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SEEKING WHAT WORKS IN THE DEVELOPMENT OF TEACHING: A GROUNDED THEORY MODEL OF TEACHING EXPANSION

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Abstract

This dissertation study used grounded theory qualitative methods and feminist theoretical perspectives to understand, interpret, and explain faculty members' teaching views and practices. Additionally, it investigated the origins of these views and practices, and their shifts. Lastly, it also probed for possible connections between teaching views and practices and issues of power dynamics and diversity in the classroom. The study used in-depth interviews from 18 tenure-track faculty members teaching in one academic department at one research intensive institution. Staying close to the data, analyses rendered a grounded theory model of teaching expansion that explains how *seeking what works* in the development of teaching was at the core of the participating faculty members' views and practices of teaching. The model explains how faculty members make changes to their teaching that may lead to the expansion of teaching views and practices. As teaching becomes more expansive, changes occur in the following areas: the roles and responsibilities of the teacher and students in the teaching and learning process; the function of content; the purpose of assessment; the distribution of power in the classroom; and the purpose of teaching. As these areas expand, they increase the epistemic credibility of teachers and students, helping create classrooms that are more inclusive. Three clusters of increasingly expansive teaching are presented: 1) adopting what works, 2) discovering what works, and 3) crafting what works, each more expansive than the previous one. The study includes suggestions for future research, decision-making, and practical application of the findings.

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Chapter 1. Introduction

"The classroom remains the most radical space of possibility in the academy"
bell hooks, 1994, p. 12

Of the many activities happening every day in universities and colleges, the teaching and learning process is perhaps the most central, at the core of institutional missions to educate students. Faculty members and students, the primary participants of this process, have been the subject of much research; consequently, the literature on teaching and learning is abundant (see Eriksson, 2010; Lammers & Murphy, 2002; Wilson, 2004). Among the main findings, this literature presents teaching approaches that can be classified as teacher- or learner-centered; the efficacy of different pedagogies or strategies; and the importance of students in the teaching and learning process. The abundance of research on the topic does not mean that we have learned enough about how teaching affects learning and which teaching practices benefit most students. Rather, previous research has prompted more questions about teaching effectiveness, for whom, and in which circumstances; and a need to delve deeper into this topic to gain better understanding. This chapter introduces the dissertation study by providing some background and stating the problem. These are followed by the importance and the purpose of the study, the research questions that guide it, and its significance.

Background of the Problem

In its traditional form, the teaching and learning process is intrinsically hierarchical, with faculty members holding the power to assess students' work. These issues of power have been highlighted, made more complex given the increasing diversity in college classrooms (Flores & Park, 2013). Diversity in college classrooms includes an expanding academic variety in terms of

enrollment loads and types, majors, degrees, and other aspects. It also includes students' social identities like race, ethnicity, age, religion, socioeconomic status, sexual orientation, and dis/ability. One of the ways to address and incorporate issues of diversity and power in the college classroom is to look at pedagogical and assessment choices that may purposefully seek to balance inequity (hooks, 1994; Schrewsbury, 1987; Weimer, 2013). Although instructors are increasingly faced with difference in the classroom, there are no studies that have investigated whether and how faculty members' pedagogical and assessment choices might be influenced by issues of power and diversity. This is important, considering the changing demographics in higher education (Flores & Park, 2013), the need to address difference in the classroom, and goal to create more liberatory teaching practices (hooks, 1994).

In addition to acknowledging power dynamics in the classroom, the literature indicates that both faculty members' and students' social identities –e.g., racial, ethnic, gender, et cetera— influence the teaching, learning, and assessment processes (Crabtree, Sapp, and Licona, 2009; Schrewsbury, 1987). Further, faculty members' awareness of diversity issues is likely to inform and influence their teaching views and practices (Gustafson, 2009).

I use feminist theoretical perspectives in this dissertation study to explore issues of social identity, diversity, and power dynamics in the classroom. Feminist theories ground this study in several ways: First, they allow research participants and me to claim our voices, our stances, and our backgrounds as explicit parts of the story that the study will produce. Second, they permit the analysis of power and power dynamics in the classroom, which are likely to be present—as they are in all relationships and social settings— and to examine their potential influence on pedagogies and assessments. Lastly, feminist theories provide analytical tools to unpack epistemic issues, since teaching is intrinsically related to learning and conceptions of knowledge.

Feminist theories are used in this study as theoretical and epistemological tools; they are not restricted to gender issues, but rather, extend to all power matters (Harding, 2004; Hartsock, 2004).

Statement of the Problem

While the literature on postsecondary teaching, pedagogical approaches, and best practices is abundant (Calkins & Seidler, 2011; Huba & Freed, 2000; Wilson, 2004), the same is not the case about studies that examine how faculty members' pedagogical and assessment choices and practices originate and change (Beyer, Taylor, & Gillmore, 2013; Maxwell, Vincent, & Ball, 2011). Moreover, there is a gap in the literature that examines whether and how the process of teaching relates to power dynamics and student diversity in the classroom.

Importance of the Study

A better understanding of how faculty members develop their teaching views and practices (including pedagogies and assessments) is important, because it can provide a glimpse into what happens in the classroom, into how faculty describe, document, and foster learning. By examining faculty members' teaching views and practices we could also learn about their perspectives on learning, students, diversity, and power. This information will hopefully allow higher education professionals to better understand faculty work as it relates to power dynamics in increasingly diverse classrooms. This information will enable us to work with faculty more effectively, promoting equity and inclusive pedagogies. The study's findings can also benefit directly faculty members at different stages in their teaching careers, providing them with ways of understanding the process of teaching, how it originates and shifts, and with suggestions for change that support student diversity in the classroom.

Purpose of the Study

This study examined how individual faculty members understand, practice, and explain teaching (pedagogies and assessments) in their classrooms. It also sought to interpret the origin of these ideas in relation to individual faculty member's personal and professional experience with diversity and equity issues in the classroom. Because of the exploratory nature of this inquiry, its aim is to contribute to and expand theory on teaching, including pedagogy and assessment. Guiding this study were several assumptions derived from sociocultural learning theories and feminist theoretical perspectives: I maintained that both faculty members' and students' social identities –e.g., racial, ethnic, gender, dis/ability, et cetera—influence the teaching, learning, and assessment processes. Since faculty members' and students' social identities are more diverse than ever before, it follows that diversity influences the teaching, learning, and assessment processes. Further, I hypothesized that faculty members' awareness of diversity issues informs and influences their teaching views and practices.

Guiding Research Questions

The main goal of this study was to understand faculty members' perceptions of their teaching (pedagogies and assessments), and their teaching's potential relation to diversity and power issues. The following research questions guided the study:

1) How do faculty members describe their practices of teaching (pedagogies and assessments)?
2) How do faculty members explain their views of teaching (pedagogies and assessments) in the classroom, and to what do they attribute these views?
3) How do faculty members explain issues of diversity and power, and their relationship to teaching?

Significance of the Study

I sought to understand individual faculty member's views and practices of teaching (including pedagogies and assessments), their origins, and how much they aligned. I see this as a first step in developing a stronger understanding of how faculty at the postsecondary level learn how to teach and assess, whether and how these choices evolve over time, and how both faculty members' awareness of diversity and their students' social identities played into this process.

The results of this dissertation study shed light on how to improve pedagogical and assessment training for faculty members, with an emphasis on more inclusive teaching practices. These alternatives should ideally correspond more closely with faculty members' own views and practices of teaching, rather than adopt blanket decisions –driven by external demands—that are more likely to be resisted. When necessary, raising faculty members' awareness of the value of equity in the classroom might be a first step in promoting these alternatives.

Additionally, this study contributes to a better insight of how faculty members learn to teach and to assess, and whether and how they seek to improve their teaching and assessment practices. Importantly, this study aimed to find ways to incorporate faculty members' views and expertise into the ways we talk about and practice pedagogy and assessment in higher education. Another unintentional result was that, as part of the research process, some participating faculty members indicated an unexpected awareness of their practices and views about teaching, as the result of describing and explaining them during the interviews. This awareness could potentially help them develop better practices that take into account diversity issues and value all students. Hence, students benefit from this study as well.

By uncovering a more nuanced picture of faculty members' descriptions and practices of teaching, and how teaching takes into account or not to students' differences, individual faculty –

and academic programs and departments – could better understand what contributes to student achievement and success and how to assess it at the individual level. In addition to contributing to the literature on teaching, this study allowed faculty members to add their voices to the current discussions on teaching, student learning and assessment, and to provide explanations of what works and what needs improvement in their classrooms. While the focus of this inquiry is at the classroom level, its findings will hopefully provide higher education administrators, faculty, and other professionals (such as those in teaching centers) with better understanding of the process of teaching in increasingly diverse classrooms and the importance of making explicit teaching decisions that benefit all or as many students as possible.

Chapter 2. Review of the Literature

"But my focus is this: on what basis should we make an epistemic assessment of another's authority to impart knowledge?
Linda Alcoff, 2001, p. 54

This chapter presents a review of the literature related to this study. First, I provide an overview of faculty and teaching, touching on broad issues related to faculty. Next I introduce the literature on faculty members' views of teaching and learning, their views on assessment, the development of pedagogical and assessment choices, and the existence of power dynamics in the classroom. I then present some pedagogical approaches. Finally, in the last section I introduce feminist theories as analytical and epistemological tools used in this study.

Faculty and Teaching

In U.S. universities and colleges, faculty members hold the primary responsibility for areas related to instruction, curriculum, research, and any aspects of the student life related to the educational process (American Association of University Professors, n.d.). This is a suitable oversight, considering that faculty members exert a strong influence on college students' academic development and success (Chen, Lattuca, & Hamilton, 2008; Komarraju, Musulkin, & Bhattacharya, 2010; Lamport, 1993; Pascarella, 1980; Terenzini & Reason, 2005; Umbach & Wawrzynski, 2005).

The literature on faculty members' work is varied, and includes issues of authority and governance (Bowen & Shapiro, 1998; Clark, 2000; Minor, 2004; Mortimer & McConnell, 1982; Mortimer & Sathre, 2007); tenure and rank (Altbach, 2005; American Association of University Professors, 2010; Cross & Goldenberg, 2009); professional development (Middaugh, 2001; Perera, Lee, Win, Perera, & Wijesuriya, 2008); and diverse and effective ways to evaluate their

work and performance (Boyer, 1990; Braskamp & Ory, 1994; Colbeck, 2002; Glassick, Huber, & Maeroff, 1997), among others. Recognizing the importance of teaching, some authors propose that teaching should be considered a type of scholarship, on par with research (Boyer, 1990; Maxwell, et al., 2011; Michael, 2007). All these are important aspects of faculty members' work. But perhaps the place where faculty members influence students the most is in the classroom, through teaching.

Faculty Members' Views of Teaching (and Learning, and Assessment)

Some of the literature on faculty members' work in the classroom includes the examination of their views on teaching, learning, and assessment, which influence their roles and responsibilities in the classroom. The following sections present the literature on these views, their origins, and potential changes.

Views of teaching and learning. As Murphy and her colleagues (in press) indicate, there is no agreement on what it means to know. There are different views of how learning happens, and different ways to group schools of thought about learning (Lattuca & Stark, 2002; Murphy, Alexander, & Muis, in press; Olson & Hergenhahn, 2009). One way to group learning perspectives is the one proposed by Lattuca and Stark (2002), which includes behavioral, cognitive, and sociocultural perspectives on learning. I describe these three perspectives here in a very simplified and brief manner, because the intent is to show that there are different ways to see learning. Behavioral theorists (Skinner, 1950; Thorndike, 1911) sustain that learning occurs because of the reinforcement of desired behaviors. Cognitive theorists (Bandura, 1986; Piaget, 1996; Tolman, 1948) see learning as a process of mental growth in creating associations and interpretations of the world; some see learning as an individual, internal process; others as influenced by the environment (we can learn from watching others). Sociocultural theorists

(Engeström 1999, 2001, 2007; Vygotsky, 1986, 1997/1978) indicate that learning occurs in social contexts through participation in cultural activities, and meaning is made through language and dialogue. These are three different ways of understanding and explaining how learning happens, which implicitly or explicitly influence teachers' perspectives on teaching.

An example of a study on teaching perspectives is the qualitative research on faculty views on teaching, course relevance, and goals for student learning completed by Calkins and Seidler (2011). Using data from a year-long faculty development program provided by a university's teaching and learning center, particularly using faculty members' "critical accounts" or written reflections on their year-long learning about teaching, these authors find that faculty members hold four mutually-exclusive types of perceptions: *Perception A* is described as that held by faculty focused on content acquisition, delivered by the teacher, and whose goal is for students to learn the course content to pass an exam or complete requirements. *Perception B* is held by faculty focused on skills and tools acquisition, whose focus is more discipline-bound, and who want their students to use their skills in real life problems. *Perception C* is held by those who seek to promote creativity, a conceptual understanding and change in their students, transcending discipline boundaries. And *perception D* is held by those who foster personal change, transcending academic and professional boundaries, wanting their students to be productive citizens, who critically examine their values, beliefs, and world views. These proposed perceptions increase in complexity in the role of the teacher, the goals of the course, and the teachers' expectations of students (see Calkins & Seidler, 2011, Table 1, p. 219, for the complete classification). The four perceptions correspond with at least four ways of approaching teaching. These findings show that faculty members' beliefs about the purpose of teaching and how learning occurs influence their pedagogical and assessment choices, and the roles and

responsibilities that teachers and students have in the teaching and learning process, which are commonly and implicitly considered to be the sole responsibility of faculty members (Davis, 2001; Svinicki & McKeachie, 2011).

Wilson (2004) adapted Chickering and Gamson's (1987) *Seven Principles for Good Practice in Undergraduate Education* to present them as seven good practices of effective teaching, tailored to the needs of millennial students. The well-known practices are: 1) student-faculty contact, 2) reciprocity and cooperation, 3) active learning, 4) feedback, 5) time on task, 6) high expectations, and 7) diverse talents and ways of knowing. Wilson adds the following considerations for effective teaching that considers the characteristics and needs of millennial-generation students: Parental involvement, technology, and students with disabilities. An important contribution made by Wilson is the argument that teaching is influenced by and should be responsive to changes in the student body.

Another study that highlights the role of students in the teaching and learning process is the one conducted by Maxwell, Vincent, and Ball (2011). They interviewed nine award-winning faculty members from the University of Missouri on effective teaching. The participants indicated that to be an effective teacher, students—and not course content—must be the central focus of teaching. Faculty members must attempt to get to know their students so they can engage with them in dialogue. Dialogue between faculty and students promotes students' active participation, and allows faculty members to make the course content relevant to them. This does not mean that the whole process is solely the responsibility of the instructor; rather, award-winning faculty believed that students have obligations in the learning process and must be engaged in it. Furthermore, students are a motivating factor for these effective teachers: They reported enjoying watching their students grow and succeed in a course and throughout their

college studies. Similarly, another study (Kember, 2009) that also examined award-winning faculty found that an active approach to learning is central for these teachers. That is, for them class discussions and engaged students are essential components of good teaching. Thus, award-winning faculty prefer a more learner-centered and active approach to teaching and learning. An obvious gap in this study is the viewpoint from non-award winning faculty, who make up the majority of U.S. college and university campuses.

Although the previous studies highlighted the importance of engaging students, students are not the only motivators to teach well. Evans and Tress (2009) investigated what motivates faculty members in research-focused universities to care about their teaching. Looking at interviews data from a mid-1990s case study and a follow-up from 2009, they conclude that these faculty members are motivated by self-esteem needs, which in turn are fed by beliefs of self-efficacy and the desire for a sense of achievement. In this sense, this study identifies faculty members' self as an important part of their teaching.

Views of assessment of student learning. Assessment is part of teaching. Most research on assessment of student learning understandably centers on students, but considering that faculty members are the agents that facilitate and enact assessment of student learning, it is important to include them. Even though faculty members' attitudes towards assessment influence their assessment choices, the literature on faculty members' views and perceptions of assessment of student learning is limited (Fletcher, Meyer, & Anderson, 2012; Marrs, 2009). In a qualitative study, Marrs (2009) interviewed three faculty members at a small liberal arts college about their perceptions of the outcomes assessment movement (defined by the author as an en vogue measurement-driven type of assessment). Among the findings, faculty reported perceiving outcomes assessment as a quantitative process for accountability purposes that is

imposed from the outside. Some resisted the idea of assessment and saw it more as a distraction to the teaching and learning process than as an educational innovation. These findings, while based on a small sample, are indicative of an ingrained faculty resistance to assessment efforts perceived to be imposed by the administration (Katz, 2010).

Some research on assessment has included both faculty members and students. In a quantitative study, Fletcher et al. (2012) surveyed faculty members and students on their views on assessment, finding some differences between the two groups. Faculty revealed more positive views of assessment than students did: Faculty defined assessment as a trustworthy process that facilitates the teaching and learning process, while students viewed it as driven by accountability, and called it irrelevant to the teaching and learning process. In a different study, Royal (2010) used the Higher Education Research Institute Faculty Survey from the University of California to examine faculty members' perceptions of which type of student learning outcomes were most valued. Royal found, perhaps unsurprisingly, that regardless of discipline, all faculty members prefer intellectual outcomes over any other types, including social, emotional, and cultural.

A large body of literature is dedicated to studying objectivity and subjectivity in assessment. Some researchers and practitioners pursue objectivity in the assessment process, either by seeking and denouncing gender biases in grading (Bonesrønning, 2008; King, 1998); attempting to remove biases in raters (Eckes, 2008; Lumley & McNamara, 1995; Murphy, Cleveland, Skattebo, & Kinney, 2004); providing specific alternatives to remove biases in grading, such as the adoption of bar codes to remove identifiers (Jae & Cowling, 2009), or the use of rubrics (Isaacson & Stacy, 2009; Jonsson & Svingby, 2007; Rezaei & Lovorn, 2010). Other work has been dedicated to examine the intrinsic presence of subjectivity in assessment –

that also exist in teaching and learning—arguing that the human and interpersonal aspects of these processes are inherently subjective and this should not be considered a hindrance (Gray, 2002; Kneer, Gems, & et al.[sic], 1991; Malouff, 2008; Ornstein, 1994; Stallings-Roberts, 1992).

Given the importance of feedback in teaching and assessment, it is not surprising that research has examined the different ways in which faculty and students perceive it (Evans, 2013; Perera et al., 2008). Perera and colleagues (2008) looked at different perceptions of teaching by faculty members and students, concretely on the quality and quantity of formative feedback provided by faculty and received by students. They found that 75 percent of faculty members believe they provide regular feedback to students, while 55 percent of students agreed that they receive regular feedback. The majority of the students also expressed that receiving a grade does not count as regular feedback. These findings make evident differences in perceptions but do not investigate what causes them, or how to bridge this gap. Relatedly, in a comprehensive review of literature on assessment feedback, Evans (2013) proposes twelve principles on effective feedback, warning that while it often improves performance, it is not guaranteed to work in every context and for every student.

More broadly, there are other recurring points in the literature related to faculty and assessment in higher education. One is that faculty involvement is essential for the successful implementation of an assessment plan at any level, and they are or should be solely responsible for classroom level assessment of student performance (Katz, 2010; Lardner & Malnarich, 2009). Another is that faculty members usually lack training in assessment, but must engage in assessment practices nonetheless, often learning to assess in a haphazard manner (Bonner & Chen, 2009; Marrs, 2009). There is a newer movement that argues for the consideration of assessment as scholarship, which involves faculty and other scholars in the meta-analysis of

assessment (Banta & Associates, 2002; Wang & Hurley, 2012). This is similar to the calls to consider teaching a scholarship as well (Boyer, 1990); these groups argue that university criteria for faculty promotion and rank reviews should grant the same value to teaching and assessment that has been given to research productivity.

Lastly, the literature on assessment frequently indicates that faculty members usually resist changing their assessment practices (Marrs, 2009; Muffo, 2001). This might be explained by the vast and sometimes contradictory literature and language related to assessment (for specific terminology on technical and specific terminology related to assessment, like portfolios, artifacts, measures, and rubrics, see Walvoord, 2004; and Banta and colleagues, 1996). For instance, some scholars and practitioners use evaluation and assessment interchangeably (Boulmetis & Dutwin, 2000). For others, evaluation is the umbrella term for academic and nonacademic units of an institution, while assessment is reserved for academic units and individual academic performance (Lattuca & Stark, 2009). Further, assessment is sometimes used as a synonym for tests and measurement (Gray, 2002). But while assessment includes all the ways in which instructors gather feedback, testing is only one way to do so, and measurement is the process of quantifying a performance (Airasian, 1991). Similarly, a common association is to focus on grades when referring to assessment of student work (Jae & Cowling, 2009; Ornstein, 1994).

The literature on faculty members' views of teaching, learning, and assessment stresses the importance of the roles and responsibilities that teachers and students have in the teaching and learning process. These roles influence the function of content, the purpose of assessment and teaching, and the distribution of power in the classroom. The literature on assessment views indicates an emphasis on studying perceptions, priorities, and positions towards assessments. It

also points to some areas for future work, such as how faculty members learn to assess, whether and how assessment choices change over time, whether they relate to who are their students. Similarly, if faculty members' teaching views influence the pedagogies and assessments they use in the classroom, we must understand how these views develop and whether and how they change.

Origins of and Changes in Teaching Views and Practices

Some literature on teaching examines the ways in which faculty members learn to teach, how they choose specific pedagogical and assessment strategies, and whether and how these choices change over time. Unless their background includes a degree in education, most faculty members arrive to teaching without pedagogical preparation, and report that they teach as they have been taught (Bonner & Chen, 2009; Igwebuike, Okandeji, & Ekwevugbe, 2013). Lack of training applies also to assessment in the classroom (Marrs, 2009). Fortunately, there are plenty of opportunities for faculty to improve their teaching once they are in a teaching position, learning to use technology, teaching online, attending workshops, or receiving assistance from a teaching and learning center at their institutions (Kember, 2009; Michael, 2007; Perera, et al., 2008).

Lattuca and Stark (2009) indicate that faculty members' teaching and learning views evolve over time, with more experienced teachers seeing their students as partners in learning, but they do not elaborate on how this change happens. Nevertheless, Ogunbiji and Ajiboye (2009) indicate that change is difficult for faculty members once they have chosen their teaching methods. Sirum, Madigan, & Klionsky (2009) support this claim, indicating that faculty members are not convinced of the value of spending time modifying their teaching methods, and tend to resist change. And although there has been a move towards developing and promoting

learner-centered pedagogies, teacher-centered ones and associated views of learning are still predominant in higher education, with lectures still being the primary delivery form of instruction in colleges (Evans & Tress, 2009; Lammers & Murphy, 2002; Sirum, et al., 2009).

But the question remains: How does change and improvement happen in faculty members' teaching careers? One way to approach this question is by looking at exemplary cases. In the Maxwell et al. (2011) phenomenological study mentioned before, award-winning faculty members (who had won at least two excellence in teaching awards and were also recommended by the administration as good teachers) describe effective teaching by comparing it to scholarship, equal to academic research. Additionally these faculty see teaching and learning as a process that involves faculty and students working together. Teaching for them is a practice that requires deep, careful reflection and continuous, arduous work. In as much as these findings are helpful, what is missing is the perspective of regular, non-award winning faculty members to complement or confirm these results.

Shulman (1987) also looked at expert teachers (who are only described in opposition to novice teachers, but not defined in any other way) to learn what kinds of knowledge and skill they possess that novice teachers seem to lack. He argues that "teaching requires basic skills, content knowledge, and general pedagogical skills" (p. 6). Shulman presents a model of pedagogical reasoning and action with the required elements to teach effectively. These elements are: 1) comprehension of purposes, subject matter, and general ideas; 2) transformation, which includes preparation of the material, representation, and adaptation and tailoring to students characteristics; 3) instruction; 4) evaluation; 5) reflection; and 6) achieving new comprehensions. There are obvious similarities between the award-winning faculty interviewed in the Maxwell and colleagues study and Shulman's model, confirming that teaching is a process that requires

knowledge, skills, reflection, and continuous work. Also examining award-winning professors, Morris and Usher (2011) found that successful teaching experiences and positive student evaluation feedback raised their sense of self-efficacy in teaching. Interestingly, negative teaching experiences did not lower their sense of self-efficacy. These professors indicated that they learned to teach by observing others teach.

The studies are helpful in describing award-winning faculty members' views and practices of teaching and learning, but fall short from fully explaining teaching change. Perhaps the most comprehensive study to date on teaching change is the University of Washington's Growth in Faculty Teaching Study (GIFTS) by Beyer, Taylor, and Gillmore (2013). These authors examined whether and why faculty members make changes to their teaching, even when they were not explicitly rewarded for doing so. Interviewing and surveying 55 faculty members, the authors found several internal and external reasons and sources of change. Eighty five percent of these reasons and sources were related to faculty-student interactions. Among them, the most significant causes of change in teaching were: Wanting to increase their own or their students' learning, engagement, or motivation; wanting to address their own teaching values; reacting to their own maturity and growth changes; observing students' behavior or performance; interacting with peers (at conferences, for instance); receiving feedback from students (face to face and through course evaluations); or needing to keep up with technology changes and course content. Another main finding of this study was that faculty inner changes (particularly own maturity and growth) was the third cause of teaching changes, which the authors call "teaching from the self." This translates as faculty members allowing themselves to be part of the teaching and learning process, which occurs as they gain confidence in their teaching skills and let go of both control and focus on content (Beyer et al., 2013). The main changes made to their teaching

were: changed assignments, restructured classes, added active learning strategies, changed technology, less content, became more explicit, and added real-life examples. This study is important, as it begins to investigate how teaching changes over time, and what aspects of teaching seem to change. It also points to the potential mechanisms that could trigger change in teaching.

As the previous studies demonstrate, teaching is a complex process that involves faculty members' views of teaching, which in consequence influences the roles and responsibilities of teachers and students. As we see next, these roles and responsibilities are saturated with power dynamics in the classroom.

Power Dynamics in the Classroom

The teaching and learning process is deeply personal and connected to social identities as faculty members and students of a particular gender, race or ethnicity, dis/ability, sexual orientation and other facets interact with one another (Gee, 2000-2001; Powell, 1997). This process is intrinsically hierarchical, even when learner-centered and power-conscious pedagogies –such as critical theory, feminist, queer, disability—are employed. The instructor holds a position with considerably more power than the students; for instance, the instructor has the authority and power to grade students' work (Bruffee, 1999).

Delpit (1988) refers to this differential as the "culture of power." Delpit presents five aspects of power in the educational process: 1) Issues of power are enacted in classrooms; 2) there are codes or rules for participating in power; that is, there is a "culture of power;" 3) the rules of the culture of power are a reflection of the rules of the culture of those who have power; 4) if you are not already a participant in the culture of power, being told explicitly the rules of that culture makes acquiring power easier; 5) those with power are frequently least aware of –or

at least willing to acknowledge—its existence. Those with less power are often the most aware of it (p. 282).

For Delpit, power differential issues have less to do with pedagogical choices –she sustains that good teaching takes many pedagogical forms—and more to do with paying attention to whose voices are heard and whose voices are silenced in the classroom. Her analysis is directed at racial differences, mostly between White and African American students and teachers, but the argument of power difference holds for other social identity aspects, such as gender and gender identity, dis/ability, socioeconomic status, ethnicity, nationality, age, sexual orientation, and others.

While less common, there have been occasions in which faculty members have reported experiences and perceptions of discrimination against them by students, administrators, or other faculty members in their institutions. This includes instances related to their gender (Culley, 1985); race and ethnicity (Collins, 1986; García, 2005; Solórzano & Yosso, 2001; Washington, 1985); sexual orientation (Rankin, Weber, Blumenfeld, & Frazer, 2010), or a combination of these and other aspects like religious beliefs or disabilities. Furthering the experience of discrimination, female faculty members in particular, regardless of their race, ethnicity, sexual orientation or any other aspect of their identities, are less likely to obtain a tenure-track faculty job than their male counterparts, even in fields with more doctoral graduates (Danowitz & Agans, 2011), particularly if they are married or have young children (Hile, 2011). Female faculty members are also less likely to obtain tenure than their male colleagues (Danowitz & Agans, 2011; Hile, 2011).

An answer to these power differential issues in the classroom has come from newer pedagogies, like feminist pedagogies (Crabtree, Sapp, & Licona, 209; Manicom, 1992; Pinar,

1997; Schrewsbury, 1987); or learning theories, such as sociocultural theories (Barab & Plucker, 2002; Kelly & Green, 1998; Lattuca, 2002; Vygostky, 1997/978). These efforts acknowledge that the teaching and learning process is inherently hierarchical, and through this acknowledgement teachers can attempt to produce more inclusive practices that consider the contributions to learning by both the instructor and the students. The next section explains these approaches in more detail.

Pedagogical Approaches

The literature on pedagogical approaches is abundant. In this section I summarize what Huba and Freed (2000) call the two "paradigms of instruction", teacher- and student-centered teaching. I also include learner-centered teaching and feminist pedagogies.

Two paradigms of instruction. A large part of the literature on teaching can be described as dedicated to creating classification schemes, which can broadly grouped into two opposing bands. One of the most common is to consider teaching to be either teacher-centered or learner-centered (Huba & Freed, 2000; Lattuca & Stark, 2009). Huba and Freed (2000) indicate that in a teacher-centered paradigm of teaching, the emphasis is on the acquisition of knowledge; the professor is the information provider and primary evaluator; the students passively receive this information; teaching and assessing are separate processes and assessment is used to monitor learning and obtaining correct answers; and the overall culture is competitive and individualistic. On the opposite side rests the student-centered paradigm of instruction, in which the emphasis is using and communicating knowledge effectively in real-life situations; the professor is a facilitator; both professor and students learn together, and students are actively involved in constructing knowledge; teaching and assessment are intertwined, with assessment being used to promote and diagnose learning; and the overall culture is cooperative,

collaborative, and supportive (see Huba & Freed, 2000, Figure 1-2, p. 5, for the complete comparison).

While Bilimoria's (1995) classification of teaching includes what she terms modern and postmodern pedagogical perspectives, they align with Huba and Freed's (2000) teacher- and student-centered teaching paradigms. For Bilimoria, the focal point of a modern perspective is students' performance; the teacher is a provider of knowledge and information; all students are assumed to be at the same level of prior knowledge and are to acquire this content through didactic, static, individual work. Relationships between students and the teacher are impersonal, distant and hierarchical, and relationships among students are competitive. On the other hand, the focal point of a postmodern perspective is learning; the teacher and students are co-participants in the learning process; students arrive with different levels of prior knowledge and are to responsibly and actively engage in their own learning, through an experiential, dynamic, collective and emergent process. Relationships among students and the teacher are intensive, personal, and consensual, and relationships among students are cooperative.

Sometimes, student-centered teaching is used synonymously with learner-centered teaching (Armbruster, Patel, Johnson, & Weiss, 2009; Beichner, 2008; Beichner et al., 2007; Calkins & Seidler, 2011; Eriksson, 2010; Kember, 2009; Wilson, 2004) but some argue that they are not the same, as it is explained next. It must also be noted that there are times, however, when instructional efforts, while intending to add more active learning activities or collaborative work in the classroom, keep the responsibility for learning mainly on the instructor (Davis, 2001; Harmin, 1994; Svinicki & McKeachie, 2011).

Learner-centered teaching. Much of the recent work on teaching and pedagogies has advocated learner-centered teaching, which consider the teaching and learning process the

responsibility of both teachers and students (Evensen, Salisbury-Glennon, & Glenn, 2001; Huba & Freed, 2000; Perera et al., 2008; Smith et al., 2005; Weimer, 2013). Learner-centered teaching has been theoretically and empirically supported by discipline-based research bodies, mostly from the sciences (Weimer, 2013).

