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A Marginalized Status: Toward Greater Understanding of How Contingent Faculty Compare to Their Full-time Counterparts on Measures of Educator Effectiveness

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A Marginalized Status: Toward Greater Understanding of How Contingent Faculty Compare to

Their Full-time Counterparts on Measures of Educator Effectiveness

A dissertation submitted in partial satisfaction of the requirements

for the degree Doctor of Philosophy in Education

by

Christos Korgan

2016

ABSTRACT OF THE DISSERTATION

A Marginalized Status: Toward Greater Understanding of How Contingent Faculty Compare to

Their Full-time Counterparts on Measures of Educator Effectiveness

By

Christos Korgan

Doctor of Philosophy in Education

University of California, Los Angeles, 2015

Professor Mark Kevin Eagan, Chair

The composition of the professoriate across colleges and universities during the second half of the 20th century has undergone a qualitative metamorphosis to include a new majority comprised of contingent academicians. This shift has led to intense scrutiny regarding the efficacy of part-time faculty, and findings from previous research remain largely mixed, at best. Previous scholarship suggests a host of negative effects of part-time faculty on student outcomes. However, prior empirical examination of contingent faculty's teaching practices has been limited in its conceptualization and may have served to further disadvantage part-timers, who tend to perform their work in academic spaces characterized as unsupportive, negative, and even hostile.

The purpose of this study was to examine how a part-time academic appointment compared with full-time, tenured faculty across several outcomes rooted in a definition of efficacious practice. Drawing from a thick literature on best practices strongly associated with

positive student learning outcomes, this study presents a comprehensive definition of faculty efficacy. More importantly, theoretical frameworks centering on the notion of workplace empowerment, namely psychological and social-structural empowerment theories, were employed to both ground and guide thinking on the relationship between faculty performance and the atmosphere the academy. A final sample of over 37,000 faculty members at more than 460 colleges and universities was drawn from the 2010-2011 Faculty Survey, administered by the Cooperative and Institutional Research Program (CIRP). Hierarchical linear modeling (HLM) was used as the preferred analytic technique to specify a series of nested, multilevel models to examine the effect of having a part-time faculty academic appointment on the study's outcome measures.

Collectively, the conclusions from this study demonstrate that part-time faculty scored substantially higher across the study's outcomes of educator effectiveness. In fact, after controlling for stress and various perceptions of campus and departmental climates, as well as attitudes connected to the teaching and learning environment, part-timers' scores on the outcomes increased even more when compared to their traditional counterparts. Inspection of the final multilevel models across all outcomes revealed that all faculty subgroupings were more efficacious instructors than their tenured colleagues. In light of these findings, the study unpacks implications for faculty and university administrators, as well as offering multiple areas ripe for further research.

The dissertation of Christos Korgan is approved.

Michael H. Seltzer

Robert Schilling

Linda J. Sax

Mark Kevin Eagan, Committee Chair

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2016

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Acknowledgements

There are several proverbs within African society which suggest it "takes a village to raise a child." Each proverb has its own distinction. The one that best describes my life experience is in Kijita (Wajita) and is, "Omwana ni wa bhone," meaning regardless of a child's biological parents, its upbringing belongs to the community. While our parents might help equip us with resources and forms of capital to fuel our attempts to self-actualize, the people we meet along our journeys tend to dramatically shape and teach us. I have a village consisting of the most amazing people who shaped me. I would like to thank each of them individually, as I culminate my doctoral experiences at one of the best universities on the planet. The individuals I will describe here are those who impacted me the most with regard to completing a terminal degree program. They are presented based on the chronology of our meeting, with a few exceptions.

I am indebted to my parents, who emotionally supported my academic endeavors. Both my parents never stepped foot in a college classroom, and so this doctorate is theirs more than it is mine. I remember when Mama would sit with me at the dining room table, about 20 years ago, and painstakingly taught me how to alphabetize and how to perform basic mathematical calculations. I also recall not being allowed to go out on many Fridays until homework for Monday was completed. But, "Why? All my friends' parents allow them to go outside!" I would ceaselessly respond. I am thankful that I wasn't my friends' parents' child. Who knows how the absence of this rigor would have impacted me, especially since I required it at that age. This was routine and transpired over many years. This structure stuck with me and these evening efforts remained, even after the point when she was no longer able to help me with my academic work.

Papa was different – he was more my cheerleader, my coach, and my support. He would enthusiastically attend school events and motivate me to earn A's with $20.00, promising a trip to the drive-in movie theater, or a summer weekend away with family to Palm Springs. These strategies might be temporarily motivational, but given their consistency, I became entrenched in a positive pattern of behavior without immediate awareness of it. Papa died almost 7 months ago, and he would have been my best cheerleader during the coming ceremony. I close my eyes and can hear him say the following, as he would have come commencement: "I want you to know I'm really proud of you, even though you didn't go to USC." I would then have given him a glance and he would have laughed, I'm sure. I can reflect and still experience the intense delight that would have emerged from his face. Losing him while writing my dissertation was the most challenging time of my life, and my only motivation for finishing this work is due to my knowing of his desire for me to see this through. While Mama and Papa were each unique in their methods of support, I am thankful for their wide spectrum of encouragement. This Ph.D. is theirs.

My formative years, which I would say were between the second and tenth grades, provided me with three educators who offered me unimaginable gifts. My sixth grade instructor, Mr. Flanagan, was the first in a series of highly talented educators. He was enthusiastic about teaching, and it really showed. I credit my competitive nature to him. His classroom was arranged to cultivate a competitive spirit – scores were always posted and names were ranked (during a time when this sort of thing wasn't necessarily a violation), and elaborate trophies were given to students for excelling in certain areas. I was never happy with myself unless my name was presented first on the posted list, I had the most flamboyant trophies on my desk, and I had outperformed every student in the class. At the time, my only competition was Geraldine Orodio,

who always knew how to pass me during the 11th hour. Mr. Flanagan made the year 1999 one of the most fantastic, and my class was his last, as he passed away very shortly after the academic year. Next, in 2000-2001, I took science with Dr. Patricia Clemente – she was that rock star middle-school teacher who took her lessons very seriously, and almost into the borderlands of excess. Dr. Clemente was particular in her challenges to students. She pushed me to my best performance, and I experienced her pedagogical calls for action as pivotal occasions for self-improvement. Finally, Delphine Lucas was my 8th grade science teacher, and she became so much more than that. Admittedly, I was quite misbehaved in her class – the atmosphere and culture of the general student population was such that my peers viewed inappropriate, disruptive conduct favorably. In my desperate attempt to fit in, at a time in my development when I craved positive affirmation from other teenagers, my classroom behavior was tasteless. It all changed, however, when I discovered that Delphine was Greek, too. What blossomed next was entirely unpredictable. Delphine became my private Greek instructor for the next 5 years. On a biweekly basis, she offered private instruction, which augmented my formal classroom Greek instruction. It was never about the money for Delphine. I only paid $20.00 per lesson, which was supposed to last an hour, but always ended up being two or three. I studied hard for our Greek lessons. When I was old enough to drive myself to the lessons, I would camp at a corner table at the local Starbucks and read from my Modern Greek text for hours at a time, rehearsing the lesson, just so I could attempt to impress her with my reading and comprehension speed. Delphine embodied the characteristics of an effective educator. She is what every instructor ought to be, and I am eternally grateful for her gifts. This Ph.D. belongs to Mr. Flanagan, Dr. Clemente, and Mrs. Lucas.

My next group of villagers came from my higher education experiences. Prior to transferring to a 4-year institution, I took coursework at Santa Monica College. Majoring in psychology, I took a number of classes from stellar faculty members, but Dr. Lisa Farwell impacted me the most when I took her social psychology course. She taught using the Socratic method, which I found exciting and frightening. She cared about her students, urging them to interrogate their belief systems. Her teaching was passionate and student-centered. Her intellectualism was infectious and she sparked my love affair with science. Like Lisa had also done, I transferred to California State University, Northridge (CSUN) to complete my baccalaureate work, and then went on to pursue a master's degree there. While at CSUN, I cultivated my skills in scientific inquiry. I approached several faculty about gaining lab membership, but was repeatedly turned away. Despite my strong academic record and intense interest, gaining access to laboratory work seemed almost an impossibility. Dr. Jill Quilici was the only faculty who allowed me access and tremendously valuable research experience. She worked closely with me as I ran participants in her cognitive psychology lab. She was a remarkable instructor and I credit my knowledge of advanced research methods to her course. She inspired me to conduct rigorous, systematic scientific inquiry. During my time at CSUN, I also enrolled in every course taught by Dr. Sheila Grant. Sheila was so authentic in her pedagogy, and it was something I genuinely appreciated. She was unafraid of being vulnerable to students, opening up about her life and discussing its interesting intersections which impacted both her academic and professional trajectories. I enjoyed our conversations in her office. Sheila would routinely ask me about my graduate school interests, and encourage me to continue. This UCLA Ph.D. is credited to the fantastic work of Dr. Lisa Farwell, Dr. Jill Quilici, and Dr. Sheila Grant.

I faced an important decision following my master's program at CSUN, and my decision expanded my village of very special people. I decided to pursue doctoral work, and while I investigated programs, my highest hope for admission was placed in the University of California, Los Angeles. After I wrote a draft of my statement of purpose, I met with my Aunt Georgia and our family friend, Pat Colby. My aunt was a teacher for well over thirty years, and Pat concluded her life's professional activities in education in a senior leadership position. Nearly five years ago, the three of us sat at my aunt's kitchen table and spent hours inspecting each word and sentence within the statement. After many hours and multiple cups of coffee, we shaped my statement into something worthy of submission to a doctoral program. I am eternally grateful for my Aunt Georgia and Pat. This Ph.D. is dedicated to them both.

While investigating the program at UCLA, I reached out to several faculty members with hopes of meeting. However, only one faculty responded to my email – Dr. Linda Sax. Linda was gracious and set up a meeting. I am unsure what Linda saw in me, but I recall that we had a fantastic appointment. I enjoyed learning about her work and immediately thought about how lucky I would be to work under her supervision. Linda was the only faculty who met with me, and she accepted me into the program. Linda Sax single-handedly changed the course of my life. My gratitude to Linda is immeasurable. During our first meeting, she encouraged me to meet with Professor Emerita Dr. Helen (Lena) Astin to gain more information about the program. Lena and I had a special meeting and she shared with me a wealth of information pertinent to my pending doctoral work. Lena remained in communication with me until her death, which also occurred during the time of this writing. I am also equally grateful for Linda's introduction at the time of my admission to Dr. Kevin Eagan, who was completing postdoctoral work for the division. By way of a complex tapestry of events, coupled with a bit of happenstance, Kevin

ended up as my Ph.D. advisor. Kevin's mentorship inspired me to complete this writing. Through coursework and one-on-one instruction, Kevin has taught me a tremendous amount. I overflow with gratitude for Kevin's friendship. This Ph.D. is committed to Dr. Linda Sax, Dr. Lena Astin, and Dr. Kevin Eagan.

Finally, my village of support consists of a larger group of individuals who have never met me, but who ceaselessly inspire me with their dedicated part-time faculty work at colleges and universities across the country. Part-time faculty have sourced my inspiration and have ultimately led to this writing. My close friend, Gigi Terminel, is an adjunct faculty member and teaches Spanish at multiple colleges in Southern California. Her professional experiences have given voice and life to my scholarship. What I have come to empirically understand through my research is echoed through Gigi's professional narrative. With over a decade of adjunct appointments, Gigi's aspiration to obtain a coveted full-time spot is steadfast and her dedication to teaching is undying, despite setback after setback thrown at her by the system she has devoted her life's work. Most importantly, my UCLA Ph.D. is the property of our nation's adjuncts who, like Gigi, devote their talents to a higher education landscape which continues to betray them.

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Chapter One:

Introduction

"Professor Smith patiently waits outside of the classroom while a proctor administers the student evaluation form to her Intro to History class. While 40 students fill out the form, Professor Smith thinks about how those evaluations may very well be the only factor that determines if she remains employed next semester or not. No one in the department interacts with her or really knows her, even though she has made efforts. She also uses the time to check her day planner, noting that she has 45 minutes to meet with six students at her makeshift office – the local coffee shop – before running to teach her next class at another college. Of course, meeting with these students is not considered "part of her load or paid for." She also thinks about the upcoming conference that she would love to go to: it is local and will cost no money, luckily, because she does not receive professional development funds. However, she dare not cancel or be late for a class or she risks being fired. Other faculty members pass her in the hallway, but no one shows any recognition. As she re-enters the room to teach the final class of the semester, she thinks to herself, "This was not how I imagined being a professor would be…"
(Kezar, 2012, p. xi)

The Adjunctification of Higher Education

The second half of the 20th century brought about significant change for the composition

of the faculty across higher education institutions, such that colleges and universities began

hiring contingent instructors at unprecedented rates (Schuster & Finkelstein, 2006). The change

in staffing patterns at American college and universities assumed new importance by the 1990s,

during which time community colleges employed substantially more part-time (66.7%) than full-

time faculty (U.S. Department of Education, 2005). In 2011, employment of contingent faculty

– both part-time and full-time tenure ineligible faculty – reached parity with tenured and tenure-

track professors across all federal financial aid granting institutions (NCES, 2011).

The rapidly expanding contingent staffing pattern across higher education institutions

stems from several phenomena. Virtually all colleges and universities, even those with the best

endowments, continue to experience resource constraints – like declining state budgets and rising

instructional costs – while also trying to adapt to environmental forces, such as the rising public

demand for knowledge and education. Wellman, Desrochers, and Colleen (2008) indicate that

the percentage of spending for the direct cost of instruction, which includes faculty salaries and benefits, has declined since 1998. The most common and effective response to such pressure has included a restructuring of the professoriate's traditional staffing patterns to include many more contingent faculty members, given that institutions can hire several part-time faculty for approximately the same amount it costs to hire one full-timer (Stephens & Wright, 1999).

Higher education's traditional staffing patterns also decrease an institution's ability to adapt in a rapidly changing society (Baldwin & Chronister, 2001, 2002; Gappa, 2001; Leslie, 1998; Massy & Wilger, 1992; Tierney, 1998). Hiring a more contingent workforce enhances institutions' flexibility and allows colleges and universities to become more nimble and responsive to external needs and demands. As public offices continue to express demands for evidence that students are obtaining jobs with a living wage following graduation (Mourshed, Farrell, & Barton, 2012), attaining flexibility and responsiveness to surrounding communities has become paramount. For instance, some purport that such flexibility allows colleges and universities to bolster student success by hiring qualified, technical professionals with careers in industry to cultivate the 21st century skills required for entering the marketplace. Baldwin and Chronister (2001) argue that flexibility and student success are dependent upon a vigorous academic profession – one that includes a growing contingent professoriate. Enhanced flexibility is also demonstrated when student enrollment drops, as the quantity of part-time faculty can easily be adjusted by not renewing contracts (Banachowski, 1997). Colleges and universities also seek more accommodating sources of instruction in response to declining public trust, decreasing public funding, and increasing student enrollments (Baldwin & Chronister, 2001; Fairweather, 1996; Gappa & Leslie, 993; Rhoades, 1996).

The growing number of part-time and full-time tenure-ineligible faculty in higher education is met with skepticism. A number of scholars purport that the growing prevalence of such faculty comes with certain costs, including a reduction to the quality of undergraduate education (Umbach, 2007), decreased rates of student persistence (Harrington & Schibik, 2001), and a significant negative impact on measures of graduation rates (Jacoby, 2006). In addition to identifying specific negative effects of contingent faculty on students, research highlights a multitude of reasons why the use of part-timers might be problematic in academe, which include their possible exploitation, their morale, and their overall inferior status as a part-time academic (Pankin & Weiss, 2011). Advancing the case against contingent faculty, other researchers suggest that, when compared to full-time faculty, part-time faculty use less student-centered instructional techniques, spend less time preparing for courses, and are less available to students (Baldwin & Wawrzynski, 2011; Benjamin, 2002, 2003; Umbach, 2007). The growing concerns about contingent faculty members' effects on students necessitates further research on instructors' characteristics by faculty subgroupings.

Previous research identifying negative effects of contingent faculty on students also comes with several noteworthy shortcomings. One of the main limitations with investigations that have looked at the effects of contingent instruction is that they have explored the relationship between student outcomes and vague student characteristics that happen to be correlated with the percentage and quantity of classes that are typically taught by part-time or full-time, non-tenure-track faculty members. For instance, Bettinger and Long (2005) suggest that students who take classes from contingent faculty members differ from students who take courses from tenure-track and tenured faculty. Rather than testing differences tied to characteristics of the instructor, previous multi-institutional studies on the topic have conflated

the outcome with student-specific traits, as schools with higher proportions of contingent faculty also tend to enroll students that may likely not be retained (Hoffmann & Oreopoulos, 2006).

Another limitation of previous research comes in the form of explanation of outcomes. That is, while research has led us to believe that differences exist between contingent faculty and full-time, tenure-track and tenured instructors, we know little, if anything, about what might explain those differences. This is paramount, however, as the working conditions for contingent faculty are shown to be less supportive, exploitive (Wallin, 2004; Gappa, 1984), and often hostile (Christensen, 2008). Unofficially, contingent faculty are often referred to as "bullpen faculty," "workhorse faculty," "academic gypsies," and "subfaculty" (Baldwin & Chronister, 2001). Such an environment is capable of negatively impacting workplace behavior and performance.

Working Conditions for the Contingent Professoriate

Scholars have called for an approach to reshaping contingent workspaces that attempts to place aside objections that funding for support is simply not available (Palmquist et al., 2011). The call to action was built on efforts to ensure the long-term employment security for instructors who are off the tenure track, although contractual insecurities are certainly not the only work stress burdening the faculty subgroup. Haeger (1998) underscores a litany of complaints from contingent faculty regarding the working conditions of their departments and institutions. Although contingent faculty complaints were associated primarily with their compensation, the four overarching issues were more broadly related to their overall working conditions. First, contingent academics protested against the lack of inclusion across most departments in meetings and committees, even when issues were directly relevant to them. Second, contingent faculty reported the absence of offices, telephones, support staff, and other computer resources needed to successfully perform the responsibilities of their position. Third,

contingent faculty reported feeling that their compensation was inadequate, their benefits were lacking, and their notifications of teaching assignments were untimely. Finally, contingent instructors felt that they had no consideration for permanent appointments when such opportunities presented, and that holding a contingent appointment was seen as a negative status by hiring managers.

Therefore, the success of part-time and full-time tenure-ineligible faculty requires examination, especially given their expressed dissatisfaction with several key aspects of their work conditions. Palmquist et al. (2011) asserted that bolstering contingent faculty success includes reframing conditions of employment such that they are more fair and equitable. Promoting equity among contingent faculty is characterized by elevated levels of involvement in shared governance, fair compensation, respect and recognition, and more support. In light of evidence demonstrating a lack of access to support services, contingent faculty advocates urge that faculty members serving in contingent positions receive office space, secretarial support, and access to computers and telephones comparable to that afforded to tenure-line faculty members (Palmquist et al., 2011). The extant body of literature on part-time faculty does not take into account how important institutional conditions might serve to explain any differences between part-time, full-time tenure-ineligible, tenure-track, and tenured faculty in how they teach or interact with students.

Despite an abundance of research highlighting the feelings of marginalization and dissatisfaction of contingent faculty, previous research has looked exclusively at group differences without regard to contextual controls that may potentially explain group differences. Additionally, previous research explored potential differences between the faculty subgroups using measures of out-of-class interaction and engagement. These measures may have unfairly

advantaged tenured and tenure-track full-timers, as contingent academics are not incentivized to sustain such types of student-faculty contact.

Demarcating workplace empowerment. As we entered the 21st century workplace, more and more organizations realized the importance of structuring empowering work environments, such that by 2001, more than 70 percent of organizations had adopted some kind of empowerment initiative (Lawler at al., 2001). Organizations are coming to recognize that workplace success can only be accomplished by empowering employees to act more like owners of their business (O'Toole & Lawler, 2006). This way of thinking – worker behavior as a function of contextual factors – has meaningful implications for the nature of contingent work within academe, especially given prior research findings regarding instructional and non-instructional differences between contingent faculty and their traditional colleagues.

To identify the possibility of contextual effects on performance for part-time faculty, this study's conceptualization rests upon two classic theoretical approaches to exploring empowerment within organizations (Liden & Arad, 1996). The first, social-structural empowerment theory, focuses on conditions within the workplace that enable an individual to feel empowered. That is, as contextual characteristics are seen as prerequisites for workers' empowerment, the workplace must come equipped with certain assets in order to permit an individual to feel such a way (Spreitzer, 2008). The second approach, labeled psychological empowerment theory, refers to a set of psychological states possessed by the individual regarding the workplace (Spreitzer, 2008). While the organizational environment must offer the worker the tools for empowerment, individuals must also perceive the environment to be empowering. These two approaches are discussed in more depth in the next chapter.

Why They Matter: The Role of Contingent Academic Work in the 21st Century Economy

As demonstrated, the academy relies heavily on the talents of contingent academics. For many part-time and full-time non-tenure-track instructors, their role within the institution is determined by a complex sociopolitical process that follows an unmistakable pattern. For example, at many institutions, especially two-year colleges, it is a typical practice that the full-timers select, or express their level of interest, to their department chairs or administrators regarding courses to be taught during the following term. After full-time faculty have expressed their preferences, the department chair usually works with a designated curriculum specialist or scheduling analyst to craft an initial section schedule for the following term. The gaps in the course schedule, which usually consist of entry-level or lower division classes taught outside of a range of desirable times (i.e., before 10:00 A.M or after 6:00 P.M.), are then assigned to a contingent faculty member (The Just-in-Time Professor, 2014).

In many cases, employment contracts between institutions and contingent faculty – a powerful force for shaping the role of any faculty – do not obligate instructors to perform any function outside the scope of instructional delivery (American Association of University Professors, 2014). In fact, it is possible that many full-time faculty across colleges and universities prefer the role of part-time or full-time tenure-ineligible instructors to remain exclusively within the parameters of instructional delivery, an assertion supported by institutional policies that do not actively foster inclusion of the faculty subgroup (Kezar, 2012). While part-timers' and contingent full-timers' role at their institutions is shaped by conventional departmental processes, their positions may also be shaped by macro processes extending beyond immediate control.

The nature of academic work has changed dramatically, accelerated by the advancement of neoliberalism – a resurgence of ideas related to laissez-faire philosophes – and the adoption of neoliberal policies (Potter, 2012; Schram, 2014; Schwartz, 2014). The instructional marketplace of today struggles to sustain the base of full-time tenure-track and tenured faculty, let alone grow the number of permanent educators. Consequently, contingent academicians are often economically pressured to stitch together multiple employments or are burdened to frequently scan the environment for open positions have been reported (Pankin & Weiss, 2011).

There are many reasons why institutions have hired a more contingent workforce, with some scholars pinning the occurrence of the phenomenon to the pursuit of prestige and others to institutional finance. Jacoby (1998) argues that the use of contingent faculty raises the prestige of institutions because the subgroup members bring abilities, skills, and talents not found in a college's permanent, full-time instructional staff. For example, some undergraduate programs, like career and technical education programs, which emphasize skill-building, may be more likely to rely on talented part-time and full-time tenure-ineligible teaching staff. Indeed, the success of many programs is almost entirely dependent upon the knowledge and proficiencies of contingent faculty members, further evidenced by their close ties to the labor markets in which students will enter. On the other hand, others are more skeptical with respect as to why the employment of contingent faculty has proliferated in the past two decades. For example, Johnson (2012) underscores data that demonstrate significant public divestment in funding the teaching function of colleges and universities. According to Schuster and Finkelstein (2006), such public divestment has led to a significant restructuring of academic work to include a contingent faculty majority.

Purpose of the Study

To respond to the relatively scant amount of empirical work on this topic, this study will examine how part-time and full-time, tenure ineligible faculty compare with their tenured and tenure-track counterparts on conceptualized measures of educator effectiveness. The extant work that addresses the topic of part-time faculty is limited and has only touched on it in regard to restrained conceptualizations of student-faculty contact (Jaeger, 2008; Jaeger & Eagan, 2010; Umbach, 2007). One of the most frequently cited investigations of contingent faculty was performed by Umbach (2007). Umbach assesses differences between part-time and full-time faculty through the construction of six composite measures representing engagement of students in educational practices linked to increases in student learning, such collaborative learning exercises, academic challenges and high expectations, time spent preparing for class, and the like. According to the large-scale study, findings indicate that contingent status is negatively associated with faculty job performance related to undergraduate education.

Umbach's (2007) findings are both directly and tangentially supported in the literature by other investigations. Said studies suggest over-reliance on contingent faculty diminishes faculty involvement in student learning (Benjamin, 1975), adversely affects graduation rates for public community colleges (Jacoby, 2006), and negatively impacts transfer (Eagan & Jaeger, 2009) and the probability of completing an associate's degree as exposure to part-time faculty increases (Jaeger & Eagan, 2009). These seminal pieces inform the present study in several ways. First, this study identifies innovative and equitable methods of describing differences by faculty subgrouping rooted in evidence of impact on students in ways that go beyond immediate instructional environments. Said methods include student-faculty contact that encourages metacognitive development, coursework evaluation practices, and both student-centered and

experientially-grounded instructional techniques. Second, and more importantly, the current

study examines potential difference in the presence of sophisticated controls that attempt to

capture theoretically important elements of contemporary academic work environments for

contingent faculty members.

This study will utilize a national dataset to explore differences across measures of

educator effectiveness by faculty appointment status. This exploration is guided by the following

overarching research questions:

1. Controlling for personal and professional characteristics as well as workplace context,
   does the frequency with which faculty use techniques aimed at enhancing students'
   habits of mind for lifelong learning vary by employment status?

2. Controlling for personal and professional characteristics as well as workplace context,
   do the ways in which faculty evaluate student work significantly vary across faculty
   employment statuses?

3. Controlling for personal and professional characteristics as well as workplace context,
   does the frequency with which faculty use student-centered and experientially
   grounded teaching practices significantly vary by employment status?

4. Among part-time faculty, does a sense of an empowering workspace correlate with
   assessment and evaluation procedures?

5. Among part-time faculty, does a sense of an empowering workspace correlate with
   their use of teaching techniques aimed at enhancing students' habits of mind for
   lifelong learning?

In response to the above questions, this study will analyze data from the 2010-11 Higher

Education Research Institute's (HERI) Faculty Survey. Created as part of a national study on

institutions' instructional staff, the HERI Faculty Survey hones in on topics which include how faculty spend their time, how they interact with students, their preferred methods of teaching, their perceptions of institutional climate, their perceptions of institutional climate, their primary sources of stress and satisfaction, and their personal and professional goals. In particular, a specific subset of questions was asked to part-time faculty that captured information about their experiences and perceptions of their work environments. The instrument offers a rich data source from which the study's independent variables are dependent measures are drawn.

The dependent variables of the study are factors derived from survey items. The first outcome measure explores the frequency with which faculty use methods in their classroom interactions with students that intend to cultivate habits of mind – a lifelong learning disposition associated with several positive outcomes and life success (Costa & Kallick, 2004, 2008). The study's second outcome relates to student-centered instruction. Instruction that is centered around the learner has been found to share association with positive cognitive, affective, and behavioral outcomes (Cornelius-White, 2007; Cornelius-White & Harbaugh, 2009). Third, and last, this study looks at faculty evaluation practices. Just as student-centered teaching practices have been found to positively impact students, learner-centered evaluation is purported to positively impact students. Said assessment practices focusing on the student are more formative for enhancing motivation and understanding (Lambert & McCombs, 1998). The aforementioned measures will be assessed by faculty appointment status. That is, group differences will be explored among part-time, full-time non-tenure track, pre-tenured, and tenured faculty. As an analytic approach, this study utilizes hierarchical linear modeling in order to derive estimates for said faculty subgroupings across outcome measures.

Significance of the Study

Significance for Research

　　While much is known about how faculty interactions and behaviors relate to college outcomes in general, very little is known about how they may differ across faculty appointments. Very little, if anything, is known about how faculty subgroups differentially engage in practices known to cultivate students' habits of mind, their tendencies toward learner-centered evaluation and assessment practices, or with what frequency they use student-centered and experientially-grounded pedagogies. Although some research has begun to explore differences with regard to engagement between part-time, full-time non-tenure-track, tenure-track, and tenured faculty, less is known about how the characteristics of work environments for contingent faculty might shape their interactions with students and behaviors in the classroom. This study aims to expand the literature on this important topic by examining group differences between said faculty subgroups with special consideration to context. The findings are expected to begin to fill a gap in knowledge about how contingent faculty compare with their traditional counterparts across measures theoretically connected to student success. In addition to addressing a lack of information on the topic, the current work contributes to the literature through its analysis of a large, national data set, using methods appropriate for the clustered nature of the data.

Significance for Practice

　　As proponents of part-time faculty advocate for better employment conditions (Kezar & Sam, 2013; Palmquist et al., 2011; Wallin, 2004), and as practitioners seek evidenced methods for enhancing student success and the quality of undergraduate education (Kuh, Kinzie, Schuh, & Whitt, 2011), this study provided additional insight into how contingent faculty compare with their full-time tenured and tenure-track counterparts on measures of good practice. In doing so,

this study may further serve to assist college administrators and faculty to identify additional ways to design supportive policies for contingent faculty and institutionalize equity at their campuses. To be more specific, any emergence of significant group differences in the presence of controls related to working conditions for part-timers may signal to administrators and individuals in positions of power to create and implement any of the following: development programs to enhance the teaching and learning environment, calls for local or state legislation to enhance revenue streams supportive to part-time interests, policies to incentivize campus involvement and participation in shared governance, or other strategies for recognizing faculty efforts to ensure student success.

Outline of the Study

This study seeks to address the gap in the literature regarding possible differences in the outlined faculty characteristics by running comparisons between part-time, full-time non-tenure-track, tenure-track, and tenured faculty across measures of educator effectiveness. More importantly, I examined all comparisons with and without the presence of central contextual measures with the aim of exploring group differences possibly associated with potentially marginalizing work environments. While the current chapter has provided a foundation and justification for the study, Chapter 2 further expands this foundation to include a comprehensive review of existing research on contingent faculty and undergraduate outcomes associated with their presence across institutions. Chapter 2 also offers definitions of key terms and concepts surrounding contingent faculty and a theoretical basis for the study. Finally, Chapter 3 details hypotheses associated with each research question, the instrument and data to be used, and offers an in-depth explanation of the statistical analysis that to be utilized. Later, Chapter 4 outlines the

investigation's findings, and Chapter 5 concludes by situating the study's results in context for

research and practice.

Chapter Two:

Review of the Literature and Theoretical Frameworks

The primary goal of this chapter is to establish a framework for understanding the effectiveness of contingent faculty as compared to full-time tenured and tenure-track faculty across indicators of educator effectiveness. Empirical work has begun to explore the characteristics of contingent faculty in comparison to full-time tenured and tenure-track faculty, especially with regard to the ways in which they engage undergraduate students (Umbach, 2007), and research has documented numerous institutional challenges and inequities for non-tenure-line faculty (Kezar & Sam, 2011). However, there is little understanding of how such contexts shape student-faculty contact and practice.

During an era of accountability and elevated public inquiry into the effectiveness of higher education's faculty, coupled with the troubles and challenges that contingent faculty face while navigating the culture of academe, it is important to understand the linkages between academic workplace conditions and the efficacy of academic labor known to affect students. Existing literature on the impact and role of contingent faculty in undergraduate education has focused primarily on three overarching bodies of literature. First, said literature has examined outcomes connected to varying levels of exposure to instruction from contingent faculty. Second, present empirical work has explored differences in instructional approaches and student interaction across faculty employment status. Last, current work on the topic has investigated policies and practices in place that hinder the work and working environment of contingent faculty. As is, the foundational body of knowledge is restricted in conceptual scope – problematic since attempts to demarcate quality contact has led to an ambiguous description of interactions relating to students' academic, intellectual, or career matters (Pascarella &

Terenzini, 1977, 1991; Pascarella, Terenzini, & Hibel, 1978). Crafting indicators of contingent faculty effectiveness necessitates the conceptual expansion of student-faculty contact dimensions, with particular attention awarded to faculty's evaluation procedures and dispositions. This study aims to expand the aforementioned conception by focusing on one important aspect of student-faculty interaction by exploring faculty characteristics with regard to pedagogy and by identifying and gauging the ways in which faculty assess students.

My exploration into the potential impact of contingent faculty on undergraduate education with special attention to organizational climate requires several considerations, which organize this chapter into five sections. First, as the current potentially marginalizing college and university environment has arisen fundamentally from an evolution of the structure and nature of academic work, I ground my thinking by discussing forces that have catalyzed the transformation of higher education to rely on a more contingent professoriate. Next, I present literature that looks specifically at the role and effects of contingent faculty on students across the higher education landscape. Third, I examine the organizational conditions in which contingent faculty work, which are examined through multiple theoretical lenses on employee performance, empowerment, and agency. Following my examination of organizational conditions, I detail relevant literature to delineate high-quality types of student-faculty contact and assessment practices, which couch this study's measures of educator effectiveness. Finally, this chapter concludes by framing measures of educator effectiveness.

Definition of Contingent Faculty for This Study

Considering the scope of empirical work that explores contingent faculty and the multiple works that employ different types of contingent samples, it is important to identify the faculty group(s). I use the term contingent faculty in reference to the following two professoriate

subgroupings that are off the tenure track: part-time faculty and full-time, tenure ineligible

faculty. Throughout my study, the term part-time faculty is used synonymously with adjunct

faculty, although it is a term that is more frequently used to point to part-time faculty working in

a community college or other two-year institution.

Toward Relying Upon a Contingent Academic Workforce

National Trends: Transferring a Majority Status to a New Type of Faculty

According to the U.S. National Center for Education Statistics (NCES), the number of

part-time faculty across U.S. colleges and universities awarding federal financial aid reached

parity with their full-time counterparts in the fall of 2011. Other similar estimates, which also

account for full-time tenure ineligible faculty, purport that upwards of two-thirds of the

professoriate is off the tenure track across all institutional types (JBL Associates, Inc., 2008;

Schuster & Finkelstein, 2006). This estimate varies considerably depending on the type of higher

education institution. For instance, approximately 64% of faculty at all community colleges were

designated as part-time in 1997 (American Association of Community Colleges, 2000).

Conversely, 42.7% of faculty across all United States higher education institutions receiving

federal financial aid are estimated to be part-time in the fall of 2013 (U.S. Department of

Education, 2015). The use of contingent faculty for undergraduate education is predominant

across the higher education landscape (Ehrenberg, 2012; Gappa, 2000; Kezar & Sam, 2011).

Part-time faculty employments have nearly doubled between 1975 and 2009, while the growth of

full-time, non-tenure-track faculty, although still positive, was more sluggish (Kezar & Maxey,

2009). Thus, the two faculty subgroupings ought to be considered separately.

Part-time faculty trends. Although part-time (adjunct) faculty have played a significant

role in higher education for a half century, they have always been most represented in the

community college sector (Kezar & Maxey, 2009). Adjuncts have experienced the most rapid rate of growth over the last 30 years, evidenced by a 422.1 percent increase between 1970 and 2003 (Schuster & Finkelstein, 2006). Recent evidence suggests that they are now the majority faculty group across higher education (JBL Associates, Inc., 2008).

Full-time tenure-ineligible faculty trends. Despite having full-time teaching contracts, these academicians are not on the tenure track. The group is qualified as contingent given their ineligibility for tenure and contractual employment status. Unlike tenured and tenure-track faculty, full-time tenure-ineligible faculty lack long-term job security. Approximately 40 years ago, full-time non-tenure-track faculty only made up roughly three percent of the professoriate (Schuster & Finkelstein, 2006). Unlike part-time faculty trends, the presence of full-time tenure-ineligible faculty did not substantially increase until about 1990 (Kezar & Maxey, 2009). Shortly thereafter, this group outpaced tenure-track faculty recruitments and reached a majority of faculty hires (58.6%) by 2003 (Schuster & Finkelstein, 2006).

The Etiology of Adjunctification

The declining hire rates for full-time, tenure-track faculty, coupled with the rapidly increasing rate of incoming contingent faculty, necessitates my looking into the broader etiology of such trends. My argument for this inspection is furthered by many critics who take these data of increased contingent faculty appointments as evidence to suggest a calamity in need of remedy. Whether such a disaster is one of unjustified exploitation of contingent faculty (Dubson, 2001), the eroding of academic quality and experiences (Benjamin, 2002), or both (Karabell, 1998), tends to be the central question.

