existed with my participants, as I did not collect observational data. This study also does not allow me to state that my participants *did* any of the things proposed by Hativa et al. (2001), but the

findings clearly show that these are things they believed were helpful, these are things of which they held reflective experience-based understandings, these are things that are epistemologically congruent with their teaching conceptions, and these are things for which they were recognized as distinguished teachers.

From the review of literature on teaching effectiveness I summarized earlier that research on teaching and learning in research universities, if combined with an acknowledgement of the pluralistic nature of the purpose of these institutions, would lead one to the following understanding: *Effective teaching in a research university must fit within an overarching ethic of student-centeredness and a notion that teaching ultimately promotes higher-order learning, while also allowing for specific disciplinary, departmental, programmatic, and curricular ecologies, which may require a range of conceptions and methods of teaching.* I believe my research findings support the concept that effective teachers are learning and learner-centered, as well as the broader notion that their teaching conceptions are affected by and adjusted to their particular circumstances.

As was revealed in the findings, these teachers held a sense of awe and respect for the powerful possibilities inherent to teaching, which gave rise to serious consideration of their students' potentials. The data demonstrated they

were committed to helping their students to have personally relevant lives and positive effects on the world.

The analysis also found that the participants were personally committed to being effective teachers and held strong work-ethics. These teachers reflected deeply on their experiences and developed principled understandings: of learning, as being lifelong and thus embodied in the life of each learner; of how crucial it is to recognize when learning is occurring; and knowing that teachers are indispensable for promoting important student learning. Additionally, it was found that these effective teachers viewed teaching as a two-way street, and felt they were getting and giving in equal measure. Data also revealed that having the opportunity to hold frank conversations about teaching with their colleagues was very important, and often difficult to find.

Of particular importance, this research revealed that for these eight effective teachers their teaching conceptions were bounded by an overarching framework, a phenomenon I refer to as a *pedagogy of larger concerns* (POLC). In the literature one may find definitions of teaching conceptions that range from a single discreet understanding of a specific phenomenon (see Pratt, 1992) to a larger group of notions related to teaching. Teaching conceptions are defined by Freire and Sanchez, for example, (1997) as “a set of ideas, beliefs, understandings

and interpretations" (p. 498). Both definitions are open-ended enough to fit what this study has led me to understand about a POLC.

Described as a specific phenomenon, POLC is a conception of the teaching endeavor, wherein the teacher holds a personal commitment to an ideal outcome of her or his teaching. Although (as this study demonstrated) the ideal outcome differs by individual teachers, it none-the-less seems to encompass a future-oriented vision, in which students are independent actors functioning positively, creatively, and critically in the larger world. This definition encompasses two of Pratt's (1998) five perspectives on teaching. Specifically his "*developmental perspective*, which cultivates ways of thinking, [and] the *nurturing perspective* that is concerned with facilitating self-efficacy" (p. xiii). For most of the participants in this study, elements of Pratt's "*social reform perspective*, wherein seeking a better society is its purpose" (p. xiii), would also be included in their POLC. If in fact, a POLC includes two or three of Pratt's specific teaching perspectives (conceptions), it raises the question as to whether teachers' can be, or should be, cast as holding to a discreet conceptual type.

It seems more likely that a POLC is better characterized as a set of interrelated understandings that are bounded by an ideal outcome, as described above. One may envision a POLC as a conceptual network with every concept

directly linked to a nexus node. Findings from this study describe five dimensions of a POLC conceptual network: (a) Teacher's Power is Leavened with Responsibility; (b) Students are Synonymous with a Positive Vision of the Future; (c) Learning to Learn Takes Precedence; (d) Teachers are essential to Student's Learning; and (e) New Learning Fits to the Student's Lifetime of Learning. These may not be the definitive five dimensions of a POLC. I believe further research into this important phenomenon is necessary to add to or refine this list.

When viewed as a whole these POLC dimensions provide support for Samuelowicz and Bain's (1992, 2001) and Kember's (1997) contentions that student and learning-centeredness and a concern for higher orders of learning are linked. Teachers who hold to the dimensions of a POLC may very well be akin to the teachers Davis (2004) called "complexivists" who conceive of students not as "neophytes, initiates, or novices to be incorporated into an established order. Rather, like teachers, they are participants – and in fact they play profound roles in shaping the forms that are popularly seen to shape them" (p. 171). Davis stated that "For complexivists, teaching is participating – in the production of personal knowing and collective knowledge, in the evolution of personal identities and collective forms, and in the shaping of personal activities

and collective possibilities" (p. 171). This understanding of teaching, described by Davis seems to fit well with a pedagogy of larger concerns ascribed to the eight teachers who participated in this research.