The first group is Problem-Based Learning, or PBL (Evensen, et al., 2001; Perera et al., 2008; Smith et al., 2005). First used in medical education, it is the "oldest, most widely used, and most well-researched" of these approaches (Weimer, 2013, p. 43). Under PBL, learning occurs in small groups; teachers are facilitators or learning; problems are the focus, motivation, and means for learning; and new information is acquired through self-directed learning (Smith et al., 2005). The second, Process-Oriented Guided Inquiry Learning, or POGIL, began in chemistry and has been used in several disciplines. POGIL involves small groups of students working together in class, guided by questions (guided inquiry) through a three-step cycle of exploring, inventing, and applying what they learn. Instructors are facilitators and students are assigned distinct roles within the small group. Peer-Led Team Learning, or PLTL, also started in chemistry, is characterized by the use of student facilitators (who had previously completed the course with high grades) who meet weekly with six to eight students to work on faculty-created problems using collaborative learning approaches (Weimer, 2013). Collaborative learning "is the instructional use of small groups so that students work together to maximize their own and each other's learning" (Smith et al., 2005, p. 88).

Weimer (2013) insists that in learner-centered teaching learning cannot occur without what she calls the five key changes to practice: 1) shifts in the role of the teacher, as students are equally responsible for teaching and learning; 2) changes in the balance of power, giving students more control over the learning process; 3) less focus on content for its own sake; 4)

adding systems of accountability to the teaching and learning process; and 5) new purposes and processes of evaluation that reflect the other shifts. Weimer (2013) traces the roots of learner-centered teaching to attribution theory and self-efficacy, radical and critical pedagogy, feminist pedagogy, constructivism, and transformative learning (see Weimer's chapter 1 for full explanation).

Feminist pedagogies. Schrewsbury (1987) defines feminist pedagogy as "a theory about the teaching/learning process that guides our choice of classroom practices by providing criteria to evaluate specific educational strategies and techniques in terms of the desired goals and outcomes" (p. 6). The criteria for pedagogy to be feminist include the level of empowerment developed by students to act towards one another and to apply their learning to social action. In this manner, Crabtree, Sapp, and Licona's (2009) definition complements Shrewsbury's, as they say that "feminist pedagogy is more than teaching about women or teaching feminist perspectives. Feminist teaching is a reexamination and reimagining of what happens in *any* classroom, indeed of the relationships between teachers, students, education, and society" (p. 4, emphasis in original). These authors consider feminist pedagogy a liberatory, empowering pedagogy. As I mentioned before, it encompasses different forms of inequity, not only gender.

Manicom (1992) presents three characteristics of an ideal feminist pedagogy. It is: 1) teaching that begins from individual experiences, 2) teaching that fosters collaboration and sharing, and 3) teaching where authority is exercised to equalize power relations. The first characteristic makes explicit that in a feminist classroom all personal experiences are valued, accepted, and included as part of the process of knowledge creation; it also relates to paying attention to which learning styles are prioritized in the classroom and how diversity and

dis/ability issues are addressed, which reflects whose views are considered important and whose become invisible (what Alcoff, 2001 calls epistemic privilege).

The second characteristic upholds a view of teaching and learning as a practice that is socially and collaboratively constructed and thus fosters a liberatory environment. However, recognizing that power dynamics might be masked under this sharing and collaborating, feminist pedagogies also contribute to breaking silences and to the naming or renaming of experiences that had previously been mislabeled, what Fricker (2006) would call hermeneutical lacunas. Identifying silences and gaps is one way to create better pedagogical and assessment practices, but doing so is not easy, particularly from an advantageous position. There are silences from those not present, from those present but not heard, from those who sense that it is unsafe to speak, and then there are silences that preserve privilege (hooks, 1994; Manicom, 1992; Tuana, 2006).

Lastly, regarding authority, a feminist classroom is one where authority is exercised to bring up the teacher's voice, experience, and perspective. But authority is also exercised to respond to and interrupt power relations among students. This is important, because a feminist classroom acknowledges that power dynamics are inherent to personal interactions and cannot be ignored or eliminated, but we can attempt to balance them (Gillman, 2007). Caughie and Pearce (2009) indicate that this can be done by becoming self-reflexive about authority, "by making our pedagogy a part of the class, a subject of investigation and critique along with the subject matter of the course" (p. 38). While faculty members' exert authority in the classroom, they are also pressured by departmental, college, institutional, and governmental guidelines and requirements to demonstrate student learning (Bresciani, 2006). This is one of the reasons why it is important to capture faculty members' views of assessment, as they can be sometimes the ones "below."

These three characteristics of feminist pedagogies are illustrative, but Manicom warns against setting a prescribed list of rules of what makes pedagogy feminist. She cautions that some classrooms might use a gender lens or feminist techniques or tools and this does not necessarily make them feminist classrooms; likewise, just putting women at the center, or bringing a women's view is not enough. Rather, Manicom (1992) reminds us that like any other feminist project, feminist pedagogy should be "about transformative politics, working to end oppressive relations of class, of gender, of race, of heterosexism" (p. 383). Ladson-Billings (1995) provides a good example of this, in her qualitative study of eight exemplary teachers of African American students, where she positions herself as observer and participant researcher, studies from the bottom up, sees research as praxis, contextualizes her inquiry and findings, and concludes that "a culturally relevant pedagogy is designed to problematize teaching and encourage teachers to ask about the nature of the student-teacher relationship, the curriculum, schooling, and society" (p. 483).

Mohanty (2003) indicates that feminist pedagogies should reveal to students the complexities of power, privilege, agency, and dissent, so that they react and act socially and politically. Even though feminist pedagogies might take on different forms, it is clear that for hooks, Ladson-Billings, Mohanty, Manicom, Schrewsbury, and many others, a "feminist pedagogy begins with a vision of what education might be like but frequently is not" (Schrewsbury, 1987, p. 6).

Learner-centered teaching and feminist pedagogies consider learning the responsibility of both teacher and students. As such, they line up with sociocultural learning theories. From a sociocultural learning theory viewpoint, learning is understood to occur as the result of social interaction (Engeström, 2001; Kelly & Green, 1998; Lattuca, 2002; Vygostky, 1997/1978).

Instruction is based on this understanding of social interaction, dialogue, and cultural tools (like language) to mediate and scaffold learning within communities of practice (Lattuca, 2002; Vygostky, 1997/1978). In this dissertation study, since learner-centered teaching, feminist pedagogies, and sociocultural learning theories posit learning as a collaborative process, they are included as they represent pedagogical approaches that attempt to acknowledge and/or distribute power in the classroom.

Feminist Theories as Epistemological and Analytical Tools

This section is dedicated to feminist theories, which provide the epistemological and analytical tools to contextualize this study. Epistemologically, feminist theories inform my understanding of who has the right and authority to learn and to teach, and how. This understanding was present in my interpretation of the findings. Analytically, feminist theories guided the development of the research questions and my interpretation of the findings, based on these epistemic understandings and the unpacking of power issues in the classroom. Although I include feminist scholars from different perspectives, one particularly guides my inquiry, feminist standpoint theory. I present an overview of the theory and some concepts related to this study, including epistemology, subjectivity, objectivity, diversity, and power.

Theory is an essential part of research and scholarly inquiry. Theories provide not only a conceptual framework, but also the definitions and propositions that allow us to look at the relationships between variables, concepts, and ideas; in this way, theories help us explain phenomena and reality (Maxwell, 2005; McMillan, 2004). Theory is also an explanation to behavior, usually consistent with previous research (Krathwohl, 2009). In other words, when we conduct research, our ways of seeing the world (ontology), how we approach and understand knowledge (epistemology), what we value (axiology), and how we explain what happens

(causality) guide our research purposes (teleology). Educational inquiry involves the analysis of relationships between participants, often in the teaching and learning process. Therefore, a particular theoretical lens is needed for these kinds of research: One that provides the scope, flexibility, and rigor to understand institutional, structural, systematic, and hierarchical interpersonal relationships. Although not the only ones to examine these aspects, feminist theories are well suited for this task. Feminist theories "were developed in the context of diverse struggles for social justice inside and outside of the academy. In their various formulations, feminist theories emphasize the need to challenge sexism, racism, colonialism, class, and other forms of inequalities in the research process" (Naples, 2003, p. 13). Following this perspective, a theory can be considered feminist if it contributes to analyzing and challenging the existing "–isms" of social inequality.

It is important to clarify an aspect of feminist theories that is commonly misunderstood: Feminist theories are not about women, at least not exclusively. Feminist theories are not only about men and women, their similarities or differences. Feminist theories are analytical tools for understanding inequity and power, which includes race, class, sexuality, age, location, religion, nationality, gender, and other identity aspects (Boydston, 2008). In this way, gender is one of the many places where inequity still exists, but not the only one. I use feminist theories as tools to unpack issues of power related to views of learning and knowledge (epistemology), which relate to teaching (pedagogies and assessments). Additionally, feminist theories are useful because, as Young (1994) explains, feminist scholars depart from the idea of theory as a universal account and explanation of reality; rather, feminist theories should have a more pragmatic orientation. By pragmatic, Young means "categorizing, explaining, developing accounts and arguments that are tied to specific practical and political problems, where the

purpose of this theoretical activity is clearly related to those problems" (pp. 717-718). Furthermore, this theorizing should be done recognizing that knowledge is always partial, biased, and specifically situated (Bank, 2011; Haraway, 1988).

Feminist standpoint theory. In the late 1970s and early 1980s, feminist standpoint theory emerged borrowing from, and as a response to, the prevalent Marxist explanation of individual identity. This Marxist view defined identity as a result of social class, influenced by a sexual division of labor (Hartsock, 2004; Hekman, 1997; Wheeler, 2011). At the same time, it developed at the time when Black, third world, and postcolonial feminists were challenging – among other things—binary systems based in patriarchal and Western approaches (Naples, 2003). This was part of a larger shift that some have defined as moving from the modern to the postmodern (Lincoln, 1997; McDowell, 1992; Naples, 2003).

Feminist standpoint theory looks for gaps and silences (not only what is said, but also what is excluded), and aims to correct them (Alcoff, 2001; Diprose, 2000; Hekman, 1997). It seeks to study from below and to make transparent the conceptual practices of power (Harding, 2004b). It challenges notions of universal, value-free, rational, and masculine knowledge production (Diprose, 2000; Haraway, 1988; Irigaray, 1995). It suggests that theory should be pragmatic (Young, 1994).

Epistemology. Responding to the period and circumstances of its birth, feminist standpoint theory appeared as an alternative way to look at knowledge production (particularly in science) and practices of power (Haraway, 1988; Harding, 2004a). Standpoint theory "claims that some kinds of social locations and political struggles advance the growth of knowledge, contrary to the dominant view that politics and local situatedness can only block scientific inquiry" (Harding, 2004b, p. 26).

Diprose (2000) points to a review of the history of philosophy completed by Lloyd, in which she found what is termed "the man of reason:" That "philosophical conceptions of reason are male. This does not mean that men by *nature* embody reason. Rather, men by *definition* embody reason" (Diprose, 2000, p. 118; referring to Lloyd, 1993; emphases in original). It means that our ideas of what is reason, reasonable, or rational, have historically excluded the feminine; without offering a feminine alternative to the standard masculine reason, but rather pretending that this masculine reason is genderless. Also, that the feminine does not fit into the concept of reason, therefore, implicitly deemed unreasonable or irrational. As a consequence, women philosophers and other minority scholars—as this logic has been extended to exclude other populations—and their inquiries might easily be dismissed as irrational. Widely examined and accepted by feminist scholars, and resisted by non-feminist ones, the concept of "the man of reason" or reason in general explains current ideas of knowledge, and relatedly, who can create knowledge, or signify (Frye, 1996). These are important epistemic claims that help explain the epistemic views that permeate our roles and rights in settings like the college classroom.

In this way, "androcentric, economically advantaged, racist, Eurocentric, and heterosexist conceptual frameworks ensured systematic ignorance and error about not only the lives of the oppressed, but also about the lives of their oppressors" (Harding, 2004a, p. 5). Not only were minorities' lives erased or distorted, but by creating this distortion, the oppressors' lives were also distorted. Scholars, particularly women of color, used a feminist framework to critique this dominant and oppressive standard, and to create alternative frameworks (to name a few, see Lugones, 1987; Moallem, 2002; Mohanty, 2006; Moraga & Anzaldúa, 1981; Narayan, 2000; Ortega, 2006; Smith, 1999).

From a feminist standpoint, knowledge is always partial, biased, and specifically situated, value-laden, and linked to political struggle (Bank, 2011; Haraway, 1988; Hekman, 1997). These new conceptualizations replace views of learning that claim to be value-free and rational. Furthering this argument, Alcoff (2001) indicates that epistemic credibility, or the granting the right and authority to know and learn, is linked to social identity (our gender, race, ethnicity, social class, sexuality, religion, nationality, and other facets), and that failure to take social identity into account when looking at who is or can be knowledgeable can lead to discrimination. Moreover, Tuana (2006) advises that to better understand the production of knowledge, "we must also examine the ways in which *not knowing* is sustained and sometimes even constructed" (p. 3, my emphasis). Exclusion from knowledge production is a way to perpetuate injustice and hierarchies that maintain the status quo. Those excluded from knowledge production might experience what Fricker (2006) calls "hermeneutical lacunas" or epistemic inequalities that leave those excluded powerless to understand, name, and change their oppressive circumstances. In some ways, some faculty members and students might experience these hermeneutical lacunas in relation to their practices of teaching, learning, and assessment. Because this study will examine views and practices of teaching, these epistemological concepts from feminist standpoint theory can provide the appropriate analytical tools. Adding issues of diversity and power in the classroom make feminist standpoint theory an apt framework, since "knowledge is always about power, and power is created by way of the production of (what counts as) knowledge" (Grzanka, 2014, p. 36; see also Butler, 2004).

Subjectivity and objectivity. Feminist standpoint theory is also helpful in analyzing two concepts related to epistemology that influence teaching (pedagogies and assessments): Objectivity and subjectivity. Objectivity can be defined as "the separation between knower and

known, removal from the situatedness of knowledge" (Hekman, 1997, p. 346). As we saw in the previous section, this definition is the antithesis of feminist knowledge, which is always situated (Haraway, 1988). For some feminist standpoint theorists, knowledge can be objective, but their definition of objectivity is different, embracing location, embodiment, and emotion (Harding, 2004a). This feminist objectivity is value-laden and embraces subjectivity, as Haraway (1988) indicates that: "Subjectivity is multidimensional […]. The knowing self is partial in all its guises, never finished, whole, simply there and original; it is always constructed and stitched together imperfectly, and therefore able to join with another, to see together without claiming to be another" (p. 586).

For Hawaray, objectivity has to do with subjectivity, and subjectivity is more than partiality, it is multifaceted: Interests and biases are inherent to our stance in the world, our thinking, our language; but subjectivity also relates to being a located subject, and therefore it is related to identity. This is the meaning of human subjectivity that Collins (1986) had in mind when she remarked that "racist and sexist ideologies both share the common feature of treating dominated groups —the "others"— as objects lacking full human subjectivity" (p. S18). A similar connotation is found in Irigaray (1995), who defines subjectivity as becoming a subject. Unfortunately, Irigaray argues, in our society there is an idea of a single subject, "one, singular, solitary, historically masculine, the paradigmatic Western adult male, rational, capable" (1995, p. 7). Then there are "the others" who are created as imperfect copies, as objects, after the singular subject; who are "not defined in and of themselves, in other words, as a different subjectivity, but rather were defined in terms of an ideal subjectivity and as a function of their inadequacies with respect to that ideal" (Irigaray, 1995, p. 7; this idea is also supported by Butler, 2004).

Reclaiming the notion of subjectivity, some feminist standpoint theories argue that only those who possess subjectivity are full subjects, and not "others" left in the margins. These scholars go further: They also reclaim the notion of objectivity, which they distinguish from the traditional definition –what Harding (2001) calls objectivism—which seeks to be value-free, impartial, and emotionless. Some feminist standpoint theorists argue that this objectivism actually preserves the values and interests of some in the scientific community, and excludes those who are different, qualifying them as lesser (Harding, 2001). Harding proposes what she calls strong objectivity as an extension of the current notion that includes positioning, backgrounds, and histories:

> To enact or operationalize the directive of strong objectivity is to value the Other's perspective and to pass over in thought into the social condition that creates it –not in order to stay there, to 'go native' or merge the self with the Other, but in order to look back at the self in all its cultural particularity from a more distant, critical, objectifying location (Harding, 2001, p. 160).

In other words, we must do away with the current notion of objectivity, and recognize that knowledge is and should be situated; hence teaching and assessing it must acknowledge this trait. Not only students' prior knowledge, identity, and skills should be an explicit part of the teaching, learning, and assessment practices, but also faculty members'.

Issues of equity in diverse classrooms. Following the arguments presented thus far, current teaching views and practices carry deeply held concepts of reason and objectivity that inform what is considered acceptable knowledge. This idea of knowledge has traditionally excluded some people, marked as "others" (Code, 1991; Fricker, 2007; Irigaray, 1995). These "others" are not defined as something but rather as a lack of the ideal, thus, not really defined on

their own (Butler, 2004; Irigaray, 1995). Frye advanced that "to be a subject, or have subjectivity, one has to enter the language, and to enter the language is to become a signifier" (1996, p. 993). If "the others" are not defined and are not subjects, and only subjects enter the language and can create knowledge, then they cannot be knowledge producers. Those who would fit the category of "the others" can then easily be silenced or rendered invisible.

When educators seek to remove biases from grading, they are seeking neutrality and fairness (Jae & Cowling, 2009; Malouff, 2008); however, some feminist theorists would argue that by pursuing neutrality, they often contribute to ignoring existing power dynamics and maintaining inequity (Harding, 2004a), and thus fail to integrate the voices of oppressed groups – "the others" (Crenshaw, 1991). This logic explains why sometimes the academic performance of some populations might be considered lesser (Walkerdine, 1994). Ewell (2002) indicates that assessment efforts can be classified as either positivistic-scientific or subjectivist-intuitionist. Some feminist standpoint theorists would warn against these dichotomies—because they are unequal—and seek other alternatives.

This section included some of the reasons why feminist theory, and particularly feminist standpoint theory, provides a fitting epistemic and analytical tool for educational research on teaching, learning, and assessment practices in higher education. Feminist standpoint theory allows researchers to look at knowledge, as well as knowledge production and exclusion, as a socially situated construct. As such, it is influenced by notions of reason, objectivity, and subjectivity that apply differently to different populations. Feminist theory suggests more liberatory and equitable pedagogical practices, in which power dynamics in the classroom are acknowledged and attended to through the employment of purposeful strategies. Using a feminist theoretical perspective, this study analyzes whether faculty members employ inclusive,

liberatory practices, even when they are not labeled feminist. At large, this study examines whether and how issues of diversity, power dynamics, and equity are related to teaching.

Summary of the Review of Literature. This review of the literature included an overview of scholar work on faculty members and teaching (pedagogies and assessments) and feminist theory. It indicates that while teaching is an important and essential part of faculty work, not enough research has been done to understand the connections between this process and student diversity and power dynamics in the classroom. To better grasp how faculty members choose, engage, and transform their teaching, there is a need for more work that explores how faculty members learn to teach and to assess and whether and how these choices change over time. This understanding can potentially translate into better options for faculty development, attuned to their views and needs. Because teaching (including both pedagogies and assessments) is inherently biased and hierarchical processes, feminist theories provide appropriate analytical tools for this study. Feminist standpoint theory in particular is well-suited to identify and examine interpersonal dynamics where power differentials and epistemological issues are present, as is the case with this study. Moreover, inclusive and liberatory pedagogical practices such as learner-centered teaching and feminist pedagogies align with this theoretical approach, which pays attention to the ways in which power and diversity play out in the classroom.

Developing ways of teaching (and assessing) that complement the goals of inclusive, liberatory pedagogies can contribute to creating learning environments where students feel welcomed, included, safe to speak up, and a full part of the class. This shift also requires identifying and decentering—because eliminating is not possible—power dynamics in the classroom. More liberatory teaching and assessment practices can further consider "the importance of a group's experience, of a distinctive kind of collective consciousness, which can

be achieved through the group's struggles to gain the kind of knowledge that they need for their projects" (Harding, 2004b, p. 36).

Faculty members must respond to the demands made by others: administrators, accreditors, and the general public. At the classroom level, faculty members have some freedom in their curricular, pedagogical, and assessment choices, but this freedom is restricted by policies and requirements dictated at the program, department, college, and institutional levels; and these policies and guidelines sometimes are tied to governmental bodies (American Association of University Professors, 1999). Surely other factors influence faculty members' curriculum, pedagogy, and assessment practices, such as disciplinary and teaching training (Lattuca & Stark, 2009), and their individual backgrounds and experiences (Bank, 2011; Banks, 2008; King & Hurtado, 2003), but those are not the focus of this dissertation. Thus, faculty members have some freedoms to act in the classroom but they are also constrained by external aspects. At the same time, faculty members are also in a dominant position, teaching and assessing students' work and determining who succeeds and who fails. To contribute to the literature on teaching, this dissertation examined faculty members' views and practices of teaching. The study also investigated how faculty members learn to teach and assess and whether and how these choices change over time. Lastly, issues of power, diversity, and equity were part of this examination, using feminist theoretical lenses.

Chapter 3. Methods

"By studying the data, you may make fundamental processes explicit, render hidden assumptions visible, and give participants new insights"
Kathy Charmaz, 2011, p. 55.

This chapter describes the methods used in this dissertation. The qualitative research method I used was grounded theory, and I framed the study using feminist theoretical perspectives, which informed the study's origins and conclusions. In this chapter I present a brief overview of a pilot study completed in the spring semester of 2013 and describe the main study's participants, data gathering and data analysis procedures. I then address ethical considerations, trustworthiness and quality in qualitative research, and some limitations of the study.

Aim of the Study

This study sought to understand, interpret, and explain faculty members' views and practices of teaching, including pedagogies and assessments. Additionally, it investigated the origins of these views and practices, and their shifts; it also probed for possible connections with power dynamics and diversity in the classroom.

Qualitative Research Approach: Grounded Theory Method and Feminist Theoretical Perspectives

The research questions that guided this study (see chapter 1) are exploratory and aim to contribute to theory. Hence, a qualitative approach provided an adequate methodology for this investigation. Specifically, grounded theory provided the methods for data collection and analysis. This is fitting, since grounded theory focuses on understanding processes, their origin and development, and the aim of the study was to understand the teaching process, including

views and practices, their origins and shifts. Using grounded theory to analyze conversational interviews provided both the rigor and flexibility needed to capture faculty members' perspectives and stories and link them to conceptual terms for analysis (Charmaz, 2011). Evensen & Pratt (2012) indicate that this method "conforms to an epistemology which assumes that persons act on the basis of individual and personal meanings that are constructed (defined and redefined) through social interaction, and that these ways of being and knowing can be made subject to inquiry" (pp. 2-3).

Out of the two main perspectives on grounded theory, I identify with the pragmatist approach developed by Corbin and Strauss (2008), which "reflected the pragmatist philosophical tradition that Strauss embraced while in his doctoral program at the University of Chicago" (Charmaz, 2011, p. 7) and not the one led by "Glaser's rigorous quantitative training at Columbia University" (Charmaz, p. 7). Moreover, I followed Charmaz's interpretation of grounded theory, derived from a symbolic interactionist theoretical perspective, which she describes as offering "an *interpretative* portrayal of the studied world, not an exact picture of it" (p. 10, emphasis in original). Like Charmaz, "I view grounded theory methods as a set of principles and practices, not as prescriptions or packages" (p. 9).

Feminist theoretical perspectives complemented the methodology, providing an additional lens with which to derive conclusions from the analyses. Issues of power, diversity, and equity are suited for analysis from a feminist lens, because feminist theories consider research to be socially situated (Harding, 2004a). The use of a feminist perspective to support research projects is considered both valid and value-laden (Harding, 2001). A feminist lens informed decisions in this study, from the development of the problem and research questions, the review of the literature, and conclusions derived from the findings.

Pilot Study and Its Results

Prior to this dissertation study, I conducted an exploratory pilot study on two faculty members' teaching views and practices. The goal of the pilot was to explore the topic that became the dissertation research questions: faculty members' descriptions and explanations of teaching and assessment views and practices, their origins and changes. It also sought to investigate the potential connections among teaching practices, student diversity and power dynamics in the classroom.

The pilot study was completed during the Spring semester of 2013 (under a different Institutional Review Board approval than the dissertation study). This pilot allowed me to practice qualitative methods skills and learn grounded theory, from how to approach my participants, conduct and refine interviews and identify gaps in the interview protocols, to begin the coding of data. The pilot study was also a space to learn QSR International NVivo 10 (Bazeley & Jackson, 2013; Edhlund & McDougall, 2013; NVivo, 2012), the software that I used in both the pilot and the main study. The pilot study was conducted in the same institution and department as the dissertation study, and the data from the pilot were incorporated into the main study.

Based on the results of the pilot study, the following adjustments were made to the final study: 1) revisions to the number of interviews per participant (from one to two, to get more in-depth data) and to the interview protocols (adding a second interview protocol and creating a thematic list); 2) refining data sources (removing planned class observations and student interviews; adding fixed-term instructors, who were considered "part of the faculty family," as a faculty administrator described them), 3) revising coding techniques; and 4) pursuing emerging coding patterns.

Dissertation Study

The following sections describe the setting and participants in the study, and the data gathering and analysis procedures. Supporting documents such as the Institutional Review Board approval letters, interview protocols for the pilot and main study, as well as the thematic list are included in the appendices.

Setting and participants. The study took place at a large, public, research university with multiple campuses located in the eastern U.S. The study involved one department and discipline (called Earth Sciences[1] in this study) with four distinct academic tracks in the main campus: People, Environment, Resources, and Technology. The discipline was chosen because in one department, it contained diverseness in several aspects: a) there are four academic tracks, each with a distinct focus; b) the faculty members come from diverse professional backgrounds; c) the majority of faculty members are identified with one of these tracks; d) all faculty members teach both undergraduate and graduate levels (from introductory to advanced courses) and have advising duties; and e) both (empirical) scientific and (social) humanistic approaches to learning, teaching, and research are said to be represented by the faculty.

These characteristics make the chosen department an ideal space to house what Brint, Cantwell, and Hanneman (2008) call the two cultures of engagement. That is, the department is both in the social sciences and includes an emphasis in humanities (with required courses in social justice, gender, history and politics, among others) while preserving a strong natural sciences focus (with courses in state-of-the-art technologies, image analysis, programming, and laboratory work). In this sense, this department provides a setting that potentially increases

[1] All identifying information has been replaced with pseudonyms, including the names of individuals, institutions, tracks, and courses.

diverseness in viewpoints, which perhaps carries over into the teaching of the participating faculty members.

Regarding the participant selection, I aimed to include all tenure-track faculty members and as many fixed-term instructors as possible, to have different academic tracks, professional backgrounds, and hopefully, pedagogical and assessment approaches represented. The department's website listed as their faculty 28 tenure-line, five emeriti, 43 fixed-term research faculty and three post-doctoral scholars in the spring semester of 2013, when the study was designed and the pilot study was conducted. Twenty five individuals agreed to participate (the rest did not reply).

This dissertation includes only the 18 tenure-track faculty members. During the course of the interviews it became clear that tenure-track faculty members shared characteristics (among them teaching loads and institutional expectations of teaching, individual ideas about the role of teaching in their professional identities, and the level and types of interactions with students) that non-tenure track instructors did not share. That led to the decision to include only tenure-track faculty members in this study. There were 14 men and 4 women. Four were untenured. Seven were foreign-born and -educated. One was a person of color. Four had been teaching for less than ten years, five had been teaching between 10 and 29 years, and nine for more than 30 years. Three of them held administrative duties in addition to their teaching responsibilities (Emma Miller had held administrative duties in the past, but not at the time of the interviews). Participants' distribution by academic track can be seen in Table 3.1 below.

Table 3.1. Participants in the Study

Name[n]	Track	Total Years Teaching[t]	Gender	Race	US-born
Charles Harris [a u]	People/Technology	20-29	Male	White	No
Daniel Anderson	Technology	Less than 10	Male	White	No
David Brown	Environment	30 or more	Male	White	No
Don Williams	Environment	30 or more	Male	White	Yes
Emma Miller	People	20-29	Female	White	Yes
Eric Hutchens	People/Resources	10-19	Male	White	Yes
Isabella Martin	Technology	30 or more	Female	White	Yes
James Smith	Environment	30 or more	Male	White	Yes
John Davis [a]	Environment	30 or more	Male	White	No
Joseph Baker [a]	Resources/Environment	30 or more	Male	White	Yes
Mary Thompson	Environment	Less than 10	Female	White	Yes
Michael Taylor [u]	Resources	Less than 10	Male	White	Yes
Neil Jones [u]	Resources	Less than 10	Male	White	No
Paul Lewis	People/Technology	30 or more	Male	Non-White	No
Richard Jackson	Technology	30 or more	Male	White	Yes
Robert Wilson [u]	People	Less than 10	Male	White	Yes
Sophia Johnson	Technology	20-29	Female	White	Yes
William Moore	People/Technology	30 or more	Male	White	No

[n] Organized by faculty member's (assigned pseudonym) first names

[t] In all institutions, not just this one. Numbers were rounded to protect identities

[a] Holds administrative duties

[u] Untenured

Data Gathering Procedures. I gathered data following a *theoretical sampling* method, in which data collection is based on concepts derived from the data (Corbin & Strauss, 2008). That is, I used the data collected during the pilot interviews and the first interviews –and other sources—to guide future data collection. After securing Institutional Review Board (IRB) approval (see Appendix A), I sent invitations by electronic mail to individual faculty members, requesting a meeting for an interview (see Appendix B). I sent a total of 34 emails, 25 to tenure-track faculty members—exceptions were a high-ranking university administrator without teaching duties for several years, a faculty on sabbatical leave, and a faculty who would join the department the following semester. I also sent emails to 9 fixed-term instructors, whose names were recommended by a department staff person as core instructors, and not one-time hires. A

total of 25 faculty members (18 tenure-tracks and 7 fixed-terms) accepted to participate and all were interviewed.

Interviews. I met with each participant at his or her campus office. After obtaining implicit informed consent (see Appendix C), I completed two interviews with most of them; in a few instances, they preferred to complete both interviews in one meeting, and one participant required three meetings to complete the interviews. Each interview lasted between 35 and 60 minutes and was audio recorded. These in-depth semi-structured interviews followed prepared protocols on the topics of teaching, assessment, and students (first interview), power dynamics and student diversity (second interview).

To allow participants to elaborate as much as they wanted or needed, as long as they were on topic, following the interview protocols was not practical. I needed flexibility to deviate from the sequence and the specific wording of the questions when necessary. Hence, I developed a thematic list to ensure that all themes were addressed (see Appendices D and E for interview protocols and thematic list), but in flexible order or wording. As I completed the interviews, I started noticing themes and trends in the data. Based on the data obtained with one participant, I would seek "pertinent data" in the next interviews to "elaborate and refine the categories constituting [my] theory" until my categories were well defined; this is called *theoretical sampling* in grounded theory (Charmaz, 2011, p. 96).

Supplemental data sources. Other data sources included course syllabi, assignment guidelines, lab instructions, sample tests, and department-related documents, such as the *Undergraduate Student Handbook* and the department's website, among others. Before beginning the first interview, I asked each participant to complete a brief Background Information Sheet (see Appendix F), which collected information on their academic track,

academic appointment, teaching workload, and courses taught. Once the interviews were completed, I asked participants for a copy of the syllabus for the course or courses they had described in the interview, as well as other related documents (such as lab instructions or assignment guidelines) mentioned during the interviews. These materials helped me contextualize and verify some of the descriptions made by the participants, including course content, pedagogies, assessment, and course policies and rules. The *Student Handbook*, a 64-page booklet, included information about the department and the faculty, and provided information on numerous academic, extracurricular, and social resources to students. The website included contextual information on the department's mission and vision, each academic track, and each faculty member and instructor's areas of research, courses taught, and contact information. These documents complemented information about the department or the individual faculty members' teaching practices, and often confirmed information gathered in the interviews.

Data Analysis Procedures. To protect my participant's identities, I assigned a pseudonym to each participant and removed all identifiers as I transcribed the interviews. I used QSR International NVivo10 (2012) qualitative software to organize, code, and analyze the data. Following grounded theory methods, all interview transcripts underwent several rounds of coding. Qualitative coding is the process of naming and categorizing data with labels ("nodes" in the software) that summarizes and accounts for the data (Charmaz, 2011). As coding evolved, I examined these labels and explained them in memos, beginning an analytic process that moved some labels into concepts. Memos were used to "catch [my] thoughts, capture the comparisons and connections [I] make, and crystalize questions and directions for [me] to pursue" (Charmaz, 2011, p. 72).