Broadly, the reliance of contingent academic labor in higher education can be linked to three major societal shifts, which I describe below. First, the widening of access to higher

education to the masses caused, among other things, an influx of students to higher education and an unforeseen rate of growth that presented unique challenges for colleges and universities (Hornsby & Osman, 2014). Second, the public's movement away from thinking of higher education as public good to a private good, coupled with the ascension of academic capitalism (Rhoades & Slaughter, 2004), is intimately connected with the adjunctification of academe. Third, increasing widespread public divestment in higher education (Johnson, 2012; Schuster & Finkelstein, 2006) propelled the hiring of contingent faculty (Maitland & Rhoades, 2005). As societal expectations and public resources for higher education undergo fundamental change (Zusman, 2005), colleges and universities are forced to become nimbler (Newman, Couturier, & Scurry, 2010). Higher education institutions responded to these external challenges by more closely aligning themselves with market pressures, which profoundly impacted both the nature of teaching in the academy and the prevalence of contingent faculty. These societal shifts are explored here, and are fundamental for understanding the nature and effects of this change. Although not major trends, other factors that contributed to the increases in hiring of contingent faculty worthy of mention include expanding need for remedial and specialized courses and replacements of full-time faculty on sabbatical or leave (Pearch & Marutz, 2005).

Mass Public Access to Higher Education

The years between 1945 and 1975 had great impact on the professoriate and had far-reaching effects on the composition of the faculty body. Coined as the time of Mass Higher Education in the Era of American Hegemony (Cohen, 2007), higher education experienced a draconian influx of students. Student enrollment had more than tripled during this period of time (U.S. Department of Commerce, 1990). As the number of students enrolling in higher education rapidly increased so did the demand for building more colleges and universities and expanding

the faculty (Gumport, 1997). In fact, in just 15 years during this timeframe, the total number of full- and part-time professors employed in American colleges and universities nearly tripled from 236,000 in 1960 to 628,000 in 1975 (U.S. Department of Education, 2000). A more significant alteration in faculty composition was the increase in the numbers of part-timers relative to their full-time counterparts. A disaggregation of part-time and full-time faculty figures illustrates that the hiring of part-time faculty occurred at more than double the rate than full-time faculty (U.S. Department of Education, 2000).

The era of mass higher education burdened colleges and universities with unforeseen financial stress (Trow, 2006), which is discussed in greater detail later with regard to economic and marketplace pressures. The post-massification era also brought about a significant reframing of traditional notions of higher education (Cohen, 2007). While the majority of college and university students were previously found to be white and traditional-age (Gumport, 1997), they were no longer the norm across the college and university landscape. Indeed, over 40 percent of students were now over the age of 24 and enrolled part-time (Teichler, 1998). These changes in demography reflected diversifying student needs, including specialized course offerings and nontraditional course times. Changes in student demography during this time supported the change of faculty composition. To best serve their customers and respond to the heterogeneity of student needs, institutions were pressured to become more flexible. A structural response to such changes included hiring more contingent faculty (Teichler, 1998), as they offered a cheaper labor source (Entin, 2005) and were available to teach courses during less customary times (Jacobs, 1998) to meet the needs of an unanticipated evolution in student demography.

Significant Public Divestment and Growing Financial Uncertainty

Troubling financial realities are not new phenomenon for college and university administrators who continue to creatively balance budgets and redistribute monies while considering competing academic priorities. American institutions, in particular, despite having confronted the educational challenges previously noted in the era of massification and post-massification, experience a public unwilling to financially support the teaching and learning function of higher education (Johnson, 2012; Teichler, 1998). In sum, this has led to higher education's inclination to employ more contingent academic staff (Fairweather, 2000; Johnson, 2012), as expansion was overwhelmingly costly to institutions. Public divestment in higher education is a salient trend, spanning decades of funding decreases and draconian fiscal reductions (Zumeta, 2006).

As mentioned, the first sphere of influence tied to expanding the contingent faculty body was massification, which was an era coupled with reduced funding for colleges and universities (Bar, 2004; Scott, 1995; Slaughter & Leslie, 1997). While massification prompted the rapid growth of institutions, public support for financing the academy's operation was called into question, to the extent that now constituents call for higher education finance reforms (Browne, 2013; Dill & Sporn, 1995; Hauptman, 2001; Murray, Evans, & Schwab, 1998). Indeed, public investments could not maintain pace with the demand of the massification and post-massification eras (Altbach, Gumport, & Berdahl, 2011; Browne, 2013). The decline in the budget priority of higher education was not always the case – in the 1970s, for example, the state of California spent almost four times more on higher education than on corrections, and nearly 20 percent of the general fund was devoted exclusively to college and university finance (California Postsecondary Education Commission, 2010; Legislative Analyst Office, 2011). However, priorities for California in the past 10 years, which were not vastly different from other states,

shifted such that general fund expenditures fell an additional nine percent (California Postsecondary Education Commission, 2010), while the general fund for corrections has surpassed higher education (Legislative Analyst's Office, 2009). This downward trend appears further exacerbated when funds are disaggregated by institutional type.

The downward spiral of higher education funding presents cost reduction challenges to institutions, and the effects of defunding are felt differentially across colleges and universities, as funding structures vary. The financial structure of the community colleges is different from that of doctoral-extensive institutions, and these varying funding structures contribute to uneven approaches to contingent faculty employment. California provides an appropriate case study to understand higher education's worrisome financial situation. Data from the California Postsecondary Education Commission (2010) demonstrate that the California community college system received the fewest dollars per student spanning the past 30 years with a budget that only continues to decline. Although budgetary allocations have also suffered for both the University of California and the California State University, reductions were not as far-reaching. These results suggest that the extent to which institutions may suffer financial hardship may depend upon their type and the degree to which institutions have adjunctified is dependent upon their sector (American Federation of Teachers, 2009). Institutional finance becomes more prevalent in contingent faculty hires when the diversification of revenue streams is examined. Financial pressures have catalyzed contingent faculty hires in addition to reshaping traditional postsecondary education. During the same time, society began shifting its views on public higher education by reshaping traditional notions.

Reconceptualizing Traditional Notions of Higher Education

The affairs of colleges and universities have been under the protection of traditional conceptualizations (Labaree, 1997) in the sense that they were previously more able to bypass scrutiny or inspection, as their broader social function was not called into question until more recently. Not long ago, scholars argued that higher education had begun to shift from what was originally a public good to a private good. This shift has manifested through the push of the professoriate's composition to a now contingent majority (Gappa, 2000), increases in licensing of scholarly activity (Thursby, Thursby, & Gupta-Mukherjee, 2007), and fragmentation of the traditional educational core (Devaney, & Weber, 2003) by way of marketization (Pusser, 2002), among other indicators. Shifts in thinking on higher education's purpose and societal function has led to an increase in adjunct and full-time, tenure-ineligible faculty hires and a widespread scholarly defense of the public good (Giroux, 2002; 2003; 2013).

Although the phrase "public good" shares meaning with "common good" and "public interest" (Pusser, 2002), unpacking its intention is central to understanding how a shift in societal perception has led to an influx of contingent academicians. Scholars argue that the function of a public good serves longer-term societal interests, which include training generations of citizens in worthwhile subjects and conducting research beneficial to local, state, and national needs (Gumport, 2001). Higher education was seen conventionally as a social institution, as it preserved values and promoted the development of morality (King & Mayhew, 2002; Perry, 1999; Trow, 1976). As such, colleges and universities were historically seen as a vehicle of upward social mobility (Birnbaum, 1983; Featherman, Lancaster-Jones, & Hauser, 1975; Haverman & Smeeding, 2006; Mulligan, 1952), elevating students from impoverished circumstances by awarding access to higher paying jobs. This way of viewing higher education

is supportive of things that may enhance its endeavors, including funding for qualified full-timers and robust programs.

On the other hand, higher education was enveloped by a shift in public thought around its purpose and utility. Seen as inefficient and wasteful, colleges and universities responded to a sense of urgency pressuring them to react so as to remain competitive (Gumport, 2001). In addition to supplying the public with economic evidence of degree value (Day & Newburger, 2002) under growing pressures, higher education has scrambled to produce evidence of non-monetary benefits to students (Rowley & Hurtado, 2002). The convergence between higher education as a social institution and an industrial enterprise (Gumport, 2001) is also the interest of academic managers looking to operate a viable enterprise on very tight budgets. Indeed, senior executive teams respond to market pressures by developing skills-driven educational programs (Altbach, Gumport, & Berdahl, 2011) intended to prepare the workforce of tomorrow (Rojewski, 2002).

The subsequent remodeling of institutions to behave more commercially inspired a rise in the use of part-time faculty (Giroux, 2013) who are well-suited to meet the needs of an investor-imagined university of the future (Noble, 2001). An influx and exponential growth of contingent faculty occurred not long following the first calls for higher education accountability (Schuster & Finkelstein, 2006), which was exacerbated by changes in hiring practices. While institutions of the past were at least slightly buffered from commercial forces and a similar entrepreneurial paradigm on higher education, the shrinking gap between institutions and industry has far-reaching effects on the makeup of the faculty to include mass entry of contingent academicians (Etzkowtiz, Webster, Gebhardt, & Terra, 2000).

The Responsibilities and Effects of a Contingent Professoriate

In spite of the high number of contingent faculty appointments across higher education and the important functions the faculty group performs, we know surprisingly little about their role in undergraduate education and ensuing effects on students. Existing empirical evidence is mixed at best. Some literature suggests that students taking higher proportions of units with part-time instructors tend to have lower chances of first-year retention (Eagan & Jaeger, 2008; Jaeger & Eagan, 2011), completing an associate degree at California community colleges (Jaeger & Eagan, 2009), and transferring from two- to four-year institutions (Eagan & Jaeger, 2009). At the same time, other evidence purports that student retention shares no significant relationship with exposure to part-timers (Johnson, 2011).

A mixed-methods study, which examined the perceptions of undergraduate students on the use of contingent faculty, discovered that students recognized contingent teachers as engaging, interactive, understanding, and able to personalize instruction (Kendall & Schussler, 2012). While Kendall and Schussler (2012) reported that students generally experienced their contingent teachers with positive regard, the researchers also discovered that students additionally experienced contingent faculty as uncertain, hesitant, nervous, and boring. One could operate under the assumption that students who believe their instructors are uncertain and boring may be less likely to perform well academically, which might help to explain some of the contradictory findings that previous work showcases. Further research is needed in order to substantiate claims. Regarding the role of and effects of contingent faculty in higher education, the current body of evidence can be thought of from multiple frames. That is, to more completely understand how contingent faculty appointments are impacting higher education, we ought to

conceptualize part-time and full-time non-tenure-track instructors as influencing students, faculty, and the culture of institutions.

How Contingent Faculty Are Thought to Affect Students

Adjunct and full-time non-tenure-track instructors are known to affect students in a number of ways, but existing evidence posturing negative effects on students tends to explore teaching and pedagogy. Again, the evidence is mixed. Research on contingent faculty's teaching practices is thin and is mostly made up of single-institution studies of limited external validity. Umbach (2007) offered examples of such studies. For instance, at one community college, no differences were found in student learning in a basic skills mathematics course between students who had taken classes with either a part-time or a full-time faculty member (Bolge, 1995). Other single-institution investigations have cited negative relationships between contingent faculty student persistence (Bettinger & Long, 2005; Harrington & Schibik, 2001). More work than not illuminates contingent faculty contact with students as negative. Likewise, Eagan and Jaeger (2008) discovered that students' retention likelihood was negatively affected when they enrolled in gatekeeper courses (large introductory courses) taught by part-time faculty.

Investigations exploring the role of contingent faculty have primarily focused on teaching practices. Employing data from the Faculty Survey of Student Engagement, Umbach (2007) concluded that a contingent faculty status is negatively related to faculty job performance with undergraduates. According to Umbach (2007), "Compared to their tenured and tenure-track peers, contingent faculty, particularly part-time faculty, are underperforming in their delivery of undergraduate instruction" (p. 110). Umbach failed to account for important controls, like measures of campus climate and perceptions of marginalization or disempowerment, which may have explained at least some of the differences in instructional techniques between part-time

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faculty and their tenure-line colleagues. Thus, Umbach's assertions of difference between full-time tenure-line faculty and their contingent colleagues may be inflated.

Evidence also suggests that part-time faculty may affect students differently than full-time tenure ineligible faculty, despite that both groups are classified as contingent. Umbach (2007) discovered that part-time faculty interacted with students less often, used active and collaborative instructional strategies less, spent less time preparing for courses, and had lower academic expectations for their students than tenured and tenure eligible faculty. Conversely, Umbach found that, although full-time non-tenure track faculty interacted less with their students, no differences existed between them and full-time tenured and tenure-track faculty on measures of active and collaborative instructional techniques. It was also the case that full-time contingent faculty spent more time preparing for their classes than full-time tenured and tenure-track faculty. Umbach determined that full-time contingent faculty behaved more like their tenured and tenure-track colleagues.

Baldwin and Wawrzynski (2011) responded to Umbach's investigation by asking whether adjunct and full-time non-tenure eligible faculty were more or less likely to use learning-centered or subject-centered teaching strategies than full-time tenured or tenure-eligible faculty. Using data from the 2004 National Survey of Postsecondary Education Faculty, the researchers discovered that part-time and full-time tenure ineligible faculty were more likely to employ multiple choice exams – a subject-centered teaching technique – in all or some of their classes than full-time tenured faculty. However, when the researchers explored other methodologies for constructing examinations, they learned that part-time faculty were far less likely than the other three faculty subgroupings to use short answer questions in exams. This may suggest that short answer exams are too time-consuming for part-time faculty to evaluate given

their typical appointment. Baldwin and Wawrzynski's investigation suggested that full-time non-tenure-track faculty behaved more like their full-time tenure-track and tenured counterparts, such that significant teaching differences emerged primarily between part-time faculty and the other three categories of faculty. Part-time faculty were less likely than full-time tenure ineligible instructors and tenured and tenured-track faculty to use learning-centered strategies such as essay exams, term research papers, multiple drafts of written work, oral presentations, or student evaluations of each other's work.

Baldwin and Wawrzynski (2011) further unpacked contingent faculty's teaching by disaggregating the faculty categories by discipline. Results suggested that a faculty member's discipline had both a statistically significant and practical influence on the learning-centered and instructor-centered teaching strategies they employed. Tenured, tenure-eligible, and full-time non-tenure-eligible faculty teaching in conventional areas, like finance or accounting, employed similar teaching methods. According to Baldwin and Wawrzynski, the greatest differences in teaching strategies existed between part-time faculty and the other three appointment types in artistic and social fields, with part-time faculty being significantly less likely to use learner-centered strategies in their teaching.

In contrast to the differences indicated by Baldwin and Wawrzynski (2011), Schuetz (2002) examined 1,500 faculty in over 100 community colleges and found that part-time faculty and full-time faculty responses indicated several similarities across measures of instructional practice. Only one instructional practice showed a significant difference between part-time and full-time faculty: fewer part-time instructors spend class time in laboratory experiments by students. This finding may be more of an artifact of the kinds of classes part-time faculty are asked to teach.

The current body of evidence looking at the role contingent faculty play in the lives of students and the possible effects or associations of such roles is narrow and limited. Evidence suggests that contingent faculty might differ along some measures of assessment and evaluation, but such differences are loosely connected to practices that impact student success. Along the same lines, evidence exploring instruction – a central aspect of student-faculty contact – is mixed and does not delineate any criteria for positive impact or best practices.

Faculty Characteristics and Instructional Practices

While a variety of faculty traits are connected to differences in teaching practices – gender, personal goals for higher education, age, discipline, among others (Biglan, 1973; Clark, 1987; Rhem, 2010; Sax, Astin, Arredondo, & Korn, 1996; Sax, Astin, Korn, & Gilmartin, 1999) – the extent to which faculty engage in *good* educational practice may also rest upon certain background characteristics. For instance, no study has focused specifically on measures of teaching effectiveness for contingent faculty disaggregated by gender, despite evidence that a faculty's gender shares a relationship with their practice (Sax, Astin, Arredondo, & Korn, 1996).

Exploring how approaches to instruction differ by gender, for instance, Sax, Astin, Arredondo, and Korn (1996) found several distinctions with regard to goals for undergraduate education teaching practices. The largest goal differences reported between men and women, with women's goals rated significantly higher, emerged with commitment to enhancing students' self-understanding, providing for students' emotional development, preparing students for employment, and developing their personal values and moral character (Sax, Astin, Arredondo, & Korn, 1996). Turning to instruction, two overarching trends were discovered. First, findings from their study suggested that faculty, in the aggregate, tended to call upon more student-centered teaching techniques more, compared to previous cohorts. However, gender differences

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showed that women were most likely to use more progressive instructional methods, captured by student-centered approaches to teaching, while men used such approaches less often. Other evidence suggests that said teaching styles have been traditionally been used by women faculty (Wakai, 1994). This is important for considering faculty characteristics by academic rank, as differences across instructional subgroups may be explained by important background attributes, as research has suggested.

It is also the case that instructional methods differ by disciplinary affiliation. Previous scholarship exploring the nature of academic careers has suggested that faculty work is molded by disciplinary field (Clark, 1987). For instance, each discipline possesses a unique culture and set of traditions that shape how instructors engage students, how they teach courses, and even how they socialize aspiring professionals. These assumptions rest upon a model of disciplinary classification (Biglan, 1973), which distinguishes between fields that concentrate on life and nonlife matters and shows that instructors across subjects think differently about knowledge. Indeed, views and attitudes toward instruction have been shown to change across departments (Rhem, 2010).

Holland's (1997) theory of academic environments lends further support for examining the effects of faculty subgroups through a disciplinary lens. His theory is grounded in the assertion that human behavior is a function of the interaction between individuals and their environments (Smart, Feldman, & Ethington, 2000) and posits that people are attracted to types of work environments that are congruent with their personality types, a feature of instructors that is intimately tied to teaching practices (Cano, Garton, & Raven, 1992; Listando et al., 2013). He also argues that such work environments mold professional norms and regulate workplace behaviors. To be specific, in accounting, government, and similar conventional fields, instruction

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may be conducted in large groups, and course assignments may be standardized with correct and incorrect answers. On the other hand, the fine arts and liberal arts offer instructors the opportunity to expand upon nuances in unique ways, which likely impacts how they engage students, how they build assignments, and how they evaluate students' academic products.

How Contingent Faculty Impact Other Aspects of Institutions

A second sphere in which contingent faculty impact students is by way of interacting with other faculty and facets of the institution. According to Grubb (1999), the effects that faculty have on one another are far-reaching. Grubb further explains:

> Good teachers were likely to be strongly connected with other faculty, even teaching jointly, while ineffective teachers were generally alienated from their peers. … In many departments, a large number of part-time instructors slip in and out of their classrooms without much interaction with the rest of the institution. … Without contact among colleagues, there are few discussions about instruction, no forums where the special pedagogical problems of [the college] can be debated and resolved, and no ways to bring problems to the attention of administrators (p. 55).

Bland and colleagues (2006) studied the relationship between faculty appointment status and faculty productivity and commitment. Utilizing data from the National Study of Postsecondary Faculty (NSOPF), researchers found that an institution's reliance on more contingent faculty appointments decreased the sense of commitment across faculty in doctoral extensive research universities. Bland et al.'s inquiry confirmed that institutions' reliance on contingent faculty diminishes overall commitment and productivity for the institution. It may be the case that the quality of instruction is reduced for undergraduate students at institutions with more non-tenure-track faculty as a result of decreased commitment among faculty.

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There are reasons beyond an individual's choice that drive contingent faculty trends, including a reduction in available appointments and a market flooded with talented Ph.D.'s desperate for faculty positions (Hansen, Newburger, Schroeder, Stapleton, & Young-Day, 1980; Larson, Ghaffarzadegan, & Xue, 2013). Research has explored the issue of faculty commitment to institutions and how dedication to instruction is normative. Employees with a high level of commitment feel that they ought to remain within the organization (Allen, 2000), and this consistency may be a good thing for students since these faculty may feel more "psychologically bound" to their institution (Kline & Peters, 1991). The present study will address how institutions with more contingent faculty differ across measures of educator effectiveness so as to have a clearer understanding of contingent faculty's effects on students. Such an inquiry focused on workplace climate and conditions functions to reduce blame and lessen the individual's onus – an important consideration when looking at issues connected to contingent faculty members.

Contingent Faculty, Organizational Culture, and Working Conditions

Part-time faculty are best understood as extensions of institutional culture and organizational identity (Roueche, Roueche, & Milliron, 1996), as colleges make adjuncts central to the organization's goals (Levin, 2007). An institution's health and effectiveness is a direct reflection of its culture, which in part can be measured through faculty attitudes (Gregory, Harris, Armenakis, & Shook, 2009; Helfrich, Li, Mohr, Meterko, & Sales, 2007; Yilmaz & Ergun, 2008) linked to student learning and engagement (Pascarella & Terenzini, 2005; Umbach & Wawrzynski, 2005). While any single faculty attitude may not profoundly impact the learning experience or the delivery of quality education to students, aggregated or a general feeling of discontent or unrest may account for certain organizational dysfunction harmful to positive academic environments. Such working conditions may have normative effects and, although

faculty likely may not modify their instructional interactions per se, other types of contact may be inadvertently altered.

Taking into consideration the volume of research suggesting that faculty attitudes are normative and may affect institutional climate, the potential effects that relying upon contingent faculty talents may have on an organization is worthy of investigation. Faculty off the tenure track have consistently been shown to share discontented and displeased feelings about their experiences. Almost universally, adjunct and full-time non-tenure-track instructors have voiced complaints about their low status on campus, which may be a reflection of administrative practices that lack offerings of recognition (Cross & Goldenberg, 2011). Among other reasons, contingent faculty express dissatisfaction with their access to resources, benefits disallowances, and job security (Cross & Goldenberg, 2011). Other evidence demonstrates that many campuses lack support structures for contingent faculty members, including office space and roles in shared governance (Kezar, 2012), further exacerbating the potentially negative effects of nonexistent essential workplace provisions.

Growing faculty discontent may have normative effects on students, and the implications for undergraduate education are especially important for institutions and departments that rely heavily on contingent faculty work. The current body of evidence has connected faculty attitudes – a direct reflection of organizational culture – to a variety of student outcomes. Literature has not yet entertained how the attitudes and beliefs of contingent faculty build an atmosphere to affect their contact with students. Additionally, research has not explored how contingent faculty's attitudes are normative and might impact the performance of their traditional colleagues. This study will examine how organizational culture, as measured by satisfaction with

compensation and aspects of faculty work, relate to the approaches both contingent and full-time, tenure-line faculty take with respect to evaluation and instruction.

The Academy as a Working Environment for Contingent Faculty

Labeled as "academic gypsies" (McGhan, 1996, p. 95) and "freeway fliers" (Kelly, 1990, p. 17), contingent faculty experience several significant challenges in academe. The experiences of contingent faculty in academe are not on par with their colleagues, and perceptions of marginalization and a second-class status are felt in a variety of ways, including by way of lesser support services and fewer office space allowances (Haeger, 1998). Many institutional contexts include a lack of supportive policies and practices, which reflect negative, if not hostile, work environments for contingent faculty (Baldwin & Chronister, 2001; Gappa, Austin, & Trice, 2007). Despite the fact that contingent faculty have become the new majority in higher education, significant pushback, obstacles, and red tape remain for part-time and full-time, tenure ineligible professors.

Adjunct faculty report feeling disempowered, disrespected, neglected, and alienated (Burk, 2000). For contingent faculty, navigating said institutional contexts can be challenging, with hindrances found to contribute to lower levels of student engagement and learning, poorer quality of work-life balance, and campus community disconnect (Meixner, Kruck, & Madden, 2010). In their qualitative investigation aimed at unpacking the experiences of part-time faculty at a mid-sized, comprehensive, public university, Meixner, Kruck, and Madden (2010) found that adjunct instructors felt disconnected from their academic communities and less engaged with their students. These investigators found that contingent faculty members desired to upgrade their skills and abilities but were not afforded sufficient access to resources to allow them to

hone their craft. This is particularly troublesome, given that colleges and universities rely heavily on their talents to teach large undergraduate classes and core courses.

Other research has taken the onus away from institutions by calling for the need for adjunct faculty to undergo re-socialization so as to allow them to function more effectively with academe's organizational culture and adapt to environmental demands (Shannon, 2007). Other work demonstrates that institutional policies do not allow contingent faculty to fully participate on university governance committees or even attend meetings, which further excludes them (Kezar, Lester, & Anderson, 2006). Although not all policies further marginalize contingent faculty, Baldwin and Chronister (2001) note that some policies work to reinforce second-class status and its associated stigma. The issue of exclusion for contingent faculty members has negative implications for their identity and the ways in which they behave on college and university campuses. It is important to note that these contextual challenges may not function similarly across campuses, especially as the mission or institutional culture of two-year colleges differs from traditional four-year universities.

According to Levin and Shaker (2011), contingent faculty members possess dualistic identities. Through narrative analysis, these researchers found that contingent faculty thought dualistically of their identities within academe because, as teachers, they saw themselves as satisfied professionals. However, as members within the larger context of the professoriate, contingent faculty members indicated a restricted sense of self-determination, agency, and self-esteem. Indeed, Levin and Shaker (2011) purport that uncertain institutional conditions, like uncertain employment conditions, are responsible for issues that arise from problematic professional identities.

While researchers have documented the institutional effects associated with contingent faculty, specifically in the form of negative student outcomes by way of increased student contact with contingent faculty (Eagan & Jaeger, 2009; Jaeger & Eagan, 2009; Umbach, 2008), then researchers must, too, begin to explore the dysfunctional organizational structures and conditions sheathing contingent faculty. It might be difficult for contingent faculty to interact with students in high-quality ways if their work conditions impress policies to exclude them, delegitimize them, or otherwise permit them to experience a stigmatized second-class status.

Not all institutions have spaces that disregard and disempower contingent faculty. Indeed, some colleges and universities seek ways to incorporate non-tenure-track faculty more into the institution and strengthen faculty as a whole (Brand, 2002; Baldwin & Chronister, 2001; Chait & Trower, 1997). In a case study of Indiana University, Brand (2002) recognized the difficulty of raising the number of tenured faculty to meet teaching demands and suggested the conversion of part-time positions to full-time non-tenure-track faculty. Chait and Trower (1997) describe such a setting in which the disparity between tenure-track and non-tenure-track position was reduced, as both positions became uniquely attractive. The choices in appointment status that were awarded to faculty were not permanent, and faculty were permitted to apply for a track change. Indeed, some institutions have begun to realize innovative ways of working with non-tenure-track and shaping inclusive academic workplaces.

Theoretical Perspectives to Shed Light on the Academic Workplace and Faculty Efficacy

Having considered the commencement of a contingent professoriate and the nature of the academic workplace for contingent faculty, I now focus on several theories which offer explanation as to how faculty may perform as educators. In examining how contingent faculty compare with their counterparts, the extant body of evidence fails to explore how central

contextual characteristics potentiate one's practice, with the exception of discipline and institutional type. Several pieces of research have demonstrated more broadly that faculty behavior is shaped by their career state, demographics, institutional type, and department and institutional reward system (Austin & Gamson, 1983; Gappa, Austin, & Trice, 2007; O'Meara, Terosky, & Neumann, 2008; Schuster & Finkelstein, 2006).

Thinking about environmental influence, namely from sociological and social-psychological perspectives, serves to hone my conceptualization of contingent faculty comparisons with their traditional colleagues. Theorists posit that while the environment may be structurally arranged to disempower some groups over others (Spreitzer, 2008), an individual's sense of agency may be reduced as a result (Elder, 1997). What's more, Holland's (1997) theory of academic environments argues that certain types of personalities are attracted to congruent work environments. These personality types and contexts work to shape norms and regulate behavior and can be captured through an individual's beliefs or attitudes. Taken together, these theories offer a clearer image of educational practice by magnifying the borders between faculty and their workspaces.

Sense of Agency as a Method for Understanding Performance Ability

The face of higher education has changed tremendously, especially during the past 25 years. Faculty members face increasing workloads, while departments face budget cuts, hiring freezes, and further elimination of professional development and travel funds (O'Meara & Terosky, 2010). These challenging conditions can negatively affect faculty's sense of agency, a sociological concept useful for understanding higher education faculty's behavior, thinking, and performance. Agency refers to having a sense of power, will, and desire to create work contexts that meet the individual's goals over time (Elder, 1997, pp. 964-965). In the case of academic

work for faculty members, agency refers to a feeling of power to make decisions that are best for one's professional life and best for students.

Emirbayer and Mische (1998) elaborated on Elder's (1997) theory of social agency by adding that "the temporally constructed engagement by actors of different structural environments – the temporal-relationship contexts of action – which, through the interplay of habit, imagination, and judgment, both reproduces and transforms those structures in interactive response to the problems posed by changing historical situations" (p. 970). The central point to this agentive perspective applicable to exploring faculty's classroom conduct and student engagements human behavior is seen as a function of a specific milieu, which in this case is unfavorable for contingent faculty. O'Meara and Campbell (2011) elaborate further by claiming that faculty make decisions in specific social spaces, and we cannot truly understand agentive process without capturing a rich image of their work atmospheres.

For part-time and full-time non-tenure-track faculty, the ability to activate a sense of agency and garner power relates to the resources they have available to them (Marshall, 2000). Academic rankings are stratified, and the social implications of such division may limit the amount of psychological resources available to faculty to exert agency over work-related affairs.

The subsequent reduction in contingent faculty's sense of agency has been connected to Foucault's (1977) notion of the panopticon prison (O'Meara, 2011). The application of Foucault's thoughts on reward and punishment was intended to examine the reward structure in place for faculty, with special attention to the position of the actor (faculty) in relation to structures of power. The prisoner, or faculty member, as is described in Foucault's panopticon image, relates to a perceived organization and makes choices to achieve an elevated status. For contingent professors, then, working efficiently is key, as they tend to teach large undergraduate

courses and at multiple institutions (Hurtado, Eagan, Pryor, Whang, & Tran, 2012). To attain

status and "behave" in a panopticon for contingent workers points to a direction of focused

efficiency in completing teaching-related tasks, which may mean relying heavily on multiple

choice examinations, lectures, and fewer substantive student interactions. Collectively, theories

of agency suggest an unsustainable system for lower ranked faculty, which may set up them up

for subpar workplace performance.

Variations in Instructional Practice Seen Through Faculty's Departmental Affiliation

This investigation offers special attention to context, and faculty's disciplinary

environment influences their instructional practices and contact with students (Lindblom-Ylanne,

Trigwell, Nevgi, & Ashwin, 2006; Lueddeke, 2003). It is important to conceptualize departments

by their unifying and underlying characteristics, which is important for controlling contextual

factors to account for variability in student-faculty contact, pedagogy, and assessment. As a

result, the grouping of departments was driven solely by Holland's (1959; 1997) theory of

vocational personalities and work environments – a respected and established methodology and

framework for identifying departments by shared traits and characteristics, which impact the

work environment. This grouping process is discussed again in chapter three.

According to Holland, there are six common typologies, namely Realistic, Investigative,

Artistic, Social, Enterprising, and Conventional. Higher education scholars who call upon

Holland's work claim that every aspect of the theory can be applied to different kinds of

environments, proving extremely valuable for colleges and universities preparing students for

their professional fields (Smart, Feldman, & Ethington, 2000). Holland's environmental

definitions, example occupations, and personality traits are offered in Table 2.1, and were

methodologically vital for this study.

Table 2.1. A Summary of Holland's Personal and Environmental Typologies

Type	Example of Occupations/Fields	Typical Traits
Realistic	computer engineering, forestry surveyor, poultry sciences, and farmer	mechanical and athletic abilities, likes to work outdoors and with tools and machines, and might be described as conforming, frank, hardheaded, honest humble, materialistc, natural, normal, persisent, practical, shy, and thrifty
Investigative	biology, chemist, physicist, geologist, anthropologist, laboratory assistant, and medical technician	math and science abilities, and likes to work along and to solve problems; might be described as analytical, complex, critical, curious, independent, intellectual, introverted, pessimistic, precise, and rational
Artistic	composer, musician, stage director, dancer, interior decorator, actor, and writer	artistic skills, enjoys creating original work, and has a good imagination; may be described as complicated, disorderly, emotional, idealistic, imaginative, impuslive, independent, introspective, nonconforming, and original
Social	teacher, speech therapist, religious worker, counselor, clinical psychologist, and nurse	likes to help, teach, and counsel people, and may be described as cooperative, friendly, generous, helpful, idealistic, kind, responsible, sympathetic, tactful, understanding, and warm
Enterprising	buyer, sports promoter producer, business executive, salesperson, travel agent, supervisor, and manager	leadership and public speaking abilities, is interested in money and politics, and likes to influence people; described as acquisitive, agreeable, ambitious, attention getting, domineering, energetic, extroverted, impulsive, optimistic, self-confidence, and sociable
Conventional	bookkeeper, financial analyst, banker, tax expert, and medical laboratory assistant	clerical and math abilities, likes to work indoors and to organize things; described as conforming, careful, efficient, obedient, orderly, persistent, practical, thrift, and unimaginative

Note: Table adapted from Riardan and Bullock (2004)

Empowerment: A Tool for Conceptualizing Environmental Forces on Performance Ability

The potential effects that feelings of marginalization have on behavior in industry and the work environment has led to several perspectives that offer insight into the connection between feelings of disempowerment and workplace performance. First, social-structural empowerment, as described by Spreitzer (2008), begins the focus of enabling people within an organization to develop and exert autonomy. According to social-structural empowerment theory, employees at low levels of the organizational hierarchy can be empowered if they have access to opportunity, information, support, and resources (Spreitzer, 2008). That is, in order to feel empowered, people must have access to vital resources deemed requisite to successfully perform in a workplace. For part-time faculty, this includes having access to certain institutional resources in order to perform successfully. Support services can range widely, but, most commonly, part-time faculty ought to have access to a private email and an office space to engage students, at a minimum (Kelly, 1990). However, research suggests that having access to support services, although vital, is not sufficient for creating an empowered professional. While this perspective has garnered attention because it connects specific managerial practices to performance, it is limited in that it provides an organizationally-centric viewpoint and does not address the actual experience of empowerment (Spreitzer, 2008).

Second, psychological empowerment theory was extended by organizational and industrial psychologists to help understand such phenomena (Maniero, 1986, Nielsen, 1986; Thomas & Velthouse, 1990). The theory suggests that, regardless of the presence of important resources, employees must feel a sense of control in relation to their work. Specifically, this perspective refers to empowerment as the set of personal beliefs that employees have regarding their role in relation to the organization (Spreitzer, 2008). This stems from perceptions of

supervisors and colleagues. For part-time faculty, having access to services is imperative, but how they experience access and other facets of academe is very important for how they approach their work.

Taken collectively, the extent to which contingent faculty might feel psychologically empowered in higher education is dependent upon multiple factors. Some institutions might allow part-time faculty to participate in governance and committee work, thus affording higher impact, cultivating self-determination, and boosting the perceived competence of contingent workforce members in academe. However, studies suggest that, regardless of whether a contingent faculty member prefers the contingent status or not, both groups report experiencing alienation from their institutions and feeling like second-class citizens (Maynard & Joseph, 2008; Gappa, Austin, & Trice, 2007; Kezar & Sam, 2011).

Further, faculty's sense of agency and empowerment may differ by the characteristics of their work contexts and disciplines. How faculty experience their profession and discipline has the capacity to shape how they navigate their positions to satisfy the functions of their role. While some disciplines may emphasize a standardized approach to assessment and evaluation and limit the quality of interactions between students and teachers, a person-centered field may encourage collaborative activity and creative assignments. It is necessary to compare contingent faculty with their counterparts in the same discipline in order to obtain a clearer understanding of their effects and to avoid claims that conflate efficacy with disciplinary affiliation.

Conceptualizing an Efficacious Faculty

When relating the contingent professoriate to tenured and tenure-eligible full-timers, appraisals should account for structural employment differences, like the aforementioned incentive reinforcement for one group to interact differently with students than the other. My

inspection explores contingent faculty's educational practices by way of two important media:

the construction and evaluation of students' academic products vital to the educational process

and interactions intended to cultivate students' metacognitive abilities.