These eight teachers were personally committed to a POLC. They understood the complexity of their teaching endeavors. They seemed to deal with the complexity by aligning the specific circumstances of their faculty lives; their beliefs about learning; their intentions for their students; and their personal motives, values, and ethics, within this broad teaching conceptual network. The most important characteristic of the POLC seems to be the cohesive integration of the content and design of the course and the teacher's interactions with students to the teacher's vision of a socially vital and personally relevant outcome of the teaching endeavor.

My findings demonstrated that these effective teachers came to grips with the complexity that Wulff (1985, 2005) pointed to as the impetus for his alignment model. The findings seem to demonstrate that some type of alignment had occurred for each of my participants to become effective teachers. It may very well be the case that each of these participants came by her or his POLC as a result of an alignment process that might map to Wulff's model. It might be the case that it is an important part of the process of aligning each of the dimensions

encompassed within a POLC wherein the nexus concept is discovered. It might also be that one or more particular dimensions may be necessary as catalysts to begin an alignment process. These speculations will require further study if they are to be understood.

My study was not intended to validate a particular model for achieving effectiveness. However, my participants did seem to develop a kind of conceptual alignment that worked well for them, that was holistic, inclusive, focused on learning, and always a work in progress. Effective teaching for these instructors didn't begin with the method or even the content, it began with a broad, organic understanding of the importance of the enterprise they were committed. Their teaching came from a deep respect for their students and an optimistic embracement of their potentials.

The participants in this research cared about their teaching, and they tried hard to explain why they cared so much. My findings show that they cared; they cared because they wanted to change the world. They cared because they wanted to shake their students out of a socially sponsored stupor. They cared because they wanted to pay forward the excitement in ideas that their own teachers had fostered in them. They cared because they loved their students, they loved the potency and majesty of new generations of humans. They cared

because they saw themselves in their students and they wanted their students to have positive experiences and be more able to lead themselves and the world to better futures.

Richard Cherwitz (2005) wrote that public research universities have a compelling social compact that we are failing to fulfill. He argued:

Perhaps no challenge is more compelling, however, than the obligation to serve society....With rising tuition, limited access to the nations best universities, and increasingly complex social problems, the need for public institutions to fulfill their compact with the citizens of their states is more important than ever. (p. 48).

I believe the participants in this study would agree wholeheartedly with his point. The findings demonstrate that a sense of the public good is built firmly into their pedagogy of larger concerns.

The teachers in this study were interested, they were enthusiastic, and they received a lot of satisfaction from their interactions with students. They were committed to teaching as a personal choice. They acknowledged the nature of faculty positions enabled them to make that choice, and that some support for their choice could be found at the university, but the real motivation came from within. Their commitment to teaching is that much more remarkable, because it

was done with the knowledge that what they were doing was often undervalued by the culture of their disciplines, some of their colleagues, and sometimes even their students.

The context of research universities is such that faculty members have a great deal of autonomy to choose to teach effectively or not, but their choices will always be grounded and sustained in their autobiographically derived conceptions of teaching. Research universities need to become communities of learners, and those communities must include the faculty members themselves as learners. If large research institutions, and the academy overall, wish to increase the numbers of effective teachers on their faculties they must devise means for teachers to understand their own conceptions, to ask themselves *why* they do what they do and *who* their endeavors are intended to serve. Faculty members should consistently be presented with opportunities to reexamine their reasons for membership and to find their own pedagogy of larger concerns.

I believe that this study offers a glimpse into the thinking of some effective and remarkable teachers. I hope that it provides insight and inspiration for others making their teaching ways in research-intensive university environments.

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In addition to his teaching practice Jim has experience as a department chair, academic administrator, research advisor, and instructional consultant. He has been deeply involved in teaching and learning improvement efforts at the classroom level as well as in programmatic, departmental, and college-wide transformation initiatives. Jim has conducted instructional workshops on an array of curriculum development, learning theory, pedagogical model, and assessment topics.