I followed Charmaz's (2011) recommendations to begin coding remaining open, staying close to the data, keeping codes short, simple and precise; using gerunds to keep focus on processes, and comparing data with data. I also heeded the advice of Corbin and Strauss (2008) to use several analytic tools to help with the coding, writing of memos, and the interpretation of the data. These include: Use of questioning, making comparisons, thinking about the various meanings of a word, drawing upon personal experience, looking at emotions expressed and the situations that aroused them, and ask "so what" and "what if," when coding.

The first round of coding completed is called ***initial coding*** and involved coding the first interview transcript line-by-line and the second transcript incident to incident; coding was done seeking to sort and separate data, and find meaning in it. This type of coding is a useful first step, because it helps begin to identify areas where needed data is lacking; also, as it sticks closely to the data, it lets the data, rather than the researcher's preconceived knowledge, guide the coding (Charmaz, 2011). Although laborious, these first rounds of coding were necessary because "if you ignore, gloss over, or leap beyond participants' meanings and actions, your grounded theory will likely reflect an outsider's rather than an insider's views" (Charmaz, 2011, p. 49). Coding was accompanied by memos that allowed me to identify, reflect on, and interpret what was happening in the data, and rendered my preliminary first high-level categories: *Imagining teaching*, *Acting like a teacher*, and *Becoming a teacher*. A second series of ***focused coding*** followed, in which I identified the most significant and/or frequent codes, still guided by the three high-level categories; this required removing, renaming or grouping some initial codes as concepts. It also involved revising and expanding existing memos, and creating new ones. Next, there was a third round, called ***axial coding***, during which I related concepts to concepts

and categories to subcategories and specified the properties and dimensions of a category, bringing data back together (Charmaz, 2011).

Throughout these rounds of coding, I used the constant comparative method as I continued to code all the interviews, refining my concepts, and focusing on process, while attempting to move from a descriptive to a conceptual level of analysis. Connecting summary memos and diagrams, I started developing a descriptive story of teaching that captured the experiences of my participants. Corbin and Strauss (2008) call this bringing process to the analysis, and indicate that the analysis can stop here, once a process is explained, or can continue onto integration.

A last round of coding, called ***theoretical coding***, is an integrative step that seeks to find relationships among codes developed in focused coding, as hypotheses that "may help [the researcher] tell an analytic story that has coherence" (Charmaz, 2011, p. 63). During this step I re-read memos, wrote summary memos combining several concepts and continued developing the story that explained the process of teaching for my participants. I also found *theoretical saturation*, which is not the same as repetition: Categories are saturated when they are well developed, and further data gathering or coding no longer sparks new theoretical insights (Charmaz, 2011; Corbin & Strauss, 2008). At this point I realized that high-level categories needed to be renamed.

To achieve ***theoretical integration***, I began searching for a *main category*, as I continued refining my concepts, trying to connect them all into the emerging story, and continued diagramming. Once the main category, *Seeking what works*, was identified, the high-level categories were revised. After some recoding and memo writing, three clusters of teaching surfaced: *Adopting what works*, *Discovering what works*, and *Crafting what works*. Having

identified the main categories and the clusters enabled me to integrate them into a story that started being descriptive and became increasingly analytic. This was a period of tremendous intellectual activity, as many ideas kept emerging, taking shape, and morphing into something else. The analytic phase was exhilarating and exhausting and it felt somehow akin to detective or creative writing work. At last, the story of teaching expansion took form and I was able to further develop the three teaching clusters in ways that were theoretically and conceptually grounded.

Once I developed my schematic, feminist theories complemented my analyses of the data, as I attempted to "look up" (examining the data from the bottom up) at structural and systemic hierarchies to then challenge them (Harding, 2004a, 2008) by deconstructing the metanarratives that sustain these structures (Naples, 2003); in this case, to make explicit potential practices of power in teaching and assessment (Harding, 2004b). Additionally, I looked for gaps and silences (what was excluded), looking at whom and what are omitted and excluded from the narratives (Alcoff, 2001; Diprose, 2000; Hekman, 1997). Finally, I returned to my research questions as I sought to interpret how faculty members' described and practiced teaching, how they explained their teaching views and practices, and whether issues of diversity and power were related to their teaching.

Ethical Considerations

Creswell (2007) indicates that qualitative researchers must take into consideration some ethical issues involving our roles with the participants, establishing respectful relationships with them, "acknowledging whose voices will be represented in our final study; and writing ourselves into the study" (p. 56). Ethical considerations happen at different stages of the research,

including before and at the beginning of the study, during data collection, analysis, and reporting, and at the publishing of the study, if applicable.

This dissertation considered these ethical issues in the following ways (using Creswell's criteria, 2007; see table 3.2 on pages 58-59): a) *Prior to the beginning of the study* I sought institutional review board approval for both the pilot and the dissertation study, and made sure that the department selected did not raise power issues that directly involved me; b) *at the beginning of the study* I informed my participants on the general purpose of the study and asked for the appropriate consent, assuring them that they could stop at any time, or skip any questions they wished to not answer; c) *during data collection* I aimed at building and maintaining trust, explained how data would be used, and avoided using leading questions; d) *during data analysis*, I reported multiple perspectives and protected my participants' identities, assigning pseudonyms; and e) *in this reporting of the data* I am reporting as honestly as possible, avoiding individual identification, and using language appropriate for the intended audiences. In preparation for a potential future *publishing of the study*, I asked participants for feedback on my preliminary analyses (see more below).

Trustworthiness and Quality

Reminding qualitative researchers about the different criteria to conduct, read, and judge qualitative research, Charmaz (2011) indicates that "whereas quantitative researchers want to use their data to make statistical inferences about their target populations, grounded theorists aim to fit their emerging theories with their data. Quantitative researchers test preconceived hypotheses; grounded theorists sometimes offer their grist for emergent hypotheses that other researchers might pursue" (p. 101). Similarly, Corbin (Corbin & Strauss, 2008) indicates that when discussing qualitative research, the terms validity and reliability "carry with them too many

quantitative implications" (p. 301). While she agrees that the word credibility captures the intent to demonstrate that the findings are trustworthy and believable, and that they capture the participants' experiences, Corbin settles on *quality* as a word that describes whether the research and the findings resonate with not only the participants, but also the readers of the research. In aiming for quality, Corbin (Corbin & Strauss, 2008) advises, a qualitative researcher should have methodological consistency; clarity of purpose; self-awareness; training in qualitative research; sensitivity for the topic, the participants, and the research; willingness to work hard; methodological awareness; and a desire to do research for its own sake.

But quality in qualitative research is judged by others; the researcher can only aim to meet the ethical and research criteria as best as possible. Charmaz (2011) suggests that grounded theory studies should meet some criteria related to credibility (findings that emerge from the data), originality (findings that offer new insights and are significant), resonance (findings that resonate with the participants and other professionals who teach), and usefulness (findings that are applicable and contribute to knowledge) (paraphrased from pages 182-183). Meeting these criteria increases the quality and trustworthiness of the research.

Seeking to increase the quality and the trustworthiness of this dissertation's findings, I used the abovementioned supplemental sources as forms of *triangulation* to corroborate my data and interpretations and I used *rich description* to let the data guide the results and to allow readers to decide on the transferability of my results (Creswell, 2007). Further, I included *member-checking* (Charmaz, 2011). I emailed participants summaries of my preliminary models and findings (without disclosing their identities or who belonged to any cluster), and asked them to provide feedback on whether 1) my interpretation of teaching resonated with their views and practices of teaching, 2) the clusters made sense to them, regardless where their teaching might

fit, and 3) there were missing aspects in my interpretation. This is what Corbin (Corbin & Strauss, 2008) calls *validating the scheme*. Not all participants replied, but those who did indicated that the models resonated with their views and practices. Some offered suggestions for interpretation, like pre-tenure pressure influencing time for teaching, or belonging to different clusters at the same time, depending on time spent teaching a specific course. I added some of their suggestions to the findings and conclusions chapters.

Lastly, there is *research bias*, or what I prefer to call *positionality*, which involves the subjectivity of the researcher. As Maxwell (2005) makes clear, "qualitative research is not primarily concerned with eliminating *variance* between researchers in the values and expectations they bring to the study, but with understanding how a *particular* researcher's values and expectations influence the conduct and conclusions of the study […] and avoiding negative consequences" (p. 108, emphases in original). My own teaching experiences and long-term study of higher education issues, including the teaching and learning process, assessment, diversity, and power dynamics inform my interpretation of the participants' teaching views and practices. My very presence (as a Latina doctoral student in higher education) and questioning might have influenced my participants. This is what Maxwell (2005) calls reactivity, and although it cannot be eliminated, it should be acknowledged. Acknowledging my positionality and its potential influence on this research, I followed the data closely to support my claims and to build my arguments.

My contribution to the understanding of teaching is socially situated (Harding, 2001). It occurs in my participants' context and my own context. Harding (2001) suggests that "listening carefully to different voices and attending thoughtfully to others' values and interests can enlarge our vision and begin to correct for inevitable ethnocentrisms" (p. 160). Rather than attempting to

fit the data into neat preconceived categories, I made an effort to accept the reality of multiple, situated, and valid standpoints and realities (Haraway, 1988; Heckman, 1997) and let the data guide the coding, the interpretation, and the reporting of the findings.

Limitations of the Study

This study has several limitations. Some are related to the sample and the sources of my data (mainly interviews): I included only the 18 tenure-track faculty members in one department at one institution (which as I explained before, also presents some advantages in the multiplicities and singularities of my participants' teaching and learning perspectives and approaches). My sample included mostly men (only four women) and only one person of color; more diversity would have helped examine whether and how their identities come into play into teaching expansion. Their context surely shapes their teaching experiences differently than teachers at other places. And while classroom observations would have been helpful to confirm some of the data, I contend that teaching expansion is related to teaching views and practices. I could not have seen my participants' teaching views after a semester of classroom observations, as they are not always observable. And it would still have still been my interpretation of the observations.

Other limitations relate to the stories (the data) themselves: These were faculty members' own stories, often recalled from a long time ago. And I captured their stories during one semester in their teaching trajectories; maybe if I were to interview them now, the data would lead me to different interpretations (for instance, if their department were undergoing an accreditation visit while I conducted the interviews, their stories would likely emphasize that).

Chapter IV. Research Findings

Seeking What Works in the Development of Teaching

and Expanding Teaching Practices and Views

"Our actions become statements of our beliefs,
of the theories that guide us as educators"
Rebecca Ropers-Huilman, 2009, p. 55

Organization of the Study's Findings

This chapter begins restating the dissertation study's aims and research questions, and providing a brief overview of the data analysis procedures. After that I present the conceptual model that captures the study's findings, and which will be explained in the following sections. Throughout the chapter I use analytical and theoretical interpretations of the categories and associated concepts (*italicized*) to indicate when a concept evolved from the data. All these analytic pieces are supported by and derived from the participants' voices, as excerpts (with all identifiers removed), to keep the interpretations close to the original data.

This study sought to understand, interpret, and explain faculty members' views and practices of teaching, including pedagogies and assessments. Additionally, it investigated the origins of these views and practices, and their shifts; it also probed for possible connections with views of power dynamics and diversity in the classroom. To reiterate, the guiding research questions were:

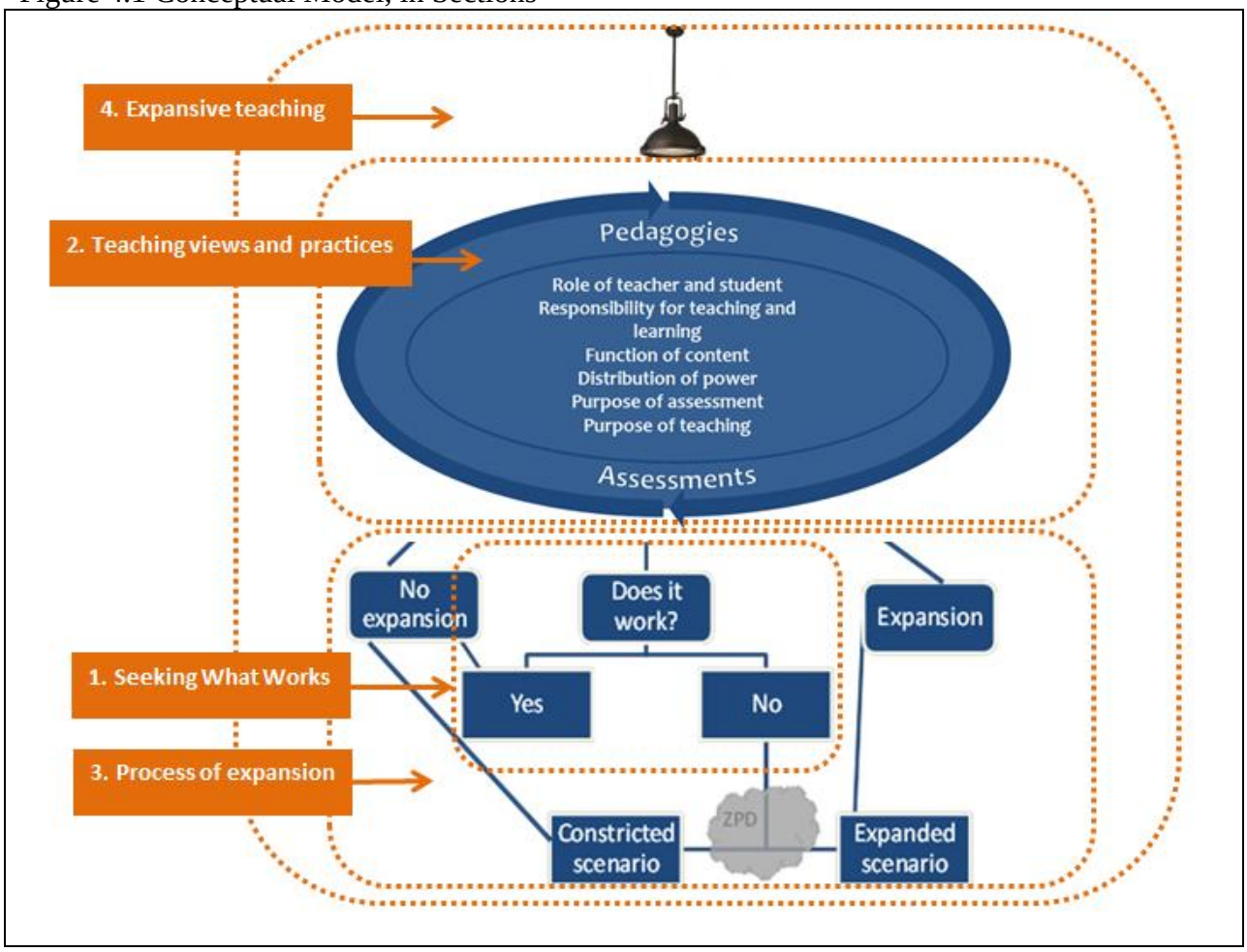
1) How do faculty members describe their practices of teaching (pedagogies and assessments)?
2) How do faculty members explain their views of teaching (pedagogies and assessments) in the classroom, and to what do they attribute these views?

3) How do faculty members explain issues of diversity and power, and their relationship to teaching?

This dissertation study included 18 tenure-track participants (see table 3.1 for participants' information) who were interviewed about their views and practices of teaching, including pedagogies and assessments, the origins of these views and practices, and the potential relationship of teaching with power dynamics and student diversity. Using qualitative grounded theory methods, data from those interviews were coded and analyzed to create concepts that capture the ideas and meaning of data pieces. These concepts were constantly compared for similarities and differences between the participants. There were several rounds of data coding until some concepts were linked via summary memos to tell the participants' story of teaching, which is represented in the conceptual model below (see Figure 4.1 below).

The model will be explained in sections, marked in Figure 4.1 The first section describes the main category of this study, *seeking what works in the development of teaching*, which guides the participants' teaching and leads them to keep or change their teaching views and practices. The second is *teaching views and practices*, which includes the participants' ideas of teaching and reflect their epistemic views. The *process of expansion* is the third section and it links the previous two, explaining the possibility of teaching expansion. The fourth is the resulting *expansion in teaching*, shown by a light beam in each cluster. Using this model, participants' descriptions and explanations of teaching were analyzed and grouped into three teaching clusters, each more expansive than the previous one. The revised full model is presented again at the end of the chapter.

Figure 4.1 Conceptual Model, in Sections



Note: This schematic highlights the four sections, marked in boxes, as they represent the following sections in the chapter. The full model is shown at the end of the chapter.

Teaching Guided by Seeking What Works

The 18 tenure-track faculty members who participated in this study teach in ways that are distinct yet seemingly effective. They employ different pedagogical and assessment strategies, hold different views about the roles that students and teachers play in the teaching and learning process, and have their own ideas about student diversity and power dynamics in the classroom. They describe teaching and learning differently, face distinct challenges, and resolve them in their own unique ways. Despite these differences, there are also commonalities: They all teach undergraduate and graduate courses, use lectures as their main pedagogic strategy, and rely on

"lots of visuals" in their PowerPoint's presentations. They all have teaching assistants, and their classes have computer lab components. They often include multiple assessments, including writing assignments. Many use active learning activities. Many seem to be valued by their students. Almost all of them wove into their interviews stories of students' success and appreciation; a few have won teaching awards. They all seem to care about their students and their learning, and about teaching.

At the core of their teaching practices, what all the faculty members that I interviewed seem to be doing is ***seeking what works*** in their teaching (as defined by themselves and in relation to their teaching views and practices, as we will see below), and teaching in ways that seem to work for them. Regardless of which pedagogies and assessments they use or how many years they have taught, their teaching is guided by this process of seeking what works in, and sometimes out of, their classrooms. This requires that they constantly check whether their teaching is working (according to their own ideas and standards). And as long as teaching seems to be working for them, they remain teaching in broadly the same way. Participants repeatedly used words like "figuring what works," "it worked" or "it wasn't working," and other similar words reflecting that sentiment. Eric illustrated the idea of something *working* or *not working* in his teaching:

> There would be some days when I feel like I'm giving like a 20-30-minute lecture, and I can sense they are really with me: They are asking questions, they are responding in such a way that I know that that information is being communicated. But sometimes it just doesn't work, and I have to try something different.

Eric's explanation of how he "senses" that the students are with him reflects his way of knowing that his teaching is working: The students are engaged in class, asking and responding to

questions as he conveys information that he hopes is being communicated. Similarly, lack of student engagement in class signals to him that his teaching is not working, and to him, this means that he must make adjustments to the way he is teaching.

Mary referred to something working for her when she talked about a course that had been taught before by other faculty in the department and that she decided to teach differently, making it "textbook-heavy upfront." In short, she decided to present important concepts at the beginning. She said that when "the course had been taught [before] these things had been blended in seamlessly through the semester, but I felt that it would be impossible to talk about any one of these places without having this other content. It worked for me…" For Mary, what worked meant something entirely different than for Eric. As she prepared this course, she was faced with an existing class outline that contradicted her views of the importance of course content. Using her ideas of what worked for her and her way of teaching in her discipline, she reworked the course outline. In both cases, Eric and Mary sought ways of making the class work to fit their ideas of what working in teaching means to them: Student engagement for Eric, course content sequence for Mary. As we will see in more detail later, these ideas of "what works" reflect individual ideas about teaching.

Over and over, teachers talked about a process of constantly self-checking their teaching, during and after a class session or at the end of the semester. These checks act as confirmation that their teaching works for them, hence that no changes are necessary. But sometimes these checks tell them that their teaching is not working, that changes are needed. These changes, big or small, are also guided by *seeking what works* in their teaching. For instance, Isabella talked about making a small calendar change to her fall semester courses, to adjust when Thanksgiving break happens:

> For one, I felt that everybody needed it, because 15, 16 weeks is an endurance test, and the instructor is exhausted, the students are exhausted, and I don't think it's conducive to learning, to have that long a stretch without a break. Thanksgiving comes too late in the semester for [this university], so halfway through it's time to take a breath, it just is, and it works, at least for me it works.

On the other hand, Richard talked about his motivation for projected big changes in his teaching:

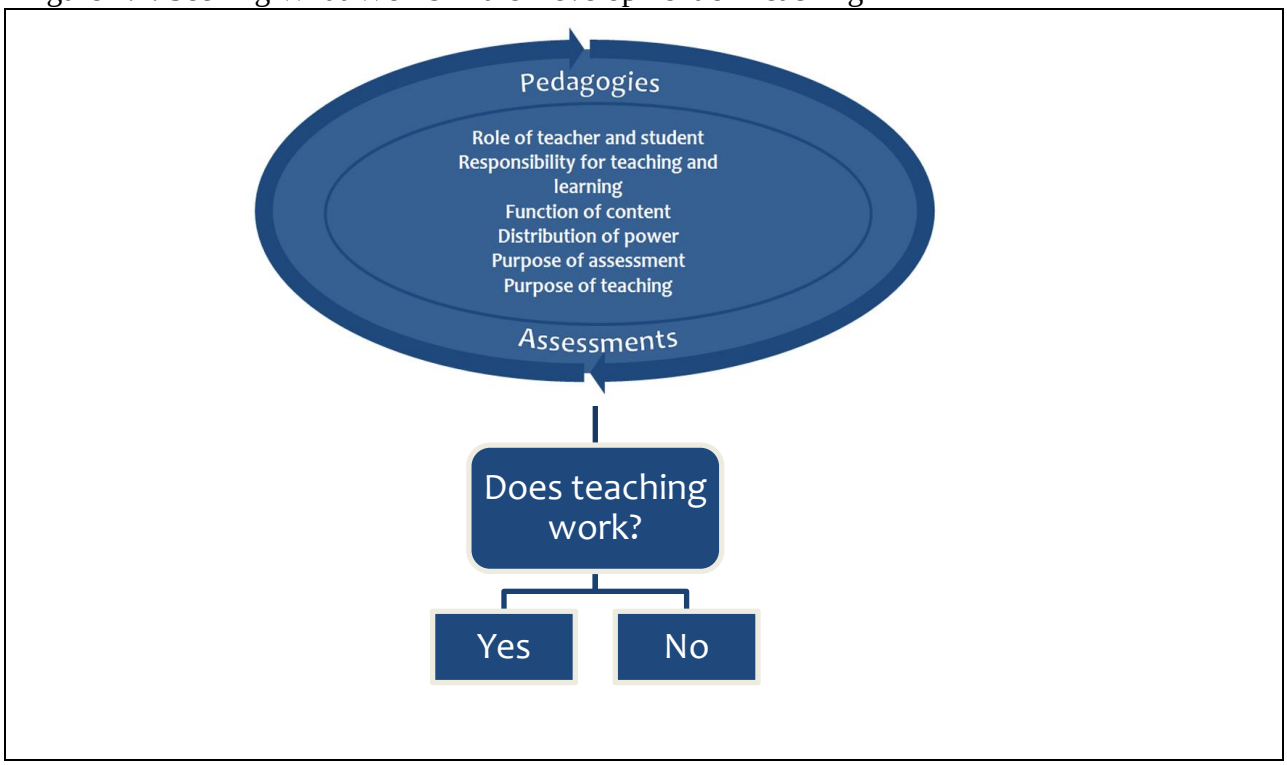
> The biggest goal that I have in there is trying to get students to really start thinking critically and knowing what that means. So there's still the tendency —I have never quite figured out how to get around it— there's a tendency in most students to want to be told what they're supposed to learn and then regurgitate that; so getting around that is the biggest challenge. I guess that's part of the reason for an attempt at active learning that we are going to try to do something different next year.

Even though Isabella and Richard were making changes in their teaching in response to seeking what works, the types of changes were different. Isabella responded to the exhaustion that she and the students were feeling and that were not "conducive to learning" and decided to alter the semester break to alleviate the stress. Richard on the other hand, wants to pursue a pedagogical change, using active learning strategies to resolve the problem of students wanting to be told what to learn passively, as he seems to believe this pedagogical shift will do that.

The core category of *seeking what works* in the development of teaching developed from the analyses of the data (see Figure 4.2 below). As I worked in interpreting it, it begged the questions what works for whom? And to what end? What does *what works* mean to these participants? The answers to these questions can be found in their ideas of teaching, in their *teaching views and practices*. Attempting to answer these questions also brought my attention to

the process that these teachers followed in developing these views and practices. Each of these teachers thinks of teaching and what it should be and look like differently, which forms and informs their views and practices of teaching. These teaching views and practices reflect the participants' basic epistemic ideas, or how it is we can know, but they also entail a more postmodern epistemology that considers who has the right and authority to learn and to produce knowledge (Alcoff, 2001).

Figure 4.2. Seeking What Works in the Development of Teaching



Beginning to Seek What Works: From First Teachings to Own Teaching Ideas

Teaching views and practices then reflect a teacher's epistemic ideas that guide the answer to the question of whether his or her teaching is working (for him/her). The process of developing views and practices of teaching starts as faculty members first begin to teach and choose specific ways of teaching, as they begin to seek what works in their teaching. For Emma,

Charles, Daniel, William, Eric, and David, becoming a faculty member was the result of wanting to pursue a career that involved teaching (a *teaching motive*); for Richard, Don, Sophia, Robert, John, and Isabella, it was the result of pursuing a career doing research (a *research motive*). Mary, James, Joseph, and Neil wanted to become faculty members to be able to do both. Paul and Michael were different cases: Paul felt that the decision was made for him as he was recruited to teach and received a scholarship to get his doctorate to then return to his home country to become a faculty member. Michael was invited to help start a new school because of his long and solid professional career as a practitioner. Two-thirds of the 18 participants began their faculty careers immediately after finishing their doctoral studies. All but John, Michael, and Paul started teaching as graduate teaching assistants.

Emma, Sophia, Isabella, and Paul are what I call *chosen* students who were given opportunities that opened doors for faculty positions. These four teachers talked about feeling that they were tapped to be faculty members. For Emma and Sophia, it meant being invited to teach as full instructors while in graduate school, because of their advisors' recommendation. This opportunity gave them teaching experiences that made them stronger candidates for faculty positions upon graduation. Emma was an ABD (all-but-dissertation) student when she was asked to teach "a mammoth 350-students intro to world [regions of earth science] class." Sophia was even hired for a tenure-track position in the fall semester of her fourth doctoral year. For Isabella, it meant being protected by another faculty in her path to her doctoral studies (she was the first woman applicant to a brand-new technology track program and faced resistance from some admissions administrators to gain admission), and later on during her first tenure-track years (she was protected from becoming the woman token in committees, a dire need at the time). For Paul, it meant being one of the top two students graduating from the main college at

his home country, who were automatically recruited to teach for a year in the same institution where they had graduated from; these new teachers were then given a scholarship to study abroad, and were asked to return to their institutions to teach again. What these four *chosen* teachers had in common was a sense of being specially selected and given special paths to become faculty members. Interestingly, the *chosen* teachers contained three of the four women in the study and the only faculty of color in the participants' group.

Sources of first teaching ideas: Individuals, experiences, and resources. Regardless of the *motives* that led the participants to their faculty positions, they talked about people, experiences, and materials that *inspired* them or served as *resources* that helped them to navigate their first teaching experiences. These people, experiences, and resources influenced their first ideas of what teaching is, what it should be and look like, and which ways of teaching work for them. These first ideas of teaching informed their first practices.

Inspired by individuals. Some participants were *inspired by individuals*. For Eric, Sophia, Charles, and Mary, the idea of becoming teachers came early, as family members, usually a parent educator, inspired them to pursue a career that involved teaching. Eric shared:

> Both my mom and my step-father are educators. My mom taught at the elementary school level, special ed, for about 15 years. My step-father … was a high school teacher and ultimately a principal of an elementary school… I grew up in a household that valued education, and I saw the importance of that.

Having two parent educators instilled in Eric values for education. It also inspired him to pursue a career in it. For Emma, Mary, William, Neil, and Paul, it was a teacher or faculty member who inspired them to follow the same journey. Emma talked about returning to school after working for ten years, and being in a class for her master's degree:

> I was taking an [earth science] graduate seminar with a professor whose style was so approachable, he made everyone in the seminar feel like what they had to contribute was quite important, that I thought, not only is [earth science] a place where I want to be, but that I want to be able to teach at this level and in this way. That's pretty much how it started for me.

Emma was inspired so strongly by this professor for the specific ways in which he taught—being approachable, creating an environment for shared teaching and learning—to the extent that she also decided to pursue a degree in Earth science. She wanted to teach like this professor. Like Emma, other participants were inspired by teachers who seemed to have figured out what worked for them, and they emulated these role models fully, in some aspects, or sometimes as models of how not to teach. The influence that Neil's teachers played in his decision on how to teach is seen here:

> Just based on my own learning. I learned best from teachers that looked me in the eye, that were accommodating enough. You know, those teachers that could give you a C or a D on a paper, an F maybe and you could still respect them. You respected where they were coming from because they treated you as an individual. So I knew… I guess I didn't know [laugh]… Based on my personal experience. I guess that wouldn't work for everybody. Maybe there are students out there who want cut and dried [information] or facts, but I felt like in order to be successful I needed that. … I also knew that you needed to be prepared. You needed to go into class knowing the material and being able to adapt.

Neil's quote is packed with his ideas of what is important in teaching: looking students in the eye and treating them with respect, being accommodating, grading firmly, knowing the course

content, and being adaptable. He credits all these ideas to teachers he respected and who treated him "as an individual". And while he recognizes that not all students might like that, these aspects are important to him. For Mary, it was inspiration from both parent educators and from teachers that motivated her to pursue a faculty career:

> My parents, my father specifically was a professor for years, eventually he moved out of academia but I had always known him and appreciated him as a professor - so I guess that was my first interest. I remember being inspired by a few faculty when I was at my undergraduate school, I decided to major in [earth sciences]. At the time because I was really impressed with one of the teachers I had seen during an orientation –so he was inspiring—and then a few of the other teachers because we were in a small department, I got to know the faculty quite well.

Mary was inspired by some teachers she got to know well, her father among them. These teachers provided her ideas about the role of the teacher that she would like to emulate.

Sometimes participants chose their teachers as role models of how not to teach. Robert was one of them. He talked about being a good teaching assistant who got paired off with a teacher who would show up to class not only unprepared and disheveled but sometimes reeking of alcohol. This instructor was for Robert an example of what not to do as a teacher.

Overall, participants mentioned individuals who helped them during their first years teaching: Advisors, peers (faculty members, some of them at this same department), family members who were educators. For one participant belonging to an informal peer teaching network at his institution was helpful; one mentioned her teaching assistants and two their students' feedback. These people acted as a *network* that opened doors for them to begin teaching, advised them, and influenced their ideas and decisions about how to begin to teach.

Inspired by teaching experience. Some of the participants wanted to pursue a career that involved teaching after they experienced it, that is, not only they began learning to teach through an early teaching experience, but also were inspired by it. For David it happened while he was completing his master's degree: "So that's really what got me into teaching, it was tutoring." As he described this tutoring experience, he added that "even though it was in English and it wasn't in [Earth Science] or anything like that, it was really incredible, I remember it was really rewarding." David enjoyed this early experience so much that later on, as a doctoral student he was a research assistant, and volunteered to be a teaching assistant to further his teaching experience. For Eric, Robert, Daniel, and James, it was their experience as outdoor educators (e.g., summer camp teachers or counselors). Robert recalled what for him was his first teaching experience as a summer camp counselor:

> I think leading groups of people through an exercise in which they are learning is my first experience with teaching. And mostly in outdoor programs like teaching kayaking and things like that. It wasn't until much later that formal class teaching became part of it. My earliest successes with teaching were very much about movement and challenge … it takes a lot of mental fortitude to get flipped over by a wave in a kayak and not just swim away. So getting people in the mental space where they could try these things that were kind of scary and succeed and giving them sort of a group vibe that would be conducive to that would be my first experience with teaching. I think this was remarkably important to how I still do things...

Tellingly, Robert credits this experience as a persistent influence in his teaching. Embedded in this quote are characteristics that he values in teaching, namely guiding individuals through scary

situations (which could be translated to learning new things) and creating an environment conducive to learning.