Defining Quality Student-Faculty Contact

A long line of inquiry suggests that faculty play a central role in undergraduate education

(Astin, 1993; Kuh & Hu, 2001; Pascarella & Terenzini, 1991, 2005, Umbach & Wawryzinski,

2005). Research suggests that there are several ways in which faculty engage and interact with

students known to positively influence student outcomes related to learning, retention,

persistence, and degree completion (Pascarella & Terenzini, 2005). Literature highlights that

faculty's interactions with students in undergraduate research programs promote retention

(Hippel, Lerner, Gregerman, Nagda, & Jonides, 1998), interracial interactions with faculty are

positively associated with students' intellectual self-confidence (Cole, 2007), and informal,

outside of the classroom faculty engagement increases students' motivation (Jaasma & Koper,

1999). The literature points out that student-faculty contact affects students' outcomes, and

positive interactions create more positive educational experiences. High levels of student-faculty

contact has been found to increase student engagement (Carini, Kuh, & Klein, 2006; Kuh, Cruce,

Shoup, & Gonyea, 2008; Kuh & Hu, 2001; Umbach & Wawrzynski, 2005).

As contingent faculty are usually paid by course, they may be discouraged by their

academic appointment status from spending time outside of class with students or engaging in

student-related activities, where they would have opportunities to engage more fully. Indeed,

contingent faculty may be less visible to students on campus than tenured and tenure-eligible

faculty, so it is imperative to advance our understanding of the nature of their interactions with

students. The current description and utility of student-faculty interaction is limited given that it

intrinsically disadvantages contingent faculty since they are neither incentivized by the current reward structure to maintain such interactions nor do they have the same amount of time to perform such a role as tenured and tenure-track faculty. Adjunct faculty tend to teach at multiple institutions, instruct large introductory courses, and find themselves with little or no office space (Hurtado et al., 2012; Leslie & Grappa, 2002), all of which make quality and frequent contact with student a difficult task. To bypass the issues inherent in traditional ways of discussing student-faculty interaction, this study purports that faculty contact with students ought to be re-conceptualized when examining contingent faculty phenomena, such that quality interactions are those that cultivate students' habits of mind – ways of thinking associated with life success.

Habits of mind and students' metacognitive outcomes. Investigators have labeled habits of mind as a type of "good thinking" that enables students to efficiently see patterns, experiment with ideas, effectively describe complex processes, visualize alternative solutions, and become innovators (Cuoco, Goldenberg, Mark, 1996). When students develop healthy habits of mind for lifelong learning, they tend to persist, manage impulsivity, practice understanding and empathy, reflect on their thinking (metacognition), and strive for accuracy in addition to engaging in many other documented positive behaviors (Costa & Kallick, 2000). On the other hand, if students are to implement such processing mechanisms, they must be presented with opportunities to hone cognitive skills known to produce such thoughtful thinkers. Although these skills are also developed outside instruction, they are formally cultivated in classrooms (Bean, 2011) at colleges and universities, and faculty members are responsible for extending such opportunities. More importantly, the durability of such habits might be dependent upon how threaded student-faculty interactions are throughout both the curriculum and other less formal types of student-faculty engagements.

According to Costa and Kallick (2009), instructors can interact with students inside the classroom with intention and purpose that encourages and promotes students' habits of mind. For instance, these authors suggest that faculty should integrate the habits directly into curriculum and utilize instruction as a medium for student-faculty interaction to grow students' habits of mind. When faculty interact with students, they should encourage their students to ask questions, seek solutions and analyze alternatives, support their opinions with solid reasoning, and curiously explore topics that might not be required in class.

According to Last (2007), these types of activities represent those that cultivate "creativity and good thinking" (p. 8), which is the lifeblood to successful business and industry and, "…continue to be requirements of those who get hired in this increasingly technical and complex world." (p. 9). Encouraging these types of activities (e.g., encouraging students how to seek out solutions, to be creative, to reason well, and to generally be curious about the world around them), is the necessary backbone of educational processes that are the foundation for an ever-changing future (Costa & Kallick, 2009). Jensen (1999) advocated for the role of faculty in cultivating students' habits of mind by highlighting the need for faculty to provide students with opportunities to do the aforementioned activities. The degree to which university professors do this – by way of their interactions with undergraduates – is not clearly understood. Further, how the contingent faculty workforce, known to experience disrespect and disregard from colleagues, engages in these best practices is less understood, despite evidence that suggests that the acquisition of habits of mind is fundamental for life success (Costa & Kallick, 2008).

Defining Effective Educational Practice

Student-faculty interactions aside, a large body of literature demonstrates the educational benefits of engaging students more fully in the learning experience (Astin, 1993; Cabrera,

(Colbeck, & Terenzini, 1998; Chickering & Gamson, 1991; Terenzini, Cabrera, Colbeck, Parente, & Bjorklund, 2001). Evidence suggests that how faculty instruct students, in addition to the methods they employ when evaluating coursework, affects student engagement. With exception to disciplines that are more likely to teach to a licensure examination leading to an authorization to perform services or practice, like medicine or law, assessment and evaluation methodologies are often characteristic and reflective of the professional. That is, faculty teaching modalities and evaluation procedures in said disciplines are designed to help students pass culminating examinations, whereas disciplines without extensive public regulation have less pressure on emphasizing facts, laws, or rules. Important characteristics of faculty demonstrate themselves through their teaching and procedures for evaluation, which may support and scaffold student learning or possess certain drawbacks.

How should faculty teach? The body of investigations exploring pedagogy and teaching is thick with evidence suggesting that the framework of student learning starts with the instructional techniques of faculty members. Threaded through the body of literature is the following common theme, which underscores that effective teachers utilize "active teaching that takes curriculum content to [students]" (Muijs & Reynolds, 2010, p. 2). This active teaching technique, which is associated with numerous positive cognitive outcomes, is also known as a learner- or student-centered approach to instruction (Cornelius-White, 2007; Cornelius-White & Harbaugh, 2009). While evidence demonstrates that there are multiple instructional modalities effective for more deeply engaging students in the learning process (Haynie, 2010; Levine & Lezotte, 1990) and that said modalities appear to slightly differ across content areas (Haynie, Holdzkom, McMillen, Tally, 2006; Zimmerman, 2011), numerous studies underscore student-

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centered teaching practices effective at increasing student learning and engagement (Cornelius-White, 2007; Huba and Freed, 2000).

It was not until 2002 after Maryellen Weimar published *Learner-Centered Teaching: Five Key Changes to Practice*, a heavily cited work in the student-centered educational practice literature, that scholars began taking more interest in the effects and associations of student-centered instruction on student learning and engagement. According to observations by Weimar in 2002, which were supported by a later volume of published findings (Weimar, 2013), teaching across colleges and universities remains focused on what the teacher knows and on a unilateral process of information transfer. That is, instructional staff members "have [remained] lecture-focused" (Weimar, p. 67), despite research underscoring the benefits of student-centered teaching approaches. More than a decade of empirical work has explored student-centered instruction, yet few investigations have unpacked how engaging said practices differs across faculty's academic rank and other characteristics associated with practice.

For the purposes of this study, I grounded my thinking on student-centered practice by drawing from Weimar's (2013) set of seven principles that, according to researchers, should guide the implementation and assessment of learner-centered teaching. In addition to helping carve out an evaluation framework for efficacious instructional practice, this set of principles is further supported by Chickering and Gamson's (1993) principles of effective educational practice.

While studies contrasting contingent faculty's pedagogy and classroom style against their traditional counterparts are scarce, research demonstrates that practice that incorporates active learning techniques and encourages cooperative learning among students enhances the quality of the undergraduate experience (Kuh, 2001). Chickering and Gamson (1993) specified effective

educational practice as including cooperative and active learning techniques. Chickering and Gamson's third principle of educational effectiveness outlines in-class active learning as course activities which are structured exercises that prompt challenging discussions, team projects, and peer critiques.

Weimar states first that teachers who practice learner-centered methods let students *do* more learning tasks, like discuss in groups and perform demonstrations or presentations. This also overlaps with the scholar's fifth principle, which recommends that faculty encourage students to learn from and with each other. Next, highly learner-centered teachers do less telling, or rely less heavily on extensive lecturing. They also give students options to accept more responsibility for their learning (i.e., allowing students to select topics for their course content, using student inquiry to drive learning, and permitting students to submit multiple drafts of work in order to monitor and track improvement). Weimar's final principle, which concerns the evaluation of students' intellectual products, is discussed later.

Despite more recent attention on effective teaching as a measure of good practice, we know little about how higher education's contingent academics compare with their traditional counterparts across measures of instruction. Few studies have contrasted contingent faculty with full-time tenured and tenure-track faculty, especially with regard to the extent to which the subgroups may differentially engage student-centered methods. Baldwin and Wawrzynski (2011) explored a similar phenomenon, but the authors looked solely at evaluation methods and failed to control for contextual measures, which, theoretically, may prevent certain faculty subgroups from performing optimally. It is theoretically insufficient to assert broadly that student-centered instruction is the only measure of effective instruction, as other evidence underscores the

effectiveness of alternative modalities, like experiential learning (Kolb, 1984; Kolb, Boyatzis, & Mainemeles, 2001).

   The added value of experiential learning for students. Early cognitive psychologists, namely John Dewey, Kurt Lewin, and Jean Piaget, diverged from behavioral learning theorists' views on education to shape a contemporary prescription for the conduct of instruction (Kolb, 1984). The theorists worked to expand the former epistemological constraints on educational processes by incorporating thinking on the acquisition of information, specifically the process of making meaning from direct experience (Kolb & Kolb, 2005). The primary characteristic of experiential learning that separates the concept from more traditional ideas on learning is that it awards space to students' consciousness and subjective experience (Kolb, 1984), instead of focusing exclusively on the acquisition and manipulation of information. Indeed, experiential learning theory conceptualizes learning as a *process* rather than an outcome. Rooted in the assumption that students' ideas are not fixed particles of thought, the theory posits that cognition is formed and re-formed through lived experiences (Ko, 2013). In other words, students do not exist in a vacuum where information is an item for extraction and deposit. Knowledge is something that is both individually shaped and contextually dependent. As such, more contemporary models of learning conceptualize learning as a process requiring the resolution of conflicts between dialectic opposites and require students to adapt information to the world around them (Kolb, 1984).

   Theoretical attention to experiential learning has led to research on its effects across several measures, including the acquisition of information and retention. Specht and Sandlin (1991) examined the effects of an experiential learning exercise used in an undergraduate accounting class and compared findings to those attained by a traditional lecture-based class.

Results, which were obtained from students' scores on quizzes, revealed that the experiential learning class showed no significant difference in scores, while scores in the lecture-based class dramatically decreased. According to the authors, the findings indicate that the primary difference in the two learning methods was the students' retention of information over time. Further evidence for experiential learning through instruction and course assignments suggests that as instructors rely on more experiential techniques, students' learning increases, as measured on multiple outcomes, like quiz and exam scores (Hamer, 2000).

Much of what we know regarding the effects and associated outcomes of experiential learning comes from studies employing a single institution or from investigations of a single class. We know surprisingly little about the profile of faculty members who are utilizing experientially-grounded instructional techniques, especially with regard to contingent faculty. This presents a significant gap in the body of knowledge on the prevalence of experientially-grounded instruction in classrooms and informs this study. To address this gap, this study explores how faculty across academic appointments report practicing this type of instructional modality. This study also gives special consideration to organizational context by examining these relationships while statistically controlling for the possibility of disempowering or disabling environments for part-time faculty, to arrive at a truer estimate of the relationship between appointment status and instructional practice.

How should faculty assess and evaluate students? Literature comparing contingent faculty with full-time tenured and tenure-track faculty has primarily unpacked pedagogical practices theorized to positively influence students' engagement in educational processes. While good teaching is prerequisite to knowledge acquisition, we know little about how contingent faculty evaluate students' assignments despite research suggesting that learning-centered

coursework activities add value to students' educational experiences (Kuh, 2001; Pascarella, 2001). Certain dispositions toward assessment and evaluation may be equally, if not more, influential than their teaching and brief didactic exchanges. Indeed, exploring pedagogy may be too simplistic, as assessment is the gatekeeper to future success (Nagy, 2000), fundamental to helping students solidify conceptual understanding (Brown, Bull, & Pendlebury 2013), and has the capacity to improve their future performance (Wiggins, 1988). Weimar's (2013) final principle indicates the importance of assessment by stating that faculty must use evaluation to promote students' learning, like calling upon peer feedback of students' work.

Investigations exploring how contingent faculty develop and administer their assignments and assessment are scarce. Baldwin and Wawrzynski (2011) attempted to explore the phenomenon, couching instructors' evaluation methods within teaching practices. Their investigation revealed that a significantly greater percentage of part-time and full-time non-tenure-track faculty were more likely to employ multiple choice examinations and less likely to use short answer essays. The researchers categorized the two methods as subject-centered or learning-centered, where the former was argued to be less effective. Overall, their study asserted that contingent faculty are less likely to use learning-centered strategies in developing and evaluating students' assignments than the other three faculty groups. Part-timers used fewer essay examinations, fewer term research papers, and were less likely to request multiple drafts of written work. While their study results were methodologically sound, Baldwin and Wawrzynski did not account for any exogenous variables, like measures of campus climate, that may help explain these differences in assessment practice. At a time when contingent faculty report fear of job loss and other employment insecurities (Valadez & Anthony, 2001), critically evaluating

students learning might be a risky practice for part-timers given that course evaluations largely determine their continued employment prospects.

Instructors who incorporate active learning techniques in their practice may differ with regard to how they shape and evaluate coursework. For instance, an instructor who conscientiously incorporates active learning holds high expectations on assignments, clearly communicates expectations, offers prompt feedback, engages students with one another, and calls upon students to deliver presentations. Active learning must be threaded throughout the educational experience, including the shaping and evaluation of assignments. In their practical guide to strategies to encourage active learning in the college classroom, Meyers and Jones (1993) suggest a wide range of tools with the intention of embedding instances of active learning throughout students' classroom experiences. For instance, they argue that assignments should include problem solving exercises, simulations, informal group work and collaborative activities that allow students the opportunity to team and interact with their peers, and a variety of other opportunities for knowledge application.

On the other hand, assignments that do not do fully engage students and fulfill these recommendations are considered subject-centered, which shifts the emphasis from the student to the instructor or environment (Nanney, 2004). Assignments and evaluation procedures using a subject-centered approach modify the learning environment such that knowledge acquisition is conceptualized as a unidirectional transaction from the teacher to the student (Clasen & Bowman, 1974, p 9). When assignments are evaluated from a subject-centered perspective, the student has fewer opportunities to engage with the material, and the intention to empower students in finding solutions is absent.

In sum, the extant literature on assessment and course evaluation suggests that faculty who create stronger learning environments for students offer clear instructions to on how to execute a task (Gibbons, 2002), create learning objectives to outline what they intend students to gain from assignments (Torrance, 2002), provide frequent feedback to students on their work (Chickering & Gamson, 1987; 1999), and offer students rubric and grading criteria (Andrade, 2000; Arter & McTighe, 2001; Stevens & Levi, 2000). These practices are in alignment with Chickering and Gamson's recommendations for effective practice and are conditions in which assessments are formative (Nicol & Macfarlane, 2006) and support students' learning (Gibbs & Simpson, 2004).

Instructor- and student-centered practices, which are known to differentially affect students' learning outcomes and educational experiences, lay out an effective framework to examine how faculty differ by appointment status, especially since by modeling such processes accounts for important environmental conditions. In particular, this framework will be used to examine differences by faculty appointment status across three outcomes related to measures of educator effectiveness (*practices that develop students' habits of mind for lifelong learning, student-centered instruction, and evaluation strategies*). Chapter 3 outlines the hypotheses associated with each of my research questions and provides additional details on the dataset, sample, variables, analyses, and limitations of this study.

Chapter Three:

Methodology

The analyses used in this study are intended to identify and test the relationships between faculty appointment status and several measures of educators' effectiveness, including assessment techniques and student-faculty interactions found to cultivate students' metacognitive skills. This study executes these comparisons while controlling for characteristics of the institutional environment, like policies, resources, or attitudes hypothesized to pose harm to empowering, collegial workspaces. To do so, the data from this study come from a national dataset that gathered information across a wide spectrum of faculty characteristics, attitudes, and perceptions. Using responses from the 2010-2011 Higher Education Research Institute's (HERI) Faculty Survey, the dependent variables capturing educator effectiveness were measured across the following three dimensions: interactions that develop students' habits of mind, faculty's use of student-centered teaching practices and experientially-grounded instruction, and student evaluation strategies faculty employ.

The study addresses the research questions across three types of analyses. First, descriptive analyses provide an initial indication as to whether these outcomes vary by faculty appointment status. These initial analyses will further break apart faculty appointments by gender and workplace satisfaction to further ground inferential tests. Second, I began by specifying a series of hierarchical linear models for each of the four outcomes to examine relationships between faculty appointment status and measures of educator effectiveness, net of other faculty characteristics, experiences, and attitudes. This second analytic phase also accounts for those institutional characteristics hypothesized to disempower faculty and attenuate sense of agency. Finally, I incorporated measures of empowerment for part-time faculty into the

hierarchical linear models to examine if and how the predictive power of negative environmental characteristics impacts measures of educator effectiveness.

This chapter reiterates the specific research questions with their accompanying hypotheses, details the theoretical framework guiding the study, describes the dataset and sample used for this investigation, and offers explanations regarding the specific methodological approach to answer the research questions.

Research Questions and Hypotheses

This section describes my five research questions guiding the study, as well as their accompanying hypotheses and rationales. Each question employs one aspect of educator effectiveness (*the cultivation of habits of mind and students' metacognitive abilities, student-centered teaching practices, and evaluation procedures)*, and explores differences by faculty appointment status (*part-time, full-time non-tenure-track, and full-time tenure-track)* in comparison to their traditional academic counterparts (*full-time, tenured faculty members).*

Research Question 1. Controlling for personal and professional characteristics as well as workplace context, does the frequency with which faculty use techniques aimed at enhancing students' habits of mind for lifelong learning vary by employment status?

Hypothesis and Rationale 1. I hypothesize that part-time faculty engage in practices to encourage students' development of metacognitive skills significantly less frequently than full-time non-tenure-track, tenure-track, and tenured faculty members. While all faculty subgroups engage in quality contact with students to cultivate students' habits of mind for lifelong learning, I expect that part-time faculty engage significantly less often in practices and interactions found to foster students' habits of mind.

Previous literature indicates that part-time faculty are less likely to employ practices linked to positive effects on students' engagement (Umbach, 2007). Research shows that contingent faculty challenged their students less than their traditional counterparts (Umbach, 2007), and such challenges have been negatively linked to students' metacognitive growth (Downing, Kwong, Chan, Lam, & Downing, 2009; Lin, 2001). Therefore, it follows that part-time faculty in this study might also demonstrate similar practice with regard to habits of mind – a rich metacognitive construct.

Research Question 2. Controlling for personal and professional characteristics as well as workplace context, do the ways in which faculty evaluate student work significantly vary across faculty employment statuses?

Hypothesis and Rationale 2. Assessment methods deemed to be strong are student-centered, which include short answer questions and tend to rely on collaborative exercises (Chickering & Gamson, 1987; 1999; Nicol & Macfarlane, 2006). Given that certain assessments are more time-intensive and evidence suggests that part-time faculty tend to invest less time into their practice than their counterparts (Umbach, 2007), I hypothesize that part-time faculty utilize student-centered assessments less often than their full-time, tenure-line colleagues in lieu of more time-efficient evaluations. Further, I hypothesize that the extent to which faculty engage in said practices is also be dependent upon disciplinary affiliation, since evidence points out that teaching in the social and behavioral sciences tends to be more student-centered than disciplines within the physical and life sciences (Birenbaum, 1997; Murray & Renaud, 1995; Neumann, 2001).

Research Question 3. Controlling for personal and professional characteristics as well as

workplace context, does the frequency with which faculty use student-centered and experientially grounded teaching practices significantly vary by employment status?

Hypothesis and Rationale 3. I hypothesize that having a part-time faculty appointment is associated with faculty engaging less in student-centered practices than any other employment status (full-time non-tenure track, tenure-track, and tenured). Evidence points out that part-time faculty are less likely than the other three faculty subgroupings to use student-centered instructional techniques (Baldwin & Wawrzynski, 2011). Full-time contingent faculty may behave more like their tenure-track and tenure colleagues in light of evidence brought forth by Baldwin and Wawrzynski, which demonstrated that full-time non-tenure-track faculty behaved more like their full-time tenure-track and tenured counterparts, such that significant differences emerged primarily between part-time faculty and the other three categories of faculty.

Research Question 4. Among part-time faculty, does a sense of an empowering workspace correlate with assessment and evaluation procedures?

Research Question 5. Among part-time faculty, does a sense of an empowering workspace correlate with their use of teaching techniques aimed at enhancing students' habits of mind for lifelong learning?

Hypothesis and Rationale for Questions 4 and 5. These hypotheses draw from a number of studies which collectively portray a working environment for contingent faculty that is disempowering and disrespectful (Burk, 2000) and hindering and challenging (Meixner, Kruck, & Madden, 2010). Due to the documented negative experiences of contingent faculty across higher education institutions, coupled with scholarship on industry which suggests that negative perceptions of organizations hamper an individual's performance abilities (Arthur, 1994; Huselid, 1995; Kluger & DeNisi, 1996), I hypothesize that, among part-time faculty,

performance across this study's measures increases as a sense of institutional empowerment increases. This hypothesis stems from the rationale that less engagement in stronger teaching practices (e.g., student-centered pedagogy) represents weaker performance, given that such practices are known to maximize motivation, learning, and achievement (Cornelius-White & Harbaugh, 2009; McCombs, 2011; McCombs & Miller, 2007). Further, in light of evidence that suggests contingent faculty may be less inclined to engage their college or university campus due to less inclusive working conditions, I predict that part-time faculty interact with students in ways that cultivate metacognitive development less often when perceptions of structurally disempowering characteristics exist.

Data Source and Sample

Survey Instrument

The data used in this study are drawn from the Cooperative Institutional Research Program (CIRP) at UCLA's Higher Education Research Institute (HERI). Specifically, this study uses HERI's 2010-2011 National Faculty Survey. Aside from collecting essential demographic information from faculty, the Faculty Survey hones in on topics which include how faculty spend their time, how they interact with students, their preferred methods of teaching, their perceptions of institutional climate, their perceptions of institutional climate, their primary sources of stress and satisfaction, and their personal and professional goals (Hurtado, Eagan, Pryor, Whang, & Tran, 2012). The survey also includes a specific subset of questions asked only of part-time faculty, which captured information about their experiences and perceptions of their work environments.

The Faculty Survey ultimately included responses from 37,933 faculty members at 498 colleges and universities. A total 4,169 part-time faculty responded to the survey. It is important

to indicate that a smaller number of survey respondents fit this investigation's inclusion criteria and were included in the study's analyses. Also, during this administration year of the survey, the HERI office solicited direct participation of faculty from an additional 94 institutions, since participation was initially higher for small private colleges (Hurtado, Eagan, Pryor, Whang, & Tran, 2012). The 2010-2011 Faculty Survey instrument is found in Appendix A.

While the Faculty Survey provides context for the institutional environment, data were also drawn from the Integrated Postsecondary Education Data System (IPEDS) and merged with faculty responses. The IPEDS data, which come from the National Center for Educational Statistics (NCES) at the U.S. Department of Education, inform this study with information related to institutional characteristics. It is a requirement for any college or university receiving federal funds to participate in the annual reporting process to IPEDS. Data collected by IPEDS are readily available for most postsecondary education institutions in the nation (NCES, 2010). The present investigation utilized a variety of institutional variables from IPEDS, such as enrollment, student-faculty ratio, and institutional type, among others.

Drawing data from these sources offered several strengths to the current investigation. Although my primary data source is from a single administration year of the Faculty Survey, the 2010 Faculty Survey provides an opportunity to assess the campus culture for contingent faculty members. Items from the Faculty Survey assist in determining what types of teaching practices faculty use. Data from these sources are most appropriate for examining the present study's research questions.

It is important to discuss a few disadvantages to using CIRP data. Specifically, responses from the Faculty Survey possess sampling bias. Generally, full-time tenure-track and tenured faculty tend to be overrepresented in the sample, as well as small, private colleges. HERI

accounts for such disproportionate responses by calculating a population weight that adjusts the sample of full-time undergraduate teaching faculty to be nationally representative, but I opted to use the unweighted sample given that the focus of this study is on part-time faculty. Perhaps the largest disadvantage found within the HERI Faculty Survey is that institutions administer the survey locally and do not systematically survey their part-time faculty. These and other limitations are discussed in more depth later in this chapter.

Sample

The study's sample final analytic sample included a final count of 18,591 tenured, 6,439 tenure-track, 4,527 non-tenure-track, and 3,891 part-time faculty members. It should be noted that these figures are slightly smaller than the total quantity of responses, as tenured faculty who self-identified as part-timers were excluded from the sample. This decision was made due to the fact that tenured faculty are traditionally thought of as full-time academics. At the same time, part-timers were identified using a self-reported item on the survey, which requested information from faculty on the full- or part-time status of faculty's employment status. If a faculty indicated working part-time, in addition to an off-tenure-line status, then the instructor was designated as a part-time academician. Among full-time, tenured faculty, the final sample was predominately white (86.4%) and male (58.8%). Sixty percent of tenured faculty taught at private institutions, and 34% of tenured faculty taught within departments belonging to the social sciences (34.6%). On the other hand, part-time faculty members were concentrated in enterprising and artistic disciplines in addition to the social sciences. Part-timers in the sample were predominantly found at 4-year institutions (74%), compared to 26% at universities. Interestingly, male faculty were dominant only in the case of full-time, tenured faculty, while the sample's remaining three faculty subgroups were comprised of a female majority. Gender parity was most closely reached

among part-timers, in which case 47.2% were male and 52.8% were female. Table 3.1 depicts a full frequency and percentage breakdown of demographic characteristics.

Table 3.1. Selected Demographic Characteristics by Faculty Appointment

	Full-Time, Tenured		Non-Tenure-Track, Full-Time		Tenure-Track		Part-Time	
Total	n	%	n	%	n	%	n	%
Race/Ethnicity								
Asian American/Pacific Islander	731	4.0	151	3.4	497	7.9	132	3.5
African American/Black	385	2.1	146	3.3	222	3.5	133	3.5
Mexican/Latino	354	1.9	124	2.8	173	2.7	109	2.9
White	15,754	86.4	3,718	83.7	4,942	78.4	3,147	82.6
Two or More Ethnicities	613	3.4	295	2.0	165	2.6	97	2.5
Sex								
Male	10,813	58.8	1,969	43.8	3,024	47.6	1,817	47.2
Female	7,576	41.2	2,525	56.2	3,333	52.4	2,036	52.8
Departmental Affiliation								
Realistic	1,411	8.1	282	6.9	424	7.1	224	6.2
Investigative	3,511	20.2	618	15.2	1,052	17.6	354	9.8
Social	6,022	34.6	1,484	36.4	2,345	39.2	1,293	35.9
Enterprising	1,702	9.8	496	12.2	621	10.4	656	18.2
Artistic	4,461	25.6	1,055	25.9	1,421	23.7	1,036	28.8
Conventional	286	1.6	137	3.4	123	2.1	40	1.1
Institutional Type								
Public	7,421	40.0	2,467	38.4	1,711	38	1,400	36.8
Private	11,134	60.0	3,961	61.6	2,787	62	2,400	63.2

Variables

This section details the three proposed outcome measures as well as the independent variables used to predict the outcomes.

Dependent measures. As I defined in chapter 2, this study conceptualizes an efficacious faculty member as one who interacts with students to cultivate habits of mind, while implementing student-centered approaches in instruction and evaluation practices. As such, items used to comprise the study's dependent measures are presented. The selection of variables to compose outcome measures was informed by literature on student-centered practices and positive metacognitive outcomes for students. The variables are all taken from the 2010-2011

Faculty Survey. A detailed list of all dependent variables, including their coding, is available in Appendix B.

In an attempt to confirm that variables will hold together as composite measures, namely for habits of mind, factor analyses and internal reliability analysis (Cronbach's alpha) were considered. Exploratory factor analysis revealed no emergence of subfactors across any of the study's outcome variables. Factor analyses utilized principle axis factoring with promax rotation (Russell, 2002). Details concerning the factor analysis technique for construction of my latent variable(s) are discussed further in the analytic approaches section of this chapter.

Dependent measure #1: Habits of Mind. Habits of mind, as defined in this investigation, includes a number of different elements from questioning and problem posing, to taking responsible risks, to applying past knowledge to new situations. Calling upon prior literature which articulated the fullness of habits of mind as a way of thinking that educators should shape and grow (Costa, 1987; Costa & Kallick, 2004; Costa & Kallick, 2000), I constructed a factor from a group of 12 variables, displayed below in Table 3.2, which measured how often faculty

Table 3.2. Factor Loadings for "Habits of Mind" and Reliability Estimate

Variables	Factor Loadings	Item Means
Look up scientific research articles	.41	2.90
Revise their papers to improve their writing	.53	2.77
Take risks for potential gains	.58	2.68
Explore topics on their own	.62	2.64
Evaluate the quality or reliability of information	.66	2.24
Seek solutions and explain them to others	.66	2.57
Accept mistakes as part of the learning process	.67	2.38
Seek alternative solutions to a problem	.68	2.45
Seek feedback on their academic work	.68	2.72
Ask questions in class	.69	2.70
Support opinions with logical arguments	.69	2.71
Integrate skills and knowledge from different sources	.72	2.45

α= .67

structure their courses to promote the development of habits of mind for lifelong learning among students. All items presented loaded on a single construct, negating the need for a rotation. The variable names, factors loadings, and individual item means are exhibited below.

The totality of variables from the Faculty Survey displayed above are intended to unpack the richness of the construct. Although researchers have not settled on any single definition for this construct, I considered research by Ames (1997), Briggs (1999), and Ennis (2001), which shed light on a number of identifiable characteristics of effective thinkers. These characteristics have been labeled as "Habits of Mind" (Resnick, 2001). Taken together, these variables tap into several of the characteristics which compose the construct, namely when students think about their thinking (metacognition), striving for accuracy, questioning and posing problems, applying past knowledge to new situations, data gathering through sensing, taking responsible risks, and learning continuously (Costa & Kallick, 2000). In further support of these variables as measures of habits of mind for lifelong learning, identical items were extracted from the CIRP's Freshman Survey (TFS) and Your First College Year (YFCY), designed and used by Hurtado and DeAngelo (2012) and DeAngelo and Hurtado (2009) to explore academic activities associated with success by the end of the first year of college. The items composing the habits of mind factor are all measured on the same scale, which asks faculty from all academic appointments to rate the extent to which, in their interactions with undergraduates, they encourage them to perform the habits previously described. The items are measured on a three-point scale of "not at all" to "frequently."

Dependent measures #2 and #3: Instructional practices. As defined in this study, faculty members who employ the strongest assessment practices engage in learning-centered approaches (Baldwin & Wawzynski, 2011), which has been further articulated as good practice

for teaching in undergraduate education (Chickering & Gamson, 1987). Although investigations have more commonly applied a learning-centered lens for evaluating pedagogy, the framework lends itself well for examining a wider scope of practice, including educational assessment. The learning-centered approach functions to operationalize the second measure of educator effectiveness used in this study, which serves to explore the assessment behaviors of part-time, full-time non-tenure-track, and full-time tenure-track and tenured faculty.

Undergirding the operationalization of learner (student)-centered assessments are the following two thoughtful principles articulated by McComb and Miller (2007): "1. They [pedagogies] define the nature of learning, as well as the various cognitive, metacognitive, affective, motivational, and social processes that support learning. 2. They [pedagogies] incorporate the developmental and other individual differences that define unique learner needs and learning experiences." (p. xi). These principles guided the selection of variables to explore how contingent faculty members compare with their tenured and tenure track colleagues in teaching practices. Table 3.3 shows the variable type and names used to explore faculty's student-centered instructional disposition. Higher values across these items indicate a faculty member who engages more in learner-centered practice in the classroom, a space of formal engagement between students and faculty. Item response theory (IRT) (Allen & Yen, 2002; Embretson & Reise, 2000) was used to develop and validate the latent variables, discussed and presented further. IRT incorporates a model-based approach to estimating latent traits and contrasts with classical test theory, which is essentially model free (Thissen & Steinberg, 2009). Also, IRT assumes that latent traits have a population distribution, that an appropriate item response model can estimate the conditional probabilities of response given the latent trait of interest, and that item responses are independent (Thissen & Steinberg, 2009). The latent

constructs calculated using IRT in this study have a population mean of 50 and a standard

deviation of 10.

Table 3.3. Parameter Estimates of the Student-Centered Pedagogy IRT Construct

Variable Type and Name	FAC			
	A	B1	B2	B3
Evaluation Method: Student presentations	1.85	-1.64	-0.01	0.87
Evaluation Method: Student evaluations of each others' work	1.53	-0.55	0.98	1.78
Instructional Method: Class discussions	1.70	-2.84	-1.39	-0.65
Instructional Method: Cooperative learning (small groups)	2.30	-1.54	-0.39	0.26
Instructional Method: Experiential learning/Field studies	1.30	-0.55	0.82	1.66
Instructional Method: Group projects	1.82	-1.08	0.43	1.31
Instructional Method: Student-selected topics for course content	1.21	-0.76	1.27	2.35
Instructional Method: Reflective writing/journaling	1.37	-0.24	1.17	2.04
Instructional Method: Using student inquiry to drive learning	1.26	-2.02	0.03	1.21

The items in Table 3.3 operationalize student-centered classroom teaching. Although

there is no specific instrument that delineates student-centered practices, the previously described

principles, coupled with Chickering and Gamson's (1999) landmark piece on good practice for

undergraduate education, guided the study's conceptualization. Each variable used to compose

an overall measure of faculty's instructional method was individually mapped onto a student-

centered practice (McComb & Miller, 2007) or recommendation by Chickering and Gamson.

Both sets of principles guided the selection of items from HERI's Faculty Survey. The items,

which asked faculty to rate in how many taught courses they incorporated a particular teaching

practice, included the following response options: all, most, some, or none.

However, while the variables named in Table 3.3 comprise a student-centered pedagogy

construct, it is insufficient to rely exclusively on this metric as an indicator of effective teaching

practice, which is situated as a larger construct in this study. As mentioned, another body of

evidence points out that experiential learning, which discusses learning as a process whereby

knowledge is created through the transformation of experience (Kolb, 1984), is necessary for the

acquisition of information and, ultimately, student success (Baxter-Magolda, 1999; Cohen, 1993;

Kolb & Kolb, 2012; Zull, 2002). This body of research serves to justify the grouping of four

items from the Faculty Survey. These items were factor analyzed to represent an experientially-

grounded teaching construct. Using principle axis factoring with promax rotation, items were

reduced to represent a single construct. All items presented in Table 3.4 loaded on a single

construct, negating the need for a rotation or a single construct request. Again, as a sensitivity

analysis, the construct was tested for latent representation across the faculty subgroups,

especially since the items were taken from the same survey instrument. Results across the four

faculty subgroups were nearly identical. The items ask faculty members to rate the extent they

use these teaching methods in their courses and included the following response options: all,

most, some, or none. It should also be noted that the Cronbach's alpha for the construct was

slightly below the standard and widely-accepted .65 threshold. However, I proceeded with the

measure due to its strong grounding in theory and competing evidence which suggests that the

coefficient's utility is less meaningful when it is derived using data from a single survey or test

administration (Sijtsma, 2009).

Table 3.4. Factor Loadings for "Experientially-Grounded Teaching" and Reliability Estimate

Variables	Factor Loadings	Item Means
Using real-life problems	.45	2.08
Recitals/Demonstrations	.48	1.78
Community service as part of coursework	.54	2.84
Experiential learning/Field studies	.78	1.40

α= .61

Dependent measure #4: Student assessment and evaluation practices. The study's final

dependent variable explores differences in evaluation practices by faculty appointment status.

Empirical work suggests that certain evaluation practices, like essay examinations, student

presentations, and similar practices, are considered evaluation techniques associated with

enhanced levels of student-learning (Boyle, 2003; Boyle, 2008; Bonwell & Eisen, 1999).

Informed by these findings, this study conceptualizes a final prong of educator efficacy based on

faculty's classroom evaluation practices such that learner-centered faculty members will more

frequently call upon: essay or short-answer examinations, student presentations, student

evaluations of other students' work, and other opportunities for learning, including quizzes. This

grouping of variables was factor analyzed to represent a student-centered evaluation construct.