Most of the participants (all except John, Michael, and Paul) talked about their first teaching experience as a graduate teaching assistant, which often inspired them or helped them develop their ideas of teaching. One of them is Joseph:

> As an undergraduate I was asked by my instructors occasionally to give a guest lecture. I did that, and I liked that. Then I went to graduate school and became a teaching assistant and enjoyed that very much. That cemented my commitment to going on to become a faculty member and an important part of that is teaching.

Joseph's quote on how his graduate student teaching experiences influenced his decision to become a faculty member emphasizes how much he enjoyed it ("I liked that," "enjoyed that very much") and its influence, as can be seen in the last sentence.

Resources. Some participants listed several kinds of resources. Almost half of them mentioned *materials as resources,* like course syllabi from other faculty in the department, from their faculty friends, or from when they attended these courses as students; sometimes these syllabi were for similar courses to the ones they were going to teach and sometimes they were dissimilar but provided an structure to emulate, but they all helped them plan their own first courses. Two of them also received slides that they used in their teaching; almost half of the teachers credited a textbook as a resource. Some participants mentioned *training as resources*; half of them attended some educational event, a teaching program, workshop, or class during their graduate student years or during their first years as faculty members. They often credited these experiences as influential in their first instructional decisions.

Lack of resources. Despite teaching at institutions that often had instructional resources available to all faculty –and often targeted at new faculty or even doctoral students, such as teaching and learning centers, several participants said that they either felt there were few or no resources available to them when they began teaching. They indicated that often they had to be proactive and creative seeking what worked. One participant said he did not seek teaching resources at all (although in other parts of the conversation he mentioned being part of a peer teaching network and using his students' feedback to guide his first teaching. He clearly did not see these as resources).

For some, deciding how to teach felt like it was not even an option, as they *lacked a sense of decision-making*. Joseph explained: "Well, back then it was fairly standard, people simply lectured." Since half of the participants have been teaching for at least three decades, this comment was not surprising. One of them was Isabella:

> When I started to teach... that was 1976, yeah… 76, I believe. It was the standard way of doing it, it was what they call *the sage on the stage* where you just got up and talked for 50 minutes, that was just the standard way of doing it, and that's what I did.

For Isabella the idea of the *Sage on the Stage* represented the prevalent way of teaching at that time. It was curious that Emma and Eric, who have been teaching for over 20 and over 10 years respectively, also mentioned the *Sage on the Stage*, but as an idea they fight against in their own teaching.

A few teachers pointed out that during their doctoral studies they were trained to do research but *lacked training* on teaching. One of them was Daniel, who said, "I find it amazing that everyone thinks that university professors have to be these excellent teachers, and I always wonder why [laughter]. How on earth does doing the research qualify for becoming an excellent

teacher? I don't think that that's necessarily the case." Likewise, Isabella described what she knew about teaching at the beginning:

> I got some general advice from my advisor, but like most academics, I think, in the United States, you are not taught how to teach; you are just thrown into a classroom and say, [chuckle], you know, "Have a good time," and there you go. So it was really learning by doing, absolutely learning by doing.

Isabella, while crediting her advisor with some help on her teaching, described a larger sense of not receiving actual help. She emphasized this feeling of lacking resources and training as she added her having to learn about teaching on her own, by teaching. Isabella's "learning (to teach) by doing" signals her learning from her own experiences, which make her original (abstract) ideas of teaching more concrete.

Several influences at once. Often, participants described their first teaching decisions as a combination of several influences. Charles exemplifies this sentiment in the following passage:

> It was just doing enough to scour around, find different curricula that were available; there were some available. Certainly taking advice from colleagues. I designed my curriculum but partly it was based on what you've seen in class that works for yourself. You think it works, your instructors have been good to you, and you kind of take the best you can from other people's examples and adapt it.

A combination of materials (syllabi) and individuals (colleagues who advised him, teachers who inspired him, who had been "good" to him) influenced Charles's first teaching views and practices. Sophia, a *chosen* student, explained how she began making teaching decisions after

her advisor, for whom she had served as a teaching assistant (TA), recommended her for a teaching job at another institution during her first year in the Ph.D.:

> I had given a few guest lectures and I had been a TA or taken those classes [that I was being asked to teach]. They weren't classes unfamiliar to me; they were design classes so I had class notes [laughter]. I had a textbook, and I had been a TA in the main class, [Introductory Design]. I don't know, I was kind of just bemused, I guess. They wanted me to do it and I was, "Okay I'll do it and I'll figure out."

In the above passage, we can see the influence of Sophia's advisor (*network*), her graduate teaching *experience*, and *resources* (*materials* like class notes and a textbook) –all products of others, informing her first teaching. As all of the examples in this section show, participants began their teaching (and seeking what worked in the development of their teaching) using different sources of ideas about teaching: Some were inspired by individuals or by early teaching experiences. Others used materials as resources that helped them during their first teaching. Often, they used several of these sources at once. And some of them shared that they felt like there were no resources.

Borrowed ideas of teaching. During the interviews, participants revealed what they knew about teaching at the time they started teaching (some chose to talk about their experiences as graduate teaching assistants, some as new faculty members). Most of them did not know much about teaching and learned by doing it. As we saw in the previous section, most used what they learned as teaching assistants or what they saw worked for their own teachers when they were students, imitating or adjusting *borrowed* ideas of teaching that they liked or learned from, or simply because that was the only way they knew how to do it.

Participants began teaching using this borrowed toolbox of ideas and practices of what worked in their first teaching. They taught using what they considered to be proven practices that worked for others. These *borrowed ideas of teaching* formed their first ideas of what worked in teaching, which informed their first practices. As time went by, these first ideas of teaching began to change, and participants began to develop their own views and practices of teaching. Sometimes they changed jobs and adapted to a new institution, or had to teach distinctly new courses. Sometimes it was just a matter of time and experience before they faced times when what had previously worked stopped working and they had to once again *seek what works* in their teaching.

Developing own teaching ideas. As teachers continued teaching, their teaching views and practices often changed from the original, mostly noncommittal toolbox of borrowed ideas of teaching into their own views and practices of teaching. James talked about how he developed his way of teaching and made his first changes, after a few years of teaching in another campus:

> I would say it was probably a fairly standard lecture, a lot of graphics, I liked to use a lot of visuals, I always had PowerPoint slides that I would make. I am a photographer so I would bring in photographs that illustrate a certain point. … I don't think I was doing anything extraordinary in terms of delivery of material at that point, I thought about it but I didn't always figure out … sometimes, we would do small-group things, in smaller classes. One class was over 100, it got up to 200 at one time, so you don't do a lot of small things. I tried to break it up, we might do current events, bring in some information, ask a few questions, have a brief discussion.

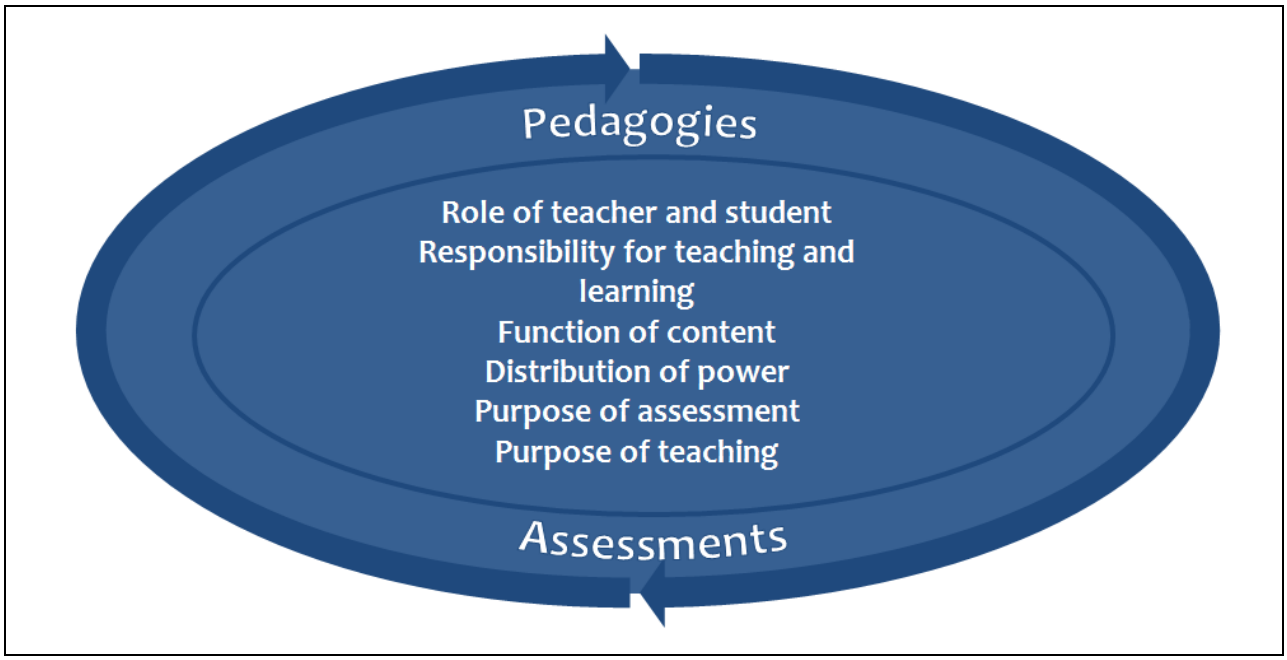
James began to bring his own photographs to his PowerPoint presentations, and while lecturing was still the primary delivery strategy, he seemed to be seeking new things to bring into his teaching. Later in the interview, he told me he had heard at a lecture he attended that "delivering dry lecture material has less retention as opposed to having more active learning." This knowledge appears to have motivated him to bring "small-group things" (seemingly his idea of active learning) to his smaller classes. The main goal in his shift seems to be to find ways to break the monotony of the lecture and bring in more student participation in class. However, although James began to think about instruction, he –like most of the participants—did not have theoretical resources or formal understanding of pedagogy, or assessment, or the roles of teacher and students.

As I proceeded with the analysis of the data in trying to explain the development of this study's participants' teaching ideas, I found that they were related to their often implicit definition of teaching. Importantly, their definitions of teaching were linked to their ideas of *what worked in teaching* meant, namely for whom and to what end. That is, like all other concepts, the concept of *what works in teaching* evolved from the data.

***Defining teaching*.** Guided by the 18 participants' stories and the literature (Beyer et al., 2013; hooks, 1994; Weimer, 2013 among others), I define teaching in this study as the combination of teaching views and practices, as I represented it in Figure 4.3 below. In other words, as I listened to, learned from, and interpreted the participants' conceptualizations of teaching, I understood it as a larger umbrella term that encompasses teaching views that are at the core of and are reflected by teaching practices, which shape and are shaped by each other. The way one teaches (*practices*) is guided by and also (in)forms one's ideas of teaching (*views*). Teaching views and practices also reflect participants' epistemic beliefs, as they guide their

views of knowledge, who can learn, who can teach, what is to be learned and taught and how, and how knowledge is to be evaluated.

Figure 4.3. Teaching: Views and Practices



1) Teaching views: During the interviews it became apparent that tacitly or expressly, teachers have specific ideas of what teaching is, what it looks like, and how it is supposed to be done. These ideas include the roles and responsibilities of teachers, teacher assistants, and students; the amount, pace, and function of content; the distribution of power dynamics and control in the classroom; and the purpose of assessments and teaching. These views usually originated with the teachers' first ideas of what works in teaching, mainly formed by what other teachers whom they admired, liked, or learned from, did. But these views can change over time.

2) Teaching practices: Participants' views guide the way in which they teach, through pedagogies and assessments. However, practices are guided by views not in the choice of a specific pedagogy or assessment, but in the way in which *any* pedagogy or assessment is used to

enact one's views of teaching. This means that most pedagogical techniques can be implemented in drastically different ways, depending on the teacher's views of teaching.

One example is the use of lectures, which all the participating teachers use as their primary instructional method. For some teachers, lectures are the predominant means to transmit information to the students. Their lectures are driven by content, and although some questioning might be included during the lecture time, answers to these questions tend to be confirmed only by the teacher after a student answers factually. For these teachers, content guides the process of teaching and assessments are likely to seek evidence of accurate information-giving. On the other hand, lectures and questioning are used by other teachers differently. Rather than being guided by content dissemination, their lectures are guided by specific learning outcomes (e.g., students' using the course concepts in projects, or students developing multiple perspectives on one issue). Throughout the lectures the students are engaged and questioning is multi-directional. The discussion produced by the questioning time can take the lecture off the original plan, and that is not only acceptable but often desired. In this teaching, assessments are often flexible to allow the students to bring their own ideas and are accepting of different ways of demonstrating understanding.

Thus, teaching views guide practices and teaching practices are based on, and confirm or modify views. The constant process of *seeking what works* guided the participants' development of teaching, from adopting those first teaching ideas, borrowed from other teachers and from materials. The process of *seeking what works* (for teachers, as they developed their teaching) continued as teachers gained experience and their ideas were informed and changed by their actual teaching practices. These practices in turn reshaped their teaching views, and teachers began to develop *their own* views and practices.

Defining what works in teaching. During the early stages of analysis, I was trying to understand what guided the participants' teaching decisions: Where did their beliefs and ideas about teaching came from? How did they know if their teaching was working? To better understand *what works in teaching*, I looked at the data to find what *teaching* and *teaching that works* meant to the participants. What worked for these participants was intrinsically related to their views and practices of teaching, explained above. Teaching views (and the enactment of these views through practices in pedagogies and assessments) include different aspects: a) what is the purpose of teaching?, b) what is the purpose of assessment?, c) what are the roles of the teacher and the students?, d) who is responsible for the teaching and learning process?, e) what is the function of content in teaching and learning?, f) who holds or should hold power in the teaching and learning process? Moreover, embedded in the answers to these questions are epistemological views that guide their practices: Who is or can be a learner? And who is or can be a teacher? In other words, for this study's participants, what works in teaching was guided by these views and practices that formed their ideas about what teaching that works is and should look like. What works for them in teaching includes also their multiple roles as teachers –and sometimes learners—in and out of the classroom; as faculty members who must also conduct, present, and publish research, as advisors and sometimes administrators; and for some participants, as teachers who are also parents, children, and spouses. In the excerpts that follow, I use brief examples to illustrate how different participants talked about what worked, particularly at the beginning, as they were developing their own teaching views and practices, using the six abovementioned teaching views aspects. The participants' views and practices of teaching will be described and interpreted in more detail later on, and in this section I only intend to show how participants talked about aligning their teaching views (roles, responsibilities,

functions) with teaching practices (pedagogies and assessments) to explain what worked in teaching for each of them.

a) What is the purpose of teaching? For many participants, particularly as they were developing their own views of teaching, teaching often meant classroom management, completing a course without big conflicts, or getting through all the content and evaluations without a glitch. An emphasis on content acquisition can be seen in David's quote: "the bigger thing for me is that the science principles they learn that relate to the environment, that they learn in my course— because some of them might never take another [environmental science] type course."

b) What is the purpose of assessment? For some, like William, assessment was associated with assigning grades to student performance, but not with learning or understanding. As many of his students went into the job market, he added to his assessment goals that students produced a piece of writing that could be shown to potential future employers:

> I think it comes back to the level of what's satisfactory, that C level… And [having] sufficient evidence for a likely employer, that he or she could say, "Yes, okay, you can hire someone with that transcript because they have reasonably absorbed these techniques, these capacities to do things in communicating." So you reward excellence for going beyond merely satisfactory. I think that is one way of looking at it."

c) What are the roles of teacher and students? Neil described his approach to teaching a new course:

> I did have some leeway in terms of how I delivered the course. I knew I had to maintain the integrity of the course, because it was part of a broader certificate program, so if the students didn't get the basic knowledge I was really doing them a disservice down the

road. In that sense I needed to stick to the standard textbook. I chose the textbook but I needed to cover certain topics, and the lectures had to cover certain topics.

Neil's passage is dominated by making decisions about content coverage. Although he implicitly refers to pedagogies, objectives, and other aspects of teaching, his role as transmitter of content (driven by the textbook) is guiding his teaching decisions.

d) Who is responsible for the teaching and learning process? Often, teachers talked about having full responsibility for the teaching and learning process. James described how he would teach a new course; his description illustrated this sense of full responsibility, and notoriously, students were completely absent from the passage:

> I start with the basic information, but I might rearrange things, and my own material. There were basically 30 lectures I guess that I had to deliver, and so each year you probably change half a dozen significantly, you may change a few, I might put a couple of current events slides at the beginning, I almost always did that; change the quiz delivery around, a little bit. I might rewrite five or six of the PowerPoints, get new slides, emphasize something differently, drop one, add another, that sort of thing.

e) What is the function of content? For many participants, course content and its "delivery" (working the students through information) dominate teaching decisions. Sophia shows how this happened early in her teaching:

> [The students] read the textbook and they learn that additional content that I might have presented in the lecture but they don't read the textbook so I am a little bit conflicted about that, because I know that what I work them through is what they learn, I work them through less because I work them through it more thoroughly. Did I pick the right things

for them to learn? I don't know, I hope so, that's what they're paying me for, to know what's important.

f) Who holds and should hold power in the classroom? For many of the participants, particularly at the beginning of their teaching, power in the classroom was mostly unexamined and assumed to be held only by the teacher. We can see this in Charles's quote regarding his syllabus:

> I tend to write very long documents these days, in part is because increasingly we are required to put in all kinds of things regarding plagiarism, health issues, and what we can and cannot do, so you have 2-3 pages of literally regulation, and it usually lasts 3-4 pages of the document. I also used to put in all my assignments in the syllabus; I put all the reading list in the syllabus, so there was no extra handouts coming in week 3 or 4, it's all in one document … In some ways it's meant both show the student what's going to be covered but it's also meant to intimidate them, because I wanted them to know that I am serious, and they've got to be serious.

For Charles, teaching that worked meant classroom management. He was the enforcer of the rules via his course syllabus. The rules included detailed academic assignments and policies and regulations presented in such a way to make it clear that he was "serious" and that he expected the same from students.

As participants began teaching, their ideas of what worked in teaching were very narrowly defined, centered on the role and responsibility of the teacher to transmit content that was meant to be learned by the students, who would demonstrate that acquisition through assessments. But these ideas of what worked in their teaching appeared to lack a self-reflective component (when for instance a teacher would seek active learning activities to engage students

yet seeing himself or herself as the only responsible for teaching and learning). For some participants, this changed as they faced contradictions in their teaching.

Process of Expansion in Teaching

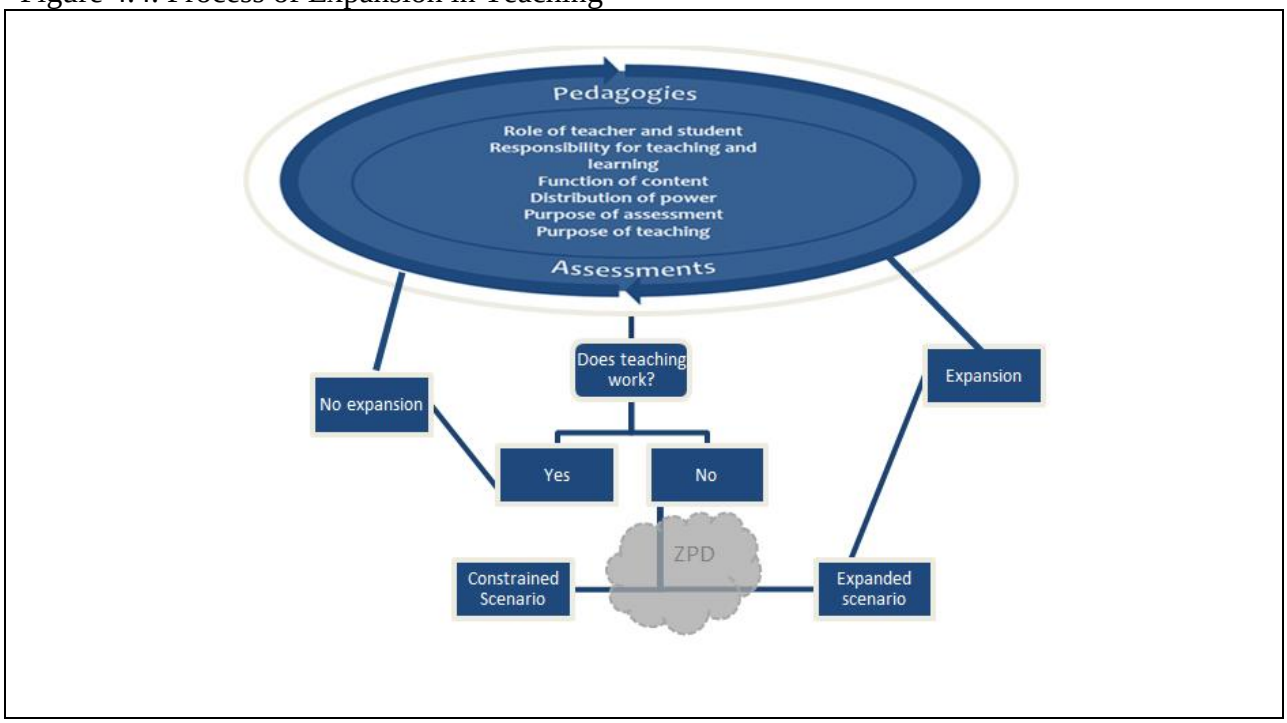
The practice of teaching for this group of teachers is then one of constantly *seeking what works*, checking whether the current teaching is working, using the abovementioned teaching views as guidelines. If teachers believed that their teaching was working, they tended to continue teaching in similar ways; but if they believed that it was not working, they made changes to their teaching. Different pieces of information, such as students' performance and feedback at the end of a class or semester, dissatisfaction with how a class or a semester went by, finishing a course without any crises, getting evidence of student learning, good students' grades, or other signs (derived from their teaching views) were used to confirm that their teaching was working. Sometimes this information signaled to them that their teaching was lacking something or needed some minor tweaking. If minor changes worked, teaching resumed in broadly the same way. However, sometimes, these signals or a new experience (attending a lecture or workshop, or co-teaching, for example) or new information (students' direct or indirect feedback) brought into question the teacher's belief that their teaching was working, and these conflicts could not be resolved with minor changes. These changes were always the result of socially constructed meanings that the participating teachers engaged in. When big changes occur in teaching, there is a potential for teaching expansion.

At this point in the analysis, I needed to find a way to explain how and why some teaching changed and seemed to become more responsive or inclusive of others. I looked at the literature on teaching and then at the literature on learning (literature is one of the ways to become theoretically sensitive, according to Corbin and Strauss, 2008). I borrow Engeström's

metaphor of learning as expansion (1999) to describe how expansion happens in the development of teaching and teaching practices. In his cultural-historical activity theory, Engeström (1999, 2001, 2007) explains that expansive learning in activities similar to teaching occurs when a person (or an organization) examines an activity and identifies contradictions or unresolved –but often invisible— conflicts in it. When faced with contradictions, Engeström explains, people analyze the contradictions and possibilities of the participants and enter into "zones of proximal development" (ZPD, a term introduced by Vygotsky, 1997/1978). As reconceived by Engeström, ZPDs are zones between the current activity and two imagined activities, "the foreseeable activity in which the contradictions are expansively resolved, and the foreseeable activity in which the contradictions have led to contraction and destruction of opportunities" (Engeström, 1999, p. 67). Engeström explains that often, people pursue the constrained scenario, ignore the problem, and often blame the system. But sometimes people pursue the achievement of the expanded scenario. This always occurs through social means (tools), whether through reading, talking or interacting with someone. The original contradiction is not always resolved, but it might transform into a secondary contradiction; when this new contradiction is socially resolved, expansive learning can occur.

Adapted to teaching and to explain this study's data, Engeström's metaphor of learning as expansion can be used to understand why some changes in teaching lead to teaching expansion and some do not. Putting together the process of seeking what works, and the two components of teaching already introduced, teaching views and practices, the process of expansion in teaching is illustrated in Figure 4.4, above. This process is explained next.

Figure 4.4. Process of Expansion in Teaching



In teaching, John provides an example of a new unresolved conflict when, after teaching in more or less the same way for many years, he had an experience that challenged his views and practices of teaching. About three years prior to the interview, he co-taught with [Susan Summers], a professor at the School of Education, a cross-listed class for students who will become elementary school teachers, teaching science; [Susan] brought in [Cody] as her teaching assistant. This is what John told me happened one day as they began the class:

> We started talking about energy and asked what energy is, because that's the concept that we needed to start with; and you get back a definition that sounds like it came out of a high school physics class. And in my mind I am just checking that off, "Okay, they got that. From now on I can use energy." [Cody and Susan] on the other hand are sitting there going, "Let's push this a little bit further." And after a while you begin… I begin to realize, that they don't understand anything about energy at all.

John's experience made him face the possibility that his teaching practices had been laden with unexamined assumptions. When his students provided a factually correct answer, he assumed that it meant that the students had understood the concept, by providing textbook definitions. But when [Susan and Cody], who were trained in pedagogy, probed for student understanding, it became apparent that the students were merely regurgitating a memorized definition but perhaps did not actually understand the phenomenon of energy. John continued:

> And so I realized that when I was teaching this course, which is the big Gen Ed class that I was teaching, that I would ask, I would teach something and I would ask questions and get back the sort of response I was expecting, and just automatically assumed that they understood it.

As John reflected on this experience, he realized that his pedagogies and assessments might not really be working (for him, for how he assessed whether his students were learning). His teaching, including his views (about the role of the teacher and of the students, control in the classroom, and the function of content and assessments) and his practices (questioning for fact retention) no longer worked as he had thought: His students had been reproducing information, but not necessarily achieving comprehension. At this point, John was faced with either the constrained scenario of attributing this new way of teaching to something he could not do (too difficult, only for other disciplines, needing training, or many other excuses), or with an expanded scenario, in which he would learn this new way of teaching. John continues:

> So I'm beginning to realize too that you need to spend far more time, unless you're happy with just the [students] knowing a lot of facts, if you actually want them to understand the process and the science involved, then you've got to cover a whole lot less than I do in my Gen Ed classes, and spend a lot more time in detail and approach it from multiple

> directions. Presenting it once in a way that seems logical to me didn't mean it was logical to the majority of people in the classroom. All of these are things that get hidden because when you do the class you expect out of 200 people, you expect 20 people to be getting As, and 20 people getting Bs. I haven't made it come out that way, but there's a group that really gets it and a group that's drifting along on Cs, and what was the result you expected: I got what I expected to see, so I didn't question what went into it. Now I'm beginning to realize that the 20 that got As got As regardless of what I said. And the problem is the ones who got Cs could have done a lot better if I had approached it differently.

In this description, John is reflecting on and articulating the new contradictions that he is facing now that he is questioning whether to pursue the constrained scenario (teaching as he had taught before) or the expanded scenario (teaching in this new way). He realizes that his views of teaching had been unquestioned. Under the expanded scenario, his role as teacher is not merely to ask questions and receive factual answers, but rather to probe for understanding before moving on. This new role will affect the amount and pace of content that will be included in his courses ("you've got to cover a whole lot less") and the pedagogical approach that he will need to use to do this, presenting material more than once (not only in the way that seemed "logical" to him), going slower "in detail and approach[ing] it from multiple directions"). These aspects also signal that he will need to become more attuned to the students, their learning needs and engagement. Tellingly, assessment had meant before that a few students (the ones who received As and Bs) were learning well (or were skilled at memorizing and providing the requested factual information, or had arrived to his classes with that prior knowledge); but now he sees that he and his teaching are meant to reach all the students in the class. More importantly, his own

success as a teacher relied on the 40 students out of 200 who would get As and Bs, but now as he realizes that his own success as a teacher must include all of the students in the class. Under the old way of teaching, he was reaching only 40 students out of 200, merely 20% of the class. If his teaching had been truly working, he would have reached more than these students.

Confronted with these scenarios, a new reality that indicated that his teaching was not really working, John chose to pursue the expanded scenario and his teaching changed: "Working with [Susan and Cody] completely changed the way I thought about things like general education." He made adjustments to his practices (pedagogies and assessments), and views (his role, the role of students, the function of content, and purpose of teaching) very differently than before this experience, as this excerpt illustrates. Thus, pursuing the expanded scenario led into a different issue, that of (learning and) re-shaping *his own* teaching. John became a learner himself.

For many if not all teachers, the constrained scenario is more common, easier, and more likely to be pursued for a number of reasons, including lack of time, resources, or training. It includes views and practices that are often unchallenged, tied to familiar practices, and that rely on simple solutions. Some participants try to find what works by doing minor tweaks to pedagogies and assessments. Charles explained it this way:

> Also you want to, if you find something that works, I don't think you necessarily want to change it. I probably experimented with things but not… there aren't huge changes; because I want to be able to teach a course… I want to be able to anticipate how it's going to go. I don't want surprises.

These are the most common and ongoing changes that most teachers in the study make to their teaching: Necessary tweaks here and there that keep it *working*. These changes do not alter

teachers' views and practices, and no big shifts are necessary. The same practices and the same views suffice. Bigger changes to their teaching were usually prompted when faced with contradictions that they could not ignore: New information about their teaching, or new experiences: For some it was changing institutions and encountering new students with different prior learning, expectations, and social norms; teaching new courses that made them realize big shifts were necessary; receiving students' feedback (in direct and indirect ways, including classroom engagement); and talking about their teaching with someone, or hearing someone else talk about teaching (in a workshop or lecture). Both types of changes, constrained and expansive, are necessary when the usual way of teaching no longer works. Both solve the conflicts and allow teachers to keep teaching in ways that work for them, but only the achievement of the expanded scenario leads to changes in teaching views and practices.

In sum, as Figure 4.4 shows above, faculty members' teaching practices are guided by their seeking what works. They teach and check, implicitly or explicitly, that it works. And as long as their teaching works, they continue teaching in relatively stable ways; when their teaching no longer works, they make small or big changes to their teaching. After making small changes to their teaching (a tweak here, a new technique there) they check again. If it works, the change is adopted and their teaching continues in more or less the same way as it was before. But sometimes as teachers reflect on the contradictions in their teaching, they need bigger changes that transform their views of teaching (their roles as teachers, the role of the students, the role of content, or the balance in power dynamics) and their practices of teaching (their pedagogies and assessments). This type of change triggers an expansion in their teaching.

Expanding Teaching That Works

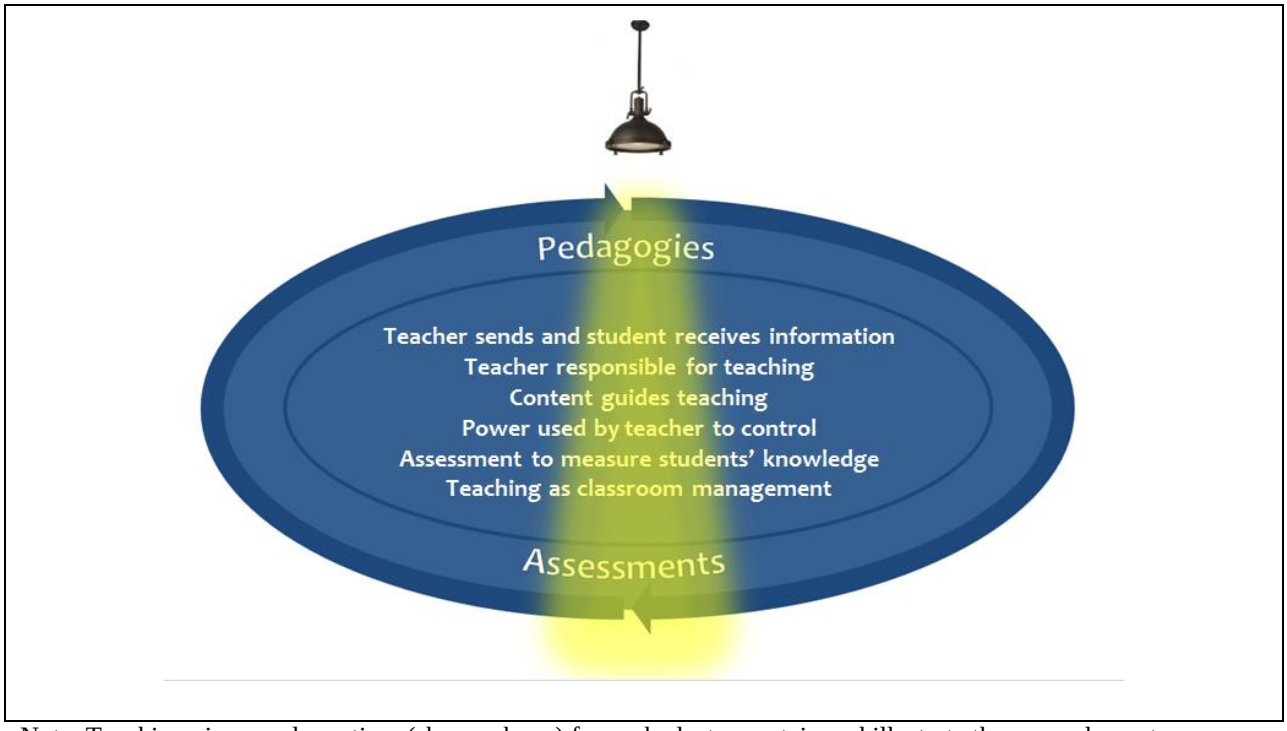
Through their constant checking of their own teaching to confirm that it works (for them and as they expressed it, for their students, and/or to achieve specific outcomes), faculty members who participated in this study developed teaching views and practices that can be grouped by their similarities into clusters. Although all of the participants carefully planned, designed, and implemented their teaching, they clustered around three forms of teaching. The first one is more rigid and narrow, focusing prominently on the teacher, content, and control. It is heavily guided by views and practices of teaching that are unexamined and assumed, familiar and typical, and any conflicts are usually solved with minor tweaks that leave those views and practices unaltered. The second is a bit more flexible, seeks to include also the students and to let go a bit of control and content. Teachers in this category were a little bit more aware of their views and practices and push themselves to stretch them wider. The third is theoretically expansive (Engeström 2001) and experiential. It includes teachers who are self-reflexive of their views and practices, act as learners as well as teachers, and are also attuned to students in their classrooms.

Like light beams that illuminate different parts of a room, each group's teaching can be described as narrow or expansive depending on how rigid or flexible their teaching views and practices are (and as a consequence, their epistemic views). Regardless of its narrowness or expansiveness, for each of these participants, his or her teaching worked for them. This can be explained because of the different levels of self-awareness and reflection shown by teachers in each cluster. The breadth in their teaching views and practices guide their ideas of what works, which then resemble that same breadth. In other words, their measurement of their own success (what works) uses a yardstick that is as short or as long as their epistemic views are.

The full model for this study is shown at the end of the chapter, in Figure 4.8 after the presentation of the three teaching clusters. It illustrates how *seeking what works* is the mechanism at the center of teaching (views and practices) as an expanding process for all the participants. The three clusters are: 1) Adopting what works; 2) Discovering what works, and 3) Crafting what works. While some participants fit well into these three clusters, other teachers seemed to be in between them. In the following sections, I explain these teaching clusters, continuing to include participants' excerpts, to show how the data fit the model. I use the components of teaching views and practices (from Figure 4.3) to explain the teaching differences in each cluster, as these are concepts derived from the analyses.

Cluster 1. Adopting what works in teaching. (Don, Charles, David, and Neil) Most participants started teaching using *borrowed ideas of what works in teaching* from other teachers, borrowing materials and instructional techniques, or imitating stances and strategies from teachers who were described as role models. They used these borrowed ideas as they sought what works. They brought to their practices what had been proven to them to work with them and adopted it as their own (as parents might adopt a child and raise him/her as their own). These are teachers who *adopted what works.* That is not to say that these teachers, particularly David and Don, who have taught for decades, have not made changes to their teaching. They have tried new things and perfected their practice to the point where it continues to work. However, David, Don, Charles, and Neil, regardless of their years teaching, were still teaching mainly adopting what works. *Adopting what works in teaching* is shown in Figure 4.5 below as a narrow light beam that illuminates some of the teaching views and practices for these participants.

Figure 4.5. Cluster 1: Adopting What Works



Note: Teaching views and practices (shown above) for each cluster contain and illustrate the same elements originally shown on Figure 4.3.

This way of teaching is characterized by a strong *faculty role* as expert and transmitter of knowledge (Ropers-Huilman, 2009); the emphasis is on delivering ("covering," see Wiggins and McTighe, 2005) *content* through a carefully orchestrated and *controlled* class time and fact-heavy course activities and assignments. Don describes how he started teaching:

> I would decide what the students did in the labs and I got feedback on how that was going or not going. So there was a continuous process of trying to stay informed on how the students were doing. Through that I could get a sense of what was working, what wasn't working. And some of that was me, some of it was the material, it was a combination of things. Some materials where just more conceptual and some students had more trouble with it; other material was not, and I find that still be the case. Same stuff, I've been working with it for 25 years, and it tends to be the case.

Don relied on his graduate teaching assistants to give him feedback on the computer lab portion of the class, which he did not attend. He indicates the importance of his *role as teacher* and transmitter ("I would decide…"). A closer look also indicates that *content* seems to function as a criterion for teaching success for Don: Some students would have "more trouble with it" than others. For Don, some students will succeed or fail regardless of what the teacher does. This idea goes unexamined, uncontested, and teaching continues as it has been for 25 years, revealing that direct student feedback does not really influence his teaching.

For Charles, *content* still drives his teaching, which consists mainly of lectures with PowerPoint presentations. He worries about it. "One of the things I know I do in class is I cannot cover everything in class, so I often give them things, if they are really interested, I give them other resources to go into." His conversation was full of references to rules (on attendance, plagiarism, health issues) for the students, spelled out in the syllabus, which "is now 14 pages and about six or seven of those pages are about the assignments. But last year it was probably twice as long a document." This focus on *control* and *power* is telling, as he described his students in relation to their poor academic skills, bad attendance, with some "milking the system" to get good grades without working hard.

Teachers who *adopt what works* often believe that the teacher holds all the *power and responsibility* in the curricular design and the teaching process, leaving little or no room for students' voices in the classroom. Rules are clearly delineated in the course syllabus (Charles, Richard, and William did this) and *teaching to the textbook* (relying on a selected textbook to guide their course content, its sequence, and assessments) is not uncommon. In the following except, David reflected on power dynamics in his teaching:

> Well, obviously I am the professor, and so I've got the experience, I've got the knowledge in the subject matter, and I am delivering that; I now know the best ways to try to transmit that information, but I don't view it as this kind of a thing, as me standing up there looking down on them. I view it as much more, I want feedback from them too. That's why I have question-and-answer session; and every question is legitimate, it really is. So when people ask questions I never put anybody down, I never say, "Well, that's a silly question." I mean, I might think to myself, "Well, if you were listening to what I said three seconds ago, you would…" But I always say, "Well, let's go back to this…"

David begins talking about the role of the teacher, who is not only expert and transmitter, but also solely responsible for teaching and assessing. David clearly holds the power in the classroom. Towards the end of the quote, he hints at wanting to expand that role and make the students more engaged in the process, but does not fully grant them responsibility for it. In regards to assessment, when asked what was most important when assessing, David answered:

> What's most important to me is… Well, I mean that's why I take the time to set written questions, even in the intro course, as I said to them, "I want to know, I want to see what you know, not what you don't know," and you can gauge that much more from the written, it's important. I like to be able to read answers that tell me that the person has got it, that they understood. Yes, it's great to have high scores in the multiple-choice and the objective part as well… The other thing I like to see is this, during the semester, is whether the mean scores are going up, *[he points up a curve with his hands]* and students in general are performing better as they get used to the material, and the format of the test and that kind of thing. It's seeing that increase in the mean during the semester that's important too, so yes, so you asked what where the important things.

David talks about adding written questions (open-ended, short essays) to his multiple-choice tests, as assessment mechanisms that go beyond memorization or the possibility of pure chance and require students' understanding. But then he adds the value of having increasing mean scores, which he links, unquestioned, to students getting used to the material and the test format. David does not see the potential contradiction in this passage: Wanting to capture students' level of understanding of concepts versus using mean scores based on students' familiarity with the material and test format to gauge that understanding (which might not necessarily be correlated).

Neil, the youngest participant (in age and years teaching), also talked about assessment, but bringing up different issues:

> The biggest problem would be giving a mark that a student isn't expecting, and that's especially true in the early years. Some students, especially students at a school that has high standards to get into, are used to 80s and 90s, and they may not be getting 80s and 90s as an undergraduate, especially the first year, as they are still learning the expectations, and maybe not fully grasping certain assignments. So it is a challenge to give a mark that a student is not expecting, and to deal with that kind of feedback, the repercussions.

Neil's passage illustrates a view of assessment linked to grades (he uses the 100-system from his country of origin, as he had been in the United States for less than a year at the time of the interview). He is conflicted not by assigning grades that might or not reflect student understanding or learning, but by assigning grades that students might not expect. Neil seems to tie the idea of better grades with progress in the degree, as first years have not yet learned expectations not fully understood some tasks. These linkages go unquestioned by him. Neil's description also ties assigning unexpected grades to "repercussions" –later, he mentioned

students' reviews of the teacher which are used in the promotion and tenure. Another example of unexamined assumptions was given by David when he talked about a change in his teaching:

> …You cannot make that assumption [that students learn content quickly], especially if most of them or many of them have no science background anyway, so you have to take it step by step by step, and lots of pictures. ..I have very little text in my Power Points, it's graphics, it's color pictures, it's photos that I have taken to illustrate a particular point. So yeah, the [students] influence in the sense that… things that cause difficulty but which they need to know, I have found different ways of approaching it.

David emphasizes that he is no longer assuming that students learn the content quickly. As a result, he now tries to slow down in class to make sure that students are "getting it. Implicit in this change was the prevailing view that students were there to absorb ("get") the material. In other words, he wants to tweak the manner of transmitting information, slowing down. But he sees no need to change the roles of teacher, student, or content.

In teaching that *adopts what works, students* are to learn facts and demonstrate what they have learned from the targeted material in the *assessments.* Learning is something that is demonstrated. Retaining, understanding, and using concepts learned in class; good grades; students' satisfaction (expressed in their end-of-the-semester evaluations of teachers and courses) and avoiding conflicts are signs that this teaching works. Unlike teachers in other clusters who would talk about assessment intrinsically related to outcomes and students' needs or skills, Don, Neil and David did so linking this to exams and grading criteria (down to the percentages). Teachers *adopting what works* often feel like they tried some things that did not work, so they are sticking to what works. Regardless of their years teaching, some teachers stay teaching this way, which is similar to how most teachers began teaching. This teaching *works for them*. To

make sense of the demands of teaching –and faculty life at large—their teaching is guided by their teaching views and practices: A strong role of teacher as transmitter of information, heavy use of content to guide teaching, students expected to absorb information and demonstrate its acquisition through test performance and feedback (from teaching assistants, class participation). Their pedagogies and assessments reflect these views and the belief that the responsibility for teaching is mostly or solely on them. This way of teaching works for classroom management, avoiding conflicts and bad reviews, it works to "cover" and test content (Wiggins & McTighe, 2005 describe how problematic it is to teach in a way that focuses on content coverage for its own sake). Some of them stay here, because that's *what works for them*.

In between clusters: From adopting to discovering what works. (William, Daniel, and Richard) Three participants while still in the first cluster, seem to be moving from *adopting what works* to *discovering what works*. Their views and practices are still very narrow but they spoke in ways that hinted some level of expansion not seen in Neil, Don, Charles, and David. For instance, William said that he had *taught to the textbook* during his first year teaching, and that he then lectured in other countries without relying on the textbook as much. When he moved to the U.S., he encountered students whose skills were subpar, which made him go back to *teaching to the textbook*:

> The [students] didn't get it, because of that I am going to develop a textbook; not develop it, I am going to use a textbook as a safety net, so no matter the weird things I say in my lectures, they can't take notes because I'm talking too fast, they can go to the textbook. I picked a textbook that I liked. I said, "Okay I am going to teach to the textbook." All my lectures are going to be drawn from these and I am going to structure the course, chapter by chapter by chapter, each lecture. The moment that I am doing a chapter, I am spending

> four class periods on it, some others I spend two. And I'll just decide how much in depth I am going to illuminate the essence of that chapter; draw the images from the chapter and then go [use] my life world to add to it or challenge it: Say, "no, I think they are wrong here, I think this is what's going on".

In his own words, William sees the textbook as a safety net. He refers to this as a "safety net" presumably for his students, to help them acquire the information since they do not seem to be able to follow his fast pace. William's reliance on the textbook to guide the content of his course, his lectures and graphics, and the pace in which he will deliver it actually reflects the use of the textbook as a safety net for himself, to prevent him from failing in teaching. A few minutes later, William added that he likes to include 50 PowerPoint slides in a 50-minute presentation, highlighting the role of *content* in his teaching, regardless of students' level of understanding. The above passage also illustrates that William sees the responsibility for teaching to fall solely on him (he decides, illuminates), and its success depends on finding ways to transmit and "cover" content (guided by the textbook and with the help of technology) to students who are merely receiving information.

William views of the *content*, *teacher*, *students*, and *assessments* are further seen when he says: "I taught to the textbook, and I examined from the textbook. Know the text, come to my lectures, and you should be ready then. I don't write a syllabus from scratch, I am basically following the textbook, and I did that when I taught [another course] as well." William's reliance on the textbook to teach extends to assessment and the unquestioned assumption that if students attend his lectures and "know the text" they would be okay ("you should be ready then"). Implicit here are expectations of content memorization and rote learning, which denote students as passive recipients of course content.

But although William's views of students were often narrow, he also talked about his desire to consider their needs and skills. He credits his own identity as a foreigner and "outsider" as a source of empathy for students and for his attempts to "teach from the self," that is, trying to bring parts of his own identity into his teaching (Beyer, Taylor, and Gillmore, 2013, also discuss this shift that some teachers do in bringing their own identities, opinions, and vulnerabilities to the classroom to enhance teaching and learning). While William seemed intent on preserving full control of classroom dynamics ("absolutely, that is why I wear a tie," he told me) and uses grades as punishment ("demerits"), he shared some examples of wanting to make the content relatable to his students and make them participants in the teaching process. These examples included asking students to contribute *content* (pictures, examples) from their own lives and diverse cultures to the class, either in-class participation, in their answers to essays exams (showing some flexibility in *assessments*), or for William to use in next year's PowerPoint presentations of the same class.

A different example of potential expansion was seen in Daniel, who sees his role as transmitter of information (content) through heavy use of technology. He grapples with not knowing if his *assessments* (mostly quizzes and multiple-choice exams) provide evidence of student learning: "The problem is the… the lifetime of knowledge. So you can assess whether a student has knowledge X at time T, but whether the same knowledge exists at time T +1 is a completely different story and I think that is one of the most challenging things." Describing himself as a laid-back teacher, Daniel said that he wants to become more rigorous. He also shared that during his first teaching years he placed considerable importance on the students' evaluations of his teaching. This might be related to receiving tenure the previous year.

Although not implemented yet, Daniel talked about a change he wants to incorporate in his teaching, using a blended learning technique called the flipped classroom:

> The flipped classroom idea has students prepare for a class that they attend, which is kind of a novelty [laughter], because a lot of time I find that one of the difficulties is that students do not take reading assignments seriously enough, so they are essentially sitting in class, and because they haven't read what they're supposed to read it's all completely foreign to them.

For Daniel, this pedagogical approach seems a solution to many issues he wants to address in his teaching, like granting more *responsibility* to the students for the teaching and learning process, as they seem unengaged in class; this approach could also help resituate the *role of the teacher.* He mentioned this approach repeatedly during the interview, like in the following passage, as he talked about student diversity in his teaching:

> The flipped classroom is also perfect for that as well, because it really allows people to do things at their own pace, so if there's someone that for whatever reason, whether it is a particular educational background or whether is language—that could be an issue as well—or whatever factors influence his or her ability to follow a lecture in the classroom… I think having the material outside of the classroom in both textual form, auditory form, with work through examples at their own pace, is something that I think it's an ideal way of catering to a really diverse audience. I think that I implicitly take care of it... but the reason that I am doing that is not necessarily that I'm thinking, "Oh, their background is so diverse." I just think it's a great concept, not just for diversity, but how classes should be restructured in general. From that perspective I have been thinking

about it, but not explicitly from the perspective of diversity, because is not as prominent in my teaching.

Although Daniel sees this pedagogical approach as beneficial for students learning at their own pace, which could help students with disabilities, or English-language learners, this was not his primary intention, as he thinks that diversity "is not as prominent in my teaching." Lastly, the flipped classroom could also help flatten the power dynamics between teachers and students:

> The idea of the flipped classroom I think is a way of getting rid of this –not getting rid of, but lower the power relations because if the [students] listen to something online, it's not a direct social contact anymore, in this sense you take a power relation out and I think it's a good thing.

What seems troublesome about Daniel's enthusiasm for this pedagogical approach is that he appears to hope that the approach itself will bring the changes to his teaching, but he seems to see no need to examine and reflect on his views of teaching to make those changes possible: He did not talk about his intention to make any other changes, rather than the adoption of this technique.

There are also some signs of changes in the teaching views and practices of Richard: He said that he no longer *teaches to the textbook*, and *content* is now secondary to building specific skills in his students. As I mentioned it in the first section, *Seeking what works*, Richard was planning to bring in more active learning strategies into his teaching to help his students think critically and to not expect to be told what to learn. He added:

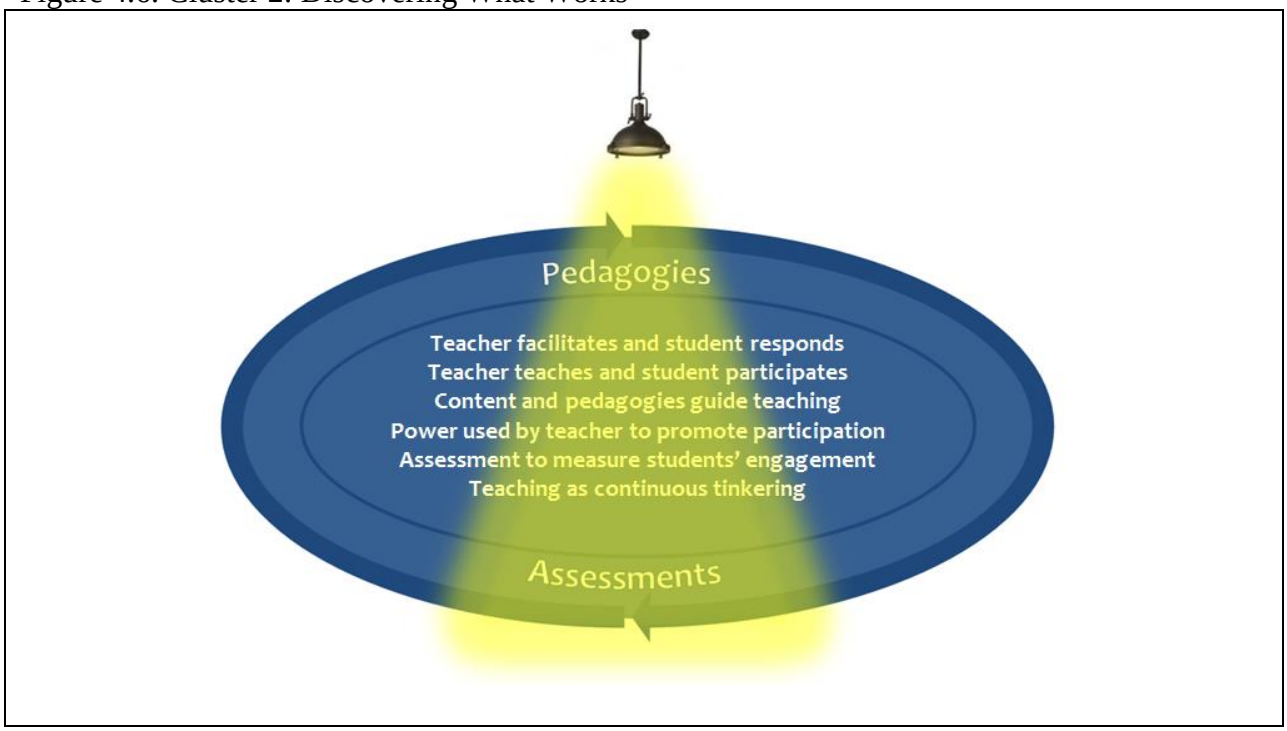
> I guess that's part of the reason for an attempt at active learning that we are going to try to do something different next year. [Connie Price] next door is teaching a class in [technology]; my TA had taken her class and he sort of created this idea initially. But we

> both liked it, linking the two classes, and her class would be the clients for the projects that my class creates, so we are going to try to have a more interactive relationship between the two. … It may be hard, it may be a one-off thing that we try, it might not work, but we are going to try it once.

As it can be seen in this except, with active learning activities Richard seems ready to give his students and his teaching assistant more *responsibility* for the teaching and learning process. He also wants to change the *purpose* of *assessments* and *teaching*, making them more practical, engaging, and comprehensive.

Cluster 2. Discovering what works in teaching. (Sophia, Robert, Isabella, Mary, and James) As teachers try new things in their classrooms, some of them seem to *discover other things that work*, like attempting to let go of focusing on content and beginning to allow the students and themselves-as-learners to become responsible for teaching and learning. They act more as facilitators than as transmitters and experts; and while they still hold most of the power in the classroom, they seek to engage students and increase their participation. In this way of teaching students are increasingly more responsible and play a larger role in decision-making in the classroom; pedagogies and assessments become more varied and more flexible in response to student diversity. Each teacher has different levels of readiness, curiosity, confidence; some of them stay here because that is *what works* for them. Discovering what works in teaching is shown in Figure 4.6 below as a light beam that shed light on teaching views and practices in a broader way than adopting what works, but not fully illuminating these aspects of teaching.

Figure 4.6. Cluster 2: Discovering What Works



Note: Teaching views and practices (shown above) for each cluster contain and illustrate the same elements originally shown on Figure 4.3.

Sophia talked about some teaching changes she has made that have shifted the roles of *content, teacher,* and *students*. For instance, although she has been teaching almost the same classes for most of her tenure, and the content is somehow similar in them, she no longer *teaches to the textbook.* She talked about another change:

> The other thing that has changed a lot in my labs... I put as little instruction in them, step-by-step instructions as I possibly can, and that has changed a lot over the years because in early years with [tech track] labs the routine was you put something like "Click here, type 3, press okay," et cetera, and you don't learn anything when you do that, so the labs I have are pretty much, "Go use this command and accomplish this thing… a multilayered line in this part of the software, it looks kind of like this." …I try to put as little instruction in what they are to do, because the more step-by-step you do, the less you

> learn; and that's being fairly different in my teaching than other people in [the technology track].

Sophia's decision to make her computer lab sections –which are led by a teaching assistant and supervised by her—comes from her belief that students will learn more with less direction; she is attempting to give students more responsibility and sees her move as diverging from other peers in the technology track. Sophia elaborated on her teaching changes throughout the interview, indicating that she added more questioning and class activities to make her teaching more engaging to students. Sophia keeps us with technology, which is vital in her visual design classes and uses the software to teach the necessary skills to students. Keeping up with technology has been a challenge but also an opportunity:

> I think I am a wonderful role model for the women that do end up in my class which is more of a technology and computer oriented class; and there are fewer women in those fields. And for them to see me... I was an art undergraduate, and I have done programming and I am good at math, I do all those things. To watch me stand up there and do a review session, throwing up numbers and dividing them and guessing at the mean, and guessing at the standard deviation, and throwing class breaks, just that ought to be the best experience—well, not the best— but a really great experience for them. Okay, that's not a scary thing to do, go up and stand in front of… there are 47 kids in the class, and there are about 10 women, so where are 37 men. I am standing up and doing math, in front of 37 men, and it's no big deal; so don't panic about it.

Recognizing the lower number of female students in technology track courses, Sophia prides herself as a role model to inspire women students to pursue traditionally male fields. Implicit in

here are her high standards for herself and her students. In the following quote we see more about Sophia's views of *teaching* and *students*:

> The grad assistants get really wounded up about that, they get really personally affronted by the fact that some students aren't paying attention to what they are explaining or trying. And I said, "You do your best to explain and make good labs, offer your help but if they don't want it, it's not a personal affront. And you have to let them be disinterested, you have to let them have you not be their priority" It's actually a peculiar backwards lesson because then if you get too winded up with that what you end up doing is yelling at the kids that are there, which is silly because they actually are there and they care. And if you try to compensate by re-explaining, over explaining, making the lab simpler, then you're really not serving the best students and the students that are actually going to go on and make an impact in your area.

After many years teaching, Sophia has grown comfortable with some level of student apathy, and wants to help her teaching assistants accept this as an unquestioned "normal" part of teaching. This speaks about her views of *students* and their *responsibilities* and of *power* in the classroom. Sophia is trying to not control student behavior in the classroom; to do so, she decides to not intervene at all, accepting that "you have to let [some students] be disinterested." She directs her teaching energy to the students who show up to class. Sophia was describing lessons she has learned about teaching and was talking about doing her best to be engaging and welcoming while being firm when suddenly she added:

> I don't know… I just don't have any problems. I know other instructors who have terribly unruly classrooms or insulting students and I just… I don't think I have ever had that problem and I don't know whether is because I am in a technical field or I have some mix

> of personality traits that don't invite that… Someone said to me, "You are tall" [laughter]. I laugh but… there's probably a component there; I'm just a tall person [laughter] so you're just not going to pick on me [laughter]. Which is weird... I mean, she's a physicist or something, but just a little short-stature woman and she said, "I get all kinds of stuff" and I look at her like, "in physics?" [Incredulous laughter] There's no… I can see getting a hassle with a gender topic or a social topic, but… but physics? [Laughter] But anyway, she said, "You are tall." [Laughter] Okay [laughter]…

Sophia seems puzzled by the mere idea that some instructors can have student behavioral problems in the classroom and tries to explain why that might be through a combination of having some personal traits and belonging to a technical field. Then, she recalls the incident of another female professor who shared these types of issues with her. Her incredulity ("which is weird… I mean, she's a physicist or something") comes from the fact that she is a physics professor (another technical field), so the idea of height gains more credibility. It was curious that Sophia shared this piece as part of her answer about lessons about teaching that she learned through teaching. It seemed like she was reflecting on her ideas about the roles of teacher and students, and power dynamics in the classroom, which had previously gone unquestioned. Later in the interview, when asked directly about *power* dynamics in the classroom, Sophia reiterated the belief that some subjects or fields are more prone to having them when she asked me if I was interviewing Emma Miller, whose research is on social issues, adding, "You'll enjoy that conversation."

Robert believes that his upbringing in diverse and non-diverse schools and neighborhoods raised in him awareness for issues of diversity that is part of his teaching views and practices. He thinks that this is likely one of the reasons why his "graduate students are

epically more diverse than the university as a whole [laughter]." He recognized that "I'm very sensitive to all of these differences and what they mean for people, but in an undergraduate context I don't really engage with students around their diversity." Robert was one of the few participants that described his students not only in terms of academic diversity (academic major, class standing, department track) but also in social identity ways (gender, age, race, geographical location). His sensitivity to diversity issues was further illustrated when he added that, "probably the main purpose of my research and my teaching is to destabilize the sort of sense of suburban privilege that I'm here because I earned it, and people who aren't here didn't earn it." Robert constantly revises his courses to make sure he takes into account his students' academic and social identity *diversity*. He talked about flexibility in his assessments:

> If they give a really terrible answer but it's presented in a way that shows that they are thinking about things, [and] not just remembering what was on the page, I am likely to give them a lot of positive feedback for that, whereas an accurate answer that is just factually accurate is less interesting to me.

As this except shows, *content* for Robert is not as important as getting students to think, write, and have clear arguments. When talking about *power* in the classroom, Robert was keenly aware that as a pre-tenured faculty, students' end-of-semester reviews of his teaching were important and played a role in his decisions: "I live in terror of getting really bad reviews." He provided an example of this when he stopped using an instructional technique, calling on student names for participation:

> [The students] hated it, because it exposes them as people who are just hoping to passively take in this class, people who haven't done the reading, people who… It exposes all the things that they should expose, and they hated that. So I had to drop it for

> the most part, because they really resented it, and I think that's a shame because I think it's a good tool, it produces good results, but I cannot force it on them without risking, you know… Most of the negative comments I've gotten since [I came to this university] have been associated with those cards, so I ended it after three weeks this semester.

This passage illustrates Robert's response to a larger contextual factor in his teaching, promotion and tenure reviews, and the need to produce satisfactory teaching evaluations (and those cards were the source of "most of the negative comments" he got in his teaching reviews). Additionally, the passage shows Robert's views of some students as unprepared, passive individuals who do not want to engage in class. He left unexamined the possibility that this technique was resented by some students as what might be seen as authoritarian or controlling, or that students' apathy should be approached in other ways (for instance, creating more engaging environments or creating other systems of accountability).

Robert, like many others, talked about awareness of *power dynamics* with students in and out of the classroom. For instance, for Robert, Neil, and Don, the *office door* was a strong symbol of boundaries between students and teachers. When asked about how he handles "institutional and cultural rules associated with gender" that he had just mentioned in response to a question on student diversity, Don replied to me: "Well, you are sitting in my office with the door open right now." I had a similar experience with Robert, who told me that I was "probably the first female ever being here with the door closed, and I <u>never</u>[2] do that, ever." However, Robert recognized that he closes the door when meeting with male students. He also described how he intentionally positioned his L-shaped desk to create a wall between him and his students.

[2] I underline text to indicate participant's emphasis, to avoid confusion with concepts developed from the analyses, which are italicized.

The office door was for these four male teachers a sign of recognition of their male faculty status, particularly when meeting with female students.

Another participant who *discovers what works in teaching* is Isabella. She described her teaching as follows:

> Basically [I] try to draw them out, the personal touch, keeping them entertained; yes, to some degree entertained, as well as giving them that historical perspective after over 30 years of experience in the field. Try not to be the sage on the stage as it's called even though it's a habit, I guess of someone of my vintage –as I said, that was the standard mode of operation— and I find it interesting to know that I'm one of those people that [if] you put me in front of an audience and without a clock I can do 50 minutes, and do it on the button [laughter]… just talking, just talking.

Isabella is trying to bring in her own *identity* to her teaching as a pioneer in the technology track. She also mentioned trying to let go of the idea of *the Sage on the Stage* that guided her first years of teaching, and that to some extent, still lingers. The lecture is not only her primary instruction form, but she sees her students as an audience to be entertained—not necessarily engaged or taught, and seemingly not responsible in the teaching and learning process. Isabella also talked about *assessment*:

> What I prefer to do, and use whenever the class is reasonably sized to be able to do it, is open-ended essays… Again the idea is to try to integrate their knowledge into a particular perspective and to draw out their perspective. I think that's important … Because early in my time here I can remember giving one of those exams, and shortly after the exam was over I was sitting in my office … and these two, three, four students came down the hall—I visualize it—very sheepish, came in and said, "We have to know, what's <u>the</u>

> answer?" And I said, "There is not the answer." And their jaws dropped; deer in the headlights look. "Gee, there is no answer we can memorize?" [Laughter] it was a shock to them. So I try to do that. Often class sizes don't allow it, you are forced into the objective kind of exam, I'm not happy with it. I find objective exams to be very hard to compile, because a lot of times there are different interpretations to the same questions, which influences the answer, so you go through this exercise of, "Oh, okay, I'll accept that answer too." And is just… I don't think… the best way to learn is just a pain for the instructor [chuckle] and the TAs.

For Isabella, open-ended essays exams seem to be a better instrument to assess student learning than "objective exams" which she later described as multiple-choice exams. But her explanation of why open-ended essays are better is not entirely clear ("to integrate their knowledge into a particular perspective"). On the other hand, multiple-choice exams are less desirable because "they are hard to compile" and the same question can be interpreted differently, which can also be said of open-ended essay exams, but she does not seem to notice. A larger reflection of the purpose of assessment seems missing in Isabella's choice, which seems to depend largely on class size. As she ends the passage, Isabella blurts out the sense of discomfort that she is experiencing with assessment: "the best way to learn is just a pain for the instructor." Throughout the passage, the students seem to be ("sheepish") passively receiving and regurgitating information ("what's the answer?").