The variables analyzed to represent learner-centered evaluation loaded on a single factor when

utilizing principle axis factoring with a promax rotation. Items exploring faculty's evaluation

practices on the 2010 Faculty Survey were asked to part-time, full-time non-tenure-eligible,

tenure-track, and tenured faculty. The items, shown in Table 3.5, were all scaled identically and

asked faculty in how many of their courses they taught using any of the evaluation methods

listed below. It should also be noted that the Cronbach's alpha for the construct was slightly

below the standard and widely-accepted .65 threshold, as was the case for the previous construct.

In the same fashion, I proceeded with the measure due to its strong grounding in theory and

competing evidence which suggests that the coefficient's utility is less meaningful when it is

derived using data from a single survey or test administration (Sijtsma, 2009).

Table 3.5. Factor Loadings for "Student-Centered Evaluation" and Reliability Estimate

Variables	Factor Loadings	Item Means
Weekly essay assignments	.40	2.64
Student evaluations of each others' work	.54	2.50
Term/research papers	.56	2.00
Student presentations	.69	1.84
$\alpha = .63$		

Independent measures. The selection process for the study's independent variables differed across research questions. Research questions one, two, and three were primarily concerned with exploring differences, if any, and items were selected from the survey that were either related to faculty's background characteristics or thought to be conceptually connected to their practice (e.g., attitudinal or behavior measures pertinent to teaching or other academic work). The selection process changed for the fourth and fifth research questions, such that variables were included to reflect the change in the modeling process in order to account for the effects of empowering and agentive work contexts. Guiding this change in process were the study's theoretical underpinnings, namely social-structural and psychological empowerment theories. Further differentiating my variable selection for research questions four and five was the isolation of the sample to include only part-time faculty members. As a reminder, these final two research questions investigated whether or not certain characteristics of empowering and agentive working conditions were associated with the study's measures of educator effectiveness for part-time faculty.

A final list of variables is presented in detail in Table B2 in Appendix B. This list will be reduced in the final multivariate analyses, through the use of descriptive statistics, missing data analysis, and factor analysis. To begin, the variables in the iterative model specifications are reduced based on the minimum sample size for faculty appointments. Recommendations in the social and behavioral sciences minimum range of 10-50 cases per variable (Bartlett, Kotrlik, & Higgins, 2001; Osborne, 2000). As a result, I eliminated variables to ensure that there the minimum threshold is met, permitting judicious estimates of association (Babyak, 2004). Next, I eliminated measures that are missing data for more than 15% of cases from the HLM analyses. Last, I was mindful of parsimony when specifying my final statistical models. That is, in the

final analytic phase of the study, some independent variables were removed from analyses if they are found to be non-significant to a particular outcome.

Faculty background characteristics and academic department. In light of the previously mentioned evidence demonstrating that faculty instructional approaches tend to differ by several characteristics, including discipline and gender, several covariates were included throughout the statistical modeling process. Namely, this study accounted for differences across the investigations outcome measures by gender and discipline. In addition to looking at variation across faculty subgroups, the study's final statistical models accounted for an instructor's race, age, gender, and disciplinary affiliation – vital background characteristics of instructional staff associated with teaching practices (Clark, 1987; Sax, Astin, Arredondo, & Korn, 1996; Smart, Feldman, & Ethington, 2000).

The Faculty Survey asks instructors to identify the department of their current faculty appointment. This item yielded a total of more than 30 different departments, from agriculture to transportation and materials moving. Disciplinary affiliations were reduced to fit into one of Holland's six environmental typologies, in order to derive more interpretable parameter estimates and preserve the integrity of parsimony during the model building process. Each departmental description was assessed for its fit into Holland's description, which were previously displayed in Table 2.1.

Institutional characteristics and climate perceptions. Provided that other aspects of the environment have the potential to disempower and disengage academic workers from institutions, like general feelings of professional autonomy, teaching loads, and the like, it is important to capture a more complete image of faculty discontent. This is especially important since studies have shown academe to be particularly challenging, unsupportive, and

marginalizing for contingent faculty members (Baldwin & Chronister, 2001; Burk, 2000; Gappa, Austin, & Trice, 2007). Variables were chosen from the Faculty Survey in order to develop understanding of various facets of faculty's environment, especially in light of findings that suggest that feelings of disconnection can lead to disengagement with students (Meixner, Kruck, & Madden, 2010). To address this area and any subsequent spillover effects that dissatisfaction can have on educational practice, the grouping of independent variables was expanded to include perceptions of the campus climate, which represent other sources of faculty's sense of fair and equitable treatment. Specifically, this study employs composite measures of faculty members' satisfaction with the workplace and compensation in addition to a measure of work-related stress. These composite measures, built and validated using IRT, were developed by HERI.

The first of three environmental measures explored job satisfaction and are outlined in Table 3.6, along with the construct's parameter estimates. All variables were on the same response scale, which asked faculty to rate their level of satisfaction with various aspects of their position. The scale was comprised of the following options: very satisfied, satisfied, marginally satisfied, not satisfied, or not applicable.

Table 3.6. Variables and Parameter Estimates of the Faculty Workplace Job Satisfaction IRT Construct

		FAC			
Variable Type and Name		**A**	**B1**	**B2**	**B3**
Satisfaction:	Autonomy and independence	1.57	-4.19	-2.63	-1.54
Satisfaction:	Professional relationships with other faculty	2.55	-3.10	-1.84	-0.93
Satisfaction:	Competency of colleagues	1.92	-3.46	-2.18	-1.11
Satisfaction:	Departmental leadership	1.51	-3.22	-1.58	-0.75
Satisfaction:	Course assignments	1.33	-3.24	-2.57	-1.50

The second measure of campus climate, shown in Table 3.7 with IRT parameter estimates, explores faculty's satisfaction with their compensation package. Workplace satisfaction, which serves as a motivator for student-centeredness, represents another challenging situation for contingent faculty, as they, on average, earn significantly less than their full-time

counterparts (Benjamin, 1999; Haeger, 1998). Items extracted from the Faculty Survey to compose the construct were all scaled identically: very satisfied, satisfied, marginally satisfied, not satisfied, not applicable.

Table 3.7. *Variables and Parameter Estimates of the Faculty Compensation Satisfaction IRT Construct*

Variable Type and Name		FAC			
		A	B1	B2	B3
Satisfaction:	Salary	1.40	-4.60	-1.27	0.05
Satisfaction:	Retirement benefits	1.48	-2.22	-1.40	-0.37
Satisfaction:	Opportunity for scholarly pursuits	2.18	-1.70	-0.96	-0.04
Satisfaction:	Teaching load	1.27	-3.46	-1.43	-0.26
Satisfaction:	Job security	1.26	-3.87	-2.02	-1.01
Satisfaction:	Prospects for career advancement	1.25	-2.06	-0.99	0.05

The third measure of college or university context explores the amount of career-related stress faculty members report experiencing. The variables used to comprise the construct are presented on the following page in Table 3.8 along with their respective parameter estimates. These items gathered information from faculty on their level of stress from participating in committee work or shared governance, teaching loads, student- or colleague-driven difficulties, and publishing demands. Central to the study's measure of context, these items were selected from the derived set of IRT constructs on the Faculty Survey given prior research that underscores that such stresses impacts instruction (Kezar & Sam; 2011; 2013; Kezar, 2012; Schuster & Finklestein, 2006). All variables used to comprise the construct were asked on the same scale and asked faculty to indicate the extent to which each of the following has been a source of stress during the last two years. Responses options included: extensive, somewhat, not at all, or not applicable.

Table 3.8. Variables and Parameter Estimates of the Faculty Career-Related Stress IRT Construct

	FAC			
Variable Type and Name	**A**	**B1**	**B2**	**B3**
Source of Stress: Committee work	1.25	-2.53	-0.35	2.01
Source of Stress: Colleagues	1.14	-4.49	-0.41	2.07
Source of Stress: Students	1.08	-5.15	-0.40	3.07
Source of Stress: Research of publishing demands	1.13	-2.63	-0.38	1.8
Source of Stress: Institutional procedures/red tape	1.17	-3.67	-0.65	1.68
Source of Stress: Teaching load	1.38	-3.39	-0.37	1.48
Source of Stress: Lack of personal time	1.52	-4.35	-1.28	0.74
Source of Stress: Self-imposed high expectations	1.09	-5.08	-1.71	1.13

Measures of empowerment. Previous scholarship indicated that many institutional contexts lack supportive policies and practices, which may reflect negative, if not hostile, work environments for contingent faculty (Baldwin & Chronister, 2001; Gappa, Austin, & Trice, 2007). Adjunct faculty members report feeling disempowered, disrespected, neglected, and alienated (Burk, 2000). A healthy, inclusive, and supportive work environment is a prerequisite to effective practice, regardless of other institutional characteristics. Indeed, efficacious teaching is centered around the existence and perception of empowering workspaces. As such, items from the Faculty Survey were factor analyzed to represent two vital components of positive working conditions for faculty. The selection of such items was guided by the investigation's theoretical framework, which posits that both supportive work elements and the perception of said elements must be present in order for workers to fulfill job responsibilities and meet employment demands (Spreitzer, 2008). The survey questions ask part-time faculty a variety of items that tap into their perceptions that extend beyond the study's earlier mention of campus climate, such that faculty offer opinions concerning their feeling of respect from students, full-time faculty, and overall relationship quality with administrators. More to the point, through the items showcased in Table

3.9, part-time faculty expose their perceptions on employment security guarantees and support service access.

Table 3.9. Percentage Aggreement for Variables Comprising the Psychological Empowerment Factor for Part-Time Faculty

Variables	Part-Time Faculty	
	Agree Strongly	Agree Somewhat
Receive respect from students	3.61	0.61
Have access to support services	3.20	0.83
Have good working relationships with the administration	3.28	0.78
Are respected by full-time faculty	3.12	0.87

The study's empowerment framework further specifies that the perception of supportive workplace aspects is a matter of their existence, or, in the case of relying upon survey data, their perceived existence. To unpack this facet of the theoretical framework and to extend beyond the measures of campus climate previously outlined, I extracted several items from the Faculty Survey. These items ask about the availability of resources to part-time faculty, including: use of private office, shared office space, a personal computer, an email account, or a phone/voicemail. All items were placed on the same scale, with faculty specifying either the presence or absence of a given resource or support.

Table 3.10. Factor Loadings for "Psychological Empowerment" and Reliability Estimate

Variables	Factor Loadings
Receive respect from students	.42
Have access to support services	.50
Have good working relationships with the administration	.73
Are respected by full-time faculty	.74
$\alpha = .69$	

Missing Values Analysis

I used the expectation-maximization (EM) algorithm to address missing data as a way to preserve the study's sample size. The EM algorithm is recommended to other types of missing

values analysis because it uses maximum likelihood estimates to replace missing values (McLachlan & Krishnan, 1997). Other methods of missing values analysis, like mean replacement, which replaces all missing values for a specific variable with the grand mean of the variable, provide less accurate estimates of the missing value than the EM algorithm (McLachlan & Krishnan, 1997). As noted previously, variables that have more than 15% missing cases were omitted from my analyses. Thus, I only used the EM algorithm to replace missing values on those variables that were missing fewer than 15% of total cases.

Factor Analyses

As previously mentioned, items will be factor analyzed in an attempt to reduce the number of dependent variables used in statistical modeling procedures. To maximize the strength of each unique factor, principle axis factoring with promax rotation will be used (Russell, 2002). Initially, items were included which were conceptually linked to certain constructs (i.e., items to comprise learner-centered evaluation as determined by literature) were factor analyzed as a first step toward building the latent variable. However, more than one factor had emerged in some cases and items were removed one-by-one until analyses extracted a single factor. The removal of items from the initial analyses was driven by factor loading, such that variables with the highest factor loadings for a particular construct were removed in order to rerun the analysis to determine unidimensionality.

Although I awarded special attention to extraction and rotation when developing my factors, evidence suggests that extraction and rotation methods have much less effect on the resulting factor structures than commonly thought, since factor structures have been shown to be highly robust across different extraction and rotation methods (Guadagnoli & Velicer, 1988; Snook & Gorsuch, 1989; Watson, Clark, & Harkness, 1994). However, to align this work with

common approaches widely adopted in the social and behavioral sciences, my factors were created if their eigenvalue was higher than 1.0, and if analyzed items had factor loadings at .40 or higher.

To preserve internal consistency of my factors, I initially attempted to maintain a minimum Cronbach's alpha of .65 to gauge reliability. However, I departed from this standard in light of competing evidence (Bentler, 2009; Green & Yang, 2009; Sijtsma, 2009) when building two constructs, which were previously described. I also focused my attention on the correlation of items used to compose the study's scale, as some suggest that the alpha coefficient is of limited utility in establishing scale unidimensionality, as it is a truer measure of internal consistency rather than homogeneity (Clark & Watson, 1995). To further support this assertion, others have argued that the alpha coefficient, while deserving of inspection, is an ambiguous indicator of internal consistency because it is a function of the following two parameters: the number of test items and the average intercorrelation among the items (Cortina, 1993; Cronbach, 1951). In circumventing this potential limitation, I adopted a more complex view of alpha, as previously detailed, in that it cannot simply be interpreted as an index for the internal consistency of a scale (Panayides, 2013; Tavakol & Dennick, 2011).

Last, while the factors were created at a total level, I ran separate analyses by faculty appointment status to ensure that the factors were near equally unidimensional and reliable for part-time, full-time non-tenure track, full-time tenure-track, and tenured faculty. These sensitivity analyses revealed no additional threats to unidimensionality or reliability.

Analytic Approaches

I divide data analysis for this study into two phases. First, I examine research questions one, two, and three descriptively by examining frequency distributions, correlations, and cross-

tabulations. By using these analyses, I explore how faculty across appointment type are currently constructing course assignment, assessing students' knowledge, and interacting with them in the classroom to advance students' metacognitive development. Analysis of variance was used to inspect educators' effectiveness by gender and environmental type. Second, during the next phase, I examine all research questions inferentially using hierarchical linear modeling as my preferred statistical technique for examining associations between appointment status and measures of effectiveness. In addition to this, the final two research questions (four and five) accounted for measures of empowering and agentive work environments during the model specification process in order to identify possible changes in associations between faculty appointment status and the study's outcome measures.

Descriptive Analyses

The first phase of data analysis used several descriptive analyses (frequency distributions, means, and standard deviations) to understand how faculty approach instruction, evaluate students' work, and make contact to impact metacognitive growth. While descriptive analyses used in this study did not serve to evaluate my predictions, they functioned to reinforce hypothesis testing by providing a detailed descriptive understanding of faculty differences across measures.

Analyses conducted within the first phase of the investigation intended to describe the study's population, to inspect the overall distribution of the variables by faculty appointment status, and to consider gender as an intervening variable as previous literature would suggest. More importantly, description of the study's outcomes was disaggregated by faculty subgroupings, as well as by a categorical variable that assigned faculty into one of three groups based upon their scores on the measure of career-related stress and workplace satisfaction.

Groupings were ordinal, and ranged from low, average, or high scores, such that a faculty with a high score on workplace satisfaction represented a high level of satisfaction. Finally, albeit an inferential statistic, analyses of variance (ANOVA) were run on the study's dependent variables by faculty appointment status, by appointment status and gender, and by the described environmental type in order to assess any baseline differences, prior to running the multivariate inferential procedures described below. The assumptions of the ANOVA were inspected and are very briefly mentioned prior to the introduction of findings.

Hierarchical Linear Modeling

In order to address the questions outlined earlier, I used one application of hierarchical linear modeling (HLM) dependent upon the nature of the outcome described in the study's research questions, specifically HLM for continuous dependent variables. HLM is a multi-level statistical technique; its use is appropriate for a study employing nested data and that is primarily concerned with disentangling institutional and faculty effects and associations. HLM is well-suited as the statistical approach for this investigation, since other single-level approaches, like Ordinary Least Squares (OLS) regression, assume that a simple random sampling technique was employed during data collection – an assumption that is not satisfied in a complex survey design such as those used by the HERI Faculty Survey (Ethington, 1997; Thomas & Heck, 2001). HLM is further advantaged due to the expectation of OLS that data will appear homoscedastic, or as having equal variability. For this investigation, that would mean that selecting OLS alternatively would assume that, regardless of the institutional workplace, there will be equal standard deviations on the study's measures of educator effectiveness. Specifically, a series of HLM regressions will be conducted to examine the relationships between faculty appointment status and the study's measures of educator effectiveness.

Given that my data are clustered (faculty within colleges and universities) and work context was shown to impact the experiences of faculty members, HLM is the most appropriate analytic strategy since the technique partitions variance between the individual (faculty member) and group (college or university) and accounts for the homogeneity of errors within groups (Raudenbush & Bryk, 2002). Accounting for both the dependence among faculty observations (shared experiences) at an institution and clustering effects prevents misestimating standard errors, which can cause an increased likelihood of a false claim that a variable is statistically significant when it is not, a Type 1 error (Bryk & Raudenbush, 1992; Raudenbush & Bryk, 2002). The technique affords the violation of other multivariate assumptions by allowing for unbalanced groups (Raudenbush & Bryk, 2002), which is a particularly attractive feature since faculty appointments are not equally distributed across institutions.

However, before running HLM analyses, I followed guidelines (Raudenbush & Bryk, 2002) that suggest calculating the intra-class correlation coefficient (ICC) for both my full sample (all faculty) and sample only containing part-time faculty members. Raudenbush & Bryk's (2002) general guideline suggests adopting a 10 percent ICC as further justification for employing HLM as the preferred analytic approach. For this study, the implication would be that 10 percent of the variation in the outcomes ought to be attributed to institutional characteristics rather than individual differences. However, my intra-class correlation coefficients were consistently below this threshold. I proceeded with HLM, as scholars have underscored the inappropriateness of using single-level analyses, like ordinary least squares regression, on multilevel data (Heck & Thomas, 2000; Muthen & Sattora, 1995; Thomas & Heck, 2001).

Across all nested models, ICCs ranged from 1.5 to 4.2 percent. My first set of models, which explored the extent to which faculty interacted with students to cultivate habits of mind

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for lifelong learning, produced an ICC of 2.4 percent. This indicated that only 2.4 percent of the variability in faculty's habits of mind contact with students is due to institutional characteristics. Models exploring faculty's use of learner-centered evaluation methods, student-centered pedagogy, and experientially-grounded instruction revealed ICCs of 2.9, 4.2, and 4.0 percent, respectively. Similar ICCs emerged from analyses of the subset of part-time faculty, such that 2.7 and 2.1 percent of the variability in learner-centered evaluation and habits of mind was due to between-school differences rather than part-time faculty characteristics, respectively. Less variability due to characteristics of institutions was found in how strongly part-time faculty employ a student-centered pedagogy (1.7%) and call upon experientially-grounded instructional practice (1.5%).

Variable centering. Choosing the location of my level-1 predictors was essential so that the study's variables had as precise of meaning as possible. Given that the intercept and slopes in all my level-1 models become outcome variables across level 2 (Raudenbush & Bryk, 2002), centering helped ensure that the meaning of these outcomes are clearly understood. In this study, the meaning of the intercept in my level-1 model depended upon the location of the predictor variables in the same level. In my simple model, which shall be expressed formally as $Y_{ij} = \beta_{0j} + \beta_{1j}X_{ij} + r_{ij}$, the intercept, β_{0j}, may be defined as the expected outcome for a faculty member working at college or university *j* who has a value of 0 on measure X_{ij}. Models were run on faculty scores on measures of organizational perception as group-mean centered ($Y_{ij} = \beta_{0j} + \beta_{1}j(X_{ij} - \bar{X}_j) + r_{ij}$), so that statistical results were related to the theoretical concerns motivating this research. At the same time, scaled items were grand-mean centered, while dichotomous variables were left uncentered and in their natural positions.

Limitations

This study has several limitations worthy of discussion. First, this study's variables are limited with regard to availability, measurement, and their ability to capture what may be an ineffable construct. More specifically, this dissertation is limited to variables available in the 2010-2011 administration of the Faculty Survey and IPEDS data from 2010-2011. Indeed, the Faculty Survey provides a broad set of outcome measures, but the extent to which items captured the constructs under investigation in this study is debatable. For instance, the items used to capture the constructs of psychological and structural empowerment might not possess sufficient richness to unpack the latent variables. Final estimates of the study's outcomes revealed alpha values which might be considered slightly below my ideal threshold of 0.65, which is common for the social and behavioral sciences. However, the composite items loaded on a single factor, statistically held together, and were tested between faculty subgroups.

Similar to the said methodological constraints related to the construction of the study's outcomes, disciplinary affiliation as an independent variable might prove problematic. While it was fundamental to reduce the report of disciplinary affiliations into meaningful latent variables, Holland submits that environments, like individuals, share characteristics across constructs. The developed taxonomy, which guided this study, does not purport that environments and people possess a set of traits exclusive to a single domain, but rather a dominant one expressed through the categorization. There is also a matter of training, which has the potential to confound assertions connected to the taxonomy. For instance, a faculty might have been trained within the social and behavioral sciences, but is employed within a computer science department. These two disciplines would have two unique disciplinary cultures, and the faculty might likely approach the teaching and learning environment with behaviors learned from academic training,

rather than the employed department. This might be problematic when teasing apart contextual associations with the study's outcomes.

The data used in this study come from a cross-sectional survey. Since data were collected only at a single point in time, causal interpretations cannot be made. The findings from this investigation are correlational, and the results only offer assertions regarding relationships between the study's variables. In addition to the limitations inherent with selecting a single administration year of the Faculty Survey for analytic purposes, there are limitations to the survey itself, which includes the distribution of the survey respondents and the timing of the survey administration. First, since this study opted to use the raw, rather than weighted, data for analyses, it is important to note that the sample population of this study may be different from a national sample. More to the point, faculty from private, liberal arts colleges are overrepresented in the sample.

Three final limitations are in effect with using the HERI's Faculty Survey. First, the survey comes with sampling bias. That is, institutions did not systematically sample contingent faculty at their institutions. The contingent faculty members who responded to the invitation to participate in the survey may look different from nonrespondents or those who were not invited by their institutions to participate. Second, this study includes an inherent bias with regard to any self-reported measure. It might be the case that faculty reported higher levels of student-centered practices across the outcome measures employed by this study as a function of social desirability, and it is unclear whether this possible bias would operate similarly across all faculty subgroups. Respondents may have been inclined to portray themselves as engaging in students in ways to cultivate their habits of mind, as it is clear that higher values on the scales used to build the latent construct were indicative of more positive educational practice. Third, and finally, I

purported earlier that the outcome measures used in this study are indicators of educators'

effectiveness. This investigation rests on the assumption that faculty who engage students in

ways to cultivate their habits of mind and use more student-centered assessment and evaluation

practices are better serving students than those that do not, or do to a lesser extent. This presents

the limitation involved with capturing the essence of an educator's effectiveness. For instance, it

might be the case that, while some faculty members might engage students less in these specific

ways deemed effective in this study, they still may serve as quality instructional staff for their

college or university. It is important to note that although the survey instrument has these

limitations, it is the only national, comprehensive dataset on college faculty due to the defunding

of the federally-sponsored National Survey of Postsecondary Faculty in 2004.

Chapter Four:

Results

This chapter presents the descriptive and multivariate analyses used to explore the relationship between faculty appointment status and the study's outcomes. Specifically, group differences between full-time tenured, tenure-track, full-time non-tenure track, and part time faculty were explored across their habits of mind instructional behaviors, use of student-centered evaluation practices, and student-centered and experiential teaching techniques. The chapter begins with the investigation's descriptive analyses, including examinations of frequencies and various measures of group differences. These analyses served to understand how faculty approach instruction, evaluate students' work, and make contact to impact students' metacognitive growth in addition to offering a foundation for the nested multivariate procedure. The remaining sections explore the fully specified multilevel models, while accounting for faculty members' background characteristics, departmental affiliation, perceptions of campus climate, and attitudinal variables thought to be related to the study's outcomes. It should be noted that the full HLM tables, displaying all nested models discussed here, are found in Appendix C.

Descriptive Analysis of Instructors' Interactions to Cultivate Students' Habits of Mind for Lifelong Learning Using the Full Faculty Sample

Description of differences by faculty appointment status. In examining my first research question, I reviewed the mean scores of full-time tenured, tenure-track, full-time non-tenure-track, and part-time faculty across the composite measure representing interactions connected to the development of students' habits of mind for lifelong learning. These scores were compared among faculty appointment statuses, and a one-way analysis of variance (ANOVA) was run. Prior to running the analysis, which served to ground my multilevel models,

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I examined the assumptions of the test in order to justify its appropriateness. Habits of mind was negatively skewed, violating the assumption of normality. The assumption of independence was not met, which Kruskal (1988) explains is a very common violation. I also requested the Levene test for equality of variances. The negative result of the test indicated homogeneity of variance, supporting my use of the ANOVA to explore differences in faculty appointment status on habits of mind for lifelong learning. While the variable violated two of the three assumptions to use in an ANOVA, I proceeded with the ANOVA, provided both that the test is robust to violations (Schmider, Ziegler, Danay, Beyer, & Bühner, 2015) and that my supplemental use of multilevel modeling does not depend upon said departures. As a precautionary measure, however, I interpreted the slightly less powerful estimate within the contrast coefficient matrices based upon unequal variances (George & Mallery, 2012).

My inspection of the univariate procedure's tests of between-subjects effects revealed a significant difference in the outcome across faculty appointment statuses, $F(3, 32{,}279) = 22.50$, $p < .001$, $\eta_p^2 = .002$. I conducted a series of post-hoc tests to determine more precisely where the group differences lie. I used a Bonferroni correction procedure in order to counteract the problem of multiple comparisons, namely arriving at a false positive result (Bland & Altman, 1995). Post-hoc analyses demonstrated that the greatest mean difference driving the main effect occurred between part-time and tenured faculty, such that part-timers ($M = 0.12$, $SE = .02$) tended to engage students in ways to enhance their habits of mind more strongly than their tenured counterparts ($M = -0.02$, $SE = .01$). A further look at the remaining post-hoc comparisons showed that part-timers' habits of mind engagement with students ($M = 0.12$, $SE = .01$) was also significantly greater than both non-tenure-track ($M = -0.01$, $SE = .01$) and tenure-track full-timers ($M = -0.002$, $SE = .02$).

Differences by faculty appointment status and gender. Next, I interacted appointment status with gender, in alignment with evidence highlighting differences in teaching practices, and faculty appointment status. Following the same approach I called upon to explore habits of mind practices by only faculty appointment status, I requested a two-way ANOVA. Findings revealed a significant interaction effect $F(7, 31,978) = 53.68$, $p < .001$, $\eta_p^2 = .012$, such that the extent to which faculty groups engaged students in ways to cultivate their habits of mind was dependent also upon a faculty member's gender. Indeed, male faculty tended to cultivate this special way of thinking with significantly less frequency than female faculty, regardless of faculty appointment status. The greatest difference in practice occurred within male ($M = -0.13$, $SD = 1.10$) and female ($M = 0.08$, $SD = 1.01$) non-tenure-track full-timers. On the other hand, the smallest difference between men ($M = 0.04$, $SD = 1.04$) and women ($M = 0.18$, $SD = 0.95$) of all faculty subgroups was observed among part-time faculty. Among all faculty appointment statuses disaggregated by gender, non-tenure-track males demonstrated the least amount of contact with students to cultivate habits of mind. Figure 4.1 illustrates a visual representation of mean differences in outcome scores by faculty appointment and gender.

Figure 4.1. Mean Level of Habits of Mind Engagement by Appointment Status and Gender

	Tenured, Full-Time	Tenure-Track, Full-Time	Non-Tenure-Track, Full-Time	Part-time Faculty
Women	0.09	0.08	0.08	0.18
Men	-0.10	-0.09	-0.13	0.04
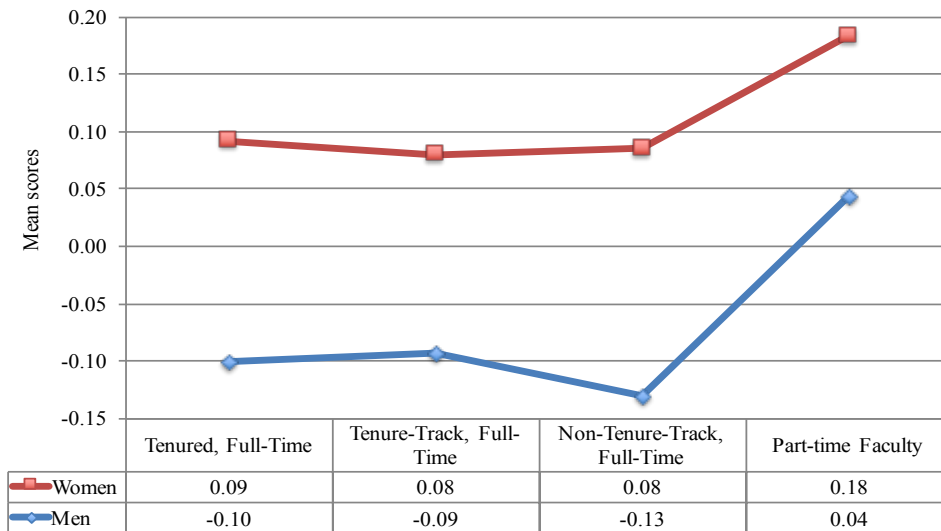
Differences by faculty appointment status and workplace satisfaction. To conclude my description of the outcome, I looked at faculty's perceptions of workplace satisfaction, which is an extension of multiple facets of a campus's climate. A two-way analysis of variance identified an interaction effect of faculty employment status and level of workplace satisfaction, $F(11, 32,233) = 10.49$, $p < .001$, $\eta_p^2 = .03$. On average, faculty members who expressed high levels of satisfaction with their workplace tended to more often utilize techniques to enhance student's habits of mind for lifelong learning. Consistent with my descriptive examinations thus far, part-time faculty tended to use habits of mind interactions more frequently than any of their counterparts, regardless of satisfaction level. Among other things, Figure 4.2 illustrates that the greatest difference in mean scores across appointment status and workplace satisfaction was observed with part-timers, whose average mean score on the outcome was 0.17, compared to their traditional, tenured colleagues, with a mean of 0.0. While the graphical representation of this significant interaction effect suggests that faculty who are more satisfied tend to employ techniques connected to habits of mind growth, it is noteworthy that the variability of workplace satisfaction effects on the outcome differs by faculty appointment status. Said differently, the range of workplace satisfaction scores tended to be less variable with tenured and tenure-track full-timers than with non-tenure-track and part-time faculty. Data suggest that a faculty's level of workplace satisfaction might have more of an effect on their practice for instructors not privileged with an employment status offering security of employment or the promise of such. Indeed, full-timers off the tenure track appeared to be most impacted by their perceptions of workplace satisfaction.

Figure 4.2. Mean Level of Habits of Mind Engagement by Appointment Status and Workplace Satisfaction

	Tenured, Full-Time	Tenure-Track, Full-Time	Non-Tenure-Track, Full-Time	Part-time Faculty
High	0.00	0.00	0.07	0.17
Average	-0.05	-0.04	-0.08	0.08
Low	0.00	0.02	0.02	0.12
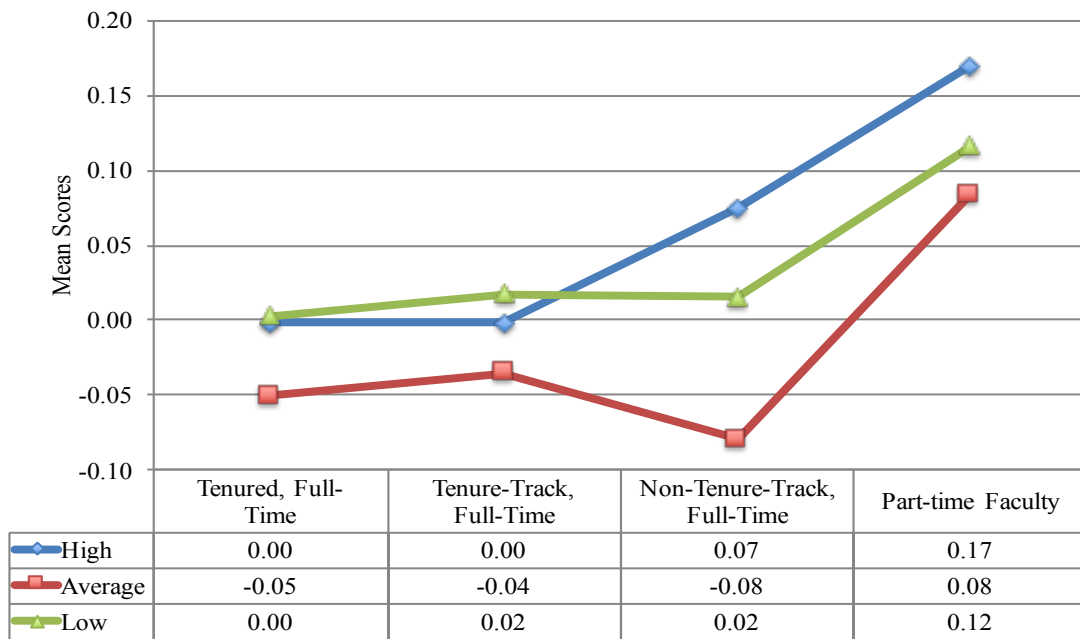
Results of HLM Analysis of Instructors' Interactions to Cultivate Students' Habits of Mind for Lifelong Learning

Table 4.1, displayed below, presents the parameter estimates produced from the HLM analyses for the full sample of faculty. These findings respond to the study's first research question. I present the findings across four nested models to demonstrate how the addition of covariates changes the association between faculty appointment status and faculty's contact with students to cultivate habits of mind. Results demonstrate that, even in the most basic model (Model 1), part-time faculty interact with students in ways known to cultivate their habits of mind with greater frequency than their full-time, tenured counterparts, which was not surprising given the results from the ANOVA presented earlier. Upon inspection of the first multilevel model, no statistically significant differences emerged between the remaining faculty subgroups in comparison to full-time, tenured faculty. However, substantial differences appeared in the

third model (Model 3), which accounted for stressors related to campus and departmental climates and feelings about the teaching and learning environment within the academy, between non-tenure-track, full-timers and their tenured colleagues. Across faculty subgroups, coefficients initially decreased once faculty's background characteristics and disciplinary affiliation were held constant, pointing to less differences across groups. Indeed, when exploring only race, age, gender, and department, faculty employment statuses presented more similarly than differently with regard to their instructional interactions with students to grow habits of mind.

The gap in the outcome between full-time, tenured faculty and their non-tenure track and part-time colleagues expanded in Model 3 after controlling for job stressors, climate measures, and faculty's feelings about academic work. While virtually no difference in the outcome was detected between full-time, non-tenure-track instructors and tenured instructors in Models 1 and 2, the third and fourth models produced a significant difference. This type of increase in the coefficient associated with part-time and non-tenure-track faculty in comparison to their tenured peers represents a suppressor effect (Astin & Antonio, 2012; MacKinnon, Krull, & Lockwood, 2000). I next considered the unique measures built into the models connected to this finding. The magnitude of the coefficients among part-time faculty increased when I individually introduced the following two variables into the model one-by-one: hours per week counseling and advising students and hours per week preparing for teaching. In other words, part-time faculty would even further outpace their full-time, tenured colleagues in the frequency with which they structure classes to cultivate students' habits of mind for lifelong learning if it were not for the fact that part-time faculty tend to spend fewer hours per week counseling and advising students, and fewer hours per week preparing for teaching. Similarly, the gap in the use of techniques aimed at increasing students' habits of mind for lifelong learning for full-time, non-tenure-track faculty

and their tenured counterparts increased after controlling for hours per week counseling and advising students, which suggests that full-time, non-tenure-track faculty would be expected to draw upon these practices even more often if they spent as many hours counseling and advising students each week as their full-time, tenured colleagues

Table 4.1 also highlights additional findings across other areas of faculty work associated with their use of instructional techniques aimed at cultivating students' habits of mind for lifelong learning. My nested models revealed a rich portrait of faculty who more regularly integrated methods to develop students' habits of mind for lifelong learning, as demarcated by their demography, departmental affiliation, stress and perceptions of their campus and departmental climates, and other feelings and behaviors related to the teaching and learning environment. Model 2 specifications revealed multiple differences in the outcome by demographics, which remained significant even after accounting for the remaining measures across the models. Parameter estimates revealed the black, Latino, multiracial, and other faculty races tended to cultivate student's habits of mind for lifelong learning with greater frequency than their white counterparts. Coefficients also pointed out that women faculty performed more positively across the outcome than their men counterparts, which corresponds to the findings from the ANOVAs presented earlier in this chapter.