When asked about the growing *student diversity* in higher education, Isabella's answer did not include students and was actually about her own breaking down the gender barrier in her field: She was the first female doctoral student in the newly-minted technology track, and she was one of the first female faculty members hired in the department. Although her whole answer

had been about her own gender *identity* as a student and instructor, she concluded by saying, "fortunately the head of the department at the time was very careful to make sure that I was not the token woman on committees of whatever sort and I was just part of the faculty." In other words, although her gender identity had been so salient in her academic journey, she tried to present as trivial in her faculty role. I asked all participants about student diversity in their teaching, but only teachers grouped in clusters 2 and 3 seem to intentionally reflect about (and teachers in cluster 3 to include) student diversity into their teaching, in varying degrees. The same happened with efforts to include their personal selves (identities) into their teaching, and to decenter the teacher role and power in the classroom. I elaborate on diversity findings later on.

Another faculty who is *discovering what works* is Mary. Her description of teaching shows her grappling with the function of *content* and her *role as a teacher*:

> I have tried to not do too much, I used to do much… whether is subconsciously you want to prove yourself … you know, everything is important, of course you have to learn everything. So I have really tried to be conscious about that and be simpler. I find it challenging to be simple while also being exciting, because to me exciting is all of these different things and everything is so important. So to take it slower and to be really clear about what the message is, make sure that we are using that as the foundation, recognizing that that is still really new and interesting to a lot of the students, and then building on that. That, I'm working on [laugh].

Mary seems aware that the amount of course content is excessive and is working towards reducing it, which to her means making it "simpler." But as she tries to decide what to do, she wants to keep everything in ("of course you have to learn everything"). Mary also wants to be "exciting" and to her "exciting is all of these different things." As she looks for a solution, she

ponders if slowing down could help. Then, she adds that she needs "to be really clear what the message is." Mary wants to be the expert in the classroom, the transmitter of information, the decider of the content that students must learn. Although she knows she wants to reduce the amount of material, she does not want to lose the excitement that she sees in all of it. Perhaps this contradiction can be further explained by another quote by Mary:

> I want to be everyone's friend [laughter] … I also see a power dynamic that gets in the way of my ability to be everybody's friend … Perhaps I try to use that personality to connect with people on a more level-playing field. But I also have noticed that power dynamic can be helpful as well, in terms of controlling the classroom, in terms of guiding the learning experiences, obviously it is not even, it cannot be perceived as such. I bristle with… When people call me Dr. Thompson, or … professor Thompson, and sometimes they just call me Mary, and that actually epitomizes my intention, "Oh, I want to be Mary," but I am also feel that the "Dr. Thompson" is the kind of respect that I have earned and it actually helps me when I provide more objective assessment or what have you. So I struggle with that and I honestly go back and forth. It epitomizes where I am with it.

Mary's previous ideas about content reflected her views about the role of teacher, which, as can be seen in the previous quote, are linked to her ideas of power dynamics in the classroom. Mary wants to be just "Mary" and wants to be "everyone's friend" but now that she has earned this position she must be Dr. Thompson. Mary sees some benefits in this new role: recognizing that she has more power, she can better control the classroom, and guide the learning experiences. Mary's views of power dynamics in the classroom do not include removing her presence as teacher, or the inclusion of students as teachers. Lastly, we see Mary's unquestioned connection

of this power and her role as teacher to "more objective assessments." Later in the interview, she talked about essay exams versus objective (multiple-choice) exams.

Mary shared her intentions to bring more of her personality (her *self*) and her passion for her research into her teaching. This occurred more easily during study-abroad trips or courses:

> On one level it gives me a way to interact with the other women that are on the group, and they see that I am doing this kind of work at a higher level. One of the concerns, with why women do this [travel abroad] in college is that they think, "Well later I won't have the chance because I'll be married and I will have kids." There has been a lot of research on it but that makes sense to me. Whereas males say, "Oh, I'll do that later, I have plenty of chances to do that." To see me as a woman who has come back to do that later in life, that I will always have that be part of who I am, I think that's really helpful. I use that to my advantage to sort of say, "Listen, you can do this all your life, [even] when you have kids" in that sort of mentorship role. I try to be very reflective, and to wear different hats at different points, so sometimes I play the American, sometimes I play the woman, sometimes I play the White person, and we just kind of use that as a teaching moment.

In a discipline still predominantly male, Mary is aware of her role as a White woman scientist. She makes different parts of her identity more salient, depending on the context. As she teaches female students who go on study-abroad trips or courses, she acts as a role model for what a female earth scientist looks like, like Sophia mentioned before. Mary sees this work as mentoring. During the interview she described how other parts of her identity (being American, being White) sometimes become more salient during these trips. Recognizing and embracing these roles as part of being a teacher, Mary tries to create teachable moments and have conversations with students about each situation.

As a self-described introvert, James is willing to try new, unconventional things in class to facilitate student engagement. He insisted in telling me an instance where he did something completely different, which *worked* in his teaching. In one of his classes they were discussing the concept of overcrowding in animal habitats:

> I forget how I came up with this; maybe I just invented the idea. Actually I would put myself into a very stressful situation, to portray this, what would happen is, I would be calmly putting—at that time I was using overheads— so I would put up an overhead about disease or whatever, and then I will turn away from the class, grab an eraser, or a piece of chalk, turn around, have a very seriously aggressive face, and say, "I am sick of the apathy in this class! I don't know what you students are doing here!" And I would hurl whatever I had against the back wall and thump! It only lasted about 20 seconds, but my heart rate was really out, I was stressed out. And then in a few seconds I would let my face relax and smile. Of course they are all like this [laughter, *he makes a scared, tense face*], and then I would talk about the adrenaline that was released, by the adrenal glands under stress, and you could imagine if that happens repeatedly, it could affect your physiology, your behavior, interrupt your reproduction. I always thought that they would remember that topic. There were actually students who will come back; they wanted to know when that lecture was [laughter]. They would sit in the back of the room and wait for it [laughter].

As James grew increasingly more comfortable with what he called his "set of skills" in teaching, *content* became less important than delivery and student engagement. He decided that the best way to teach a central concept, overcrowding in animal habitats, was to act it out. By doing so, James tried to impress on his students how stress was at the core of the concept. However, by

suddenly yelling to students about their apathy, James got their attention. Students were likely confused about what was happening and the scene made sense only after James explained it to them. It became a humorous and popular moment ("it was always a favorite day"). The embedded message of student apathy remained untouched but lingering in the room. But at least one of the goals had been achieved: Students were now rapt with attention.

James described his *assessments* as "fairly prescribed" with multiple-choice midterm and final exams, writing assignments, computer lab exercises, pop quizzes, and group projects. A couple of times, while listing these assessments and class assignments, James mentioned that they are aimed at helping students develop their points of view on different topics. He provided one example of this as he described small group discussions role-play activities, which he began in a graduate-level course, but introduced to his first-year seminar class. He divides the class in small groups and assigns students to these groups, giving each a role to play:

> There is a controversial environmental issue; they are assigned character roles in small groups of 4 to 5 people. They get a little bit of basic material that argues from that person's point of view, and each group does that, and then we compare. I go around, and when they are doing that I pretend that I am an attorney. I usually wear a suit, maybe a three-piece suit; sometimes if I can find one, I find a cigar. I don't smoke it, I just carry it around. And I always have [fake] money; I have all kinds of money… giant dollar bills … Sometimes I will bring $100 bills, and have a pocket full of $100 bills. And I would be listening to the conversation, and if the "private contract contractor" who is being threatened by environmental regulations… I will go over and say, "I think you need to pay off these guys off a little bit"… I make it up, just playing around. Again small group

> discussions which they have to write up, and usually in those I have them write out their personal view of that as well as what the group decided and why.

For James, the role of entertainer, mentioned before by Isabella, becomes a tool to engage students in class concepts. Like an entertainer in a theater play, he might get carried away, as we see in both this and the previous example, but James believes these techniques work for him and his teaching. James sees his students' reaction and participation in class and uses that as a sign that his teaching is working. He described the purpose of this small group work to be the development of points of view on a topic for his students, but this goal became buried by the details of his *role* (his suit, the cigar, the fake money). James is clearly willing to try new things in his teaching, but these innovations seem to revolve around his role as teacher and performer. The importance of helping students develop different perspectives came back as he continued explaining how he made his assignment and assessment choices:

> I guess my college experience. And I think a lot of the students when they first come to college, it's often the first time they are away from their family, from their parents, whomever is influencing them, and it's that time in life when you are questioning who you are, how people change who they are, "try this," "experiment" ... I guess to me that's part of learning, being exposed to a range of ideas and perspectives, figuring out what you believe, what your skills are, what you're able to do. That's why… Usually when they are in groups… I assigned them myself, I don't let them pick. If they are picking something, I'd say, "you know you can learn something from picking something you don't know anything about, so if you're a fisherman, why pick the fish identification topic? That's boring, pick [something else]…" So I'm trying to encourage that sort of thing. I think they like it; [but] it's tough for some of them.

Based on his own experience as a college student and his observation of his students, James sees that college is a time for students to develop their own viewpoints. He wants to use this information in his teaching and contribute to that "part of learning, being exposed to a range of ideas and perspectives." By being flexible on course *content*, he intentionally tries to push his students to select new topics that will broaden their views, even if it is "tough" for some of them.

In between clusters: From discovering to crafting what works. (Michael, Eric, and Paul) These participants were still discovering what works in their teaching, but they showed a growing move towards teaching expansion compared to other teachers in this cluster. Michael had been teaching for only a few years, but had been in management positions for decades. After he had mentioned the assignments and assessments he uses in several of his courses I asked him to explain how he made the decision to include these assignments and assessments. Micheal replied:

> Because I felt the students would learn more from them, that the only reason. I looked at that and said, "You know, I can get up there, I could write one page of notes and talk for an hour and 15 minutes, and I can give tests, and it would be just like when I went to school… And the students will learn as much as I learned when I was in school, and I learned a lot from when I went to school, but would it teach them? Would it internalize the knowledge? Would they <u>feel it</u> as well as know it, and that's what I want, because after 35 years of being in government and having to deal with it, you feel it as much as you know it. And I felt that the students will have a leg up in the world if they felt the results rather than just learned it from a piece of paper, so I encourage questions in my classes.

Michael used his professional and academic experience to inform his teaching. Dissatisfied with the traditional teaching he experienced as a student, he wanted to try new ways of doing it. He first seemed to recognize that this traditional way worked ("I learned a lot") but now that he is in the teacher role, he wonders if this way would *really* work. He then uses his professional experience to question if he truly learned with traditional teaching methods that lacked "feeling." The contradiction becomes obvious: He thought he had learned, but learning to him means feeling (and internalizing) as much as knowing (by knowing he seems to be referring to factual information "from a piece of paper"). He concludes by saying that a way to truly learn is by asking questions, which he encourages students to do. In another part of the interview, Michael talked about *power dynamics* in the classroom:

> I walk into that room and I know that the students are afraid of me, they are afraid that I'm going to give them a bad grade. I don't give students a bad grade, I just scribe grades, they provide their own grades by the work that they do, but it is a power relationship. And I try to tell the students when I come in, "Just think of me as your grandfather" [laughter]. And, "all I'm trying to do is let you know what I learned over a long period of time." I probably wouldn't have said that 30 years ago [laughter] but there is a power relationship.

Michael sees the students as *responsible* for their own learning and for demonstrating it in *assessments* that he chooses: Students "provide their own grades by the work they do" and he is merely a scribe. Aware of the *power dynamics* in the classroom, he asks them to see him as a familiar grandfather figure who wants to pass on what he has learned in his professional life. He recognizes that his role as teacher provokes fear (of receiving a bad grade) in some students, but

not the need to diffuse this fear through a system of accountability that makes students more responsible for the teaching and learning process. He continues:

> And students have power over a professor as well. A block of students could decide not to learn, and that could be devastating to a class, someone could be disruptive —I'm always worried, how am I going to deal with a disruptive student if there's a disruptive student— there's a power relationship there. The students will have power, I try to figure out a way to take the power away from the individual student and give the power to the whole class, so that the class decides the norm or behavior. That's hard sometimes to do but I try to do that. I'm very aware of the power relationship going into it so I try to be very careful.

Michael adds that students also have power in the classroom and can be "disruptive," which worries him as it would be "devastating to a class." He wonders what he would do when that happens. Importantly, Michael speaks of the power that some students can have over other students, and sees his *role* as teacher to make sure that "the class [and not the individual] decides the norm or behavior." In this way, Michael's classrooms become respectful environments. He credited this view on his managerial experience.

Eric talked about changes in his teaching: "It has been more of a gradual evolution as I've tried new things, experimented." I asked him to explain this, and he answered:

> Kind of on the margins, not in a hugely structured way… I think I experiment sometimes on the fly. Sometimes I'd be in the classroom and I make a decision to do something based upon the energy in the room, what I'm seeing, where the students are. …And I'll have some content ready to present, but I feel like they are not engaged enough, so I need to kind of force them to more actively learn. Sometimes I'll make media shifts: I'll put an

> image up and ask them to react to the image, or I'll have them do in-class writing that they'll then use to inform the discussion. So, it's probably not so much in terms of the content where I make any kind of shifts, but it's more in the kinds of strategies that I'll use in a given day to have them engage with the content.

The above passage shows that for Eric, trying new things meant using pedagogical strategies to keep students engaged, and particularly being sensitive to the students' energy in the room. While *content* seems to still strongly guide his teaching. His *role* is still being the main presenter of information who needs "to kind of force [students] to more actively learn" through activities he designs: reactions to the images he presents, in-class writing, and class discussion.

At one point in the interview, Eric was talking about the importance of teaching critical thinking in all of his courses. "For me critical thinking is being willing to take apart a particular argument or a particular idea or a concept," he said and proceeded to provide an example. When teaching a social concept, like poverty, he said he begins by defining the concept, to "demonstrate to students that there are multiple interpretations of a concept like poverty. Then basically use that as a teaching moment to try to evaluate where those particular points of view come from, where are the limitations to them". Eric's definition of critical thinking is linked to recognizing multiple interpretations. Nevertheless, until recently this multiplicity of interpretations excluded his own views as he was still "very reticent" to bring his own opinions, his interpretations to those concepts, into a class discussion:

> I'm beginning to get more comfortable with the idea that I am not completely disrupting the classroom ecosystem if "Dr. Hutchens is saying, well this is what he thinks about a particular thing." You can do that somewhat strategically at certain times, whereas before I will have almost removed myself. Be very much kind of a facilitator but having being

> said that, I think that even in the ideas that I will pull forward when am teaching I would try to demonstrate to students that I'm trying to recognize limitations. Like how I will conceptualize poverty, and those limitations are driven by a normative use of myself, they are driven by my biases, they are driven by my positionality, being White, male, and of European descent. And just put those on the table. I think you have to try.

The passage above shows how Eric is becoming more comfortable with bringing his (*self*) opinions and his positionality ("being White, male, and of European descent") into the classroom. He recognizes the *power dynamics* associated with him as the teacher adding his opinions to a class discussion, and tries to use that awareness to further demonstrate and teach critical thinking skills to his students. In a way, this self-reflection ("I'm trying to recognize limitations") shows his move from being solely a teacher, to also being a learner. Eric continued:

> I find that in-class writing is very, very helpful for them [in class] discussion, because I find that students have something that they can work with in a discussion … Because I value in-class participation… For some students that are a little bit more reluctant to just jump in into the conversation –I do find that tends to be gendered; sometimes women are less… it's not always the case… I've taught classes where the most vocal people are female students. But I have taught classes where sometimes the dominant vocal person is male, invariable male, or the first person to respond is male. So I find that when I have them write in the classroom, it changes the dynamics of who is willing to participate. I'd say that is something that has been a change.

As Eric had mentioned before, he sometimes asked his students to do some short in-class writing about a topic. The students could then use that writing to participate in class. In the previous quote, Eric explains that he implemented this change in part to help quiet or shy students

participate more. Recognizing that some students will tend to be more vocal, he sees this in-class writing technique as a way to help balance *power dynamics* in the classroom for the students. He had also observed that class participation, while not always, tended to be gendered, and this technique was helpful in that way too. Finally, Eric was one of two participants who spoke of a "teaching philosophy" (the other person was Emma). Eric's teaching philosophy included teaching his students critical thinking skills and verbal and writing skills; he chose his pedagogies and assessments guided by those outcomes, regardless of the course. As I understood it, for Eric, his teaching philosophy was the product of reflection on his teaching, and includes the core values that guide his practices.

Paul, one of the teachers with the longest teaching career, provided a very different case. His interview was one of the most unique ones in that he explained to me what he termed postmodern view of teaching by deconstructing every part of the interview. He described his teaching changes as follows:

> Actually, within the last 10 years my teaching has changed very drastically. Number one is, the incorporation of technology, but number two is the incorporation of epistemology. And number three is telling people of the importance of citizenship. When I teach, then, I say, "I am not necessarily teaching you to get a $100,000 job, I am teaching you to be a good citizen, if that helps you to get a job, more power to you."

Explaining what he meant, Paul talked at length about his growing awareness of how his views of poverty, his area of academic expertise, became contradicted by the realities he saw in different experiences he had. One of them was attending a work camp to help fix housing in poor neighborhoods. He described a moment of reflection:

> We were working and then something clicked in my head. In the meantime I am really very skeptical about what academics are saying about poor people. And then I am in this woman's house, she's [the owner] I think an Italian woman, she was younger than me, but about 200 pounds heavier. While I was painting her kitchen, she was just drinking soda and smoking cigarettes. So I told myself, "What the hell am I doing here?" You know? And "how many houses can people paint? Why is a woman who is younger than me not able to paint her kitchen?" I am not a conservative, I am not blaming her. And then I said, I really need to develop [explanations for] why these situations exist.

Paul had already begun to question his academic view on poverty. And then this experience pushed him to rethink whether helping paint houses was the best way to help solve poverty. He realized that "what economics in [earth science] and sociology, the way they teach about poverty is the problem." He adds that "as I was developing that criticism, I didn't quite have the language to articulate it, and I started reading French philosophy." Paul is reaching out of his field to find theoretical resources in his search for a "language to articulate" his new thoughts.

Undergoing an epistemic shift himself, Paul wants to bring this new way of looking at knowledge production into his teaching. He is trying to find ways to critique the current discourse on poverty, and to bring his new perspective into the classroom through the use of technology: "I have done a whole series of studies using GIS and technology to prove these things, because it is very detailed and scientific." He adds: "I am saying that education and knowledge is very important. That we need to ask of a different kind [of education and knowledge], that's my project. I use a lot of technology and mapping systems for this." Underlying these quotes are Paul's ideas that his new perspectives on poverty he is developing

can gain more acceptance if they are "detailed and scientific", which he ensures through his use of technology.

For Paul, part of the problem that duplicates and perpetuates intellectual paralysis and world problems related to his research and teaching is that universities act as transmitters of the same concepts that he seeks to change, like poverty. In his pursuit of changing this dynamic within the university context, Paul teaches the *content* that must be "covered" and then add his own critique of it. I asked him to describe his *assessments* and he answered:

> I don't assess for several reasons… that the kind of thinking that I am doing is in my judgment, fairly radical. Even the best of the students, they don't get it. I was deeply disappointed after … I remember two or three students … really top people who I thought I had really influenced. And many years later, one of them had said that I had very unrealistic goals and that… I do not remember how it was put… that I was trying to change the whole university, [this university]. And then I asked, very sad, I said, "didn't I teach you any damn thing, that you think that I am an unrealistic person? I am going to change the world, not the university... So I thought if the best and the brightest react like that, who the hell knows what happens with the others. So I don't really go there, because it is too complicated.

I followed up his comment by asking him what happens with students' grades. He replied:

> With grades? Very standard. There is a certain body of material … and if they answer those questions… I don't grade them on their values; I don't grade them on whether they change their outlook in life. I try to teach it, but evaluation and grading is done by very standard ways so they don't feel threatened by grades. Many of them get good grades, because they work hard, and they reproduce the information. Occasionally I will have

> one or two essay questions to see whether they are getting what I am trying to get at, but other than that…

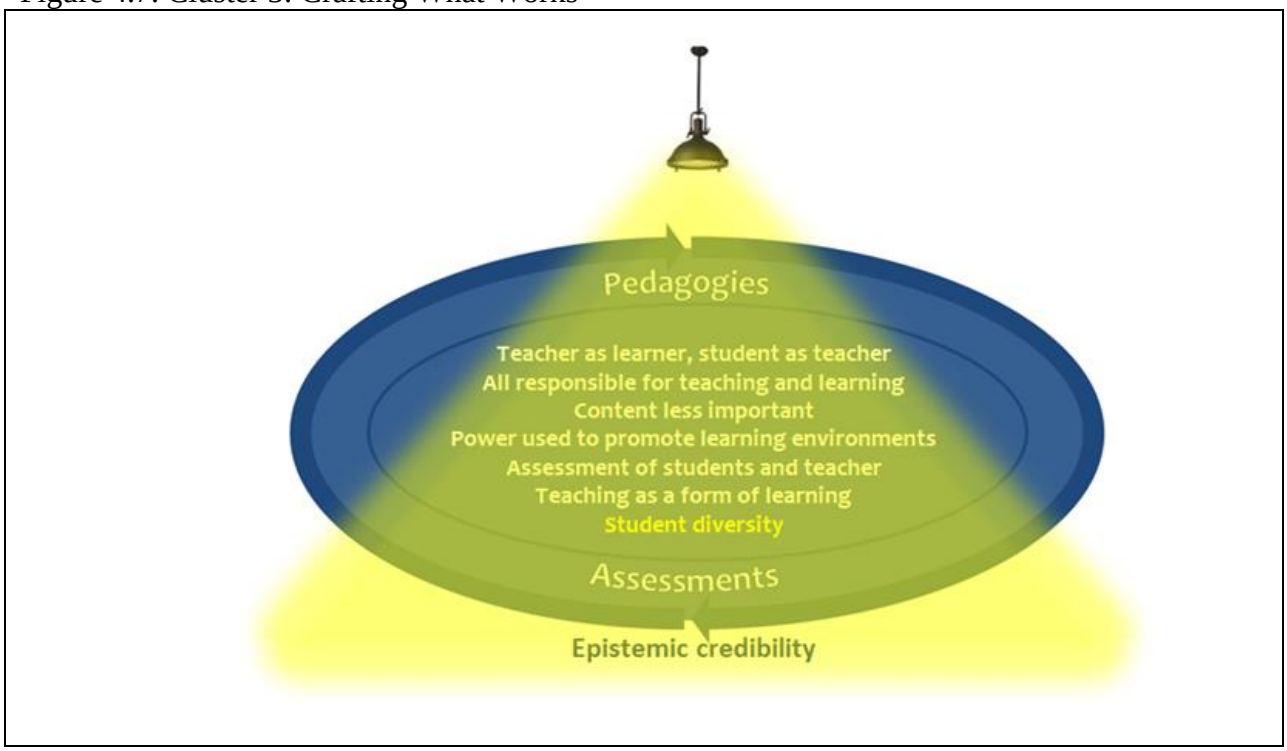
These two passages show that Paul links assessments to a deeper judgment of student understanding that he thinks he cannot capture. In a subversive move, he turns to evaluation to assign required grades based on student performance. Students get good grades if they "reproduce the information;" their *role* is to do this. Paul, like a few other participants told me that assessment was not as important to them as teaching or as student learning. Although Paul had a comprehensive view of assessment, he somehow detached it from his teaching, not using it to gauge how successful teaching or student learning were. Paul concluded:

> What I am saying is that to me, my teaching journey is about producing some knowledge that I am not clear about yet. So I spend less time figuring out how other people are absorbing it and more time figuring out how do I best say this, because it's different. If I had a textbook to teach from, then I could just teach that, the educational objectives are very clear, I can make the assessment, but I am more interested in figuring out what's a good message.

Paul's own learning quest, for "producing some knowledge" that he is "not clear about yet" seems to almost remove him from the teaching views and practices that other participants kept at the core of their teaching. Paul's teaching almost defied classification into this model as his teaching seemed to be expanding inwards, towards becoming a learner, but not as focused on seeing how students "absorb" his ideas. I struggled to understand his interview more than other participants' interviews. As Paul deconstructed his research and teaching (using primarily the ideas of Michel Foucault), his teaching practices seem to reflect this deconstruction.

Cluster 3. ***Crafting what works*****.** (John, Joseph, and Emma) Lastly, some participants were a little more daring and made frequent attempts to try new things in their teaching. They seemed increasingly flexible, choosing pedagogies and assessments that create climates where both students and faculty have more shared responsibilities for teaching and learning (Beyer, Taylor, and Gillmore, 2013). Their pedagogies and assessments are increasingly varied and flexible, considering individual students' needs, skills, and backgrounds. In this way of teaching there is less certainty about how learning happens, but it relies on careful curriculum design. The increasing flexibility means less control of what happens, which is purposely crafted; it also means less attention to the content for its own sake, and it serves as a means for knowing (whether it is course or broader outcomes). Power, while still mainly held by the teacher, is used to create respectful and inclusive learning environments where all or most students add their voices (see Hymes, 1996 on ideas of freedom to have a voice heard and to develop a voice worth hearing). This way of teaching resembles learner-centered teaching (Huba and Freed, 2000; Weimer, 2013) and feminist pedagogies (Crabtree, Sapp, and Licona, 2009; Manicom; 1992; Shrewsbury. 1987). As teachers *seek what works*, they seem comfortable when their teaching does not always work. As with workers who exercise their skills in making something new, these teachers constantly craft or create a repertoire of teaching strategies but tend to continue their innovating and shifting.

Figure 4.7. Cluster 3: Crafting What Works



Note: Teaching views and practices (shown above) for each cluster contain and illustrate the same elements originally shown on Figure 4.3.

I previously talked about John's teaching when I explained the process of teaching expansion. I described his attempts to remove his own assumptions about students' understanding of concepts, and how he was redefining the roles of teacher, students, pedagogies, and assessments. John talked about purposely having less *content* in his teaching. He also changed his *pedagogies*, to add more intentional questioning and class discussions.

John talked about *power dynamics* in the classroom as being very different from the ones he experienced as a college student in another country, where "the professor would come into the room, talk and leave. You couldn't ask questions, there were no office hours, basically you had to go, if you didn't understand it, you better go to the library and work it out because nobody else was going help you." He described his efforts to diffuse the *power dynamics* in his courses:

> Those power relationships are there; I don't actually see that you can get away from them. All you can do is try to lessen the impact, and at least be a little bit more approachable and create an environment where people –where you might still have the power, you're giving the grade— but people can feel a little more comfortable about talking. And [I teach] a lot of classes where we allow them to grade each other, so we give them a little voice in what's going on, and that may make a difference between being a sort of a B and a B+, but is not going to be the big controlling factor.

John talked about being aware of the power dynamics in the classroom, and that he, as the teacher, held the most power. Like Michael, John intentionally tried to balance these dynamics to create respectful and inclusive learning environments. In John's case, he uses peer-assessments to give students a "little voice" in the *assessment* process.

About *student diversity*, John shared that in this institution there is not as much racial, ethnic, and gender diversity as they would like to have, but they do have some international student representation that he tries highlight in the classroom:

> More recently I give myself some space there … through this whole discussion of worldviews and ethics because that allows me to say, "Yes, this is a science class, but how you're approaching a science class is important, and so we got to think about that." And now all of a sudden the conversation can be a little bit more than just the science. So that helps bring some diversity into it, and it helps different people in the room to come out, gives them a space to talk about some things that they wouldn't otherwise be able to do in that class; so a little bit of that helps. If there are obvious international students in there, then that helps too. We try, as long as it is not uncomfortable… I have a tendency to ask them, "What do you think about this?" or maybe not "what do <u>you</u>," but, "Back

> home, what would people be saying about something like this?" I try not to make it… not to put them on the spot and being too personal, but try and get at the fact that there might be a different perspective on this in the room.

John recognizes the poor racial, ethnic, and gender diversity in the student body that attends his courses, but he finds ways to open up spaces in his classes to bring diverse viewpoints. He also wants to make students feel that this course, even when it is a science course, can become a space where diverse opinions or topics are welcomed and included. John is also sensitive to feelings of tokenism or being "on the spot" and works around that, further demonstrating his value for diversity.

Another participant, Joseph, talked about trying to reduce the amount of *content* and attempting to convey it in slower and multiple ways. He spoke of efforts to train students to teach to prepare them as future professionals, letting his students run some of his seminar courses, which also makes them aware of how much work teaching involves. When asked about what carries over in his teaching, regardless of the course, Joseph answered immediately "high standards and rigor." I asked him to elaborate, and he replied:

> Students will rise to the level that you set for the course, so if I set high standards, the students will get more out of the course and will get more value for their education. Also, another thing that I do emphasize in all of my courses … is an emphasis on form. I really want students to present neat, professional work that is extremely well-written and well edited, because I found that students who develop and maintain those habits have more successful careers. And at some point in their lives they are either going to develop those professional habits or they'll have failed careers, or careers that are lower or lesser than they would have hoped for. Sometimes they think that I am being very picky but I've

> had so many students over the years —I couldn't begin to tell you the number— they came back and said that of all of all the things that I taught them, they didn't remember the content of the course, that they really remember those things, and it really made a difference in their professional lives.

Joseph's statement that students will raise to the level that a teacher sets appears in college teaching literature (Beyer, Taylor, & Gillmore, 2013). In another part of the conversation, Joseph mentioned that he tries to stay informed about education: "sometimes you go to workshops, but most often it's simply paying attention to what's going on, and you are reading the *Chronicle of Higher Education* and following trends in higher education. Some of them are pedagogic, some of them are administrative." This engagement shows intentionality in understanding and enhancing his teaching. The passage above also speaks to Joseph's views of the *purpose* of teaching. He sees good writing skills (what he calls "form") as precursor of a successful career, and wants that for his students. He invokes the stories of students (feedback) who had reached back to him to assure him that this skill was more important than any course content. Joseph reflected on changes in his views about *power dynamics* in the classroom:

> Sometimes when I team-teach I find that the person I've been team-teaching with, I find that he can be very hard and demanding on the students, whereas I will try to get the same things out of the students but I would do it in a kinder, gentler way. So the students typically will migrate to me [chuckle] and will try to avoid the other instructor, and yet we both have power over the students. I do reflect upon power dynamics in those cases because I've found that I can wield an awful amount of power by using what we might call a velvet hammer so the students actually respect me and yet they also realized that I am a no-nonsense teacher. It's just that I find that I can get work from the students

> without being real nasty about it, which is a nice change because when I was young I wasn't sure of myself so I came across as too aggressive sometimes with my students. With age and experience and maturity I've gotten to be a guy who demands perfection and hard work from students, but in a way that they don't find unpleasant.

Through comparing himself to another instructor, Joseph explains that both of them have power over the students, but that he is effective at getting the students to respond to his demands for "perfection and hard work" while being gentler (using a "velvet hammer") than the other instructor. He assumes his approach works because he gets "work from the students" and they prefer to work with him. For Joseph, team-teaching allowed him to reflect on his colleague and on his own practices. He talks about changes in his teaching as the result of "age and experience and maturity" which have allowed him to hone his skills. As Joseph reflects on his power, he adds that the students also have power in the classroom:

> Oh, the students have power, they really do. And I want them to have power, I want them to feel like when we are working together, that they can influence me, and the kinds of information that I can help them gain, the ways that I can help them gain it… Sometimes they want to hear lectures, other times they want to just for me to help guide them in a direction where they can find their own material, so I try to —in my more advanced classes— to empower the students to help me. And I often say to them that "this is your class".

In the passage above, we see that not only does Joseph acknowledge that students have power, but he wants them to have it and use it, to "help" him. He describes his *role* as facilitator of learning and clearly sees the teacher and the students "working together." He then lists ways in which his students can influence him and the class dynamics. A final example of his efforts to

decenter the teacher figure is when he adds that he tells the students that this is their class, sharing that he is willing to be flexible to their needs and suggestions.

Joseph talked about becoming sensitive to *students*, to their needs and differences. He described how this influences his teaching:

> In my early years as a teacher I wasn't sufficiently sensitive to the students, and so I try to use… I don't want to use the word force, but I forced the students to do things my way, and I didn't really pay much attention to their needs and differences and subtleties. Then as I became a more experienced teacher I became more in tune with the students' needs and I became more willing to adapt the course to meet the students' needs. If I'm preparing a new course now … I try to have my antenna up, so that I can be able to adjust the course so that it becomes a better learning experience... Any course that I teach now is probably, maybe in the broad structure outlines much like I envisioned it, but in the details is probably very different than what I originally conceived.