I turned next to Holland's typologies to expand upon my portrait of a faculty member who utilized practices aimed at enhancing students' habits of mind for lifelong learning. Due to it having the greatest representation of faculty respondents, I used the social environments category as my reference group. Results show that only faculty teaching in enterprising (e.g., Business, Management, and Marketing) and artistic disciplines (Visual and Performing Arts) engaged students more positively on the outcome in comparison to disciplines within the social typology.

I observed the strongest, positive association with artistic environments, indicating the greatest difference between faculty teaching within this and the social typologies, after accounting for the full sample and measures of institutional context. On the other hand, faculty teaching in realistic, investigative, and conventional disciplines were less likely to utilize instructional practices connected with enhancing students' habits of mind for lifelong learning compared to their colleagues in social disciplines. The most striking difference was observed in Model 4, in which faculty teaching within disciplines associated with a conventional typology were significantly less likely to engage students using habits of mind techniques compared to their peers in the social environments subgroup.

I began Model 3 with specifications to measures faculty's stress and perceptions of campus and departmental climates in addition to feelings and behaviors related to the teaching and learning environment. I found a weak association suggesting that faculty who perceived higher levels of career-related stress also tended to cultivate students' habits of mind more strongly. Parameter estimates within Table 4.1 also demonstrated that faculty who perceived their teaching as valued by their departments, and who perceived a sense of equality with regard to the treatment of gay and lesbian faculty, tended to use these instructional techniques to make contact with students more frequently. Along these same lines, the perceived treatment of women faculty was also influential, such that instructors who perceived women as treated more equally also more readily utilized instructional practices aimed at enhancing students' habits of mind for lifelong learning. Collectively, these items suggest that faculty who perceived more positive institutional and departmental climates tended to incorporate efficacious practices into their teaching with greater regularity.

Other findings underscore the importance of instructors' feelings and behaviors related to the teaching and learning environment in understanding their use instructional practices designed to enhance students' habits of mind for lifelong learning. Faculty who tended to cultivate students' habits of mind for lifelong learning also more strongly felt that the training they received in graduate school had prepared them well for their instructional role and believed they achieved a healthy balance between their personal and professional lives. Among all measures related to the teaching and learning environment, how faculty felt about teaching emerged as the most influential factor in predicting the outcome in the final model. Faculty who placed greater importance on teaching more often incorporated instructional techniques aimed at growing students' habits of mind, accounting for all other individual- and institutional-level covariates in the final model. Additionally, as faculty spent more hours per week preparing for teaching (including student papers and grading) and advising and counseling students, they were inclined to more frequently call upon techniques evidenced to grow students' habits of mind for lifelong learning. These findings in particular hold important implications for part-time faculty, which will be discussed in the next chapter.

Among institutional variables included in the model, I discovered that several characteristics of colleges and universities were related to faculty's use of techniques to cultivate this student outcome. On average, faculty at private institutions made contact with students in ways to develop their habits of mind for lifelong learning less frequently than public institutions, net other institution- and faculty-level controls. Faculty teaching at more selective institutions tended to more frequently shape students' habits of mind for lifelong learning, while instructors teaching at larger colleges and universities, as measured by undergraduate FTE enrollment, utilized these practices with less regularity than their colleagues at smaller institutions.

Furthermore, average faculty salaries had no significant relationship with the extent to which instructors used pedagogical techniques aimed at enhancing students' habits of mind for lifelong learning. The final model accounted for 9.3% of the faculty-level variance and 38.3% of institution-level variance.

Table 4.1. Results from HLM Analyses Predicting Use of Habits of Mind Teaching Approaches for the Full Sample of Faculty

	Full Sample		
	Coef.	SE	Sig.
Institutional Characteristics			
Intercept	-0.13	0.04	*
Institutional control: Private	-0.06	0.02	*
Selectivity (100)	0.02	0.01	*
Avg. Faculty Salary (000)	0.00	0.00	
Undergraduate FTE	-0.01	0.00	*
Faculty Appointment Type			
Full-time, tenure-track	-0.01	0.02	
Full-time, non-tenure-track	0.05	0.02	*
Part-time	0.26	0.03	*
Demographics			
Race: Asian	0.03	0.02	
Race: Black	0.09	0.04	*
Race: Hispanic	0.09	0.04	*
Race: Other	0.16	0.04	*
Race: Two or more	0.10	0.03	*
Sex: Female	0.11	0.01	*
Age	0.00	0.00	
Departmental Affiliation			
Dept: Realistic	-0.20	0.05	*
Dept: Investigative	-0.08	0.02	*
Dept: Enterprising	0.14	0.02	*
Dept: Artistic	0.21	0.02	*
Dept: Conventional	-0.35	0.07	*
Stress and Perceptions of Campus and Departmental Climates			
Career-related stress	0.01	0.00	*
Satisfaction with compensation	0.00	0.00	
Satisfaction with workplace	0.00	0.00	
Institutional opinion: My teaching is valued by faculty in my department	0.02	0.01	*
Institutional opinion: Faculty of color are treated fairly here	0.01	0.01	
Institutional opinion: Women faculty are treated fairly here	-0.04	0.01	*
Institutional opinion: Gay and lesbian faculty are treated fairly here	0.03	0.01	*

Table 4.1 (cont). Results from HLM Analyses Predicting Use of Habits of Mind Teaching Approaches for the Full Sample of Faculty

	Full Sample		
	Coef.	SE	Sig.
Feelings and Behaviors Related to the Teaching and Learning Environment			
Affect: Feel that the training you received in graduate school prepared you well for your role as a faculty member	0.05	0.01	*
Affect: Achieve a healthy balance between your personal life and your professional life	0.02	0.01	*
Importance: Research	0.08	0.01	*
Importance: Teaching	0.18	0.01	*
Importance: Service	0.07	0.01	*
Hours per Week: Preparing for teaching (including reading student papers and grading)	0.02	0.00	*
Hours per Week: Advising and counseling of students	0.08	0.01	*
Hours per Week: Commuting to campus	0.00	0.01	
Model Diagnostics			
Level-1 Explained Variance	9.3%		
Level-2 Explained Variance	38.3%		
Total Explained Variance	10.0%		

Note: *$p < .001$

Descriptive Analysis of Faculty's Use of Student-Centered Evaluation

Description of differences in use of student-centered evaluation by faculty appointment status. The second research question interrogated the extent to which faculty varied in their use of student-centered evaluation practices across appointment types. As an initial step, I proceeded with the univariate procedure to determine whether or not faculty's use of learner-centered evaluation and assessment strategies varied significantly by employment status. Analyses revealed statistically significant variation across faculty appointments in use of learner-centered evaluation methods, $F(3, 32,970) = 76.86$, $p < .001$, $\eta_p^2 = .02$. Further analysis of the spread of mean scores by faculty appointment status on the use of learner-centered evaluation illustrated that full-time, tenured faculty ($M = -0.04$, $SD = 0.78$) called upon this type of assessment significantly less often than tenure-track ($M = 0.04$, $SD = 0.79$), non-tenure-track full-timers ($M = 0.01$, $SD = 0.90$), and part-time instructors ($M = 0.17$, $SD = 0.94$). Multiple comparisons using a Bonferroni correction were performed in order to determine group differences driving the statistically significant result. Post-hoc tests demonstrated that full-time,

tenured faculty statistically differed from every other appointment status in their use of student-centered assessment practices, $p < .001$. These tests revealed the largest significant difference ($I - J = -.21$) to be between full-time, tenured and part-time faculty. Among the remaining post-hoc comparisons, only tenure-track and non-tenure-track, full-time faculty observed a nonsignificant result, meaning that these two groups called upon student-centered assessment methods more similarly than any other subgrouping. This would also indicate that every other faculty subgroup significantly differed from each other with regard to their use of student-centered assessments.

Differences in use of use of student-centered evaluation by faculty appointment and gender. Faculty's use of student-centered assessment practices was largely dependent upon their gender, as indicated by a statistically significant conditional effect, $F(7, 32,643) = 169.49$, $p < .001$, $\eta_p^2 = .03$. While tenured, tenure-track, and non-tenure track female faculty called upon these types of formative evaluation procedures with similar regularity, female part-time faculty utilized these practices significantly more often than any other group. Consistent with the trend that female part-timers were found to call upon these practices more often than their peers, male part-timers were also leaders within their own group. The observed gap between male and female faculty by appointment status was greatest among tenured faculty, where tenured female faculty outpaced their tenured male colleagues by nearly a third of a standard deviation (see Figure 4.3).

Figure 4.3. Faculty's Mean Use of Student-Centered Assessment Practices by Appointment and Gender

	Tenured, Full-Time	Tenure-Track, Full-Time	Non-Tenure-Track, Full-Time	Part-time Faculty
Women	0.15	0.15	0.11	0.26
Men	-0.17	-0.07	-0.11	0.07

Differences in use of student-centered evaluation by faculty appointment status and

workplace satisfaction. I concluded my descriptive analysis of this outcome by exploring

variation by workplace satisfaction. My test of the interaction between faculty appointment

status and workplace satisfaction produced a significant result, $F(11, 32{,}922) = 24.30$, $p < .001$,

$\eta_p^2 = .01$. Tenured faculty's use of student-centered assessment practices showed limited

variation across levels of workplace satisfaction. That is, feelings of satisfaction with the

academic work environment had little practical influence on how strongly tenured faculty

adopted learner-centered assessment practices. However, a visual inspection of Figure 4.4

suggests that the use of student-centered evaluation procedures varied considerably by their

workplace satisfaction for part-time, full-time non-tenure-track, and full-time tenure-track

faculty. No significant difference was detected for full-time non-tenure-track faculty with low

and average levels of workplace satisfaction, those with a high level of workplace satisfaction

incorporated student-centered assessment strategies significantly more often than their less-

satisfied colleagues. The same trend continued for part-time faculty, but with high levels of

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workplace satisfaction more strongly associated with the use of student-centered assessment practices than for the non-tenure-track group. It is important to note that, on average, the highly satisfied part-time faculty called upon student-centered evaluation substantially more than tenured faculty within the same group ($I - J = 0.29$), and this difference changed only slightly among the less satisfied within the same subgroup.

Figure 4.4. Faculty's Mean Use of Student-Centered Assessment Practices by Appointment and Workplace Satisfaction

	Tenured, Full-Time	Tenure-Track, Full-Time	Non-Tenure-Track, Full-Time	Part-time Faculty
High	-0.04	0.06	0.07	0.26
Average	-0.06	0.03	-0.01	0.12
Low	-0.03	0.03	-0.02	0.14
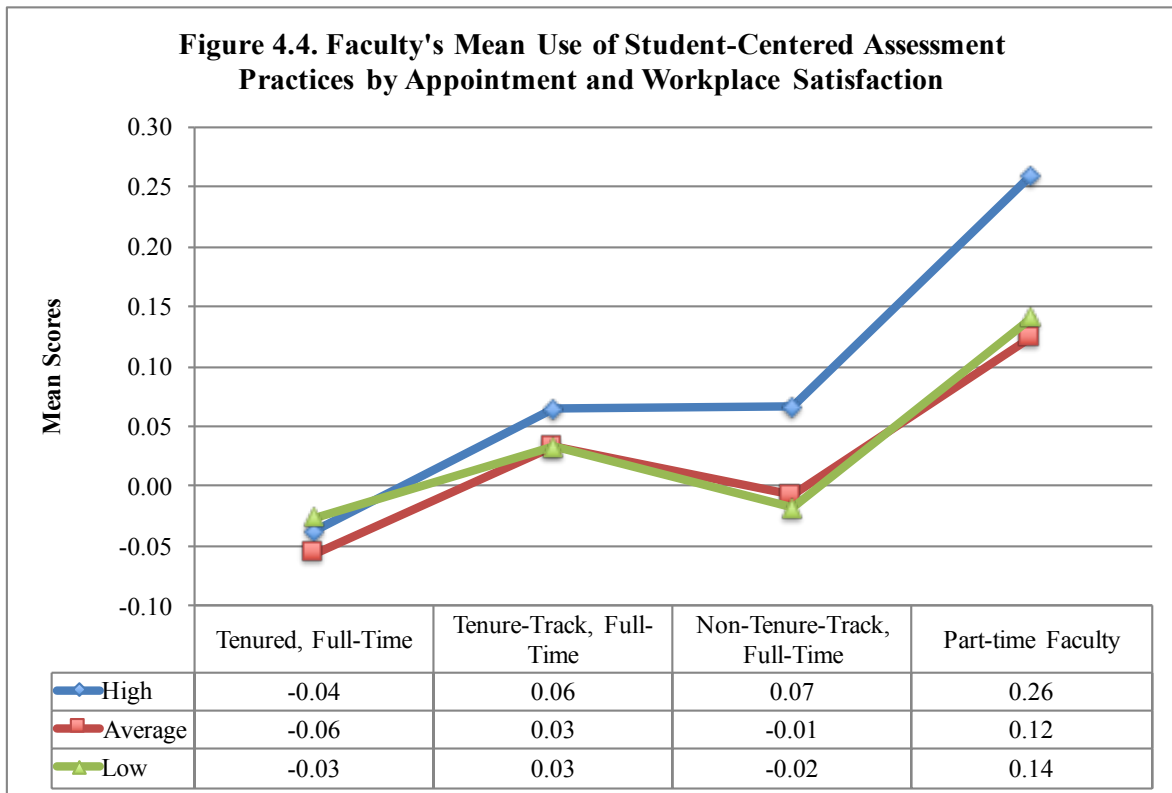
HLM Analysis of Instructors' Use of Learner-Centered Assessments Using the Full Faculty Sample

After analyzing faculty's use of student-centered assessment strategies with ANOVAs, I proceeded to constructs HLMs to better understand factors associated with this outcome. The parameter estimates for the hierarchical linear models are presented in Table 4.2. The findings are presented across four nested models in order to show how the inclusion of covariates alters the association between faculty appointment status and employment of learner-centered

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evaluation practices. Results from Model 1 show that part-time faculty members utilize student-centered assessments with significantly more regularity than their tenured colleagues. The gap in use of learner-centered evaluation between the faculty subgroupings decreased in Model 2 after accounting for demographic characteristics and departmental affiliation. The gap in learner-centered evaluation practices between full-time non-tenure-track and tenured faculty was eliminated upon the introduction of demographic and departmental controls. Significant differences remained for full-time, tenure-track faculty in comparison with their tenured colleagues.

The third model controlled for stress and perceptions of campus and departmental climates, as well as feelings and behaviors related to the teaching and learning environment. The final model added institutional characteristics, which have the capacity to influence the teaching and learning environment. In the third model, the gap between part-time faculty and their tenured counterparts in their use of student-centered assessments increased. Upon exploring variables connected to the finding one-by-one, the same fashion previously used, I discovered that the expansion was primarily attributed to faculty's career-related stress and the hours per week they spent counseling and advising students. These findings suggest that part-time faculty's use of student-centered assessments would even further outpace that of their tenure colleagues if it were not for the fact that part-timers report lower levels of career-related stress and spend fewer hours per week counseling and advising students, both of which positively correlate with the frequency faculty used student-centered evaluation practices.

Table 4.2 showcases several other faculty characteristics associated with the use of learner-centered assessments, including departmental affiliation, stress and perceptions of the campus and departmental climates, and feelings and behaviors connected to the teaching and

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learning environment. After controlling for stress and perceptions of campus and departmental climates and faculty's beliefs related to the teaching and learning environment, I observed that faculty who teach within realistic, investigative (e.g., Biological and Biomedical Sciences), and conventional (e.g., Library Science, or Transportation and Materials Moving) environments called upon learner-centered assessments less often than faculty within a discipline assigned to a social context. By contrast, faculty working within enterprising and artistic environments tended to incorporate student-centered assessment strategies more often than faculty teaching within social environments.

Subsequent models demonstrated that faculty's perceived level of career-related stress was positively associated with their use of learner-centered assessment. Parameter estimates showed that as faculty perceived that their colleagues of color were treated more fairly at the institution, their use of learner-centered evaluation practices tended to decline. As faculty placed greater importance on research, teaching, and service, their use of learner-centered assessments increased. Also, as faculty devoted more hours per week advising and counseling students, they tended to also use learner-centered assessments more frequently.

Across characteristics of colleges and universities, only one covariate in the full sample emerged significant to share a relationship with the extent to which faculty called upon learner-centered assessment practices. Findings suggest that faculty teaching at private institutions used learner-centered evaluations more frequently than their colleagues teaching at public colleges and universities. The final multilevel model accounted for 16.9% of faculty-level variance and 48.5% of between institution variance in faculty's use of learner-centered assessment practices.

Table 4.2. Results from HLM Analyses Predicting Use of Learner-Centered Evaluation Methods for the Full Sample of Faculty

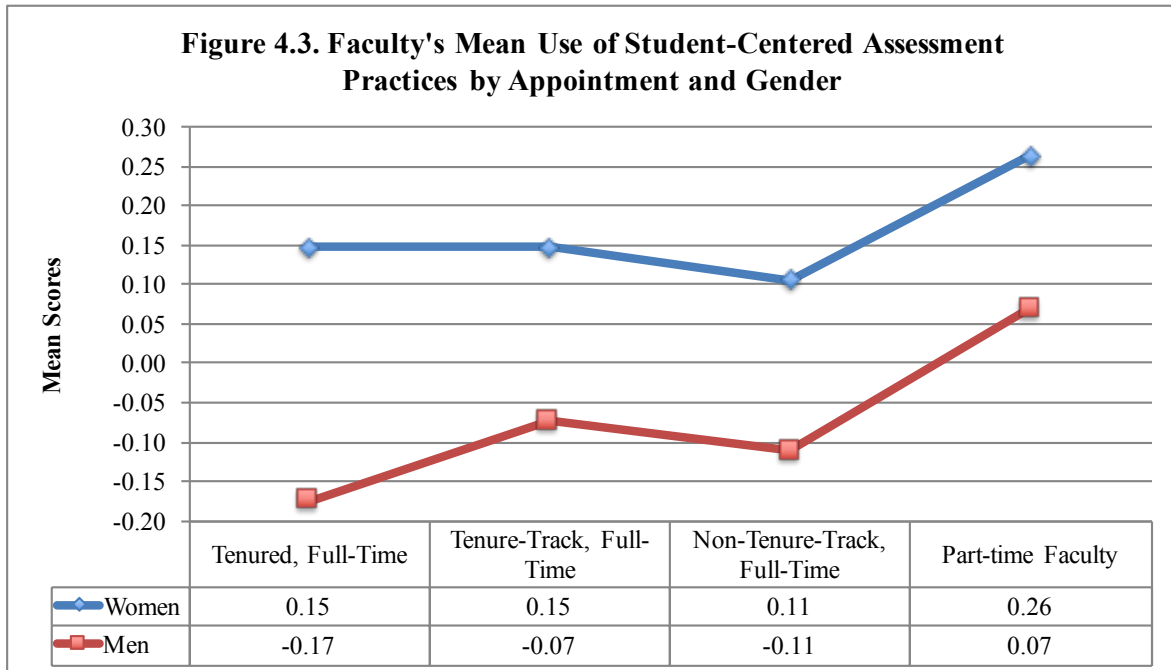|	Full Sample		
	Coef.	SE	Sig.
Institutional Characteristics			
Intercept	-0.46	0.04	*
Institutional control: Private	0.11	0.02	*
Selectivity (100)	-0.01	0.01	
Avg. Faculty Salary (000	0.00	0.00	
Undergraduate FTE	0.00	0.00	
Faculty Appointment Type			
Full-time, tenure-track	0.07	0.01	*
Full-time, non-tenure-track	0.06	0.02	*
Part-time	0.23	0.03	*
Demographics			
Race: Asian	-0.01	0.02	
Race: Black	0.05	0.03	
Race: Hispanic	0.10	0.04	
Race: Other	0.05	0.03	
Race: Two or more	0.10	0.02	*
Sex: Female	0.19	0.01	*
Age	0.00	0.00	
Departmental Affiliation			
Dept: Realistic	-0.23	0.02	*
Dept: Investigative	-0.46	0.02	*
Dept: Enterprising	0.19	0.02	*
Dept: Artistic	0.15	0.01	*
Dept: Conventional	-0.51	0.05	*
Stress and Perceptions of Campus and Departmental Climates			
Career-related stress	0.01	0.00	*
Satisfaction with compensation	0.00	0.00	
Satisfaction with workplace	0.00	0.00	
Institutional opinion: My teaching is valued by faculty in my department	0.01	0.01	
Institutional opinion: Faculty of color are treated fairly here	-0.04	0.01	*
Institutional opinion: Women faculty are treated fairly here	0.00	0.01	
Institutional opinion: Gay and lesbian faculty are treated fairly here	0.01	0.01	
Feelings and Behaviors Related to the Teaching and Learning Environment			
Affect: Feel that the training you received in graduate school prepared you well for your role as a faculty member	-0.01	0.01	
Affect: Achieve a healthy balance between your personal life and your professional life	0.00	0.01	
Importance: Research	0.08	0.01	*
Importance: Teaching	0.06	0.01	*
Importance: Service	0.08	0.01	*
Hours per Week: Preparing for teaching (including reading student papers and grading)	0.00	0.00	
Hours per Week: Advising and counseling of students	0.07	0.01	*
Hours per Week: Commuting to campus	0.01	0.01	
Model Diagnostics			
Level-1 Explained Variance	16.9%		
Level-2 Explained Variance	48.5%		
Total Explained Variance	17.8%		

Note: *$p < .001$

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Descriptive Analysis of Faculty's Use of a Student-Centered Pedagogy

Description of differences in use of student-centered pedagogy by faculty appointment status. My investigation of faculty efficacy turned next to variation in faculty's use of student-centered pedagogy by faculty appointment status, followed by aforementioned measure of workplace satisfaction. As with the previous outcomes, I began with a univariate ANOVA on the outcome to explore between-subjects effects. Carrying over the same confidence interval as the previous descriptive analyses, tests demonstrated statistically significant variability in the extent to which faculty adopt a student-centered pedagogy, $F(3, 33,270) = 166.80, p < .001, \eta_p^2 = .02$. Post-hoc tests were conducted to investigate possible differences across the four faculty appointment statuses. Using a Bonferroni correction procedure, results indicated significance differences between full-time, tenured faculty and the three other appointment statuses (i.e., tenure-track, non-tenure-track, and part-time faculty). Mean differences in student-centered pedagogy were expressed, respectively, as follow: -1.85, -1.91, and -2.84. Indeed, the largest gap in use of student-centered instruction emerged between full-time, tenured faculty and part-timers. Subsequent analyses, reviewed in the following sections, incorporated gender and workplace satisfaction into separate two-way ANOVAs.

Differences in use of student-centered pedagogy by faculty appointment and gender. A significant interaction effect was detected in use of student-centered pedagogy by faculty appointment and gender, $F(7, 33,928) = 292.49, p < .001, \eta_p^2 = .02$. Graphically shown in Figure 4.5, female faculty members utilized student-centered instructional practices significantly more often than their male colleagues. Gender differences across faculty appointment status were most notably pronounced for tenured faculty than any other faculty subgrouping. For tenured professors, gender significantly influenced their use of student-centered practices. The gap

between gender and appointment status was the smallest, albeit just slightly, for part-time faculty. Indeed, part-timers, both male and female, demonstrated the highest mean scores within appointment status disaggregated by gender. As a whole, part-time faculty called upon student-centered practices with greater frequency than any other appointment status. Across all groups displayed in Figure 4.5, the largest difference, with regard to gender, was observed between female part-timers and male tenured faculty, such that female part-time faculty scored nearly two-thirds of a standard deviation higher ($SD = 8.7$).

Figure 4.5. Faculty's Mean Use of Student-Centered Pedagogy by Appointment Status and Gender
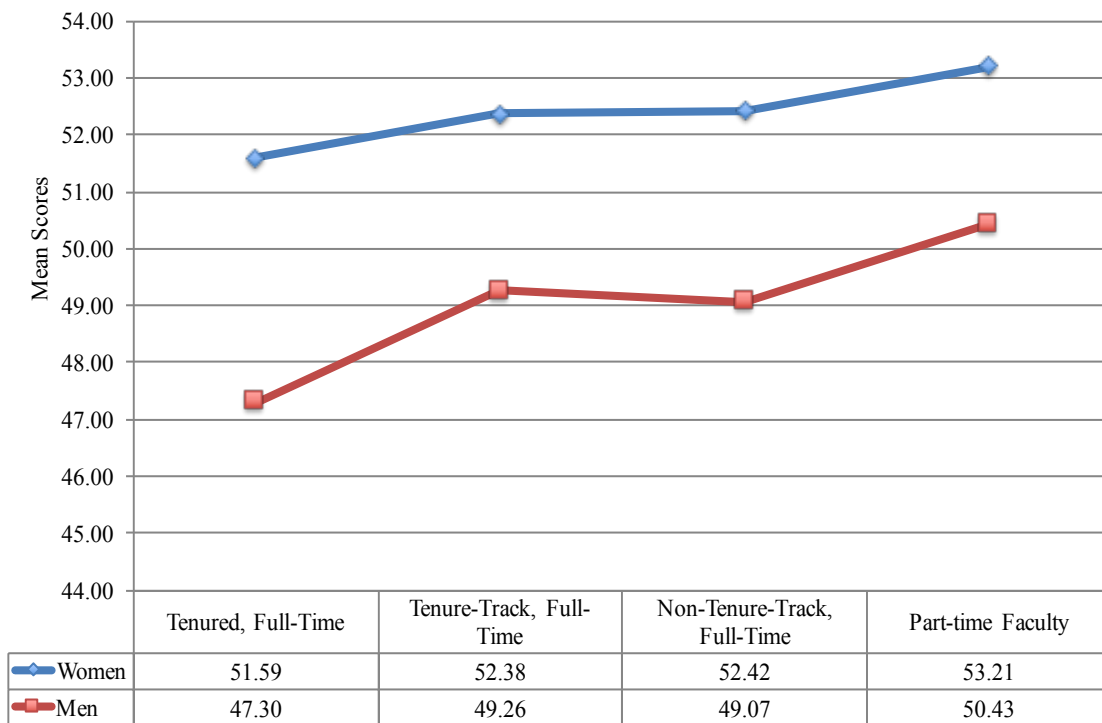
	Tenured, Full-Time	Tenure-Track, Full-Time	Non-Tenure-Track, Full-Time	Part-time Faculty
Women	51.59	52.38	52.42	53.21
Men	47.30	49.26	49.07	50.43

Differences in use of student-centered pedagogy by faculty appointment status and workplace satisfaction. Concluding the descriptive presentation of the second research question, I interacted student-centered pedagogy by workplace satisfaction in order to determine whether or not the extent to which faculty were satisfied with their academic working environment had any impact on their use of student-centered pedagogy. Tests of between-subject effects upon

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running a two-way analysis of variance showed that the extent to which faculty employed a student-centered pedagogy was dependent upon their perceived level of satisfaction with their workplace, $F(11, 33,215) = 50.89$, $p < .001$, $\eta_p^2 = .02$. Workplace satisfaction had noticeably little effect for tenured faculty, as tenured faculty exhibited little variation in their usage of student-centered pedagogy across levels of workplace satisfaction. On the other hand, workplace satisfaction seemed to matter most to part-time instructors. When part-time faculty expressed more satisfaction with their workplace, they tended to call upon student-centered approaches to teaching more often ($M = 53.11$, $SD = 10.10$) than when they were less satisfied ($M = 51.29$, $SD = 9.71$). The visualization is shown below, in Figure 4.6.

Figure 4.6. Faculty's Mean Use of Student-Centered Pedagogy by Appointment Status and Workplace Satisfaction

	Tenured, Full-Time	Tenure-Track, Full-Time	Non-Tenure-Track, Full-Time	Part-time Faculty
High	49.2063	51.1778	51.9305	53.0955
Average	48.9217	50.7493	50.5907	51.4215
Low	49.1409	50.8441	50.5441	51.2888
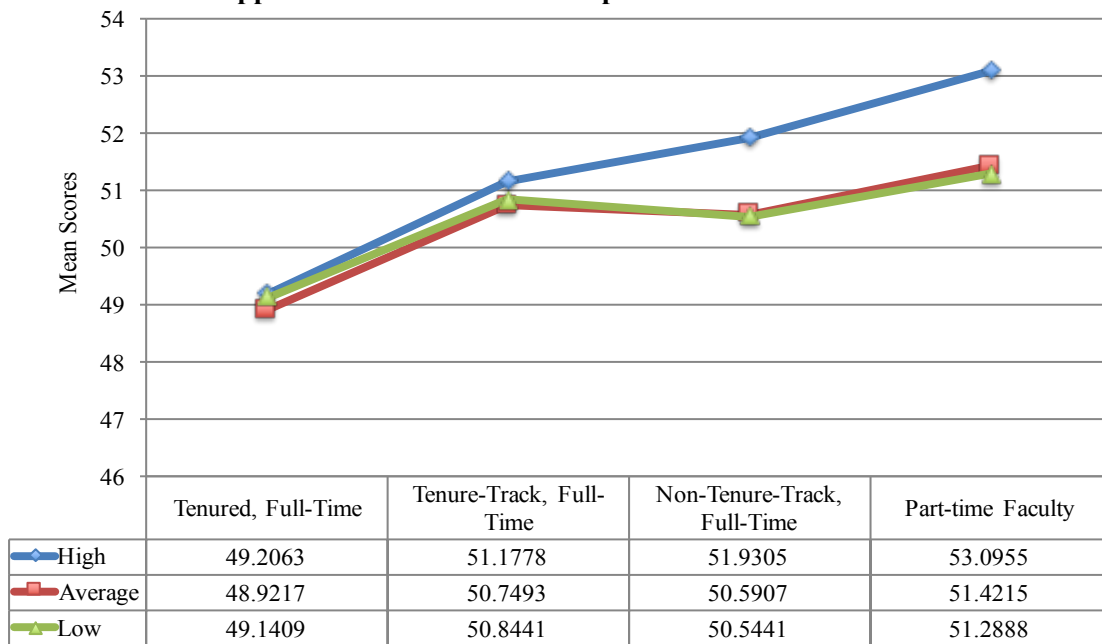
HLM Analysis of Instructors' Use of Student-Centered Pedagogy Using the Full Faculty Sample

To build upon the one- and two-way ANOVAs, I next turned to building HLMs to examine predictors of faculty's use of student-centered pedagogy. Table 4.3, which is shown at

the conclusion of this section's narrative, presents the parameter estimates produced from the HLM analyses for the full sample of faculty. Consistent with the approach used to address the first research question, I present the findings across four nested models to show how the addition of covariates alters the association between faculty appointment status and faculty's use of a student-centered pedagogy. Results demonstrate that, even in the most basic model (Model 1), part-time faculty employed student-centered instructional practices with greater frequency than their full-time, tenured counterparts. Indeed, the greatest difference in faculty appointment status emerged between part-timers and full-time tenured faculty. The difference between part-timers and their tenured colleagues in their use of a student-centered pedagogy ranged from a quarter of a standard deviation, in Model 1, to over a third of a standard deviation in the final model. Estimates of faculty's use of student-centered pedagogy remained significant but were reduced in Model 2 when I accounted for various demographic characteristics and departmental affiliation.

The gap in use of student-centered pedagogy between tenured faculty and their tenure-track, full-time non-tenure-track, and part-time colleagues increased in Model 3 after controlling for faculty stress, perceptions of campus and departmental climates, and feelings and behaviors related to the teaching and learning environment. The gap between part-time faculty and their tenured counterparts expanded after accounting for the hours per week faculty spent counseling and advising students and faculty's sense that their department values their teaching. In other words, we would expect part-time faculty to incorporate student-centered teaching practices even more often than their full-time, tenured colleagues if it were not for the fact that part-timers spend fewer hours per week counseling and advising students and feel that their teaching is devalued by faculty within their department.

In addition to differences by faculty appointment status, results in Table 4.3 reveal several significant differences across department affiliation. Faculty teaching within disciplines hallmarked by a realistic typology tended to use a student-centered pedagogy significantly less than those teaching within social environments. The greatest disproportionality was observed between faculty who teach within conventional and social disciplinary environments, as faculty in conventional disciplines incorporated student-centered teaching practices significantly less often than their colleagues in the social environments. The disparity between conventional and social environments was the strongest across all typological comparisons. The second largest disparity was observed between investigative and social departments, in which case faculty teaching within investigative environments used student-centered instructional techniques with much less frequency. This order of impact remained stable after accounting for perceptions of the department and an array of attitudes and behaviors related to teaching and instructional delivery. Most departmental typologies scored lower across the outcome than social environments, with the exception of artistic and enterprising environments. Indeed, among all of Holland's environmental typologies analyzed on this particular outcome, faculty teaching within the artistic typology scored marginally higher than those within social environments, and faculty within the enterprising disciplines emerged as the group that utilized student-centered teaching practices most often.

Other faculty characteristics related to perceptions of campus and departmental climates, in addition to feelings and behaviors related to the teaching and learning environment, significantly correlated with faculty's use of student-centered pedagogy. I observed a significant, positive association with career-related stress and instructional techniques used by faculty to use a student-centered pedagogy. This significant and positive association was also carried over into

feelings of workplace satisfaction, as my descriptive analysis suggested. That is, as faculty felt more positively about their workplace, they tended to call upon student-centered instruction more frequently. I also observed that faculty who perceived their teaching to be valued by their department were more likely to call upon student-centered pedagogy. Across my measures of faculty's feelings related to the teaching and learning environment, I observed the strongest, positive associations with faculty's use of student-centered pedagogy by those instructors who personally valued teaching and service.

Additionally, faculty who perceived their teaching to be valued by their department tended to more frequently call upon a student-centered pedagogy. However, faculty's perception of fairness for diverse others was inversely related to their use of student-centered pedagogy, such that as instructors reported higher levels of fairness for faculty of color, they tended to engage less in student-centered teaching. Finally, faculty who spent more time each week advising and counseling students tended to utilize student-centered instructional practices significantly more often. This positive association was among the strongest in the final model, suggesting that faculty who more frequently spend their time advising and counseling students tend to be the same faculty who more often draw upon evidence-based teaching practices. The final statistical specification also suggests that the more hours per week that faculty spend preparing for teaching (including reading student papers and grading), the more frequently they implemented a student-centered pedagogy. I followed the final model of table 4.3 with the investigation's next prong of the third research question, which concerned the extent to which faculty called upon experientially-grounded instruction.

Table 4.3. Results from HLM Analyses Predicting Student-Centered Pedagogy for the Full Sample of Faculty

	Full Sample		
	Coef.	SE	Sig.
Institutional Characteristics			
Intercept	44.32	0.47	*
Institutional control: Private	0.99	0.25	*
Selectivity (100)	-0.07	0.09	
Avg. Faculty Salary (000)	-0.03	0.01	*
Undergraduate FTE	0.00	0.02	
Faculty Appointment Type			
Full-time, tenure-track	1.32	0.14	*
Full-time, non-tenure-track	1.85	0.16	*
Part-time	3.51	0.21	*
Demographics			
Race: Asian	-0.86	0.23	*
Race: Black	0.35	0.31	
Race: Hispanic	0.97	0.32	*
Race: Other	0.50	0.35	
Race: Two or more	1.07	0.25	*
Sex: Female	2.68	0.10	*
Age	0.01	0.01	
Departmental Affiliation			
Dept: Realistic	-2.39	0.20	*
Dept: Investigative	-4.94	0.14	*
Dept: Enterprising	1.89	0.17	*
Dept: Artistic	0.68	0.12	*
Dept: Conventional	-6.63	0.37	*
Stress and Perceptions of Campus and Departmental Climates			
Career-related stress	0.11	0.01	*
Satisfaction with compensation	0.00	0.01	
Satisfaction with workplace	0.02	0.01	*
Institutional opinion: My teaching is valued by faculty in my department	0.24	0.08	*
Institutional opinion: Faculty of color are treated fairly here	-0.67	0.10	*
Institutional opinion: Women faculty are treated fairly here	0.02	0.10	
Institutional opinion: Gay and lesbian faculty are treated fairly here	0.09	0.08	
Feelings and Behaviors Related to the Teaching and Learning Environment			
Affect: Feel that the training you received in graduate school prepared you well for your role as a faculty member	0.00	0.08	
Affect: Achieve a healthy balance between your personal life and your professional life	-0.03	0.08	
Importance: Research	0.56	0.06	*
Importance: Teaching	1.34	0.10	*
Importance: Service	1.40	0.07	*
Hours per Week: Preparing for teaching (including reading student papers and grading)	0.04	0.03	*
Hours per Week: Advising and counseling of students	0.81	0.05	*
Hours per Week: Commuting to campus	0.18	0.06	
Model Diagnostics			
Level-1 Explained Variance	20.2%		
Level-2 Explained Variance	52.5%		
Total Explained Variance	21.6%		

Note: *$p < .001$

Descriptive Analysis of Faculty's Use of Experientially-Grounded Instruction

Description of differences in use of experientially-grounded instruction by faculty appointment status. As mentioned previously, a student-centered pedagogy alone is insufficient for examining the richness of a learner-centered construct, and so this study probed its richness by exploring how faculty across the range employment statuses call upon experiential learning techniques. I analyzed the experientially-grounded instruction by appointment status using a one-way ANOVA. The F-test demonstrated significant differences across means in the outcome by faculty subgroups, $F(3, 33,983) = 90.31$, $p < .001$, $\eta_p^2 = .01$, revealing more precisely that full-time, tenured faculty used experiential learning techniques during their instructional practice less each of the other three faculty subgroups. Post-hoc analyses revealed that tenure-track instructors were more similar to their contingent colleagues than their tenured peers. With regard to this outcome, an inspection of mean differences $(I - J)$ across the multiple comparisons seemed to suggest a qualitative difference in experiential practice once a faculty member was tenured. On average, non-tenure track, full-timers ($M = 0.11$, $SD = 0.01$) and part-timers ($M = 0.12$, $SD = 0.01$) both called upon this practice more than tenured ($M = -0.07$, $SD = 0.01$) and tenure-track ($M = 0.05$, $SD = 0.01$) faculty members.

Differences in use of experientially-grounded instruction by faculty appointment and gender. Upon interacting faculty appointment status and gender, results revealed a statistically significant interaction effect, suggesting that the extent to which faculty engage experiential learning techniques and exercises is dependent upon their gender, $F(7, 32,261) = 116.87$, $p < .001$, $\eta_p^2 = .03$. Consistent with my previous findings and also supportive of literature, women tended to call upon this learner-centered technique more strongly than men, and this finding is graphically depicted in Figure 4.7. Specifically, the greatest difference across the factorial

presentation was observed between female, non-tenure-track faculty ($M = 0.20$, $SD = 0.91$) and

male, tenured, full-timers ($M = -0.16$, $SD = 0.76$). Further visual inspection of Figure 4.7

indicated that the spread of scores within gender was generally consistent across appointment

status. The largest gender gap in use of experiential learner techniques, albeit slightly, was

observed for full-time faculty, in which case women used the pedagogical variety more strongly.

Figure 4.7. Faculty's Mean Use of Experientially-Grounded Instructional Practices by Appointment and Gender

	Tenured, Full-Time	Tenure-Track, Full-Time	Non-Tenure-Track, Full-Time	Part-time Faculty
Women	0.07	0.14	0.20	0.19
Men	-0.16	-0.06	-0.02	0.02
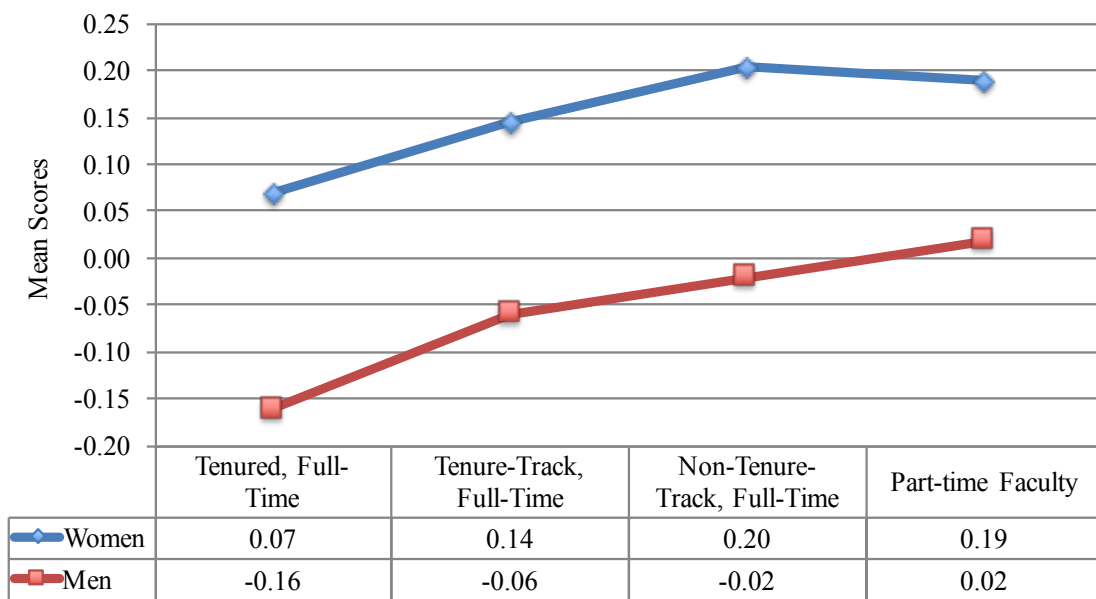
Differences in use of experientially-grounded instruction by faculty appointment status and workplace satisfaction. A second two-way ANOVA analyzed differences in faculty's use of

experientially-grounded teaching practices by appointment status and workplace satisfaction.

Tests of between-subjects effects illustrated a significant interaction effect, $F(7, 32,261) =$

116.87, $p < .001$, $\eta_p^2 = .03$, which is graphically displayed in Figure 4.8. Full-time tenured and

tenure-track instructors' use of experientially-grounded instruction did not vary significantly

across levels of workplace satisfaction. However, workplace satisfaction mattered for faculty off

the tenure track. For non-tenure-track faculty, a greater feeling of workplace satisfaction was

accompanied by more frequent use of experientially-grounded teaching. This finding was also the case for part-time faculty, for whom experiencing workplace satisfaction tended to matter more than other faculty subgroupings. Indeed, the spread of workplace satisfaction scores on experientially-grounded instructional practice was larger for part-time faculty than any other faculty subgrouping. Importantly, part-timers who reported the lowest levels of workplace satisfaction still more frequently incorporated experientially-grounded instructional practices than the most satisfied full-time tenured faculty. Within Figure 4.8, it is important to note that, across faculty appointment statuses, the effect of workplace satisfaction on experientially-grounded teaching practices was inversely related between traditional faculty ranks (tenured and tenure-track) and those teaching off the tenure track. Tenured and tenure-track faculty who were less satisfied with their work tended to more frequently incorporate experientially-grounded instructional practices than their more satisfied colleagues with identical appointments. By contrast, as part-time and non-tenure-track faculty found greater workplace satisfaction, they tended to utilize experientially-grounded pedagogy with greater regularity.

Figure 4.8. Faculty's Mean Use of Experientially-Grounded Instructional Practices by Appointment and Workplace Satisfaction

	Tenured, Full-Time	Tenure-Track, Full-Time	Non-Tenure-Track, Full-Time	Part-time Faculty
High	-0.08	0.04	0.16	0.20
Average	-0.08	0.03	0.10	0.10
Low	-0.02	0.08	0.06	0.03
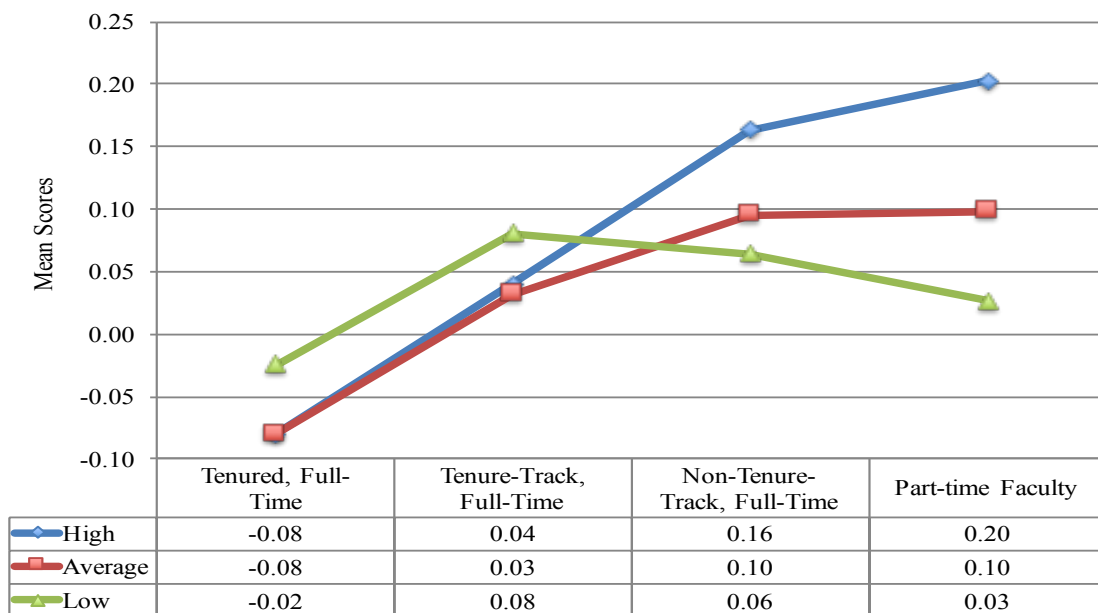
HLM Analysis of Instructors' Use of Experientially-Grounded Instruction Using the Full Faculty Sample

To address the study's third research question, I specified a full multilevel model by appointment status considering the extent to which faculty employed experientially-grounded instruction. Table 4.4, displayed immediately following this section's narrative, presents the parameter estimates produced from the HLM analyses for the full sample of faculty. Consistent with the approach used to address the previous research questions, I present the findings across four nested models to show how the addition of covariates alters the association between faculty appointment status and faculty's use of a student-centered pedagogy. Results demonstrate that, even in the most basic model (Model 1), part-time, full-time non-tenure-track, and full-time tenure-track faculty utilized experientially-grounded instructional practice more frequently than their tenured colleagues. These gaps were reduced after accounting for demographic characteristics and department affiliations in Model 2 but then expanded in Model 3 after controlling for various perceptions of climate and feelings connected to academic work. The gap between contingent faculty (i.e., part-time and full-time non-tenure-track) and their tenured colleagues specifically increased due to the inclusion of faculty's career-related stress, time spent counseling and advising students, and the importance of teaching as a personally relevant activity. The growth in the gap between contingent faculty and their tenured colleagues, explored by a one-by-one introduction of these covariates, suggested that contingent faculty would integrate experientially grounded instructional techniques even more often than their tenured colleagues if they had the chance to spend similar amounts of time each week counseling and advising students, had lower levels of career-related stress, and placed less importance on teaching.

In addition to faculty appointment status, coefficients displayed in table 4.4 illuminated other areas of faculty work correlated to their use of experientially-grounded instructional practices. Women faculty tended to incorporate experientially-grounded teaching practices more frequently than their male colleagues. Faculty's departmental affiliations also emerged as significant when instructors were compared to their peers teaching within the social environmental typology. Compared to their colleagues in the social environments group, faculty in all five other disciplinary typologies used experientially-grounded practices significantly less often.

I accounted for faculty's perceptions of campus and departmental climates, in addition to various beliefs connected to the teaching and learning environment beginning in Model 3. The significant covariates specified in this model all remained significant after controlling for institution-level characteristics. Findings revealed that faculty who experienced more career-related stress tended to more frequently call upon experientially-grounded pedagogical techniques. Indeed, instructors who more regularly integrated experientially-grounded instruction into their classrooms rated the importance of teaching and service more highly and devoted more time counseling and advising students. They also tended to spend more hours commuting to campus. To the contrary, faculty who spent more hours per week preparing for teaching, which included reading student papers and grading, used experiential methods less often in the classroom.

Model 4 accounted for institutional characteristics, which may be associated with faculty's ability to be efficacious in their practice. Only institutional control emerged as significant in my final model to indicate that faculty at private institutions more frequently

practiced experientially-grounded teaching methods. The final model accounted for 12.2% of the

faculty-level variance and 51.7% of institution-level variance.

Table 4.4. Results from HLM Analyses Predicting Experientially-Grounded Instruction for the Full Sample of Faculty

	Full Sample		
	Coef.	SE	Sig.
Institutional Characteristics			
Intercept	-0.23	0.47	*
Institutional control: Private	0.04	0.25	*
Selectivity (100)	-0.02	0.09	
Avg. Faculty Salary (000)	0.00	0.01	
Undergraduate FTE	0.00	0.02	
Faculty Appointment Type			
Full-time, tenure-track	0.15	0.01	*
Full-time, non-tenure-track	0.19	0.02	*
Part-time	0.29	0.02	*
Demographics			
Race: Asian	-0.06	0.02	
Race: Black	-0.01	0.03	
Race: Hispanic	0.08	0.03	
Race: Other	0.09	0.03	
Race: Two or more	0.12	0.02	*
Sex: Female	0.15	0.01	*
Age	0.00	0.00	
Departmental Affiliation			
Dept: Realistic	-0.11	0.02	*
Dept: Investigative	-0.29	0.01	*
Dept: Enterprising	-0.01	0.02	
Dept: Artistic	-0.24	0.01	*
Dept: Conventional	-0.51	0.04	*
Stress and Perceptions of Campus and Departmental Climates			
Career-related stress	0.03	0.01	*
Satisfaction with compensation	0.00	0.01	
Satisfaction with workplace	0.00	0.01	
Institutional opinion: My teaching is valued by faculty in my department	0.00	0.08	
Institutional opinion: Faculty of color are treated fairly here	-0.01	0.10	
Institutional opinion: Women faculty are treated fairly here	-0.01	0.10	
Institutional opinion: Gay and lesbian faculty are treated fairly here	0.02	0.08	
Feelings and Behaviors Related to the Teaching and Learning Environment			
Affect: Feel that the training you received in graduate school prepared you well for your role as a faculty member	-0.01	0.01	
Affect: Achieve a healthy balance between your personal life and your professional life	0.01	0.01	
Importance: Research	0.01	0.01	
Importance: Teaching	0.10	0.01	*
Importance: Service	0.16	0.01	*

Table 4.4 (cont). Results from HLM Analyses Predicting Experientially-Grounded Instruction for the Full Sample of Faculty

	Full Sample		
	Coef.	SE	Sig.
Feelings and Behaviors Related to the Teaching and Learning Environment			
Hours per Week: Preparing for teaching (including reading student papers and grading)	-0.03	0.00	*
Hours per Week: Advising and counseling of students	0.09	0.01	*
Hours per Week: Commuting to campus	0.03	0.01	*
Model Diagnostics			
Level-1 Explained Variance	12.2%		
Level-2 Explained Variance	51.7%		
Total Explained Variance	13.7%		

Note: *$p < .001$

Findings from the Subset of Part-time Faculty and Evaluation of the Study's Theoretical Framework

Findings presented in this section address the final two research questions by analyzing a subset of the full sample that includes only part-time faculty. I begin the effort on a descriptive level by relating psychological empowerment to the structural assets of institutions. As a reminder to the reader, these structural assets served to represent the construct of structural empowerment – an institutional rather than individual trait. Prior scholarship has suggested that the two are interconnected, and the findings are first immediately presented as such. Then, I delve into part-time faculty performance across the study's measures of educator effectiveness. Multivariate, hierarchical analyses account for the same features of instructors identified in the prior sections of the chapter.

Descriptive Analysis of Faculty's Sense of Empowerment Within an Academic Workplace

Expressions of psychological empowerment by level of structural assets and essential academic workplace traits. Prior to directly responding to research question four, I first descriptively explored the construct of psychological empowerment to offer a more complete evaluation of the framework in relation to the work of part-time faculty. Psychological

empowerment theory would suggest that, while faculty ought to perform their work within agentive, empowering environments, these characteristics must also be perceived by faculty (Spreitzer, 2008). My exploration of the connection between both of the investigation's theoretical frameworks begins with a series of independent samples *t*-tests on the study's measure of psychological empowerment using the condition (i.e., presence or absence) of part-time faculty resources as a grouping variable. These resources were deconstructed from the counter theory, social-structural empowerment (Spreitzer, 2008), and used as individual items so as to more fully come to know differences in variability in part-time faculty's sense of psychological empowerment under the presence of vital structural features.

Beginning my inspection of part-time faculty's sense of psychological empowerment across resources available to the subgrouping, I ran my first independent samples *t*-test between those part-timers who reported having access to a private office and those who did not. Following my consideration of Levene's test for equality of variances between the groups, the two-tailed test revealed statistically significant group differences, $t(3,819) = -5.52$, $p < .001$. The test of group differences showed that part-timers without office space reported significantly lower mean levels of psychological empowerment ($M = -0.05$, $SD = 0.87$) than those faculty who had access to their own office ($M = 0.16$, $SD = 0.82$). I also tested for differences in feelings of psychological empowerment between those part-timers who had access to a shared office space and those who did not, in order to determine *how much* office space might be necessary in order to observe an effect. Findings failed to uncover significant group differences between shared spaces groups. The same was the case with regard to an email account. However, I continued to explore essential structural characteristics necessary for work within the academy. Significant differences in reported empowerment emerged between part-time faculty who had access to a

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personal computer ($M = 0.06$, $SD = 0.84$) compared to those who did not ($M = -0.07$, $SD = 0.88$), $t(3,819) = -4.47$, $p < .001$. Part-timers who indicated having access to a phone and voicemail also expressed higher average levels of psychological empowerment ($M = 0.04$, $SD = 0.85$) compared to those without these resources ($M = -0.05$, $SD = 0.87$), a difference that was statistically significant, $t(3,819) = -3.23$, $p < .001$.

In summary, there were multiple structural characteristics of the academic work environment that impacted how psychologically empowered a part-time faculty felt. Faculty tended to feel more empowered when they had access to a private office space, a personal computer, and access to a phone and voicemail account. These features of college and university workspaces were found to be important for empowering part-time faculty, not to mention are essential for academic work.

Psychological and social-structural empowerment across the study's prongs of educator efficacy. While studying factors that contribute to empowerment for part-time faculty is significant for describing the nature of this investigation's theoretical framework, determining whether or not substantial variation existed across institutional assets was also of descriptive interest to further establish a foundation for my multivariate evaluation. Consistent with the first phase of the study, I used a variation of the previously run ANOVA to assist with my description of variability across outcomes, proceeding in the same sequence of dependent variable introduction as described. However, while the constructs of empowerment used in this study were divided into three equal groups to become ordinal grouping variables (i.e., low, average, and high), the levels of the independent variable were allowed to vary across institutions by using a random effects procedure (Baugh, 2001; Frederick, 1999). This was performed in order to more appropriately capture variability in empowerment.

I turned next to the second theoretical framework – social-structural empowerment, which identified key characteristics of academic working environment hypothesized to be prerequisite to part-time faculty's use of efficacious instructional modalities. I ran a mixed-effects ANOVA in the same fashion as with the other theoretical framework, starting again with habits of mind for lifelong learning. I followed this first set of analyses by subsequently examining part-time faculty's use of student-centered pedagogy, experientially-grounded instruction, and learner-centered evaluation as outcomes.

No statistically significant differences existed across social-structural empowerment groups nested within institutions on habits of mind for lifelong learning, student-centered pedagogy, and experientially-grounded instruction. However, the ANOVA identified a main effect of social-structural empowerment on use of learner-centered evaluation procedures, accounting for variability across institutions, $F(2, 3,948) = 4.72$, $p < .001$, $\eta_p^2 = .01$. Post-hoc analyses showed that part-time faculty who reported more structurally empowering work contexts tended to reach higher levels of learner-centered evaluation. Indeed, the extent to which this type of empowerment impacted a part-time faculty member's ability to implement a learner-centered assessment strategy seemed to be more dependent on characteristics of their institution.

HLM Analysis of Part-Time Faculty's Performance across the Measures of Educator Effectiveness

Each of the following subsections presents results from HLM analyses conducted on the subset of part-time faculty across the study's four outcomes.

Part-time faculty's sense of empowerment and their contact with students to cultivate habits of mind. Table 4.5 provides the parameter estimates from the HLM analysis regressing faculty's engagement with students to develop their habits of mind for lifelong

learning on the set of independent variables discussed earlier. After controlling for an involuntary part-time status and demographic characteristics, analyses of part-time faculty's sense of empowerment, both psychological and social-structural, did not correlate with their interactions with students to cultivate their habits of mind for lifelong learning. That is, the extent to which part-time faculty worked within institutions that offered basic support services to faculty was not connected to how often faculty engaged with students in ways aimed at cultivating habits of mind for lifelong learning. The extent to which part-time faculty perceived their workspaces and colleagues to be psychologically empowering was also not related to the outcome. However, other characteristics of part-time faculty were found to shape the ways in which they made contact with students.

Among part-time instructors' demographic characteristics, women tended to more frequently interact with students in ways to encourage the development of habits of mind for lifelong learning compared to their male colleagues. Results also suggested that part-timers' departmental affiliation, as captured by Holland's environmental typologies, shared a significant relationship with habits of mind cultivation. Part-time faculty teaching within artistic and enterprising disciplines employed techniques to enhance students' habits of mind for lifelong learning more than faculty within social contexts. Part-timers who placed greater personal importance on research also more frequently incorporated practices aimed at developing students' habits of mind for lifelong learning.

Among institutional measures, part-time instructors who taught at institutions with a smaller undergraduate body more frequently engaged in teaching practices aimed at enhancing students' habits of mind for lifelong learning compared to their colleagues at larger campuses. For every 1000-student increase in undergraduate FTE, part-time faculty's habits of mind

interactions decreased by one-tenth of a standard deviation, controlling for multiple institution-

and individual-level measures. The final model accounted for 23.0% of faculty-level variance in

habits of mind engagements and 74.3% of between-institution variance.

Table 4.5. Results from HLM Analyses Predicting Habits of Mind for the Subset of Part-time Faculty

	Full Sample		
	Coef.	SE	Sig.
Institutional Characteristics			
Intercept	-0.19	0.16	
Institutional control: Private	-0.01	0.07	
Selectivity	0.05	0.03	
Avg. Faculty Salary (000)	-0.01	0.00	*
Undergraduate FTE	0.01	0.00	
Faculty Appointment Type			
Involuntary Part-time	0.02	0.05	
Demographics			
Race: Asian	-0.11	0.13	
Race: Black	0.20	0.14	
Race: Hispanic	0.09	0.13	
Race: Other	0.12	0.15	
Race: Two or more	0.30	0.10	
Sex: Female	0.12	0.05	*
Age	0.00	0.01	
Departmental Affiliation			
Dept: Realistic	-0.05	0.12	
Dept: Investigative	0.00	0.08	
Dept: Enterprising	0.31	0.07	*
Dept: Artistic	0.23	0.06	*
Dept: Conventional	-0.66	0.29	
Psychologically and Structurally Empowering Work Environments			
Psychological Empowerment	-0.02	0.03	
Social-Structural Empowerment	0.00	0.01	
Stress and Perceptions of Campus and Departmental Climates			
Career-related stress	0.01	0.00	
Satisfaction with compensation	0.00	0.00	
Satisfaction with workplace	0.00	0.00	
Institutional opinion: My teaching is valued by faculty in my department	-0.02	0.04	
Institutional opinion: Faculty of color are treated fairly here	0.02	0.06	
Institutional opinion: Women faculty are treated fairly here	0.05	0.06	
Institutional opinion: Gay and lesbian faculty are treated fairly here	-0.05	0.04	
Feelings and Behaviors Related to the Teaching and Learning Environment			
Affect: Feel that the training you received in graduate school prepared you well for your role as a faculty member	0.04	0.04	
Affect: Achieve a healthy balance between your personal life and your professional life	0.08	0.04	
Importance: Research	0.10	0.03	*
Importance: Teaching	0.10	0.05	
Importance: Service	0.07	0.03	
Hours per Week: Preparing for teaching (including reading student papers and grading)	0.03	0.01	
Hours per Week: Advising and counseling of students	0.09	0.03	
Hours per Week: Commuting to campus	0.01	0.03	

Table 4.5 (cont). Results from HLM Analyses Predicting Habits of Mind for the Subset of Part-time Faculty

	Full Sample		
	Coef.	SE	Sig.
Model Diagnostics			
Level-1 Explained Variance	23.0%		
Level-2 Explained Variance	74.3%		
Total Explained Variance	24.0%		

Note: *$p < .001$

Part-time faculty's sense of empowerment and their use of learner-centered evaluation practices. Parameter estimates for the HLM analysis regressing learner-centered evaluation practices on the independent variables are displayed in Table 4.6. After controlling for involuntary part-time status and demographic characteristics, neither psychological nor social-structural empowerment were related to part-time faculty's use of learner-centered evaluation practices. That is, the extent to which part-time instructors perceived their workspaces to be conducive to their psychological empowerment shared no significant relationship with their use of learner-centered evaluation practices. The social-structural features of empowering academic environments also did not impact part-time faculty's employment of learner-centered evaluation strategies. However, other characteristics of part-time faculty were found to impact their use of said evaluation practices.

Inspection of the remaining nested models revealed that other traits of part-time faculty impacted the extent to which they employed learner-centered evaluations of students. Part-timers placed greater importance on research and service tended to utilize student-centered evaluation practices more often. Additionally, part-time faculty who spent more time advising and counseling students each week also tended to draw from learner-centered assessment strategies with greater regularity. The findings in Table 4.6 show that no institution-level predictors significantly accounted for variance across campuses in part-time faculty's use of learner-

centered assessment. The final model accounted for 16.2% of the faculty-level variance in

learner-centered assessment and 67.9% of the between-institution variance.

Table 4.6. Results from HLM Analyses Predicting Learner-Centered Evaluation Practices for the Subset of Part-time Faculty

	Full Sample		
	Coef.	SE	Sig.
Institutional Characteristics			
Intercept	-0.42	0.16	
Institutional control: Private	0.16	0.07	
Selectivity	-0.03	0.03	
Avg. Faculty Salary (000	0.01	0.00	
Undergraduate FTE	0.00	0.00	
Faculty Appointment Type			
Involuntary Part-time	0.05	0.05	
Demographics			
Race: Asian	-0.25	0.13	
Race: Black	0.07	0.14	
Race: Hispanic	-0.05	0.13	
Race: Other	0.17	0.15	
Race: Two or more	-0.02	0.10	
Sex: Female	0.16	0.05	*
Age	0.00	0.00	
Departmental Affiliation			
Dept: Realistic	-0.31	0.12	
Dept: Investigative	-0.60	0.08	*
Dept: Enterprising	0.32	0.07	*
Dept: Artistic	0.17	0.06	
Dept: Conventional	-0.62	0.28	
Psychologically and Structurally Empowering Work Environments			
Psychological Empowerment	-0.10	0.03	
Social-Structural Empowerment	0.00	0.01	
Stress and Perceptions of Campus and Departmental Climates			
Career-related stress	-0.10	0.00	
Satisfaction with compensation	0.00	0.00	
Satisfaction with workplace	0.00	0.00	
Institutional opinion: My teaching is valued by faculty in my department	0.00	0.04	
Institutional opinion: Faculty of color are treated fairly here	0.00	0.06	
Institutional opinion: Women faculty are treated fairly here	0.02	0.06	
Institutional opinion: Gay and lesbian faculty are treated fairly here	-0.07	0.04	
Feelings and Behaviors Related to the Teaching and Learning Environment			
Affect: Feel that the training you received in graduate school prepared you well for your role as a faculty member	-0.02	0.04	
Affect: Achieve a healthy balance between your personal life and your professional life	0.03	0.04	
Importance: Research	0.11	0.03	*
Importance: Teaching	0.04	0.05	
Importance: Service	0.12	0.03	*
Hours per Week: Preparing for teaching (including reading student papers and grading)	0.03	0.01	
Hours per Week: Advising and counseling of students	0.09	0.03	*
Hours per Week: Commuting to campus	-0.03	0.03	

	Full Sample		
	Coef.	SE	Sig.
Model Diagnostics			
Level-1 Explained Variance	16.2%		
Level-2 Explained Variance	67.9%		
Total Explained Variance	17.6%		

Note: *$p < .001$

Part-time faculty's sense of empowerment and their use of a student-centered

pedagogy. I next examined the relationship between faculty's sense of empowerment and their

use of student-centered pedagogy. Coefficients associated with the models are presented in Table

4.7. Upon controlling for an involuntary part-time status and demographic characteristics,

analyses of part-time faculty's sense of empowerment, neither psychological nor social-structural

significantly correlated with their use of a student-centered pedagogy. In other words, the extent

to which institutions offered part-time faculty with features indicative of structurally

empowering environments, coupled with perceptions of empowering colleagues (i.e.,

psychological), did not impact whether or not part-timers incorporated student-centered teaching

techniques into their classrooms.

However, results in Table 4.7 demonstrate several other characteristics significantly

associated with part-time faculty's use of a student-centered pedagogy. Women part-time faculty

more frequently incorporated student-centered teaching techniques than men. Instructors who

more highly rated research and service as a personally relevant activity and spent more hours per

week advising and counseling students also more frequently used student-centered practices.

Part-time faculty who more regularly incorporated student-centered pedagogy into their lessons

tended to teach in disciplines within the enterprising environmental typology. Analysis of

differences by departmental affiliation found the largest gap between faculty in investigative and

social environments, with the former using a student-centered pedagogy with significantly less

regularity. The findings in Table 4.7 illustrate that no institution-level predictors significantly accounted for variance across campuses in part-time faculty's use of student-centered pedagogy. The final model accounted for 16.7% of the faculty-level variance in student-centered pedagogy and 17.2% of the institution-level variance.

Table 4.7. Results from HLM Analyses Predicting Student-Centered Pedagogy for the Subset of Part-time Faculty

	Full Sample		
	Coef.	SE	Sig.
Institutional Characteristics			
Intercept	45.73	1.67	*
Institutional control: Private	1.20	0.791	
Selectivity	0.01	0.3156	
Avg. Faculty Salary (000)	0.02	0.0272	
Undergraduate FTE	0.04	0.0482	
Faculty Appointment Type			
Involuntary Part-time	0.64	0.55	
Demographics			
Race: Asian	-2.64	1.34	
Race: Black	1.85	1.41	
Race: Hispanic	1.49	1.37	
Race: Other	2.07	1.52	
Race: Two or more	0.22	1.06	
Sex: Female	2.11	0.50	*
Age	0.00	0.00	
Departmental Affiliation			
Dept: Realistic	-2.60	1.21	
Dept: Investigative	-5.72	0.85	*
Dept: Enterprising	3.22	0.75	*
Dept: Artistic	0.72	0.60	
Dept: Conventional	-6.26	2.89	
Psychologically and Structurally Empowering Work Environments			
Psychological Empowerment	-0.93	0.36	
Social-Structural Empowerment	0.00	0.14	
Stress and Perceptions of Campus and Departmental Climates			
Career-related stress	0.05	0.03	
Satisfaction with compensation	0.02	0.03	
Satisfaction with workplace	0.04	0.03	
Institutional opinion: My teaching is valued by faculty in my department	0.11	0.39	
Institutional opinion: Faculty of color are treated fairly here	-1.41	0.60	
Institutional opinion: Women faculty are treated fairly here	0.41	0.60	
Institutional opinion: Gay and lesbian faculty are treated fairly here	0.81	0.42	

Table 4.7 (cont). Results from HLM Analyses Predicting Student-Centered Pedagogy for the Subset of Part-time Faculty

	Full Sample		
	Coef.	SE	Sig.
Feelings and Behaviors Related to the Teaching and Learning Environment			
Affect: Feel that the training you received in graduate school prepared you well for your role as a faculty member	-0.05	0.40	
Affect: Achieve a healthy balance between your personal life and your professional life	0.56	0.41	
Importance: Research	1.07	0.27	*
Importance: Teaching	1.53	0.51	
Importance: Service	1.65	0.31	*
Hours per Week: Preparing for teaching (including reading student papers and grading)	0.18	0.15	
Hours per Week: Advising and counseling of students	1.06	0.31	*
Hours per Week: Commuting to campus	-0.03	0.26	
Model Diagnostics			
Level-1 Explained Variance	16.7%		
Level-2 Explained Variance	17.2%		
Total Explained Variance	16.8%		

Note: *$p < .001$

Part-time faculty's sense of empowerment and their use of experientially-grounded

instructional techniques. The study's findings concluded with Table 4.8, which responded to

the last prong of educator effectiveness nested within research question 5. Neither psychological

nor social-structural shared a significant relationship with their use of experientially-grounded

instruction. In other words, the extent to which institutions offered part-time faculty with features

indicative of structurally empowering environments, coupled with perceptions of empowering

colleagues (i.e., psychological), did significantly change the frequency with part-time faculty

incorporated an experientially-based approach to their teaching.

Results within Table 4.8 pointed to other faculty-level characteristics found to impact the

extent to which part-timers called upon experientially-grounded teaching. Consistent with results

from previous analyses, women faculty more often incorporated an experientially-based

instructional approach than men. This observation was consistent across models and remained

after I controlled for empowerment, stress and perceptions of campus and departmental climates,

feelings related to the teaching and learning environment, and institutional characteristics. Part-

time faculty who tended to practice experientially-grounded instruction also indicated service

work as a personally relevant activity and spent more hours per week advising and counseling students. There were no institution-level variables associated with faculty's use of experiential instruction. The final model accounted for 11.9% of faculty-level variance in the outcome and 15.3% of the between-institution variance. The total explained variance was 11.9 percent.

Table 4.8. Results from HLM Analyses Predicting Experientially-Grounded Instruction for the Subset of Part-time Faculty

	Full Sample		
	Coef.	SE	Sig.
Institutional Characteristics			
Intercept	-0.01	0.17	
Institutional control: Private	0.02	0.08	
Selectivity	0.03	0.03	
Avg. Faculty Salary (000)	0.00	0.00	
Undergraduate FTE	0.00	0.00	
Faculty Appointment Type			
Involuntary Part-time	0.02	0.05	
Demographics			
Race: Asian	-0.10	0.13	
Race: Black	0.22	0.14	
Race: Hispanic	-0.04	0.13	
Race: Other	0.18	0.14	
Race: Two or more	0.10	0.10	
Sex: Female	0.13	0.05	*
Age	0.00	0.01	
Departmental Affiliation			
Dept: Realistic	-0.18	0.12	
Dept: Investigative	-0.37	0.08	*
Dept: Enterprising	-0.05	0.07	
Dept: Artistic	-0.17	0.06	*
Dept: Conventional	-0.11	0.28	
Psychologically and Structurally Empowering Work Environments			
Psychological Empowerment	-0.03	0.03	
Social-Structural Empowerment	-0.02	0.01	
Stress and Perceptions of Campus and Departmental Climates			
Career-related stress	0.02	0.01	
Satisfaction with compensation	0.00	0.00	
Satisfaction with workplace	0.00	0.00	
Institutional opinion: My teaching is valued by faculty in my department	0.01	0.04	
Institutional opinion: Faculty of color are treated fairly here	-0.11	0.06	
Institutional opinion: Women faculty are treated fairly here	0.04	0.06	
Institutional opinion: Gay and lesbian faculty are treated fairly here	0.01	0.04	

Table 4.8 (cont). Results from HLM Analyses Predicting Experientially-Grounded Instruction for the Subset of Part-time Faculty

	Full Sample		
	Coef.	SE	Sig.
Feelings and Behaviors Related to the Teaching and Learning Environment			
Affect: Feel that the training you received in graduate school prepared you well for your role as a faculty member	0.03	0.04	
Affect: Achieve a healthy balance between your personal life and your professional life	0.04	0.04	
Importance: Research	0.06	0.03	
Importance: Teaching	0.02	0.05	
Importance: Service	0.21	0.03	*
Hours per Week: Preparing for teaching (including reading student papers and grading)	-0.04	0.01	
Hours per Week: Advising and counseling of students	0.14	0.03	*
Hours per Week: Commuting to campus	0.05	0.02	
Model Diagnostics			
Level-1 Explained Variance	11.9%		
Level-2 Explained Variance	15.3%		
Total Explained Variance	11.9%		

Note: *$p < .001$

Summary

There are numerous key findings threaded throughout the nested models across the study's outcomes, pointing toward several overarching results. Analyses revealed that the greatest gaps in practice were observed between part-time and tenured faculty, with part-timers calling upon efficacious practice significantly more. Indeed, the final set of multilevel models revealed that when statistically significant differences were present, all faculty subgroups (tenure-track, full-time non-tenure-track, and part-time) outperformed their tenured colleagues. With regard to context, the study found that feelings of satisfaction with one's workplace mattered, but particularly so for part-time faculty – the more satisfied part-timers were with their workplace, the more they tended to engage in efficacious teaching practices. Interestingly, however, their sense of empowerment on their campus did not relate to their practices. Among other noteworthy findings, the educational practice of women faculty was more efficacious than men, on average. Faculty within enterprising and artistic disciplines tended to engage students

using more positive methods, as well. It is also important to note that I modeled the effects of having a part-time appointment across institutions, in order to shed more light on part-time academic appointment on the outcomes – no significant results were obtained. This non-significant finding suggested that the heterogeneity of institutions was unlikely connected to the measures of educator effectiveness. The findings detailed in this chapter are related to the study's hypotheses and further unpacked in the following chapter.