The above passage reiterates Joseph's belief that course *content* is less important than other aspects in his teaching. It also shows big changes in his teaching. He keeps "his antenna up" to be sensitive to his students' "needs and differences and subtleties." He outlines the course and remains flexible to what it will actually become once the students shape it, being responsive and interactive in his teaching. Joseph talked about trying to bring his own *self*, his research interests, life experiences (being a dad and a granddad) into the classroom and to help him understand the students. At the end of the interview, when I asked if there was anything else to be added, Joseph shared the following:

> I still feel after all these years inadequate as a teacher. I've even won teaching awards and I don't think I deserve them. I think I've gotten them for a couple of reasons; one is because people realized that I am dubious about my teaching, and secondly because I've been here so long [laughter]. But I really still feel inadequate as a teacher and that's probably a good thing because it means that every time I go into the classroom and every time I go into another course I am willing to try to be better than I was the previous time. And I think that that's helped my teaching because I never become complacent about it. So I assume that I've improved over the years, but one never knows [laughter].

Joseph's feelings of inadequacy in teaching, regardless of the teaching awards he has received, rather than discourage him, seem to become a force for continuous reflection and improvement. He adds, "I am willing to try to be better than I was the previous time" and that might denote flexibility, self-reflection, and his positioning as a learner that expands his teaching. This idea was repeated by Emma, who insisted that she is "still learning" to teach. It was also signaled by John, who was open to learning from his colleague. In other words, all three crafters (cluster 3) seem to reflect a humility that enables them to be receptive to continue learning (from their students, by continuously crafting what works) (hooks, 1994).

Of all the participants, Emma was perhaps the teacher with the most expansive way of teaching. She was not the only one who received teaching training, but she credits the "future professoriate program" she attended as a doctoral student with providing her first teaching skills: "that's how I learned how to teach. I'm still learning but…." Being a funded program, entry was competitive. The university's future professoriate program was carefully designed to provide *chosen* students like Emma rich teaching experiences. The program rotated students to teach different courses under the supervision of a group of exemplary teachers who would give her

"mostly positive feedback" on her teaching. She was assigned a mentor who could not be the same person as her program advisor.

Emma was one of the few teachers who explicitly said about *content* that "it is okay to be behind." She said that this took her a long time to become comfortable with, "but if we are behind because we're having conversations, I am totally okay with that, and if we get through three quarters of the syllabus, I am okay with that also." She sees her *faculty role* as a guide in students' learning. She also sees herself as a *learner*: "I've been here [many] years. I am not being kind of coy by saying that I'm still learning, I really am still learning. I learn a lot from graduate students." –She mentioned that she was learning repeatedly during the interview. Emma, like most participants, seems to lack formal educational theories that help her explain and develop their teaching. Emma's teaching and its expansion seems to be linked to the idea of scaffolding (support during the teaching and learning process) that works not only to bolster students' learning, but also her own (Vygotsky, 1997/1978).

Emma's *self* comes into her teaching in several ways. She provided several examples showing how she tells her students stories about who she is, including being a feminist, a researcher, a daughter, a woman, and about growing up in a well-known neighborhood in a nearby state. She does this to relate more to her students, so they will know "that I have a mother," that they would say "she's kind of normal, she grew up in [that neighborhood]". Emma talked about a change in her teaching:

> I am okay with those very long uncomfortable moments; it's taken me to be pretty senior to do that. I used to say when I was younger, "Okay, I can outwait you, you know?" I don't even say it anymore. I'm very comfortable to stand there and look at them. And I do that.

Implicit in this passage is the *teaching* idea that students need time to think, process information, and create thoughts that allow them to participate in class. It also alludes to letting go of *control* in the classroom, of reducing her *role* and *responsibility* as a teacher in the classroom. She is comfortable letting students "get there," think about a question, comment, or problem, and not jump in immediately to fill the silence, giving them more *responsibility* for teaching and learning. Emma uses many assessment instruments in her courses including open book exams, writing assignments, projects, and in-class panels. This multiplicity of assessments, Emma says,

> Goes to a bunch of different strengths and weaknesses, so the students know—and I'm very clear with them. I say, "You can really blow one of these things, do really terribly in one of them, and still get a good grade in the class, but you need to work with us once that happens."

Recognizing that students learn and demonstrate learning differently, Emma has included multiple assessments in her classes. Having this array of options, students have, and know that they have, the possibility of recovering from failing one of them. She credits her teaching assistants for suggesting some of these assessments. This is how Emma talked about her views of *assessment*:

> Assessment is not just about assigning a score to a student; it's trying to figure out why students might not understand the material and what my role is in them not understanding it as well. Our roles are to convey certain material but our roles also determine what we don't… why aren't they getting it? It's not necessarily always the student's problem. Yeah, they have terrible schedules and they don't eat right, and there are all those kinds of things. But there's also a way you have to assess yourself after this assessment of the students themselves.

The *purpose of assessment* for Emma is clearly related to her own *role as faculty*. Assessment not only gauges students' understanding of the course *content*, it reveals how effectively Emma is conveying the material, and at large, how effectively she is teaching. Emma added that a challenge in assessment is that "this course may kick in five years from now for them… I have to give them a grade by the end of the semester, and I think what we are doing in this classroom is something that really takes a while for them to gel."

Interestingly, when I asked Emma whether *student diversity* comes into play into her assessments, her reply changed as she reflected on it:

> They don't. [Pause] They don't; they might; I mean, they come into… Their identities would probably come into play in terms of the assessment marking something that we may need to… for example international students, English as a second language, we might need to get them help…. I… [Sigh] They do, okay. I'm going to take that back. They do in certain cases.

Emma was one of the few participants who admitted that in some way, student diversity might have some level of influence on her assessment of students. After saying that, Emma elaborated on an example in which a sensitive topic (sexual assault) would appear in a written assignment. When this happened, she would say privately to the students, "I am so honored that you shared this with us [her and her teaching assistants], but I need you to do this now, I need you do the kind of [assignment] we asked you to do in the class, you cannot substitute one for the other." Emma made sure that the student felt that she was listening. She then would direct them to the appropriate office or resource. Finally, Emma made sure that the student understood that the original assignment still had to be completed for course credit. Emma continued talking about *diversity*:

> We also try to build, in terms of diversity, we've been pretty lucky [that this course] attracts a diverse student body and we were able to mimic that in the [teaching assistants]. So it's diversity in terms of gender, in terms of race, in terms of national background, we try to get as many international students involved as we can, and they are always a good group and it's fun. That's how that kind of happens.

For Emma, student diversity also comes into her teaching, in the students who attend her courses, and in her teaching assistants, seeking representation of diverse viewpoints and backgrounds. Talking about *power*, Emma said that "power is seductive." She differentiated between good and bad *power dynamics*. She said that many students want the teacher to be in charge and to tell them what to do. The trick, as Emma explained this, is to find ways to destabilize power and not respond to this assumption of being the expert. Here is how Emma describes her attempts:

> I try to give agency to students, both men and women, to be able to use the theories that we're working with, apply them in their own lives … which gives them a little bit of power and agency to determine their own futures. So by destabilizing power relationships in the classroom one of the things that I think it's very important... We've all seen this – and I know you probably have statistics on this— I can't tell you how nuts I go when I am teaching a gender class that has 10 women and 2 men and the men are the people who are talking in the class. So I have to figure out how to empower those women to feel comfortable in speaking and be able to say, "Okay, guys" and they are really great guys, I'm not saying that they are bad, but they've just been conditioned into this environment, where they feel very good about talking…

Purposely trying to give agency to students in her classroom, Emma encourages students to use the theories they are learning in their everyday lives. Her point about class participation being

gendered, which Eric had also pointed out, demonstrates Emma's awareness of power dynamics in the classroom among students. It also illustrates her intentionality in trying to create a learning environment conducive to learning and engagement by all students. She continued explaining how she attempts forms of empowering:

> Usually what I do in the beginning of these smaller classes [is] …Breaking them up into groups, so they report back, so you can slowly start building confidence, and next thing you know, it starts getting… You know, there's always going to be the male student and the female student who won't speak in class; they are uncomfortable with it. But that something different, than a dynamic that I see often in classrooms that we as instructors need to try to figure out.

Emma uses her pedagogical skills, using small groups to build students' comfort level and confidence in the classroom, to create this desired learning environment. Her observation that male students tend to do most of the talking in classroom contexts (Blum, 1999; hooks, 1994) has been documented by others.

As Emma, Joseph, and John exemplified, as representatives of the most expansive of the clusters, *crafting what works in teaching* moves towards what in the literature is called learner-centered teaching (Huba & Freed, 2000; Weimer, 2013) or feminist pedagogy (Crabtree, Sapp, & Licona, 2009; hooks, 1994; Manicom, 1992; Schrewsbury, 1987). These teachers often mentioned being insecure or dissatisfied with their teaching, constantly *seeking what works*, crafting and re-crafting their teaching. This does not mean that they are always expanding their teaching, just that they are more likely to do so than teachers in the other clusters.

The Full Grounded Theory Model of Teaching Expansion

Viewing these ways of teaching with the process of expansion, we can see that teaching is a process of constant revision that has the possibility for expansion. When teachers are faced with and recognize contradictions in their teaching and work towards resolving them, some of them choose and pursue expanded scenarios. Even though there were many similarities among the participants' experiences and traits, teachers in this study developed distinct ways of teaching. The department tracks these teachers belonged to and the courses they taught did not seem to be the strongest influences in how they teach; they all indicated that they taught all levels of undergraduate and graduate courses. Their courses varied in class sizes. Several teachers in different clusters taught courses on economics or technology, and they did so very differently. As it has been mentioned before, all the participants taught in the same department, using lectures, and their courses had a computer lab assistant, and graduate teaching assistants. Some of them received some form of teaching training in graduate school. Some grew up and were schooled in other countries; some had parent educators or early teaching experiences; some wanted to be researchers, some to be teachers, and some both. These aspects did not seem to determine completely how they teach. It is clear that most of the participants were driven by a desire to improve their teaching and student learning. This supports previous research (Beyer, Taylor, & Gillmore, 2013).

The three teachers who *craft what works*, Emma, Joseph, and John, have held administrative posts in addition to their teaching responsibilities, but Charles also has administrative duties and seems to *adopt what works*. For many, their expansion seemed related to their years of teaching, but Don and David have taught for more than three decades and are still *adopting what works*. Lastly, a finding unrelated (at least directly) to teaching expansion

was that the four female teachers indicated being cognizant and intentional about their own role model as a female scientist and scholar for other students, particularly female students.

To explain why some teachers in this study made changes that lead to teaching expansively, the data seem to point to a combination of personal readiness that involved awareness of self, of students and their diversity, of power dynamics (see Maxwell, Vincent, & Ball, 2011) and external conditions –co-teaching; talking with faculty peers about teaching; training; acting on students' and teaching assistants' feedback in different ways. For these teachers, teaching changes involved a level of self-reflection, of learning, that pushed them into the expanded scenario: Becoming learners themselves.

It is important to note that although teachers belong to an expanded cluster their teaching does not necessarily expand all the time. Teachers who *craft what works* might still teach in ways that *adopts or discovers what works* some of the time. Teaching appears to also be situated and reflective of teachers' specific needs and goals. For instance, getting ready for a tenure review, or teaching a course for the first time versus teaching the same course for more than a decade. But teachers who *craft what works* are more likely to continue their teaching expansion than other teachers.

The full model in Figure 4.8 below shows how even teachers who *adopt what works* constantly revise whether their teaching works and make smaller revisions to it. But for these teachers, their revisions come mostly from *borrowed* ideas of teaching that they believe are "proven" to work. Although minor tweaks occur in this teaching, teaching views and practices remain mainly the same, with narrow views of the role of teacher as transmitter of information, students as recipients and reproducers of this content, which is demonstrated in rigid assessments. Control in the classroom is important, and power dynamics are dominated by rules

established by the teacher. These teachers seem to rely on traditional, proven ways of teaching, and by "that old adage: Don't fix what has not [been] broken. If it's working, stick to it," as Neil told me.

The second cluster includes teachers who are *discovering what works.* These teachers continuously tinker and make revisions to their teaching, reflecting their willingness to try new things, but never quite develop any given technique. Rather, they seem to think that constantly bringing new ideas to their teaching is sufficient for it to work (to keep students engaged). These teachers attempt to become more expansive in that the teacher is often no longer the only expert and transmitter of content, and in that the learners (sometimes the students, sometimes the teacher-as-learner-self, sometimes both) are brought in with a more active role to share the responsibility for teaching and learning in the classroom. Their views of power, assessments, and teaching are becoming less rigid and more varied, but still seek to maintain a sense of control and authority.

Lastly, teachers who *craft what works* constantly work towards creating more expansive learning environments that are more than the sum of the students and the teacher; these spaces encompass a larger vision about the creation of knowledge (Alcoff, 2001; Code, 1991; Frye, 1996; Manicom, 1992). In this cluster the role of teacher is that of a guide that not only helps students learn, but also becomes a learner as well. This decentering of the teacher figure makes it possible for students to become responsible for the teaching and learning process (that is, students are given epistemic credibility and can both learn and teach). Assessments are flexible and varied. Content in this way of teaching becomes a vehicle for reaching a deeper understanding of ideas and concepts. In this cluster, teachers acknowledge power dynamics in the classroom and aim to use their power to ensure that the learning environment is respectful

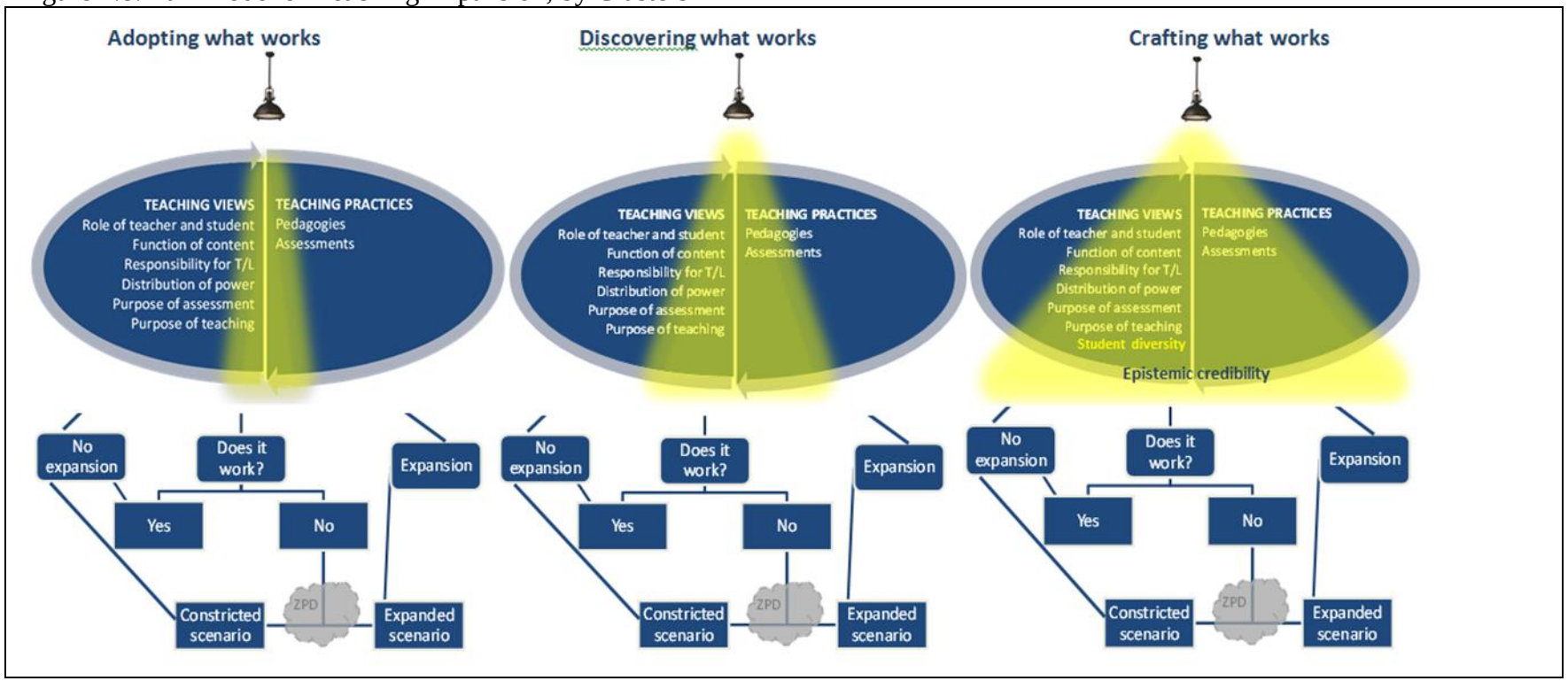
and inclusive. These teachers are comfortable with flexibility, ambiguity and constant revisions to their teaching. Their vision about teaching includes the inclusion of multiple and diverse perspectives, and becoming vulnerable to learning, not only teaching.

Notably, teachers who *craft what works* in teaching illuminated *epistemic credibility* as part of their teaching, as the full model in Figure 4.8 shows. Historically, not all individuals have been granted epistemic credibility; and some argue that this exclusion is still practiced. Having epistemic credibility means being recognized as an individual with the right and the authority to know and to learn, and to create knowledge (Alcoff, 2001; Code, 1991; Fricker, 2006, 2007; Harding, 2001; Rooney, 2011, 2012; Tuana, 2006). For teachers who craft what works, epistemic credibility is granted to both students and the teacher-as-learner. By becoming learners, teachers deemphasize their own role and responsibility in creating learning environments; it also allows them to reflect on the changes they choose to make when faced with teaching contradictions as they enter the zones of proximal development. But teachers also grant epistemic credibility to their students, empowering them to be responsible for participating in the teaching and learning process. Further, as this epistemic credibility is linked to social identity (i.e., student diversity in the classroom), teachers who craft what works in teaching include *student diversity* in their teaching views (see Figure 4.8 below). This attunement to student diversity is reflected in the variety, intentionality, and flexibility of pedagogies and assessments.

Teachers in other clusters lack this attunement, perpetuating what Tuana (2006) calls a *not knowing* that is sustained and even constructed to preserve some values and voices and to exclude, silence, or make others invisible. In this way, teachers who *craft what works* in teaching, through their attempt to decenter power dynamics in the classroom increase the number and kinds of voices and views that participate in knowledge production. By doing this, these

teachers are contributing to the dismantling of hierarchies that maintain the status quo, and to the correction of potential injustice and inequity in the teaching and learning process. In other words, teachers who craft what works create more inclusive classrooms and teaching practices.

Figure 4.8. Full Model of Teaching Expansion, by Clusters



Note: Teaching views and practices (shown above in the ovals) for each cluster contain and illustrate the same elements originally shown on Figure 4.3.

Chapter V. Discussion, Conclusions, and Implications

The Value of Teaching Expansion to Create Inclusive Learning Environments

"Fixed notions about teaching as a process are continuously challenged
in a learning context where students are really diverse,
where they do not share the same assumptions about learning"
bell hooks, 1994, p. 162

In this chapter I present a summary of the study's findings in relation to the guiding research questions. I then discuss these findings employing feminist theoretical perspectives and sociocultural learning theories, as the findings are compatible with and supported by these perspectives. I present some concluding thoughts and offer some suggestions for future research, and for applications of this study's findings for policy decision-making and practice.

Summary of the Study's Findings

The purpose of this grounded theory study was to examine how faculty members understand, practice, and explain their teaching and assessment of students, and to interpret these views and practices in relation to student diversity and power dynamics in the classroom. To examine these issues, this study was guided by three purposely broad research questions:

1) How do faculty members describe their practices of teaching (pedagogies and assessments)?
2) How do faculty members explain their views of teaching (pedagogies and assessments) in the classroom, and to what do they attribute these views?
3) How do faculty members explain issues of diversity and power, and their relationship to teaching?

One of the first findings was that teaching for this study's participants was a combination of

teaching views (about the roles and responsibilities of teacher and students, the function of content, the distribution of power dynamics, and the purpose of assessment and teaching) and teaching practices (the specific pedagogies and assessments they choose). These ideas of teaching originated from *borrowed ideas of teaching* that they learned about as they started teaching. Sometimes these ideas changed over time, when their own teaching experiences informed their views and practices of teaching (beginning to address the first two research questions).

Teachers constantly engaged in a *seeking what works* process of self-checking whether their teaching was working for them. As long it worked, no changes were necessary; when it no longer worked, changes were needed. Small changes occurred more often, maintaining and confirming their views and practices of teaching. But sometimes the changes made were so big that impacted their views and practices of teaching—changing the way they taught, and the views they held—and their teaching expanded. This *teaching expansion* occurred when teachers underwent a self-reflection process of becoming learners themselves as they faced the two likely scenarios (a constrained and an expanded one) as potential solutions to their teaching problems. Staying close to the data during the analyses rendered a grounded theory model of teaching expansion that explains how *seeking what works* is at the core of the participating faculty members' views and practices of teaching, and their potential expansion. In this manner, the resulting model itself serves to describe and explain the participants' teaching views and practices (research questions one and two).

Grouping participants according to their ways of teaching (views and practices), three clusters were formed: 1) *adopting what works*, 2) *discovering what works*, and 3) *crafting what works*, each stance more expansive than the previous one. As each cluster was developed, it

became clear that although teachers in the first two clusters believed that their teaching worked, these ways of teaching appeared to be narrow and rigid, and would likely fail to create the learning environments that promote student participation, engagement, and learning (Beyer, Taylor, & Gillmore, 2013; Crabtree, Sapp, & Licona, 2009; Manicom, 1992; Shrewsbury, 1987).

Further, for teachers in the *crafting what works* cluster, *epistemic credibility* (Alcoff, 2001) became part of their teaching. This meant not only becoming learners themselves, but allowing their students to be participants in the teaching and learning process. This granting of epistemic credibility for both teacher and students made them all responsible for creating learning environments. Since epistemic credibility is linked to social identity (i.e., student diversity in the classroom), this expanded form of teaching intentionally sought to include *student diversity* and decenter *power dynamics* in the classroom. This intentionality creates more inclusive learning environments that seek to correct hierarchies that maintain some student populations' silence or invisibility (Alcoff, 2001; Code, 1991; Fricker, 2006, 2007; Harding, 2001; Rooney, 2011, 2012; Tuana, 2006). These linkages addressed the third research question and are further discussed in the following section.

Discussion of the Study's Findings

One of the findings of this study is a better understanding of the process of teaching expansion. Through the constant process of seeking what works in the development of their teaching, teachers confirm and maintain or change and expand their teaching views and practices. For some of the teachers in this study, what works in teaching meant using a toolbox of borrowed ideas of teaching believed to be proven to work, hence not needing any changes. For other teachers, what works in teaching related to a constant tinkering with their pedagogies and assessments, "discovered" mostly through trial and error. And for a few of the teachers in

this study, what works in teaching meant being willing to become learners as well as teachers, and recognize the right and authority of students to learn and to create knowledge, expanding teaching (and learning). Central to this process of expansion is that the teacher self-reflects and becomes a learner him or herself. This shift in epistemic stance includes the students as well, as both teacher and students hold epistemic credibility (Alcoff, 2001) and become participants with the right and authority to know and to learn, and to create knowledge in the teaching and learning process. In this section, I discuss how this concept of epistemic credibility is central to the creation of inclusive classrooms.

Expanded teaching is linked to epistemic credibility. As teachers expand their teaching views and practices, they are more likely to grant epistemic recognition to themselves (as learners and not only as teachers) and to their students (as teachers, not only as learners). Hence, students are no longer merely receptors of information; they have the right and authority not only to learn, but also to create knowledge. Teachers who are teaching using borrowed ideas of teaching, or who are adopting what works in their teaching still hold on to the idea of the teacher as an expert and transmitter of knowledge. In these classrooms, students are often perceived as passive recipients of information, incapable of being responsible for the teaching and learning process (Delpit, 1988). We can see one example of these views in William, an adopter (cluster 1), as he talked about Chinese students who attend his classes:

> And too many of the Chinese students are plagiarizing left, right, and center. They cheated on their exams to get in, most of the ones for the grad school …And if we are going to make an offer to somebody that has got supposedly high TOEFL scores and high on English, we'll phone them up. And sometimes there is somebody on the dorm that night who is the person who is pretending to be that person [the applicant]. And [when]

> they arrive in September or in August, you cannot have a conversation with them… I am not willing to say, "Okay, I am giving you the benefit of the doubt."

From this except we can see that William presumes that "too many" of these students plagiarized and cheated to get in to this institution –that is, they do not possess the knowledge necessary "to get in." He also presumes that when he or his colleagues call these students as part of the admission's process, these students do not answer the phone but have an impersonator answer the phone for them. A high level of distrust for the linguistic intellect (linked to the epistemic capability) of these students is set before they even arrive to his classroom. Once there, "you cannot have a conversation with them." As the literature and any language learner would indicate, English proficiency (including verbal communication) for a non-native speaker "can take 4 to 7 years" (Hakuta, Butler, & Witt, 2000, p. 13). Not being able to communicate does not mean that these students do not know. They could potentially demonstrate their knowing in other ways. But for William, these students' inability to have a conversation equates with not having the necessary knowledge to obtain the right or authority to learn, and even less to create knowledge.

On the other hand, towards the end of the following excerpt we can see how Emma, a crafter (cluster 3), sees her students as participants in the teaching and learning process:

> I do a lecture on the burka and there's a bunch of female students sitting there covered, not with burkas, but with… I do "the bikini versus the burka lecture, and who is really oppressed?" And a lot of the women who are covered in some way come up to me afterwards and thank me for the lecture. It's a really old lecture, I wrote it with two Muslim students when I was at [my doctoral university]; I sat down with them and said,

> "Look, I have to do this lecture. What do you think is the best way of doing it?" And they gave me some great ideas.

Emma's inclusion of students' voices in her teaching indicates her willingness to decenter the teacher as the only creator of knowledge, which "derives from the pedagogical tradition –the ways of teaching, learning, reading, and writing established by the class whose authority the authorial voice reflects and perpetuates" (Caughie, and Pearce, 2009, p. 36). As teachers recognize students as learners and teachers, and their teaching expands, they are granting them epistemic credibility.

However, not only the students' roles and responsibilities shift as they are granted epistemic credibility. Allowing students' voices in the classroom requires that teachers step down from being at the head and helm, at the front of the classroom (what some participants called being the *Sage on the Stage*). It requires teachers to participate in the classroom also as learners, and let go of the teacher-as-expert position. Eric, a discoverer (cluster 2), talked about trying to not be the only teacher in the room, and encouraging his students to make decisions about the content, by identifying articles and presenting case studies in class:

> … And I don't know what's going to happen, talk about being on a tight rope. They bring any and all kinds of stuff out. I like it because, boy! It keeps me on my toes; I have to be prepared to respond. And there are going to be things that I don't know about. I say to the students, "I don't know anything about that. Who else knows about this type of energy?" Immediately that's a way to basically say, I am not the expert on all things, I don't need to have control over everything.

Letting go of control –in this case of the content and the responsibility for being the only teacher— means allowing the students to take the class to sometimes unpredictable places, as

long as the discussions stay on topic and contribute to learning. Another way in which teachers shift the epistemic responsibilities in the classroom is by becoming more vulnerable, which Eric alludes to in the previous excerpt. They purposefully bring their "selves" into the classroom (Beyer, Taylor, & Gillmore, 2013; Diprose, 2000), which situates their knowledge (Haraway, 1988). Noted feminist teacher and scholar bell hooks (1994) describes engaged pedagogy as one that empowers both students and teachers, but warns that "that empowerment cannot happen if we [teachers] refuse to be vulnerable while encouraging students to take risks" (p. 21).

Emma once again provides an example when she narrates an occurrence related to her assigning the book, *The Help*, by Kathryn Stockett in one of her courses. Usually, ten students form a forum and discuss the book in front of the class, giving an overview of the book's story; students are usually very enthusiastic about it ("and they all love reading it, they love the book"). The book comes back as a writing assignment towards the end of the semester, after several classes on race and other historical and cultural aspects. Now, the students have to write an essay critiquing this book that they liked so much:

> And we go through everything, all the work that they've done in the class comes through in this novel that they enjoyed reading. Sometimes they feel bad that they enjoyed it. I said, "Don't feel bad about reading it. Now you have the tools, right?" I said, "I enjoyed it, I sat at the beach when I read it for the first time. And it wasn't until I heard the critique from the Black Women Caucus that said that this type of language is recreating the mammy figure: They don't talk about the violence in the households; they talk about the violence in the black households but not in the white households, to the black maids." So that's part of the assessment, that they are asked to write a page based on what they

> read from *The Help*, [and] they have to write a broader paper about the class … tying it back to *The Help* in terms of some of the cultural [aspects].

Emma is not afraid to disclose her own process of learning (as we will continue to see throughout this section) in front of the students. Bringing her identity as a White woman, she connects course topics (race, racism, privilege) and her struggles learning them. As other teachers who craft what works, Emma carefully plans and implements her teaching to counter and challenge the teacher-as-expert role.

Expanded teaching and epistemic credibility foster academic diversity. As teaching expands and teachers are also learners, and grant epistemic credibility to their students, more students' voices and ideas are recognized and accepted in the classroom; more viewpoints are included in what is accepted as knowledge; the multiplicity of perspectives fosters academic diversity in the teaching and learning process. This is also related to the teacher taking a back seat, which happens increasingly as teaching expands. Michael, a discoverer (cluster 2), described his students in a way that illustrates his willingness to let his students participate in the creation of knowledge in the classroom:

> Everybody is an adult, everybody has some experiences that they can bring to the table, everybody has education that they can bring to the table. All of them have different experiences and different education, so even the person that might be a junior in an undergraduate has things that they know that other students don't; and the older students have obviously things that other students don't. So I try to make an environment where the students can bring their own interests, their own ideas to the table…

Even though Michael tries to include students in the creation of knowledge, at the end of the quote, he reminds us that he is the one responsible to "try to make an environment" where this

happens. On the other hand, John, a crafter (cluster 3), shows us a more expansive example as he explained how teaching to students from different disciplines made him aware of the richness of perspectives in his classroom, and to jump at the opportunity to intentionally incorporate them in his pedagogies:

> And then I started teaching classes that came from multiple disciplines and would have a mix of first-year, second-year, third-year [students], and then we started to really think about who was in the classroom and what they brought to it, and making more use of what they brought to the classroom, because now everybody was bringing something different. And we were teaching the sort of classes like living on the margins, or world and crisis, or things that we could invent as we went along, and every student that came in, came with a different perspective and a different disciplinary background that let them add something to the conversation. So in those classes the students become part of the teaching that's going on. And in the study-abroad program that's where we feel a lot of the education happens; it is students teaching each other; there's a lot of peer learning happening.

In contrast with Michaels' description, we see in John a more palpable decentering of his role as teacher, as the "students become part of the teaching" and they are "teaching each other." John's students are knowledge creators and co-teachers and as they come from different disciplines and class standings, this learning environment is richer with academic diversity. This recognition of students as full participants responsible for creating learning environments bolsters learning, as learning is socially and collaboratively constructed. This claim is supported by sociocultural learning theories (Kelly & Green, 1998), by feminist pedagogies (Crabtree, Sapp, & Licona, 2009; hooks, 1994; Schrewsbury, 1987; Manicom, 1992), and by learner-centered teaching,

which insists that "ultimately, the responsibility for learning rests with the students" (Weimer, 2013, p.64).

Expanded teaching and epistemic credibility foster more inclusive classrooms. Following the previous point, as teaching expands and epistemic credibility is granted to more students, and the academic diversity in the classroom (described above) increases, this expansion might also create more inclusive classrooms for underrepresented and non-traditional students. A key component relates to how this recognition occurs. Alcoff (2001) explains that epistemic recognition is the result of assessing an individual, usually based on his or her social identity ("those social markers of identity that our culture employs, which are most importantly race, gender, sexuality, ethnicity, nationality, class, and religion" p. 59). Teachers' granting of epistemic credibility is linked to ideas of who are the students, that is, their social identities. We can see this linkage in the above descriptions made by William of Chinese students, by Emma of Muslim students, and by Michael of adult, older students.