Chapter Five:

Discussion and Conclusion

This concluding chapter begins with a brief overview of the present study and the research questions examined, a review of the theoretical frameworks, and a summary of the methodological analyses. Following this introduction, I provide a synthesis of the study findings in light of prior research and set a context for implications for faculty and administrators in higher education. Last, I conclude the chapter with a brief summary of the limitations of the present investigation and offer suggestions for future researchers wishing to explore important issues connected to contingent faculty.

Overview of the Study

In response to the scant literature on the topic of contingent faculty with careful consideration of context and practice, this study examined how instructors in part-time academic appointments compared with full-time, tenured faculty across several outcomes rooted in the definition of efficacious practice – demarcated as *contact with students to increase habits of mind for lifelong learning, employment of learner-centered assessments, and use of a student-centered pedagogy and experientially-grounded instruction.* These outcomes were shaped by a robust literature on best practices strongly associated with positive student learning outcomes (Chickering & Gamson, 1987; 1999; Coreneilius-White, 2007; Costa & Kallick, 2000; Weimar, 2002). To address this topic, this study addressed the following five questions:

1. Controlling for personal and professional characteristics as well as workplace context, does the frequency with which faculty use techniques aimed at enhancing students' habits of mind for lifelong learning vary by employment status?
2. Controlling for personal and professional characteristics as well as workplace context, do the ways in which faculty evaluate student work significantly vary across faculty employment statuses?

3. Controlling for personal and professional characteristics as well as workplace context, does the frequency with which faculty use student-centered and experientially-grounded teaching practices significantly vary by employment status?
4. Among part-time faculty, does a sense of an empowering workspace correlate with assessment and evaluation procedures?
5. Among part-time faculty, does a sense of an empowering workspace correlate with their use of teaching techniques aimed at enhancing students' habits of mind for lifelong learning?

The theoretical frameworks of psychological and social-structural empowerment were used as a foundation for the final two research questions, serving to conceptualize environmental traits previously evidenced to impact employee performances. Holland's typological theory was used to group disciplinary affiliation into its environmental type, which has been previously found to impact the nature of instruction and educational practice. The study used CIRP survey data from responses of over 37,000 faculty members at more than 460 colleges and universities, in addition to institution-level data provides by institutions in the sample. Analyses included various statistical procedures to describe variation in the study's outcomes by faculty appointment status, workplace satisfaction, and gender. A full multivariate profile was constructed using hierarchical linear modeling (HLM). Differences in faculty employment status were explored across multiple nested models and coefficient changes were examined as blocked covariates were specified in successive models.

Discussion of the Findings

The analyses in Chapter 4 sought to examine differences in faculty appointment status, while accounting for faculty's personal and professional characteristics and a rich set of contextual measures, across the following outcomes connected to efficacious performance: *contact with students to increase habits of mind for lifelong learning, employment of learner-centered assessments, and use of a student-centered pedagogy and experientially-grounded instruction*. Taken together, results from the analyses highlighted that part-time faculty scored

substantially higher across the study's outcomes. In fact, after controlling for stress and perceptions of campus and departmental climates, and attitudes connected to the teaching and learning environment, the gap between part-timers and their tenured colleagues increased. Inspection of the final multilevel models across all outcomes revealed that part-time, full-time non-tenure track, and tenure-track faculty were more efficacious instructors than their tenured colleagues. The single exception was observed between tenured and tenure-track faculty on interactions to increase students' habits of mind for lifelong learning, in which case no statistically significant difference emerged. The following two sections present the findings from Chapter 4 in the context of the higher education landscape today and link these findings to extant literature on the top of quality student-faculty contact and efficacious educational practice. For clarity, the discussion is thematically organized by my study's main findings: part-time faculty as efficacious instructors, significant disciplinary differences as measured by Holland's typological theory, empowerment and efficacious instruction, and peripheral findings on efficacious faculty members. It is important to note that the study's research questions and accompanying hypotheses are broadly addressed within the context of the aforementioned themes.

Part-Time Faculty as Efficacious Instructors

The central finding of this study was arguably that part-time faculty performed significantly better than their tenured colleagues across each of the study's measures of educator efficacy. Indeed, part-time faculty scored higher than any other faculty subgrouping. The differences between part-time faculty and their colleagues grew upon controlling for a variety of factors associated with teaching and the nature of instruction. Contrary to my hypotheses, findings across all statistical models consistently suggested that part-timers engaged in more effective teaching practices than their full-time, tenured colleagues. This gap held for faculty's

cultivation of students' habits of mind for lifelong learning, their use of efficacious evaluation strategies, and the frequency with which they employed student-centered teaching practices in their coursework. Indeed, findings suggested that the largest difference in each of the four outcomes was observed between part-time faculty and their tenured counterparts, and these results were further supported by the multilevel model specifications. These findings were unexpected and offer evidence contrary to what existing literature would suggest. Previous literature on the topic of part-time practices purported that part-time faculty are less likely to employ practices linked to positive effects on students' engagement (Umbach, 2007) and less likely to challenge their students in ways linked to metacognitive growth (Downing, Kwong, Chan, Lam, & Downing, 2009; Lin, 2001). Furthermore, prior evidence highlights that not all forms of assessment require the same amount of effort on behalf of the instructor, and that evaluation measures that are labeled as learner-centered tend to be more time intensive (Chickering & Gamson, 1987; 1999; Nicol & Macfarlane, 2006). Other evidence has highlighted that part-time faculty invest less time into their practice than their tenure-line colleagues (Umbach, 2007), especially as a sizeable portion of part-time faculty spend hours commuting to multiple institutions to teach, which provided the foundation for hypothesis 2.1.

When viewed through the lens of prior empirical work, it appears strikingly counter-intuitive that part-time faculty were top-performers. However, part-time faculty's primary charge is to teach. Indeed, unburdened with the largest responsibilities associated with scholarship and service, these differences in educator efficacy may be a consequence of their job focus – to deliver high-quality instruction, which would include the outcomes examined in this study. This is particularly interesting when considering the fact that part-time faculty are also known for "freeway flying" (Kelly, 1990, p. 17) to teach at more than one institution. Despite their multiple

teaching responsibilities, it appears to be the case that part-time faculty have mastered the responsibilities of delivering instruction in such a way that appears beneficial to students. Indeed, while juggling multiple academic appointments, it makes sense that part-time disciplinary experts may have streamlined their work for the sole purpose of benefiting students. The findings further suggest that part-timers take their roles seriously, as evidenced by their engagement with intensive instructional methods.

I found evidence to reject my first hypothesis and support my second. Variation in mean scores on the outcome by faculty appointment status demonstrated that part-time faculty conducted learner-centered assessment practices significantly more than tenured-faculty, contrary to previous research suggesting otherwise. In fact, part-time instructors exhibited the most frequent use of used learner-centered assessments among all faculty subgroupings. I pointed out earlier that it may very well be the case that part-time faculty have streamlined their processes, including their assessments and evaluation efforts, due to their multiple teaching appointments. Many adjuncts traverse cities and counties to instruct duplicate courses (Hurtado, Eagan, Pryor, Whang, & Tran, 2012). While prior scholarship suggests that this presents significant challenges to the faculty subgrouping, this study underscores that having a group of faculty who specialize in teaching may be a good thing, evidenced by findings echoing part-timers' multiple efficacious practices. As a result, universities should consider an appointment that is full-time, but focused exclusively on instruction. This recommendation is submitted with the cautionary note that such a system could perpetuate inequality and create a two-tiered system, within which research continues to benefit from a greater system of values and rewards. What's more, part-time faculty often have the opportunity to teach the same courses frequently

enough to offer benefit from finding efficiencies in their assessment practices, in addition to regularly improving their pedagogical practice.

A very limited amount of empirical work has explored differences in student-centered teaching practices by appointment status (Baldwin & Wawrzynski, 2011), despite a thick literature that suggests the teaching method positively effects students. In their investigation, Baldwin and Wawrzynski also highlighted that full-time, non-tenure-line faculty instructionally behaved similarly to their tenured and tenure-track colleagues. No previous work has explored experientially based instructional practice by faculty appointment status, despite its demonstrated added benefit to students (Kolb 1984; Kolb, Boyatzis, & Mainemeles, 2001).

Group differences in faculty appointment status and my measures of teaching (i.e., student-centered pedagogy and experientially based instruction) indicated that part-time faculty actually drew upon student-centered pedagogy and experiential learning with significantly greater regularity than any other faculty appointment status. However, the largest differences were observed between part-time and tenured faculty, and said differences grew when exploring faculty's workplace satisfaction. The multilevel models further demonstrated that the gap between part-timers and their tenured colleagues further expanded upon controlling for other vital contextual and attitudinal measures. Given the ever-increasing prevalence of part-time faculty members, institutions might also attempt to compensate them for their time with students, as more time spent with students was associated with more student-centered practices. Further examination of the subset of part-time faculty would suggest that this difference may be generalized to the entire group of part-time faculty in the sample, as no difference by involuntary status emerged.

I found partial support for hypotheses 4 and 5. Descriptively, part-time faculty's workplace satisfaction shared a relationship with the extent to which they interacted with students to cultivate their habits of mind for lifelong learning. Indeed, those part-time faculty who reported higher levels of workplace satisfaction also tended to interact with students in ways to cultivate their habits of mind for lifelong learning more frequently than those who reported either medium or low levels of workplace satisfaction. While workplace satisfaction was not conceptualized in this investigation as part of the empowerment construct, others have argued that the complexity of psychological and social-structural empowerment by its nature captures the essence of satisfaction (Laschinger, Finegan, Shamian, & Wilk, 2004; Spreitzer, Kizilos, & Nason, 1997). Said differently, it can be argued that workplace empowerment is the precursor to workplace satisfaction, and the two concepts are not necessarily mutually exclusive. When I accounted for social-structural and psychological empowerment, however, no clear relationship emerged between the facets of the theoretical framework and this outcome. The extent to which higher education organizations provide part-time faculty with vital resources to perform their work seemingly produces no relationship with how they shaped their contact with students to cultivate metacognitive abilities.

These same patterns emerged across the more instructional outcomes, nested within the study's final hypothesis. Higher levels of workplace satisfaction were positively associated with more frequent use of a student-centered pedagogy, experientially-grounded instruction, and learner-centered assessment practices. However, the HLM results failed to reveal a relationship between the study's outcomes and measures of psychological and social-structural empowerment. Again, it could very well be the case that when faculty feel more satisfied with

their academic workspaces, they are more likely to engage in practices that positively impact students.

Reflections and Meanings

In light of the tested hypotheses and synthesized findings summarized above, what can be concluded about how part-time faculty perform relative to their colleagues, and what can be deduced about faculty's broader characteristics connected to their performance abilities? The enduring challenge for scholars concerned about both the experience of contingent faculty and the quality of undergraduate education is to locate empirical research focused on faculty's performance. This challenge is compounded when considering environmental controls, like disciplinary and campus climates. In fact, Umbach (2007) conducted the only empirical investigation with sufficient internal validity to draw conclusions regarding contingent faculty's performance. Baldwin and Wawzrynsky (2011) similarly drew comparisons between contingent faculty and their colleagues, likewise painting a narrative of part-timers as subpar, and perhaps even dangerous to students. The findings of this study further contextualize and expand these efforts to investigate the impact of the use of contingent faculty on undergraduate education. However, taken together, the findings of my study illustrate a very different portrait of part-time faculty than the one perpetuated by Umbach (2007) and Baldwin and Wawrzynsky (2011). In many ways, my results provided diverging evidence compared to the narratives of part-time instruction described by Umbach (2007) and Baldwin and Wawrzynsky (2011). Not only did part-time faculty score higher on the study's outcomes of educator efficacy but their performance gap with tenured faculty also expanded after I controlled for previously unaccounted measures, like the amount of time spent advising/counseling students. These measures are vital, as they relate intimately to the lack of time part-timers have to spend doing such activities due to having

to string together multiple teaching appointments. This may suggest that studies like Umbach's (2007) and Baldwin and Wawrzynsky's (2011) may have arrived at erroneous conclusions which misrepresented the value part-time instructors bring to campuses and departments, especially since those studies lacked controls for unpacking a multifaceted academic workplace.

Empowerment and Efficacious Instruction

It is also important to broadly unpack the notion of empowerment and workplace satisfaction, as my study found the theoretical framework to be unrelated to faculty's efficacy and performance abilities. A number of studies have found a positive relationship between empowerment and workplace satisfaction (Liden, Wayne, & Sparrowe, 2000; Spreitzer, Kizilos, & Nason, 1997; Spreitzer, 1996; Thomas & Velthouse, 1990); however, as conceptualized in this study, the frameworks of empowerment failed to indicate a significant relationship with part-time faculty's performance across the outcomes. This was likely caused by the study's challenge in capturing the essence of empowerment via the available items on the HERI Faculty Survey, resulting in potential threats to construct validity. The essence and function of workplace empowerment is rather complex, and researchers have operationalized the variable differently. For instance, Thomas and Velthouse's (1985) work, which much later served as the impetus for psychological and social-structural empowerment theories, focused more on task assessments as a basis for empowerment. These assessments were couched within the areas of an employee's sense of impact, competence, meaningfulness, and choice.

If I follow the development of the construct of empowerment to some of its earlier theorists, I can begin to see how I have only begun to tap into what empowerment truly means to faculty and how it manifests in academe. Indeed, investigations concerned with unpacking an employee's feelings of empowerment are limited to observations in industry, which may

possibly have uniquely materialized the construct. That is, attempting to capture how empowerment manifests in industry may not be the same as in academe. The notion of workplace empowerment in the academy might also appear differently for different groups within the same context. This offers an area ripe for future research, which is discussed in more detail below.

My strong sense that empowerment must remain in conversation when scholars consider part-timers' performance, despite its lack of statistical significance in my multilevel models, stems from significant variation and noteworthy trends that faculty's workplace satisfaction matters (Hagedorn, 2000; Johnsrud & Rosser, 2002; Rosser, 2004) Collectively, the study evidenced that workplace satisfaction does matter in faculty's performance across subgroups. A thick literature has found workplace satisfaction to be strongly, positively connected to feelings of workplace empowerment (Laschinger, Finegan, Shamian, & Wilk, 2004; Spreitzer, Kizilos, & Nason, 1997).

Prior scholarship has suggested that academe can be a challenging, if not hindering, workspace for contingent faculty (Meixner, Kruck, & Madden, 2010). Burk (2000) suggests that the working conditions for contingent faculty (both adjunct and full-time non-tenure-track) are disempowering and disrespectful. This scholarship helped shape the study's hypotheses, while also considering evidence from industry suggesting that negative perceptions of organizations tend to decrease an individual's workplace performance (Arthur, 1994; Huselid, 1995; Kluger & DeNisi, 1996). While satisfaction was not intended to directly measure empowerment, it served as a fundamental proxy, provided that empowerment, due to its conceptual richness, may be challenging to capture (Conger & Kanungo, 1988; Schulz, Israel, Zimmerman, & Checkoway, 1995; Spretizer, 1995) and has been found to be positively associated with workplace satisfaction

(Morrison, Jones, & Fuller, 1997). In a higher education context, Eagan, Jaeger, & Grantham (2015) effectively demonstrated the connection between empowerment (office space, respect, and the like) and workplace satisfaction.

Disciplinary Differences in Instruction and Educational Practice

Differences between faculty subgroups aside, this study extends the application of Holland's (1959; 1997) theory of vocational personalities and work environments to higher education organizations. Previous scholarship has identified disciplinary differences in classroom teaching behaviors (Murray & Renaud, 1995), and results from this study support the assertion that instruction differs across disciplines – underlying forces suggest that faculty teaching within disciplines affiliated with creativity may be better serving students. This disproportionate impact, however, appears to be dependent upon the type of practice. The study found, for instance, that faculty within enterprising and artistic environments tended to use a student-centered pedagogy more frequently than social environments. This changed when examining experientially-grounded instruction in such a way that instructors within social environments were the most frequent users of this practice. It would seem that the extent to which faculty in the aggregate engaged in best practices was dependent in part upon their disciplinary affiliation.

There are a few reasons why this might be the case. Creative disciplines, even those with scientific bases, like psychology, might have carefully retained their flexibility by not usually emphasizing standardized testing in order to practice. Meanwhile, conventional disciplines have often taught to pass students on a licensure examination. This is not to say that instructors aspiring to pass their students on national or regional examinations, or even to cultivate a uniquely technical skill set, are compelled to call upon instructional approaches that are less student-centered in nature. However, the teaching methods (or culture) within the department

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may be such that traditional lecture is more highly valued, perhaps due to its efficiency, compared to alternative approaches to instruction that the literature has found to be more beneficial to student learning (Chickering & Gamson, 1993; Weimar, 2013).

It was reasonable to further conclude that said instructional differences may be seen as dependent upon a faculty's disciplinary affiliation, in light of evidence that teaching in the social and behavioral sciences tends to be more student-centered than disciplines within the physical and life sciences (Birnbaum, 1997; Murray & Renaud, 1995; Neumann, 2001). Findings within the study's multilevel models exploring disciplinary affiliation supported my second hypothesis, in light of evidence pointing out disciplinary differences. In most models, a faculty's departmental affiliation produced a noteworthy difference in practice when contrasted against the comparison group, such that artistic and enterprising affiliated disciplines produced the most positive effects across the outcomes in the majority of cases. This result was consistent for the subset of part-time faculty.

Implications

The findings from this investigation offer opportunity for both faculty and higher education administrators. In particular, these findings lead to implications for how faculty and administrators can enhance the quality of educational and instructional environment for students – a fundamental priority for accrediting bodies (Alstete, 2004; Frazer, 1992). These implications are expanded upon in the following two sections, first unpacking implications for faculty with regard to how they teach and interact with students, and following by describing ways in which the findings can inform how higher education administrators orient themselves toward faculty and institutional affairs. Each section explores the specific implications related to the quality of educational practices and any other related findings from the prior chapter. These implications

are rooted in both the statistical and practical significance of this investigation. That is, the following sections detail decisions to be made both on the part of faculty and administrators.

Implications for Faculty

At the beginning of my evaluation of the empowerment framework, I developed a foundation for psychological empowerment by structural characteristics. These analyses also offered several implications for faculty leaders who ought to concern themselves with fostering positive workspaces and departmental cultures for their contingent academicians. My evaluation of the study's theoretical framework began by testing group differences between part-time faculty who had access to certain resources and those who did not. These findings indicate to department leaders that, at a minimum, certain structural resources may be prerequisites to fostering an empowering academic working environment. In light of these findings, department chairs should consider allocating department funding toward providing office space for contingent faculty. Part-time faculty who reported having access to offices indicated higher average levels of empowerment. The same was the case for faculty who had access to a computer and a phone with voicemail capabilities. Previous research has found that faculty who have access to office space – either shared or private – also exhibit greater levels of workplace satisfaction (Eagan, Jaeger, & Grantham, 2015).

Department chairs also have an opportunity to identify and allocate to part-time faculty private spaces with computers and phones. These resources for part-timers also ensure that departments are within compliance of the Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. § 1232g; 34 CFR Part 99), such that they are able to ensure the confidentiality of information pertaining to students' educational experiences. Part-time faculty teach a significant amount of undergraduate courses, and need private space and equipment to discuss matters

pertinent to students' educational records. Failure of departments to offer these resources could threaten institutions' federal compliance, in addition to part-time faculty's empowerment.

Furthermore, the findings from this study are significant at a time when higher education experts recommend that instructors call upon student-centered instruction and policymakers request increased accountability for student outcomes (Friedlaender, Burns, Lewis-Charp, Cook-Harvey, & Darling-Hammond, 2014; National Research Council, 2003). While results demonstrated that part-time faculty are consistently calling upon both student- and experientially-based methods significantly more than other faculty subgroupings, faculty leaders might wish to augment their use of these best practices by offering professional development opportunities. However, should the faculty move forward with professional development opportunities, it is recommended that the activities be informed by evidence that suggests said opportunities be both sustained and faculty-driven (Penuel, Fishman, Yamaguchi, & Gallagher, 2007). All faculty might consider participating in the activities in order to promote buy-in and shared responsibility. Additionally, institutions might consider inviting part-time faculty facilitate and lead such professional development opportunities. Professional development, which might also manifest as learning communities, presents opportunities for faculty to engage department-wide conversation concerning the extent to which they engaged these best practices. Evidenced by the disproportionate impact of faculty on students by disciplinary affiliation, faculty teaching within investigative or conventional environments must ask themselves some of the following important questions: How do we improve our engagement with students, both in terms of frequency and quality? How can we as a faculty more positively interact with students, and how does this look within our discipline? What factors within our discipline might inhibit us from engaging in these practices more fully?

Finally, accreditation, be it initial or candidacy, is mandatory in order to receive public funding (Higher Education Act, Title IV). During certain points of an institution's accreditation cycle, full-time faculty are typically charged with spearheading self-evaluation or self-study efforts prior to a site visit from their appropriate regional commission. Indeed, accreditation commissions are concerned with the quality of the teaching and learning environment and inquire into faculty's instructional practices, in addition to looking at institutions' use of part-time faculty (Henry, 2008). By consequence, it would behoove the faculty to take a deeper look into the ways in which they are engaging students and delivering their programs. The results from this study showed that, net other factors, part-time faculty were calling upon these instructional practices more frequently than their full-time colleagues. Faculty might consider working with the administration or their institutional research officers in order to gather information on instructors' teaching and assessment practices, as this information is vital for assuring educational quality, enhancing institutional effectiveness, and fostering continuous improvement.

Implications for College and University Administrators

The study's findings have implications for administrative and executive teams across higher education institutions. University administrators, namely those working within academic affairs, might consider using their authority to build and foster environments for part-time faculty, which may be conducive to empowerment and satisfaction. While some might argue that the costs associated with such an environment are high, there are a number of activities, procedures, and policies that senior-level administrators can introduce to their campuses to change the collective culture and enhance the academy as a working environment.

It is important for administrators to design methods for faculty enhancement with regard to recognition and achievement, possibility of growth and advancement, and campus-wide climate assessment. First, it has been widely accepted by industrial-organizational psychologists that acts of notice and praise offered by one or more superior or colleague enhances connection to the working environment (Campbell, 2000; Dutton, 2003; Schmidt, 2007). In turn, this connection fosters contingent faculty's commitment to their campus. Recognition and mention also relate to the achievements of organizational personnel (Locke & Latham, 2002). Many institutions offer praise to their full-time instructional staff in the areas of exemplary teaching and service (e.g., outstanding teaching awards). By extension, administrators also might consider extending eligibility to their part-time faculty.

Colleges and universities ought to entertain the notion of restructuring hiring practices to provide opportunity for adjuncts. This is especially true for public and broad access institutions where overwhelming numbers of adjunct faculty tend to "audition" for years, aspiring to become a full-time faculty member (Christensen, 2008). For these faculty, competing for a permanent academic position can be quite challenging. It is common that administrators and hiring committees recruit interim/temporary staff and executive members, which is seen as a stepping-stone for a permanent position. This same selection process might be extended to the faculty, such that exemplary adjuncts might be invited by their faculty peers to hold interim full-time positions. This strategy offers part-time faculty the chance to fill a full-time spot while the recruitment is open, giving them a unique experience and chance to enhance their ability to compete for the permanent position. While still not a firm offer or contractual agreement, this method of selection which is practiced in other organizational units (in both student affairs and instructional offices, interim staff and management positions are often seen as an approach to test

and fill a permanent position) offers adjuncts paid time to devote more hours per week preparing and advising, and less hours commuting – three variables associated with faculty's ability to be efficacious instructors. To further this point, given the thread of findings which overwhelmingly pointed out that part-timers are excellent instructors, campuses might also invest in more immediately hiring full-time faculty devoted solely to teaching (instructional opportunities with service obligations tied strictly to curriculum development).

Finally, it is key that the administration ensures that these efforts are facilitated within a positive campus climate. Vice-presidents of instruction and academic affairs might consider charging their institutional research offices with spearheading the development, implementation, and analysis of a climate survey, intended to gather rich information on the state of affairs for their contingent faculty. Strategies to engender a more positive climate can then be rooted in the results, making them highly tailored and institution-specific.

To further align institutional culture with the interests of contingent faculty, which also inherently builds a more positive climate, the administration must work fervently to allow these faculty to participate in shared governance. A recent instance of success was described at Northeastern University (Flaherty, 2016). In this case, the adjunct faculty at Northeastern University formed a union, and after nearly two years of negotiations, were able to secure substantial pay increases and other key benefits, like getting paid for classes that the college cancels. This represents a strong example of the positive effects that occur once adjuncts are able to contribute their perspectives to institutional governance. Kezar and Lester (2009) discuss the significant challenges for leadership that the rise of contingent faculty creates, and we must promote their dialogue by opening space for contingent faculty on important institutional committees and workgroups. True promotion of these activities consists of more than affording

space or extending invitations to participate in faculty governance. Institutions might consider incentivizing adjunct participation in faculty meetings, curriculum committees, and the like. Institutions occasionally allow adjuncts to sit on institutional committees, but numbers are often capped to one or two. It is recommended that institutions remove these ceilings of participation in order to foster adjunct contribution and to more fully reflect their presence on campus. Committee work is ripe with opportunity for part-time and non-tenured faculty participation and extends from budgetary and organizational planning to campus-wide events.

Additionally, I mentioned earlier the implications of the study's results for faculty involvement in accreditation work; however this extends to the administration and, more specifically, accreditation liaison officers (ALO). As ALO's, or other administrative officials working in similar capacities, identify and develop evidence to assure the quality of instruction at their institution, they should focus their efforts toward identifying the extent to which their faculty are engaging in best practices. Provided that part-time faculty likely comprise the majority of their instructional staff, coupled with the fact that some commissions require the avoidance of undue dependence of part-time faculty, adjuncts, and graduate assistants to conduct classroom instruction (Speer, 2013), how the administration works with faculty to evidence engagement in best practices will be key for showing adherence to regional accreditation standards. That is, gathering and disseminating institution-level data on faculty's perceptions and behaviors serves to demonstrate to accreditors that institutions are reflective and engaging a type of ongoing quality control process.

Directions for Future Research

The area of contingent faculty, specifically related to part-time and adjunct instructors, is an area ripe with opportunities for future empirical investigation. This work offers a counter-

narrative to Umbach's (2007) study regarding contingent faculty and their varying degrees of engagement, including their use of student-centered methods. The central question remains: If contingent faculty, as evidenced in this dissertation, are practitioners of more efficacious pedagogical approaches and make contact with students in ways associated with stronger metacognitive development, what explains and accounts for the negative relationships identified between student exposure to contingent faculty and student outcomes (Eagan & Jaeger, 2008, 2009; Jaeger & Eagan, 2009, 2011a, 2011b)? First and foremost, future study of contingent faculty phenomena needs to further unpack the role of supportive institutional structures and perceptions of campus climate in contingent faculty's campus work. Kezar (2006) highlights that institutions must foster the inclusion of contingent and part-time faculty in shared governance, and this represents one avenue by which researchers can study the interface between contingent faculty's dominant instructional presence and their decreased participation in areas to impact their work. The ways in which campuses bring adjuncts into institution-wide conversations are broader than shared governance, however, and represent another area for future scholarship. To be specific, we must ask ourselves which areas of part-time faculty contribution across campus will be the most far-reaching and engaging, and whether being a minority contributor (one or two adjuncts surrounded by a pool of full-timers within or without their department) has an impact on an empowering institutional context? The nature of said questions represents an area ripe with research opportunity for qualitative investigators, especially those using focus group methods adopting a sampling strategy to pull part-timers together across multiple campuses, rather than just one. Indeed, it is important to unpack these experiences across contexts to shed light on the phenomenon.

To gain a clearer image of contingent faculty's impact on students, researchers must work to elevate the sophistication of data connected to the phenomenon. That is, researchers need to merge student- and faculty-level data to directly look at the impact of instruction and contact on students' outcomes. While previous studies have explored how certain approaches to teaching impact students (Balwin & Wawrzynsky, 2011; Umbach, 2007) and which faculty subgroups tend to call upon these practices more, there is no work to single-handedly connect these pieces. The most powerful studies in this area will be multi-institutional. Coordination of these efforts ought to be the scholarly responsibility of large, public districts with multiple sites. For instance, the California Community College (CCC) system represents a unified body comprised of 112 institutions with the data infrastructure sufficiently sophisticated to conduct such work. Essentially, I suggest funding in this area for the CCC system, and the Chancellor's Office in Sacramento needs to respond to this call to action. This funding would support a system-wide project to merge faculty- and student-level survey data from faculty and students to examine a host of outcomes related to retention, academic performance, and engagement. Researchers within or interested in the community college arena should consider spearheading these efforts, as they would be especially meaningful for their system and often represent more stringent responses to accreditation and accountability expectations. While my study focused on four-year institutions, the data currently available through systematic collection processes within the CCCO, when merged with survey data, provide a ripe opportunity to enact this type of investigation.

However, when looking into contingent faculty phenomena, research highlights that adjunct faculty are often treated as one group (Kezar, 2013). Future scholarship should consider comparing contingent faculty against themselves, as the issues connected to non-contractual

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work are different across disciplines. Part-time instructional employment looks differently in the health sciences, where many contingent faculty may hold full-time practice in a specialty outside of the academy and may voluntarily teach part-time, compared to part-timers teaching in the humanities. By contrast, instructors with terminal degrees in the humanities may be more likely to compete for full-time, tenure-track positions and might view themselves as "stuck" in a perpetual part-time faculty role. The central question for future investigation then becomes: Which characteristics of contingent appointments affect adjuncts' engagement in best practices? While this study looked broadly at dispositions, attitudes, and behaviors of the contingent academic, it did not precisely explore the nature of the appointment itself. That is, what elements of contingent contracts, including teaching load and pay, tend to amplify efficacious practice. The nature of efficacious contingent faculty work may be too complex to compare across general appointments, and future endeavors should dissect these appointments further in order to develop a richer image of efficacious practice.

Finally, when studying issues related to the work of contingent faculty, future studies should consider grounding their approaches in any number of theoretical frameworks to explore job satisfaction, a construct closely related to workplace empowerment. Some theories of job satisfaction include discrepancy theory (Locke, 1969), equity theory (Mowday, 1992), motivator-hygiene theory (Herzberg, Mausner, & Snyderman, 1959), and existence, relatedness, and growth (ERG) theory (Alderfer, 1972). These frameworks possess far-reaching utility in higher education research, especially when studying contingent faculty phenomena, and are greatly underutilized. To be clear, these theories are fundamental for advancing research in this area for the reason that they offer focus on elements of satisfaction and bring scholarly conversations into a deeper dialogue with the constructs of empowerment. More importantly, the traditional

conceptualization of job satisfaction as related to job performance may itself be limited. Future

studies might also consider capturing a fuller picture of emotion toward the workplace and the

nature of the work in order to arrive a truer estimate of performance contingent upon an

individual's affect. That is, researchers must ask: What constitutes satisfaction? A number of

measures connected to the feeling are available for use, and future work would capitalize from

the elevated specificity on the emotion of workplace satisfaction, contentment, or happiness.

Conclusion

"The wellbeing of the university depends on its ability to recruit and retain a talented professoriate. Our national wellbeing depends on our ability to develop a happy, emotionally healthy, and productive next generation." (Hensel, 1991, p. 79)

Full-time, tenured faculty maintain a privileged status within the academy, despite the

fact that the majority of students in higher education might be taught by adjuncts – it is logical to

conclude that the new majority might very well be teaching the majority of coursework,

especially survey courses with the lowest student-faculty ratios. Yet, despite this, part-timers

have less decision-making power over issues that affect them and the students whom they teach.

Indeed, as full-time, tenured faculty members make departmental and organizational decisions to

preserve their status and govern their institutions, they must make certain that the interests and

expertise of the individuals who represent the majority faculty appointments are adequately

represented. Faculty must interrogate the climates of their institutions. These cross-examinations

manifest through a multiplicity of ways – from hallway conversations with administrators to

concerted and institutional efforts with convened committees.

While this study did not explore the connection between contingent faculty and student

outcomes, the findings of this study suggest that contingent faculty are among the most

efficacious instructors in the academy as measured by pedagogical constructs from a national

survey of faculty and informed by the literature on effective teaching practices. The opening quotation of this section purports that our nation's faculty have the capacity to enhance the development of the next generation, but if we continue to ignore the needs and expertise of the individuals who increasingly are more likely to teach future students, we risk impeding that development and knowledge production As mentioned, a thick literature has examined what our teachers should do in order to enhance the next generation of students, who will become our future CEO's, health and human service workers, congressmen and women, and, perhaps most importantly, future educators. The findings from this study would suggest that our contingent academicians are quite effectively cultivating the talents of our next generation, and postsecondary institutions have an obligation to recognize and further elevate the skills, talents, and expertise of these efficacious educators.

Appendices

Appendix A:
Survey Instrument

Appendix B:
Variables and Coding Schemes

Appendix C:
Complete HLM Tables Including All Nested Models

Appendix D:
Full Correlation Matrix Between Faculty Subgroupings and Independent Variables

Appendix A:

Survey Instrument

NOTE: The 2010-2011 HERI Faculty Survey is a web-based survey and therefore this document does not reflect the web-based formatting.

1. What is your principal activity in your current position at this institution?
Administration
Teaching
Research
Services to clients and patients
Other

2. Are you considered a full-time employee of your institution for at least nine months of the current academic year?
Yes   No

▪▪

PART-TIME FACULTY
These questions will only be included for part-time faculty.

2a. If given the choice, I would prefer to work full-time at this institution.
     Yes   No

2b. Have you ever sought a full-time teaching position at this or another institution?
     Yes   No

IF YES, NESTED ITEM
2bi. How long ago did you pursue a full-time position?
Currently seeking a position
Within the last year
1 to 2 years ago
3 to 5 years ago
More than 5 years ago

2c. My full time professional career is outside academia.
     Yes   No

2d. In considering your reasons for teaching part-time at this institution, please indicate your agreement with the following statements:
(Responses: Agree Strongly, Agree Somewhat, Disagree Somewhat, Disagree Strongly)
My part-time position is an important source of income for me
Compensation is not a major consideration in my decision to teach part-time
Part-time teaching is a stepping-stone to a full-time position
My part-time position provides benefits (e.g. health insurance, retirement, etc. that I need
Teaching part-time fits my current lifestyle

Full-time positions were not available
My expertise in my chosen profession is relevant to the course(s) I teach

2e. Mark all institutional resources available to you in your last term as <u>part-time</u> faculty. (Mark <u>all</u> that apply)
Use of private office
Shared office space
A personal computer
An email account
A phone/voicemail

2f. Please indicate your agreement with the following statements:
(Responses: Agree Strongly, Agree Somewhat, Disagree Somewhat, Disagree Strongly)
<u>Part-time instructors at this institution:</u>
Are given specific training before teaching
Rarely get hired into full-time positions
Receive respect from students
Are primarily responsible for introductory classes
Have no guarantee of employment security
Have access to support services
Are compensated for advising/counseling students
Are required to attend meetings
Have good working relationships with the administration
Are respected by full-time faculty

2g. Besides this institution, at how many other institutions do you teach (e.g., 0, 1, 2, 3, etc.)?

▪▪▪

3. What is your present academic rank?
Professor
Associate Professor
Assistant Professor
Lecturer
Instructor

4. What is your tenure status at this institution?
Tenured
On tenure track, but not tenured
Not on tenure track, but institution has tenure system
Institution has no tenure system

▪▪▪

<u>COMMUNITY COLLEGE</u>
These questions will only be included for community colleges, and will replace questions 3 and 4 when the survey is used by community colleges.