In order for students –and particularly underrepresented and non-traditional students—to feel recognized and accepted as contributors to knowledge creation, particular attention must be paid to the ways in which the teacher grants this recognition. It must be done without prejudice or expectations of specific responses, ways of demonstrating skills and knowledge, or of ways of learning (what Alcoff, 2001; Rooney, 2011, and others call epistemic privilege). This prejudice can actually exclude some students, often the same students intended to be included.

Teachers who craft what works are more likely to use a repertoire of instructional approaches and assessments precisely because they want to include students who might be shy, uncomfortable with verbal or written forms of communication, who might feel "tokenized" (Collins, 1986; Flores Niemann, 1999) because of their social identities, or who have different

ways of learning and demonstrating it. This is relevant in departments like the one the participants in this study teach in, which has historically been White and male. Even though there are more female teachers now, it is still predominantly male; and although there are many non-U.S.-born faculty members, it is also mostly White. The diversity in the faculty body comes mostly from the international perspectives and the four disciplinary tracks. The student body is more diverse, but still dominated by White male students. Since "the make-up of our classes affects the ways in which we conceive of teacher-student relationships" (Caughie & Pearce, 2009, p. 37), teaching expansion and genuine epistemic credibility can create classrooms where underrepresented students feel included and welcomed. Neil, an adopter (cluster 1), struggled with his answer to whether the students' diversity influenced his assessments:

> [Long pause] I don't think so. And I am skeptical of that answer because I feel that maybe there is some reason… Maybe there's this thesis I'm trying to get at, if there is a culturally distinct way, if certain cultures respond better or worse at certain assessment practices… For the sake of consistency and standardization and all these things in assessment… I don't think that I would tailor it too much [laughter]. [I am] being very conscious of the fact that I came from a specific background and I feel like this practices are normal and maybe they are not. I cannot see the assessment practices changing based on the culture that a student....

We can see that Neil hesitates with his answer that the students' diversity do not influence his assessments, and articulates how that would conflict with his idea that assessment should have "consistency and standardization" and that these unexamined practices that come from "a specific background" feel like they "are normal." On the other hand, Emma (cluster 3) showed

an expansive way to describe her awareness of student diversity as she talked about finishing her lecture on the bikini versus the burka that she had talked about before:

> I got nervous, because I really don't want anybody to be offended. And I thought, "Well, I'll give it a try." And what I usually do is I might introduce something a bit modified at first, if the student body has changed a bit, as students have become more diverse, in terms of, for example an increase in African-American students. I am always careful with this lecture, but I have become super careful. And I have to say when African-American students, after the lecture are waiting to see me, I am sweating. And I've only heard good things from them… or [they] ask me for the references, because they're working on a paper over in African-American studies and they ask for references. Not that, "You've done a good job, nice White teacher" I am not looking for that. They come up and say, "Where did you get that clip? I want to use it for this [other assignment]." And then I [think], "Okay, I am doing okay."

Emma includes students' diversity in her teaching though her choice of topics, the students who attend her courses, the type of feedback they give her and in her awareness of her own identity. The different ways in which diversity appears or becomes invisible in different clusters can further be seen in William, an adopter (cluster 1), and Emma, a crafter (cluster 3). They shared examples of how they include difficult social identity analyses in their courses, which were not exclusively on these topics. William described including slavery and race as topics in his course on landscapes:

> In a class where I deal with slave landscape in Bristol and Liverpool, I sat down next to one African-American student before the class started, sat down next to him, and in very low voice I said, "Look, I am sorry, some of the things that I'm going to be talking about

> today are awkward and disturbing, but I really feel that it is important that we lay out this part of what…" And they appreciated me saying that. So I try to accommodate that. As I said earlier I am dealing with my White, male, straightness, so if I am comfortable in my own self, then, and not apologetic about it, at least I think I can engage.

William knows that the class content will be "awkward and disturbing" for "the one African-American student" and thinks that forewarning this student is sufficient action (presumably, other students in the class might notice his seating next to this student, highlighting the marker of "the other"). He uses his comfort level with being "White, male, straight" to try to explain that – as some form of empathy. But William does not see how he is not allowing the student to participate in what and how the class lesson happens; he apologizes ("I am sorry") while saying that he is "not apologetic about it." In contrast, Emma described her course on cultures, in which she examines identity issues like race, racism, privilege, gender, and sexism:

> I have a whole lecture on white privilege which… Everyone is on board for the racism lecture, "Oh, yeah, that's bad," but when you start talking about your own privilege and what we don't see... I sometimes use examples of when I don't see things to kind of start them off, and say, "Look, I'm vulnerable." I tell them a story of when I first started working with women firefighters. The reason I started this was, when I went to [my neighborhood]—this is when my personal life will come back—I went home to [my neighborhood]. I was looking for a new project, I was trying to think about what my next big project was going to be, and then I was walking down the block—a block I grew up in— I saw a fire truck pulling in, and all the kids in the neighborhood ran up, and I said, "Oh, I used to do that, the firemen used to give us candy" and all of a sudden I see a female firefighter take her helmet off and I thought, "Here I am, this feminist scholar, and

> I was assuming that it was a fire *man*." And I explain that from my perspective, and how the cultural traces of my past actually hinder me about thinking about something different, so that's one way that I do that.

In William's and Emma's descriptions we can see the different intentionality and levels of success of both in creating inclusive classrooms. Although both faculty members decided to include these difficult topics in an effort to contextualize their teaching and potentially to bring issues of diversity into their classrooms, their approaches are very different. We see in Emma the desire to include both the racist and the white privilege perspectives to avoid marginalizing some students, which William does not seem to do. And while both teachers are aware of their own identities in these classes, only Emma makes it explicit and a part of her instruction. Lastly, we see in Emma a willingness to become vulnerable in the classroom, being a learner herself, allowing her students to see her own learning struggles as she faced a sexism moment.

Expanded teaching and epistemic credibility deemphasize power in the classroom. Teachers who adopt and who discover what works use power very differently from teachers who craft what works. All teachers agreed that they always hold, and should hold, more power than students. But expansion in teaching diffuses or repositions control and power in the classroom. In cluster 3, crafting what works, the role of teachers is decentered and students have more responsibilities, the use of power shifts from classroom management to the creation of respectful learning environments where all or most voices are participants.

Adopters (cluster 1) seem to still hold on to different ways to ensure power and control in the classroom. Some included a deluge of policies in their syllabi to ensure classroom behavior; some talked about using devices such as being addressed by their titles (doctor, professor, never

by their first name) or clothing (ties, jackets) to command respect. Here is what Neil (an adopter) shared:

> When I get to the age thing… and this is something that I spoke with my colleagues about… As soon as you put on a tie, you just, you command a little bit more respect. If I went in looking as I do now, I think that it would be more challenging to get over that age thing. If I go in with a tie, maybe even a jacket, then it's a little easier.

Neil, the youngest participant (in age and number of years teaching), mentioned the challenge of being young and using clothing to command respect. William, another adopter, mentioned similar sentiments:

> Absolutely, that's why I wear a tie. I am not trying to pretend that there isn't [power]. It is not a level-playing field. If I showed up in a T-shirt and shorts and a baseball on backwards, you know… I am the person who is giving the grade. I have been hired and I am being paid to share certain things and to adjudicate on the adequate level of performance. So yes, of course there's power.

Oddly, wearing a tie came up when talking about student diversity with James, a discoverer (cluster 2), as he talked about several teachers in the department who wear ties to class: "I never wear ties otherwise, or in my case I wear a tie at the beginning of the semester –I am not wearing one today—I don't like wearing them that much. That's a little bit about control, and respect, things like that." There seems to be a culture in this academic department where faculty status was a value shared by several people. Using a professional title seemed important to men and women, while the clothing only came up with male faculty members.

Power in the classroom was also present through the empowering of students to be part of the teaching and learning process. Eric, a discoverer (cluster 2), shared a moment early in his

teaching career: A student had brought in an article as part of a class exercise and the students started talking with each other about it, working collaboratively on the piece. Eric was happy about the students' engagement. Then, 30 minutes into the class:

> One student said to me, "I am sorry that we've spent 30 minutes in the class on this; we didn't get to what you wanted to cover." Boy! That was an intervention point there! [Laughter] And I said to her and the entire class, "We are covering material together; there is not a set agenda every single week." …. I will never forget that, I found that to be so informative, that a student was of the mindset that basically they have taken time away from the class and <u>from me</u>. To try to destabilize that, I guess that's one way that I try to get the students to understand that they have agency.

With this interaction, Eric realized that he had to become more intentional about helping his students gain agency, to be full participants in the teaching and learning process, which he had thought was understood but was obviously not clear. In another example, Joseph, a crafter (cluster 3), shared what he had learned through his teaching career:

> I was trying to give students too much information, too fast, and expecting them to retain it; and I have learned that is more important to simplify, to give them multiple ways of accessing the information because some people learn well in what we call a traditional way, others learn better in nontraditional ways. And there are so many different styles of learning that if you only present one of two ways in a given class, then you would only be reaching a proportion of the students, but if you can present it in multiple ways then all the students would grasp it, and the ones that would have grasped it anyway with the more traditional ways, would grasp better. It's true, you cover less content, but I have asked myself, "Should I be playing to the few students who would get it all, or is it better

for me to play it to the majority of the students and help them all understand it better, but maybe in less depth or probably more likely in less variety?"

The excerpt shows Joseph's efforts to create possibilities for all students to participate and learn. His attitude illustrates the intentionality necessary to make the granting of epistemic credibility a foundation for inclusive classrooms for all or most students. He reflects on successful teaching as that which includes reaching all the students, not only some of them.

From learner-centered teaching and feminist pedagogy perspectives, "most teaching is too authoritarian. Power in the classroom is not equally distributed, and the imbalance negatively affects learning outcomes" (Weimer, 2013, p. 19). Those most affected by authoritarian teaching are usually non-traditional and underrepresented students, who often lack epistemic credibility (Alcoff, 2001; Fricker, 2006, 2007). To correct epistemic injustice, Fricker (2007) suggests giving trust, credibility, and authority. The combination of teaching expansion (in cluster 3) with the genuine granting of epistemic credibility could contribute to the creation of inclusive, diverse, and welcoming teaching and learning practices where all or most students engage, develop, and learn.

Concluding Thoughts

By describing how teachers describe and explain their views and practices of teaching, the origins of this views, and how changes in these views and practices happen, this study made "everyday practices of work visible" (Engeström, 1999, p. 63; he was responding to Margolis, 1993). According to Margolis, teaching as an everyday practice done by everyone can be assumed to be invisible. As this study has shown, it is not. Teaching is a process that requires careful planning, implementation and assessment; it affects students and teachers every day; it makes new possibilities tangible.

All the faculty members who participated in this study seem to care about teaching. All make an effort to continuously *seek what works* for them and often for their students. When faced with a conflict, a problem, a difficulty in their teaching, these teachers sought alternatives (constrained and expansive scenarios) for the potential changes that would solve these issues. But they resolved these issues differently. Teachers who *craft what works in teaching* pursued the expanded scenarios that changed their epistemic views (who can learn and who can teach, among others). With this change, their teaching views—the roles, responsibilities, and purposes that teacher and students have in the classrooms changed as well. This also influenced their teaching practices—the way in which specific pedagogies and assessments were implemented. Not only can their students contribute to the creation of knowledge in their classrooms, but teachers themselves become learners in these environments (Alcoff, 2001). By pursuing the expanded scenario, teachers who craft what works fostered changes in those classrooms. Their adjustments, small and large, expanded their teaching.

But the ways of teaching that resemble *adopting* and *discovering what works* in teaching are still the most pervasive in U.S. college classrooms (Weimer, 2013). Lack of time, training and other resources, as well as incentives (Beyer, Taylor, & Gillmore, 2013) might discourage faculty from investing the time and energy that teaching that crafts what works requires. This is more likely at research-intensive institutions, where resources are allocated and rewarded based on research productivity (Morris & Usher, 2011). As one of the adopter teachers in this study told me,

> For all I care about teaching, it's only 40% of what I am supposed to be doing here; I got my own research, and my service to do. I am not going to reinvent, I have already

reinvented when I had to move from slides to PowerPoint, I mean I have that took two years, to transition to these different platforms. I am too old now [laughter].

The expanded way of teaching that crafts what works demands more from students as well, as it makes them responsible and accountable for participating in the teaching and learning process, and some student might resist this change (Svinicki & McKeachie, 2011; Weimer, 2013). As hooks (1994) reminds us, "this demand on the students' part does not mean that they will always accept our guidance. This is one of the joys of education as the practice of freedom, for it allows students to assume responsibility for their choices" (p. 19).

While Engeström's metaphor of learning as expansion was used in part to explain the process of expansion in learning, the model presented in this dissertation study on the development of teaching (with teachers expanding their learning on teaching) includes a component not explicitly present in his model: epistemological views. Teaching expansion, while following a similar process of resolving a conflict (entering a zone of proximal development, ZPD, where two scenarios are possible), differs in that the pursuit of the expansive scenario requires an epistemic shift. It requires that the teacher grants epistemic credibility to students and to self-as-learner, to create environments where all are contributing to teaching and learning, influencing every aspect of their teaching views and practices. This expansion brings more voices to the classrooms, making them more diverse. In this manner, this model offers a new way to understand ways of creating inclusive classrooms.

The grounded theory model of teaching expansion developed in this study, while explaining the process of expansion and hinting at the mechanisms that are in place for it to happen, leaves open the specific paths that lead to it, and the possibilities of continuous expansion. As Beyer and her colleagues (2013) indicate, "growth in teaching is a dynamic,

iterative, complex, and challenging process. It is not linear, self-evident, or easy" (p. 132). This study responds to feminist pedagogies that warn against one-size-fits-most approach, and "recognize each classroom as different, [where] strategies must constantly be changed, invented, reconceptualized to address each new teaching experience" (hooks, 1994, pp. 10-11). This model is flexible enough to allow for individual adaptations that respond to individual, departmental, and institutional contexts, situating their practices. Caughie and Pearce (2009) remind us that "what we need is a pedagogy that enables us to displace the authority of any one model, including its own" (p. 37).

Implications for Policy Decision-Making

Faculty members often learn to teach by teaching (Beyer et al., 2013); they need help and resources to support and further their learning. As part of the member-checking process for this study, one of the participants, in cluster 3, told me as he provided feedback to the preliminary analytic models that he believes that "time and experience are necessary but not sufficient for teaching expansion" (I am paraphrasing him). If so, universities and academic departments can help future faculty by providing teaching centers, instructional support staff, and other pedagogical aids to give them time and experience. Even though this will not guarantee teaching expansion, it supports it. And it is equally important to create environments where all teachers, regardless of their teaching longevity feel safe to use them, and are rewarded when they do so. As this study and Beyer and colleagues (2013) indicate, changes in teaching happen as the result of internal and external conditions. Institutions must make resources available to address both.

Institutions and academic departments can use existing systems such as peer reviews of teaching to expose teachers to other forms of teaching, and to help them become effective and reflective observers and practitioners. Institutions and departments can also use existing

promotion and tenure systems to help new and experienced faculty improve their teaching, matching the setting of desired goals with specific resources and supports. Additionally, departments can hold meetings where teaching topics (including pedagogies and epistemologies) are discussed and where questions can be raised safely. Fostering learning environments for teachers, where they feel empowered to experiment—and not penalized by it—is important. Teachers benefit from seeing each other's' teaching. This requires becoming comfortable with becoming vulnerable, so it is important to emphasize the benefits that these practices can have, and to create safe environments where these practices can occur.

This study showed that some participants were *chosen* as doctoral students who were given opportunities that opened doors for faculty positions. The four chosen teachers were Emma, Sophia, Isabella, and Paul. Interestingly, these were three of the four women and the only faculty of color. If we are intentional about increasing the diversity in the faculty body, institutions will need to adopt strategies to "choose" and support qualified, diverse students to become future faculty.

Faculty members often lack teaching preparation (Beyer et al., 2013; Morris & Usher, 2011). Academic departments and programs could add well-designed and -implemented programs for graduate students to gain the necessary tools and experiences to learn to teach (Gaff, 2002; Pruitt-Logan & Gaff, 2004; Rivoire, 2010). This support will send a strong signal to future faculty members about the importance of teaching. Participants in this study often mentioned that the practice of teaching takes time: Time to become comfortable, time to figure out *what works*, time to reflect on decisions and their results. Teaching programs will give future faculty advanced time to start practicing and developing.

Practical Applications of the Study's Findings

As Freedman (2009) indicates, "pedagogy is rarely discussed" in universities (p. 118). Contributions from this study can serve as a guide for individual faculty members and department chairs to structure conversations about teaching views and practices, seeking to expand them. Hopefully this study encourages faculty members to talk with their colleagues about their teaching. Moreover, this study shows different ways of teaching that might inspire teachers to try specific new things, like trusting their students more, letting go of control and power, and developing high expectations for them and help them achieve them.

Hopefully the contributions of this dissertation will also inform and broaden the practices of higher education administrators and student affairs professionals as they support faculty members in their teaching. When creating development opportunities for faculty members, academic and student affairs and administrators can become partners in dialogues about teaching, and aids in instructional work. As they do so, they should not assume that they know (and that they know best) based only on the literature, but talk with and listen to teachers, work with them, observe them.

Efforts to study and support teaching change are important and worthy, because as Beyer and colleagues (2013) indicate, "change in teaching may increase students learning in two ways" (p. 133): The first, they say, is the improved practices themselves, the second is the message to students that their learning matters. I would add that a third way in that these efforts are important is that they foster learning environments that are more inclusive of student diversity, and benefit not only the students, but the teachers themselves as well.

Suggestions for Future Research

Findings from this dissertation study may provide a basis for further exploration of the process of teaching expansion including other institutional types, different academic departments, and certainly other faculty members (particularly those with different social identities). In that sense, we need similar studies that include teachers with more diverse genders, races, ethnicities, sexualities, religions, and abilities. We also need similar studies that include teachers who teach online or in other formats, and those who are non-tenure track faculty. Their perspectives can enrich this study's findings.

This dissertation study adapted parts of Engeström's interpretation of cultural-historical activity theory (1999, 2001, 2007a) to explain teaching expansion. Engeström has studied and applied his model for expansion in learning in hospitals, banks, and technology companies. Additional research can investigate teaching expansion for practitioners in other similar settings, such as student affairs professionals, counselors, and coaches. These practitioners might undergo similar processes like the teachers in this study, and the model of teaching expansion presented here could help explain their practices.

Even though Beyer and colleagues (2013) have contributed to the research on teaching shifts, more studies that examine teaching changes will move us closer to better understand how to create more opportunities for faculty to expand their teaching. Similarly, this dissertation's findings begin to connect how issues of power dynamics in the classroom and student diversity are linked to epistemic views. A deeper grasp of these issues will benefit both teachers and students with the creation of more inclusive learning environments.

APPENDIX A: INSTITUTIONAL REVIEW BOARD APPROVAL

Note: This letter has been edited to protect participants' identities.

Date: September 03, 2013

From: The Office for Research Protections

To: Karla L. Loya-Suárez

Re: Determination of Exemption

IRB Protocol ID: 43810

Follow-up Date: September 2, 2018

Title of Protocol: Faculty Members' Practices and Descriptions of Teaching, Assessment, and Diversity

The Office for Research Protections (ORP) has received and reviewed the above referenced eSubmission application. It has been determined that your research is exempt from IRB initial and ongoing review, as currently described in the application. You may begin your research. The category within the federal regulations under which your research is exempt is:

45 CFR 46.101(b)(1) Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

45 CFR 46.101(b)(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Given that the IRB is not involved in the initial and ongoing review of this research, it is the investigator's responsibility to review IRB Policy III "Exempt Review Process and Determination" which outlines:

- What it means to be exempt and how determinations are made
- What changes to the research protocol are and are not required to be reported to the ORP
- Ongoing actions post-exemption determination including addressing problems and complaints, reporting closed research to the ORP and research audits
- What occurs at the time of follow-up

Please do not hesitate to contact the Office for Research Protections (ORP) if you have any questions or concerns. Thank you for your continued efforts in protecting human participants in research. This correspondence should be maintained with your research records.

APPENDIX B: REQUEST FOR INTERVIEW (ELECTRONIC MAIL)

Note: This is an edited version of the email sent to faculty members to request an interview, to protect participant's identities.

Dr. *(LAST NAME),*

My name is Karla Loya. I am a Ph.D. candidate in Higher Education at the Pennsylvania State University. My dissertation is on faculty members' teaching and assessment practices, and I would love the opportunity to **interview you**.

I hope you will agree to share your views and expertise with me, which can potentially contribute to improving the way we understand teaching, assessing, and learning.

Is there a date and time next week when we could meet? My schedule is quite flexible and I deeply appreciate your consideration to this request.

More details about the study:
I am collecting data in the (*NAME)* department at your institution, where I conducted a pilot study last spring.
There will be two interviews. Each interview should last 30-60 minutes. They will be audio recorded.
The questions are about teaching, assessment, and students. The information you share is confidential and you will be assigned a pseudonym.

Thank you again and I look forward to meeting you soon,

Karla

Karla Loya
Ph.D. Candidate, Higher Education Program
Graduate Research Assistant, Center for the Study of Higher Education
Pennsylvania State University

APPENDIX C: IMPLIED INFORMED CONSENT FORM FOR SOCIAL SCIENCE RESEARCH

Note: This document has been edited to protect participants' identities.

Title of Project:	**Faculty Members' Views and Practices of Teaching, Assessment, and Diversity**
Principal Investigator:	Karla I. Loya Ph.D. Candidate, Higher Education Program 400 Rackley Building, University Park, PA 16802-3203 kil5146@psu.edu; XXX-XXX-XXXX

1. **Purpose of the Study:** The purpose of this research is to examine how faculty members develop their views and practices of teaching and assessment, and their potential relation to diversity and power issues.

2. **Procedures to be followed:** You will be asked to participate in two interviews, which will be audio recorded. You will also be asked to provide some course-related documents such as syllabus, assignment guidelines, lab instructions, and similar academic materials, as well as background information.

3. **Duration/Time:** Each interview should take between 30 and 60 minutes.

4. **Statement of Confidentiality:** Your participation in this research is confidential. The data will be stored and secured in password-protected files and computer that only the principal investigator has access to. The data will be destroyed by the year 2020. In the event of a publication or presentation resulting from the research, no personally identifiable information will be shared. Pseudonyms will be used to maintain the identity of all participants confidential.

5. **Right to Ask Questions:** Please contact Karla Loya at XXX-XXX-XXXX with questions or concerns about this study.

6. **Voluntary Participation:** Your decision to be in this research is voluntary. You can stop at any time. You do not have to answer any questions you do not want to answer.

You must be 18 years of age or older to take part in this research study.

Completion and return of the interview implies that you have read the information in this form and consent to take part in the research. Please keep this form for your records or future reference.

APPENDIX D: (FIRST AND SECOND) INTERVIEW PROTOCOLS

FIRST INTERVIEW

SCRIPT: Thank you for agreeing to this interview. As I mentioned it before, I am interested in the undergraduate level teaching aspect of your work at this institution, and the questions that I will ask you will help me better understand the teaching process. If at any point you prefer to not answer a question or stop, please let me know and we can stop of skip a question.

TEACHING

1. Let's begin with how you became a teacher. What careers were you choosing, and how did teaching factor into that?
    a. How prepared did you feel when you walked into your first class?
    b. What, if anything, did you know about teaching then?
    c. Who, if anyone, influenced your first years teaching?
2. Was there a time when you felt you've made a shift from those early days? What happened?
    a. What has contributed to this change (or continuity)?
3. You told me you teach X number of courses; would you describe how you teach these courses as similar or different? Why? How?
4. Have you gone to workshops, or looked for readings that help you in your teaching?
5. I would like you to focus on **one class** that you've taught several times at the undergraduate level. Could you tell me how do you structure it (plan, delivery, assessment)?
    a. What do you do as a teacher that carries over your courses? In other words, how would you describe what characterizes your teaching, across different courses?
    b. Could you describe a "typical class" for this course?
    c. Could you describe this course for me (in terms of size, level, type, et cetera)
6. Could you tell me about any challenges you face when teaching?
    a. Did these challenges lead to any revisions? What kinds of revisions?
    b. Are there any other things that prompt you to make revisions in your class?
7. What would you say have been the most important lessons you have learned about teaching, through experiencing teaching?
8. Does this department use peer assessments or is there any mentoring program or practices? If so, could you share something a colleague mentioned about your teaching?

9. Is there anything in the following that influences your teaching? (*list one at a time*) Background, philosophy, personality, values…

ASSESSMENT

1. Could you describe to me the kinds of assessments that you have used in this class we have been talking about?

    a. How did you decide to select these assessment tools? What was the basis of your decision?

2. Has your way of assessing students changed since you started teaching? Tell me about it.

3. Have you attended workshops or seminars or any other ways (readings) to learn about assessment?

4. What is most important when assessing students?

5. What would you say are the main obstacles you encounter when assessing whether a student has learned?

6. Do you think that it is possible to define assessment? If so, how would you define it?

STUDENTS

I would like to go now a bit deeply into students.

1. Could you describe to me the students who normally take this class we have been talking about?

2. In what ways, if any, do your students influence how you teach?

3. In what ways, if any, do your students influence your assessment choices?

4. Do you integrate student evaluations (the ones used in this institution or any other) into your teaching? Could you provide an example?

Is there anything else I should know to understand your teaching and assessment work in the classroom?

Thank you.

<u>SECOND INTERVIEW</u>

SCRIPT: In our first interview, we talked about your teaching and assessment practices and began talking about students and issues of diversity. In this second interview, I would like us to focus on these two last items. As you know, if at any point you prefer to not answer a question or stop, please let me know and we can stop of skip a question.

> The literature in higher education and popular press indicates that college and university students are increasingly more diverse than 60 years ago, in terms of gender, race, ethnicity, dis/ability, country of origin, sexual orientation, and other identity aspects.

1. Is this growing student diversity something you have observed in your teaching career?
2. Do any of these factors inform or influence your teaching? If so, how?
3. Do any of these factors inform or influence your assessment? If so, how?
4. Are there any other characteristics in the student body that you have seen change?
5. How have these influenced your teaching/assessment practices?
6. You said earlier that there are very many different students in your classes – specifically in terms of (*add specific instance here)* – has this ever influenced how you treat such students in terms of teaching and/or assessment?
    a. Could you explain why you have decided to do so?
    b. How did you develop this perspective?
7. Some scholars indicate that all social contexts involve power relations. Since teaching is a social activity, it follows that the teaching and learning process is influenced by power dynamics.
    a. Is this something you think of in relation to teaching?
    b. Is this something you think of in relation to assessment?
    c. If not, if this something you think is important?
8. Is there anything else I should know to understand your teaching and assessment work in the classroom related to your views on diversity?

Thank you.

APPENDIX E: THEMATIC LIST FOR INTERVIEWS

First teaching experience
- How did it start?
- Prepared to teach?
- How did you plan your teaching? How did you plan your assessment?

Changes in teaching
- Points in career when made changes to teaching and to assessment
- What prompted change(s)
- Anything else? (Workshops, readings)

Teaching and assessment
- Teaching: Focus on one class – what characterizes your teaching
  - Structure – plan, delivery, assessment
  - Students in this class
  - Challenges
  - Reactions and NEW actions to challenges
- Most important lesson about teaching, learned through teaching
- Peer assessments? What do they say about teaching?
- Professional self-identity

Assessment
- Types of assessments used (Feedback, rubrics…)
- How was this selection made?
- Changes to assessment and why
- Obstacles when assessing
- Definition of assessment

Students
- Description of students in chosen class
- Influence of students in teaching and assessment
- Student evaluations and teaching

Background and Identity
- Demographic changes in college students
  - Influences in teaching? Influences in assessment?
  - Other influences? (academic preparation, prior knowledge, cultural background…)
- Your (instructor) personal identity
  - Relation to teaching? Relation to assessment?
  - Relation to students?
- Power dynamics in the classroom
  - Think of this when teaching? Think of this when assessing?
  - If not… is it important? Why or why not?

APPENDIX F: PARTICIPANT'S BACKGROUND INFORMATION SHEET

Note: This document has been edited to protect participants' identities.

Name: _____

Age: _____ Gender: _____ Race/Ethnicity: _____

Please select all that apply about your position at [THIS INSTITUTION]:

1. Your position is…

- ☐ Tenure-track
- ☐ Tenured
- ☐ Fixed Term
- ☐ Other:

_____

2. Your teaching position at [THIS] department is related to this/these program(s):

- ☐ [TECHNOLOGY]
- ☐ [PEOPLE]
- ☐ [RESOURCES]
- ☐ [ENVIRONMENT]
- ☐ Other

_____

3. How many years have you been teaching…

At [THIS INSTITUTION]? _____

At another institution(s)? _____

4. How many courses do you usually teach per academic year? _____

5. How many of them are at the undergraduate level? _____

6. Please name a few courses that you usually teach at the undergraduate level: _____

_____

Thank You!

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Curriculum Vita for Karla I. Loya-Suárez

EDUCATION

Doctor of Philosophy in Higher Education, Women Studies minor. Pennsylvania State University (2015)
Master of Science in Higher Education Administration, University of Kansas (2007)
Bachelor of Science in Higher Education, Gender Studies minor, University of Colima, México (1997)

SELECTED PROFESSIONAL EXPERIENCE

Associate Dean for Academic Affairs and Doctor of Ministry Program, Saint Paul School of Theology. Kansas City, MO (2000-2010)
Academic Coordinator and Program Evaluator. University of Colima, Coordinating Office of High Schools System. Colima, México. (1998-1997)

SELECTED TEACHING EXPERIENCE

Invited Guest Lecturer. College of Education, Pennsylvania State University.
Feb. 12, 2014 "Data Analysis Demonstration Using Grounded Theory and NVivo Software" HIED 588 Qualitative Methods in Educational Research II course. Instructor: Dr. Dorothy Evensen.
Nov. 5, 2013 "Expanding our Perspectives on Gender and Sexual Orientation Identity theories." HIED 597A College Student Development course. Instructor: Dr. Leticia Oseguera.
April 9, 2013 "Professional and Research Experience: Dissertation Research Choices." CSA 504 Research and Assessment course. Instructor: Dr. Daniel Merson.
Teaching Assistant. College of Education, Pennsylvania State University
Fall 2012 HIED 556 Higher Education Students course. Instructor: Dr. Leticia Oseguera.
Spring 2012 HIED 548 Curricula in Higher Education course. Instructor: Dr. Dorothy Evensen.
Teaching Assistant. School of Education, University of Colima. Colima, México (1996) Educational Issues course. Instructor: Juan Carlos Yáñez Velazco.
Tutor/Parent Educator. Kansas City, Missouri School District. Kansas City, MO (1999-2000)
Elementary School Teacher. Marcela Domene Institute. Colima, México (1996-1997)

SELECTED RESEARCH EXPERIENCE

Graduate Research Assistant. Center for the Study of Higher Education. Pennsylvania State University
2014 -Evaluation of Penn State Millennium Scholars Program. Howard Hughes Medical Institute. Chevy Chase, MD ($125,000.00). Supervisor: Dr. Leticia Oseguera.
2014 - 2011 Pennsylvania College Access Challenge Grant Program Evaluation, sponsored by Project GRAD USA ($125,000.00). Dr. Leticia Oseguera, Principal Investigator (PI).
2011 Pennsylvania State University's Dickinson Law School Climate Study. Dr. Susan Rankin, PI.
2012-2010 Student-Athlete Climate Study (SACS), Sponsored by the National Collegiate Athletic Association ($100,000.00). Dr. Susan Rankin, PI.

SELECTED PUBLICATIONS

Ro, H. K., and Loya, K. I. (2015). The effect of gender and race intersectionality on student learning outcomes in engineering. *The Review of Higher Education, (38)*3, 359-396. doi: 10.1353/rhe.2015.0014
Loya, K. I., Hwang, J., and Oseguera, L. (2015). Latino and Latina students' college enrollment: Gender, generational status, and college sector selectivity. In Pérez, P.A. & Ceja, M.A. (Eds.). *Higher education access and choice for Latino students: Critical findings and theoretical perspectives*. New York, NY: Routledge.
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