3. What is your current status at this institution?
Tenured
Probationary, Tenure Track
Renewable Contract Instructor (e.g., Adjunct)

4. What is your academic rank at this institution?
Acting Instructor
Instructor
Assistant Professor
Associate Professor
Professor
Emeritus

••

5. Are you currently serving in an administrative position as: (Mark <u>all</u> that apply)
Department chair
Dean (Associate or Assistant)
President
Vice-President
Provost
Other
Not Applicable

6. <u>On</u> the following list, please mark <u>one</u> in each column:
Highest Degree Earned
Degree Currently Working On
Bachelor's (B.A., B.S., etc.
Master's (M.A., M.S., M.F.A., M.B.A., etc.
LL.B., J.D.
M.D., D.D.S. (or equivalent)
Other first professional degree beyond B.A. (e.g., D.D., D.V.M.)
Ed.D.
Ph.D.
Other degree
None

7. From what higher education institution did you receive your Bachelor's Degree?
(Please enter complete Institution Name and City)
Institution Name   _____
City   _____
State *(Drop down)*   _____
Country *(Drop down)*   _____

8. From what higher education institution did you receive your highest degree?
(Please enter complete Institution Name and City)
Institution Name   _____

City   _____

State *(Drop down)*   _____

Country *(Drop down)*   _____

9. Personally, how important to you is:
(Responses: Essential, Very Important, Somewhat Important, Not Important)
Research
Teaching
Service

10. During the past two years, have you engaged in any of the following activities?
(Responses: Yes, No)
Taught an honors course
Taught an interdisciplinary course
Taught an ethnic studies course
Taught a women's studies course
Taught a service learning course
Taught an exclusively web-based course at this institution
Participated in a teaching enhancement workshop
Advised student groups involved in service/volunteer work
Collaborated with the local community in research/teaching
Conducted research or writing focused on:
        International/global issues
        Racial or ethnic minorities
        Women and gender issues
Engaged undergraduates on <u>your</u> research project
Worked with undergraduates on a research project
Engaged in academic research that spans multiple disciplines
Taught a seminar for first-year students
Taught a capstone course
Taught in a learning community (e.g. FIG, linked courses)
Supervised an undergraduate thesis
Published op-ed pieces or editorials
Received funding for your work from:
        Foundations
        State or federal government
        Business or industry

11. How many courses are you teaching this term (include all institutions at which you teach)?
(e.g., 0, 1, 2, 3, etc.)

IF response to question 11 is greater than or equal to one, populate 11a-11j based on response - NESTED
11a – 11j   <u>Course 1 (up to 10 courses)</u>
i. Type of Course:
General education course
Course required for an undergraduate major
Other undergraduate credit course

Developmental/remedial course (not for credit)
Non-credit course (other than above)
Graduate course

ii. How many students are enrolled in this course? _____

iii. Does this course have a teaching/lab assistant or reader/grader assigned?

                   Yes   No

iv. Where do you teach this course?
At this institution
At another institution

IF response to question 11 is 0 or Missing
11k. What types of courses do you primarily teach?
Undergraduate credit courses
Graduate courses
Non-credit courses
I do not teach

12. Do you teach remedial/developmental skills in any of the following areas? (Mark <u>all</u> that apply)
Reading
Writing
Mathematics
ESL
General academic skills
Other subject areas

13. Have you engaged in any of the following professional development opportunities at your institution?
(Responses: Yes, No, Not eligible, Not available)
Paid workshops outside the institution focused on teaching
Paid sabbatical leave
Travel funds paid by the institution
Internal grants for research
Training for administrative leadership
Received incentives to develop new courses
Received incentives to integrate new technology into your classroom

14. How many of the following have you published?
(Responses: None, 1-2, 3-4, 5-10, 11-20, 21-50, 51+)
Articles in academic or professional journals
Chapters in edited volumes
Books, manuals, or monographs
Other, such as patents, or computer software products

15. How many exhibitions or performances in the fine or applied arts have you presented in the last two years?
(Responses: None, 1-2, 3-4, 5-10, 11-20, 21-50, 51+)

16. How many of your professional writings have been published or accepted for publication in the last two years?
(Responses: None, 1-2, 3-4, 5-10, 11-20, 21-50, 51+)

17. Please indicate the extent to which you:
(Responses: To a Great Extent, To Some Extent, Not at All)
Feel that the training you received in graduate school prepared you well for your role as a faculty member
Achieve a healthy balance between your personal life and your professional life
Experience close alignment between your work and your personal values
Feel that you have to work harder than your colleagues to be perceived as a legitimate scholar
Mentor new faculty

18. In your interactions with undergraduates, how often do you encourage them to:
(Responses: Frequently, Occasionally, Not at all)
Ask questions in class
Support their opinions with a logical argument
Seek solutions to problems and explain them to others
Revise their papers to improve their writing
Evaluate the quality or reliability of information they receive
Take risks for potential gains
Seek alternative solutions to a problem
Look up scientific research articles and resources
Explore topics on their own, even though it was not required for a class
Accept mistakes as part of the learning process
Seek feedback on their academic work
Integrate skills and knowledge from different sources and experiences

19. In how many of the courses that you teach do you use each of the following?
(Responses: All, Most, Some, None)
<u>Evaluation Methods</u>
Multiple-choice exams
Essay exams
Short-answer exams
Quizzes
Weekly essay assignments
Student presentations
Term/research papers
Student evaluations of each others' work
Grading on a curve
Competency-based grading
<u>Instructional Techniques/Methods</u>
Class discussions
Cooperative learning (small groups)

Experiential learning/Field studies
Teaching assistants
Recitals/Demonstrations
Group projects
Extensive lecturing
Multiple drafts of written work
Student-selected topics for course content
Reflective writing/journaling
Community service as part of coursework
Electronic quizzes with immediate feedback in class
Using real-life problems
Using student inquiry to drive learning

20. Indicate the importance to you personally of each of the following:
(Responses: Essential, Very Important, Somewhat Important, Not Important)
Becoming an authority in my field
Influencing the political structure
Influencing social values
Raising a family
Becoming very well off financially
Helping others who are in difficulty
Adopting 'green' practices to protect the environment
Developing a meaningful philosophy of life
Helping to promote racial understanding
Integrating spirituality into my life
Making a theoretical contribution to science
Participating in a community action program
Keeping up to date with political affairs
Becoming a community leader
Mentoring the next generation of scholars

21. Indicate the importance to you of each of the following education goals for undergraduate students:
(Responses: Essential, Very Important, Somewhat Important, Not important)
Develop ability to think critically
Prepare students for employment after college
Prepare students for graduate or advanced education
Develop moral character
Provide for students' emotional development
Teach students the classic works of Western civilization
Help students develop personal values
Enhance students' self-understanding
Instill in students a commitment to community service
Enhance students' knowledge of and appreciation for other racial/ethnic groups
Help master knowledge in a discipline
Develop creative capacities
Instill a basic appreciation of the liberal arts

Promote ability to write effectively
Help students evaluate the quality and reliability of information
Engage students in civil discourse around controversial issues
Teach students tolerance and respect for different beliefs
Encourage students to become agents of social change

22. During the present term, how many hours per week on average do you actually spend on each of the following activities?
(Responses: None, 1-4, 5-8, 9-12, 13-16, 17-20, 21-34, 35-44, 45+)
Scheduled teaching (give actual, not credit hours)
Preparing for teaching (including reading student papers and grading)
Advising and counseling of students
Committee work and meetings
Other administration
Research and scholarly writing
Other creative products/performances
Consultation with clients/patients
Community or public service
Outside consulting/freelance work
Household/childcare duties
Commuting to campus
Other employment, outside of academia

23. For each of the following items, please mark either Yes or No.
(Responses: Yes, No)
Are you a member of a faculty union?
Are you a U.S. citizen?
Do you plan to retire within the next three years?
Do you use your scholarship to address local community needs?
Have you been sexually harassed at this institution?
Have you ever interrupted your professional career for more than one year for family reasons?
Have you ever received an award for outstanding teaching?
Is (or was) your spouse/partner an academic?

24. During the past two years, have you:
(Responses: Yes, No)
Considered early retirement?
Considered leaving academe for another job?
Considered leaving this institution for another?
Changed academic institutions?
Engaged in paid consulting outside of your institution?
Engaged in public service/professional consulting without pay?
Received at least one firm job offer?
Requested/sought an early promotion?

25. If you were to begin your career again, would you:
(Responses: Definitely yes, Probably yes, Not sure, Probably no, Definitely no)

Still want to come to this institution?
Still want to be a college professor?

26. Indicate how well each of the following describes your college or university:
(Responses: Very Descriptive, Somewhat Descriptive, Not Descriptive)
It is easy for students to see faculty outside of regular office hours
The faculty are typically at odds with campus administration
Faculty here respect each other
Most students are treated like "numbers in a book"
Faculty are rewarded for being good teachers
There is respect for the expression of diverse values and beliefs
Faculty are rewarded for their efforts to use instructional technology
Administrators consider faculty concerns when making policy
The administration is open about its policies

27. Please indicate the extent to which each of the following has been a source of stress for you during the last two years:
(Responses: Extensive, Somewhat, Not at All, Not Applicable)
Managing household responsibilities
Child care
Care of elderly parent
My physical health
Health of spouse/partner
Review/promotion process
Subtle discrimination (e.g., prejudice, racism, sexism)
Personal finances
Committee work
Faculty meetings
Colleagues
Students
Research or publishing demands
Institutional procedures and "red tape"
Teaching load
Children's problems
Friction with spouse/partner
Lack of personal time
Keeping up with information technology
Job security
Being part of a dual career couple
Working with underprepared students
Self-imposed high expectations
Change in work responsibilities
Institutional budget cuts

28. How satisfied are you with the following aspects of your job?
(Responses: Very Satisfied, Satisfied, Marginally Satisfied, Not Satisfied, Not Applicable)
Salary
Health benefits

Retirement benefits
Opportunity for scholarly pursuits
Teaching load
Quality of students
Office/lab space
Autonomy and independence
Professional relationships with other faculty
Social relationships with other faculty
Competency of colleagues
Job security
Departmental leadership
Course assignments
Freedom to determine course content
Availability of child care at this institution
Prospects for career advancement
Clerical/administrative support
Overall job satisfaction
Tuition remission for your children/dependents

29. Below are some statements about your college or university. Indicate the extent to which you agree or disagree with each of the following:
(Responses: Agree Strongly, Agree Somewhat, Disagree Somewhat, Disagree Strongly)
Faculty are interested in students' personal problems
Racial and ethnic diversity should be more strongly reflected in the curriculum
Faculty feel that most students are well-prepared academically
This institution should hire more faculty of color
This institution should hire more women faculty
Student Affairs staff have the support and respect of faculty
Faculty are committed to the welfare of this institution
Faculty here are strongly interested in the academic problems of undergraduates
There is a lot of campus racial conflict here
My research is valued by faculty in my department
My teaching is valued by faculty in my department
Faculty of color are treated fairly here
Women faculty are treated fairly here
Gay and lesbian faculty are treated fairly here
Faculty are sufficiently involved in campus decision making
My values are congruent with the dominant institutional values
This institution takes responsibility for educating underprepared students
The criteria for advancement and promotion decisions are clear
Most of the students I teach lack the basic skills for college level work
There is adequate support for faculty development

30. Indicate how important you believe each priority listed below is at your college or university:
(Responses: Highest Priority, High Priority, Medium Priority, Low Priority)
To promote the intellectual development of students
To develop a sense of community among students and faculty

To facilitate student involvement in community service
To help students learn how to bring about change in society
To increase or maintain institutional prestige
To hire faculty "stars"
To recruit more minority students
To enhance the institution's national image
To create a diverse multi-cultural campus environment
To promote gender equity among faculty
To provide resources for faculty to engage in community-based teaching or research
To create and sustain partnerships with surrounding communities
To pursue extramural funding
To increase the representation of minorities in the faculty and administration
To strengthen links with the for-profit, corporate sector
To develop leadership ability among students
To increase the representation of women in the faculty and administration
To develop an appreciation for multiculturalism

31. Please indicate your agreement with each of the following statements:
(Responses: Agree Strongly, Agree Somewhat, Disagree Somewhat, Disagree Strongly)
The chief benefit of a college education is that it increases one's earning power
Promoting diversity leads to the admission of too many underprepared students
Colleges should be actively involved in solving social problems
Colleges should encourage students to be involved in community service activities
A racially/ethnically diverse student body enhances the educational experience of all students
Realistically, an individual can do little to bring about changes in society
Colleges should be concerned with facilitating undergraduate students' spiritual development
Colleges have a responsibility to work with their surrounding communities to address local issues
Private funding sources often prevent researchers from being completely objective in the
      conduct of their work
Colleges should prohibit racist/sexist speech on campus
This institution should not offer remedial/developmental education

32. Please enter your base institutional salary (e.g., for $56,000, please enter 56000).
$_____

33. Your base institutional salary reported above is based on:
Less than 9 months
9/10 months
11/12 months

▪▪▪
PART-TIME FACULTY
These questions will replace questions 32 and 33 for faculty who indicate they are part-time.

32. Please enter your total salary from teaching at this institution for this academic year (e.g., for $30,000, please enter 30000).
$_____

33. How much are you paid per course at this institution (e.g., for $3,000, please enter 3000)?
$_____

. . . .

34. What percentage of your current year's income comes from:
       (e.g., for 45%, please enter 45 - total for all responses must equal 100%)

Base salary from this institution   ____%
Other income from this institution   ____%
Income from another academic institution   ____%
Non-academic income   ____%

35. Please enter the four-digit year that each of the following occurred (e.g., 1944, 2001, etc.).
Year of birth   ____
Year of highest degree now held   ____
Year of appointment at present institution   ____
If tenured, year tenure was awarded   ____

36. Please select the most appropriate general area and disciplinary field for the following:
      (See Appendix A)
Major of highest degree held   ____
Department of current faculty appointment   ____

37. How many children do you have in the following age ranges?
(Responses: 0, 1, 2, 3, 4+)
Under 18 years old
18 years or older

38. How would you characterize your political views?
Far Left
Liberal
Middle of the Road
Conservative
Far Right

39. Are you currently: (Mark <u>one</u>)
Single
Married
Unmarried, living with partner
Divorced
Widowed
Separated

40. Your sex:
Male
Female

41. Is English your native language?
Yes   No

42. Are you: (Mark <u>all</u> that apply)
White/Caucasian
African American/Black
American Indian/Alaska Native
Asian American/Asian
Native Hawaiian/Pacific Islander
Mexican American/Chicano
Puerto Rican
Other Latino
Other

43. Do you give the Higher Education Research Institute (HERI) permission to retain your contact information (i.e., your email address and name) for possible follow-up research? HERI maintains strict standards of confidentiality and will not release your identifying information.
Yes   No

If "Yes," please confirm your email address: _____

44 to 63. Local Optional Questions (20 total)
(Responses: A, B, C, D, E)

General Area
(Major / Department)

1=Agriculture/natural resources/related	17=Library science
2=Architecture and related services	18=Mathematics and statistics
3=Area/ethnic/cultural/gender studies	19=Mechanical/repair technologies/techs
4=Arts (visual and performing)	20=Multi/interdisciplinary studies
5=Biological and biomedical sciences	21=Parks/recreation/leisure/fitness studies
6=Business/management/marketing/related	22=Precision production
7=Communication/journalism/ comm. tech	23=Personal and culinary services
8=Computer/info sciences/support tech	24=Philosophy, religion & theology
9=Construction trades	25=Physical sciences
10=Education	26=Psychology
11=Engineering technologies/technicians	27=Public administration/social services
12=English language and literature/letters	28=Science technologies/technicians
13=Family/consumer sciences, human sciences	29=Security & protective services
14=Foreign languages/literature/linguistics	30=Social sciences (except psych) and history
15=Health professions/clinical sciences	31=Transportation & materials moving
16=Legal professions and studies	32=Other

Specific Discipline
(Major / Department)

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0101=Agriculture and related sciences
0102=Natural resources and conservation
0103=Agriculture/natural resources/related, other
0201=Architecture and related services
0301=Area/ethnic/cultural/gender studies
0401=Art history, criticism, and conservation
0402=Design & applied arts
0403=Drama/theatre arts and stagecraft
0404=Fine and studio art
0405=Music, general
0406=Music history, literature, and theory
0407=Commercial and advertising art
0408=Dance
0409= Film, video, and photographic arts
0410=Visual and performing arts, other
0501=Biochem/biophysics/molecular biology
0502=Botany/plant biology
0503=Genetics
0504=Microbiological sciences & immunology
0505=Physiology, pathology & related sciences
0506=Zoology/animal biology
0507=Biological & biomedical sciences, other
0601=Accounting and related services
0602=Business admin/management/operations
0603=Business operations support/assistance
0604=Finance/financial management services
0605=Human resources management and svcs
0606=Marketing
0607= Management information systems/services
0608= Business/mgt/marketing/related, other
0701=Communication/journalism/related prgms
0702=Communication technologies/technicians and support svcs
0703=Communication/journalism/comm.. tech, other
0801=Computer/info tech administration/mgmt
0802=Computer programming
0803=Computer science
0804=Computer software and media applications
0805=Computer systems analysis
0806=Computer systems networking/telecom
0807=Data entry/microcomputer applications
0808=Data processing
0809=Information science/studies
0810=Computer/info sci/support svcs, other
0901=Construction trades
1001=Curriculum and instruction
1002=Educational administration/supervision
1003=Educational/instructional media design
1004=Special education and teaching
1005=Student counseling/personnel services
1006=Early childhood education and teaching
1007=Elementary education and teaching
1008=Secondary education and teaching
1009=Adult and continuing education/teaching
1010=Teacher ed: specific levels, other
1011=Teacher ed: specific subject areas
1012=Bilingual & multicultural education

1013=Ed assessment
1014=Higher education
1015=Education, other
1101=Biomedical/medical engineering
1102=Chemical engineering
1103=Civil engineering
1104=Computer engineering
1105=Electrical/electronics/comms engineering
1106=Engineering technologies/technicians
1107=Environmental/environmental health eng
1108=Mechanical engineering
1109=Engineering, other
1201=English language and literature/letters
1301=Family/consumer sciences, human sciences
1401=Foreign languages/literature/linguistics
1501=Alternative/complementary medicine/sys
1502=Chiropractic
1503=Clinical/medical lab science/allied
1504=Dental support services/allied
1505=Dentistry
1506=Health & medical administrative services
1507=Allied health and medical assisting services
1508=Allied health diagnostic, intervention, treatment professions
1509=Medicine, including psychiatry
1510=Mental/social health services and allied
1511=Nursing
1512=Optometry
1513=Osteopathic medicine/osteopathy
1514=Pharmacy/pharmaceutical sciences/admin
1515=Podiatric medicine/podiatry
1516=Public health
1517=Rehabilitation & therapeutic professions
1518=Veterinary medicine
1519=Health/related clinical services, other
1601=Law
1602=Legal support services
1603=Legal professions and studies, other
1701=Library science
1801=Mathematics
1802=Statistics
1803=Mathematics and statistics, other
1901=Mechanical/repair technologies/techs
2001=Multi/interdisciplinary studies
2101=Parks, recreation and leisure studies
2102=Health and physical education/fitness
2103=Parks/recreation/leisure/fitness studies, other
2201=Precision production
2301=Culinary arts and related services
2302=Personal and culinary services
2303=Personal and culinary services, other
2401=Philosophy
2402=Religion/religious studies
2403=Theology and religious vocations
2404=Philosophy, religion & theology, other
2501=Astronomy & astrophysics
2502=Atmospheric sciences and meteorology

2503=Chemistry
2504=Geological & earth sciences/geosciences
2505=Physics
2506=Physical sciences, other
2601=Behavioral psychology
2602=Clinical psychology
2603=Education/school psychology
2604=Psychology, other
2701=Public administration
2702=Social work
2703=Public administration & social svcs other
2801=Science technologies/technicians
2901=Corrections
2902=Criminal justice
2903=Fire protection
2904=Police science
2905=Security and protective services, other
3001=Anthropology (except psychology)
3002=Archaeology
3003=Criminology
3004=Demography & population studies
3005=Economics
3006=Geography & cartography
3007=History
3008=International relations & affairs
3009=Political science and government
3010=Sociology
3011=Urban studies/affairs
3012=Social sciences, other
3101=Transportation and materials moving
3201=Other

Appendix B:

Variables and Coding Schemes

Table B1. List of Dependent Variables

Description of Study Measures	Measurement and Coding Scheme
Habits of Mind Factor	
Self-Rating: Ask questions in class	3-pt scale: 1 = "Frequently" to 3 = "Not at all"
Self-Rating: Support opinions with logical arguments	3-pt scale: 1 = "Frequently" to 3 = "Not at all"
Self-Rating: Seek solutions and explain them to others	3-pt scale: 1 = "Frequently" to 3 = "Not at all"
Self-Rating: Evaluate the quality or reliability of information	3-pt scale: 1 = "Frequently" to 3 = "Not at all"
Self-Rating: Take risks for potential gains	3-pt scale: 1 = "Frequently" to 3 = "Not at all"
Self-Rating: Seek alternative solutions to a problem	3-pt scale: 1 = "Frequently" to 3 = "Not at all"
Self-Rating: Look up scientific research articles	3-pt scale: 1 = "Frequently" to 3 = "Not at all"
Self-Rating: Explore topics on their own	3-pt scale: 1 = "Frequently" to 3 = "Not at all"
Self-Rating: Integrate skills and knowledge from different sources	3-pt scale: 1 = "Frequently" to 3 = "Not at all"
Self-Rating: Seek feedback on their academic work	3-pt scale: 1 = "Frequently" to 3 = "Not at all"
Self-Rating: Accept mistakes as part of the learning process	3-pt scale: 1 = "Frequently" to 3 = "Not at all"
Self-Rating: Revise their papers to improve their writing	3-pt scale: 1 = "Frequently" to 3 = "Not at all"
Student-Centered Instruction Factor	
Self-Rating: Using student inquiry to drive learning	4-pt scale: 1 = "All" to 4 = "None"
Self-Rating: Class discussions	4-pt scale: 1 = "All" to 4 = "None"
Self-Rating: Group projects	4-pt scale: 1 = "All" to 4 = "None"
Self-Rating: Student-selected topics for course content	4-pt scale: 1 = "All" to 4 = "None"
Self-Rating: Reflective writing/journaling	4-pt scale: 1 = "All" to 4 = "None"
Self-Rating: Multiple drafts of written work	4-pt scale: 1 = "All" to 4 = "None"
Self-Rating: Extensive lecturing	4-pt scale: 1 = "All" to 4 = "None"
Self-Rating: Cooperative learning (small groups)	4-pt scale: 1 = "All" to 4 = "None"
Experientally-Grounded Teaching Factor	
Self-Rating: Experiential learning/Field studies	4-pt scale: 1 = "All" to 4 = "None"
Self-Rating: Teaching assistants	4-pt scale: 1 = "All" to 4 = "None"
Self-Rating: Recitals/Demonstrations	4-pt scale: 1 = "All" to 4 = "None"
Self-Rating: Using real-life problems	4-pt scale: 1 = "All" to 4 = "None"
Evaluation Practices	
Self-Rating: Weekly essay assignments	4-pt scale: 1 = "All" to 4 = "None"
Self-Rating: Student presentations	4-pt scale: 1 = "All" to 4 = "None"
Self-Rating: Term/research papers	4-pt scale: 1 = "All" to 4 = "None"
Self-Rating: Student evaluations of each others' work	4-pt scale: 1 = "All" to 4 = "None"

B2. Independent Variable Request List and Coding Schemes

Description of Study Measures	Measurement and Coding Scheme
Faculty Characteristics	
Academic Rank: Acting Instructor, Instructor, Assistant Professor, Associate Professor, Professor, Emeritus	All dichtomous, 1 = Not Marked, 2 = Marked
Tenure Status: Tenured, Probationary, Tenure-Track Renewable Contract Instructor (e.g., Adjunct)	All dichotomous, 1 = Not Marked, 2 = Marked
Major/Discipline	
Administrative Position: Department Chair, Dean (Associate or Assistant), President, Vice-President, Provost, Other, N/A	All dichotomous, 1 = Not Marked, 2 = Marked
Faculty Gender	
Race/Ethnicity: White/Caucasian, African-Americar American Indian/Alaska Native, Asian American/Asian Native Hawaiian/Pacfic Islander, Mexican American/Chicano Puerto Rican, Other Latino, Other	All dichotomous, 1 = Not Marked, 2 = Marked
Age	Continuous Scale (e.g., 31, 32, 33, etc.)
Highest Degree Held: Bachelor's, Master's, Professional Degree, Ph.D., Other degree, None	
Native Language: English	Dichotomous, 1 = Native English, 2 = Other
Measures of Campus Context and Environmental Perceptions	
Workplace Job Satisfaction Construct	
Satisfaction: Autonomy and independence	4-pt scale: 1 = "Very Satisfied" to 4 ="Not Satisfied"
Satisfaction: Professional relationships with other faculty	4-pt scale: 1 = "Very Satisfied" to 4 ="Not Satisfied"
Satisfaction: Competency of colleagues	4-pt scale: 1 = "Very Satisfied" to 4 ="Not Satisfied"
Satisfaction: Departmental leadership	4-pt scale: 1 = "Very Satisfied" to 4 ="Not Satisfied"
Satisfaction: Course assignments	4-pt scale: 1 = "Very Satisfied" to 4 ="Not Satisfied"
Faculty Compensation Satisfaction Construct	
Satisfaction: Salary	4-pt scale: 1 = "Very Satisfied" to 4 ="Not Satisfied"
Satisfaction: Retirement benefits	4-pt scale: 1 = "Very Satisfied" to 4 ="Not Satisfied"
Satisfaction: Opportunity for scholarly pursuits	4-pt scale: 1 = "Very Satisfied" to 4 ="Not Satisfied"
Satisfaction: Teaching load	4-pt scale: 1 = "Very Satisfied" to 4 ="Not Satisfied"
Satisfaction: Job security	4-pt scale: 1 = "Very Satisfied" to 4 ="Not Satisfied"
Satisfaction: Prospects for career advancement	4-pt scale: 1 = "Very Satisfied" to 4 ="Not Satisfied"
Career-Related Stress Construct	
Source of Stress: Committee work	3-pt scale: 1 = "Extensive" to 4 = "Not at All"
Source of Stress: Colleagues	3-pt scale: 1 = "Extensive" to 4 = "Not at All"
Source of Stress: Students	3-pt scale: 1 = "Extensive" to 4 = "Not at All"
Source of Stress: Research of publishing demands	3-pt scale: 1 = "Extensive" to 4 = "Not at All"
Source of Stress: Institutional Procedures/Red Tape	3-pt scale: 1 = "Extensive" to 4 = "Not at All"
Source of Stress: Teacing load	3-pt scale: 1 = "Extensive" to 4 = "Not at All"
Source of Stress: Lack of personal time	3-pt scale: 1 = "Extensive" to 4 = "Not at All"
Source of Stress: Self-imposed high expectations	3-pt scale: 1 = "Extensive" to 4 = "Not at All"

Table B2 (cont). Initial Independent Variable Request List

Psychological Empowerment (part-time sample only)	
Perception: Receive respect from students	4-pt scale: 1 = "Agree Strongly" to 4 = "Disagree Strongly"
Perception: Have access to support services	4-pt scale: 1 = "Agree Strongly" to 4 = "Disagree Strongly"
Perception: Have good working relationships with the administration	4-pt scale: 1 = "Agree Strongly" to 4 = "Disagree Strongly"
Perception: Are respected by full-time faculty	4-pt scale: 1 = "Agree Strongly" to 4 = "Disagree Strongly"
Structural Empowerment (part-time sample only)	
Resource: Use of private office	All dichotomous, 1 = Not Marked, 2 = Marked
Resource: Shared office space	All dichotomous, 1 = Not Marked, 2 = Marked
Resource: A personal computer	All dichotomous, 1 = Not Marked, 2 = Marked
Resource: An email account	All dichotomous, 1 = Not Marked, 2 = Marked
Resource: A phone/voicemail	All dichotomous, 1 = Not Marked, 2 = Marked
Feelings and Behaviors Related to the Teaching and Learning Environment and Misc.	
Affect: Feel that training in graduate school prepared you well for your role as a faculty member	3-pt scale: 1 = "To a Great Extent" to 3 = "Not at All"
Self-Rating: Achieve a healthy balance between your personal life and professional life	3-pt scale: 1 = "To a Great Extent" to 3 = "Not at All"
Importance: Research	4-pt scale: 1 = "Essential" to 4 = "Not Important"
Importance: Teaching	4-pt scale: 1 = "Essential" to 4 = "Not Important"
Importance: Service	4-pt scale: 1 = "Essential" to 4 = "Not Important"
Importance of: Mentoring the next generation of scholars	4-pt scale: 1 = "Essential" to 4 = "Not Important"
Institutional Opinion: My teaching is valued by faculty in the department	4-pt scale: 1 = "Agree Strongly" to 4 = "Disagree Strongly"
Institutional Opinion: Women faculty are treated fairly here	4-pt scale: 1 = "Agree Strongly" to 4 = "Disagree Strongly"
Institutional Opinion: Gay and lesbian faculty are treated fairly here	4-pt scale: 1 = "Agree Strongly" to 4 = "Disagree Strongly"
Institutional Opinion: Faculty of color are treated fairly here	4-pt scale: 1 = "Agree Strongly" to 4 = "Disagree Strongly"
Hours per Week: Preparing for teaching (including reading student papers and grading)	Avg: "None," "1-4," 5-8," … "45+"
Hours per Week: Advising and counseling of students	Avg: "None," "1-4," 5-8," … "45+"
Hours per Week: Commuting to campus	Avg: "None," "1-4," 5-8," … "45+"
Institutional Characteristics	
Selectivity	Mean of Math and Verbal SAT scores by institution
Institutional Control	Dichotomous, 1 = Public, 2 = Private
Average Salary (000)	Mean faculty salary
Undergraduate FTE	Number of full-time equivalent undergraduates

Appendix C:

Expanded HLM Tables for the Full Sample of Faculty and Subset of Part-time Faculty

Table 1. Results from HLM Analyses Predicting Use of Habits of Mind Teaching Approaches for the Full Sample of Faculty

	Model 1			Model 2			Model 3			Full Sample		
	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.
Institutional Characteristics												
Intercept	-0.01	0.01		-0.26	0.0226	*	-0.238	0.0223	*	-0.13	0.04	*
Institutional control: Private										-0.06	0.02	*
Selectivity (100)										0.02	0.01	*
Avg. Faculty Salary (000)										0.00	0.00	
Undergraduate FTE										-0.01	0.00	*
Faculty Appointment Type												
Full-time, tenure-track	0.02	0.01		-0.02	0.02		-0.01	0.02		-0.01	0.02	
Full-time, non-tenure-track	0.03	0.02		0.00	0.02		0.05	0.02	*	0.05	0.02	*
Part-time	0.13	0.02	*	0.07	0.02	*	0.25	0.02	*	0.26	0.03	*
Demographics												
Race: Asian				0.03	0.02		0.02	0.03		0.03	0.02	
Race: Black				0.09	0.04	*	0.08	0.04	*	0.09	0.04	*
Race: Hispanic				0.12	0.04	*	0.09	0.04	*	0.09	0.04	*
Race: Other				0.20	0.04	*	0.16	0.04	*	0.16	0.04	*
Race: Two or more				0.12	0.03	*	0.10	0.03	*	0.10	0.03	*
Sex: Female				0.15	0.01	*	0.11	0.01	*	0.11	0.01	*
Age				0.00	0.00		0.00	0.00		0.00	0.00	
Departmental Affiliation												
Dept: Realistic				-0.24	-0.24	*	-0.20	0.02	*	-0.20	0.05	*
Dept: Investigative				-0.12	-0.12	*	-0.08	0.02	*	-0.08	0.02	*
Dept: Enterprising				0.11	0.11	*	0.14	0.02	*	0.14	0.02	*
Dept: Artistic				0.23	0.23	*	0.22	0.01	*	0.21	0.02	*
Dept: Conventional				-0.49	-0.49	*	-0.34	0.04	*	-0.35	0.07	*

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Table 1 (cont). Results from HLM Analyses Predicting Use of Habits of Mind Teaching Approaches for the Full Sample of Faculty

	Model 1			Model 2			Model 3			Full Sample		
	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.
Stress and Perceptions of Campus and Departmental Climates												
Career-related stress							0.01	0.00	*	0.01	0.00	*
Satisfaction with compensation							0.00	0.00		0.00	0.00	
Satisfaction with workplace							0.00	0.00		0.00	0.00	
Institutional opinion: My teaching is valued by faculty in my department							0.02	0.01	*	0.02	0.01	*
Institutional opinion: Faculty of color are treated fairly here							0.01	0.01		0.01	0.01	
Institutional opinion: Women faculty are treated fairly here							-0.04	0.01	*	-0.04	0.01	*
Institutional opinion: Gay and lesbian faculty are treated fairly here							0.03	0.01	*	0.03	0.01	*
Feelings and Behaviors Related to the Teaching and Learning Environment												
Affect: Feel that the training you received in graduate school prepared you well for your role as a faculty member							0.05	0.01	*	0.05	0.01	*
Affect: Achieve a healthy balance between your personal life and your professional life							0.02	0.01	*	0.02	0.01	*
Importance: Research							0.08	0.01	*	0.08	0.01	*
Importance: Teaching							0.18	0.01	*	0.18	0.01	*
Importance: Service							0.07	0.01	*	0.07	0.01	*
Hours per Week: Preparing for teaching (including reading student papers and grading)							0.02	0.00	*	0.02	0.00	*
Hours per Week: Advising and counseling of students							0.08	0.01	*	0.08	0.01	*
Hours per Week: Commuting to campus							0.00	0.01		0.00	0.01	
Model Diagnostics												
Level-1 Explained Variance	0.1%			4.9%			9.2%			9.3%		
Level-2 Explained Variance	1.7%			19.7%			30.6%			38.3%		
Total Explained Variance	0.2%			5.2%			9.8%			10.0%		

Note: *$p < .001$

Table 2. Results from HLM Analyses Predicting Use of Learner-Centered Evaluation Methods for the Full Sample of Faculty

	Model 1			Model 2			Model 3			Full Sample		
	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.
Institutional Characteristics												
Intercept	-0.05	0.01		-0.30	0.0195	*	-0.287	0.02	*	-0.46	0.04	*
Institutional control: Private										0.11	0.02	*
Selectivity (100)										-0.01	0.01	
Avg. Faculty Salary (000										0.00	0.00	
Undergraduate FTE										0.00	0.00	
Faculty Appointment Type												
Full-time, tenure-track	0.08	0.01	*	0.06	0.01	*	0.07	0.01	*	0.07	0.0143	*
Full-time, non-tenure-track	0.06	0.01	*	0.00	0.02		0.06	0.02	*	0.06	0.0178	*
Part-time	0.17	0.02	*	0.07	0.02	*	0.23	0.03	*	0.23	0.0273	*
Demographics												
Race: Asian				0.01	0.02		-0.01	0.02		-0.01	0.02	
Race: Black				0.10	0.03	*	0.05	0.03		0.05	0.03	
Race: Hispanic				0.14	0.04	*	0.10	0.04		0.10	0.04	
Race: Other				0.09	0.03		0.05	0.03		0.05	0.03	
Race: Two or more				0.12	0.02	*	0.09	0.02	*	0.10	0.02	*
Sex: Female				0.23	0.01	*	0.19	0.01	*	0.19	0.01	*
Age				0.00	0.00	*	0.00	0.00		0.00	0.00	
Departmental Affiliation												
Dept: Realistic				-0.26	0.02	*	-0.24	0.02	*	-0.23	0.02	*
Dept: Investigative				-0.50	0.02	*	-0.46	0.02	*	-0.46	0.02	*
Dept: Enterprising				0.15	0.02	*	0.19	0.02	*	0.19	0.02	*
Dept: Artistic				0.16	0.01	*	0.16	0.01	*	0.15	0.01	*
Dept: Conventional				-0.59	0.05	*	-0.51	0.05	*	-0.51	0.05	*
Stress and Perceptions of Campus and Departmental Climates												
Career-related stress							0.01	0.00	*	0.01	0.00	*
Satisfaction with compensation							0.00	0.00		0.00	0.00	
Satisfaction with workplace							0.00	0.00		0.00	0.00	
Institutional opinion: My teaching is valued by faculty in my department							0.01	0.01		0.01	0.01	
Institutional opinion: Faculty of color are treated fairly here							-0.04	0.01	*	-0.04	0.01	*
Institutional opinion: Women faculty are treated fairly here							0.01	0.01		0.00	0.01	
Institutional opinion: Gay and lesbian faculty are treated fairly here							0.00	0.01		0.01	0.01	

Table 2 (cont). Results from HLM Analyses Predicting Use of Learner-Centered Evaluation Methods for the Full Sample of Faculty

	Model 1			Model 2			Model 3			Full Sample		
	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.
Feelings and Behaviors Related to the Teaching and Learning Environment												
Affect: Feel that the training you received in graduate school prepared you well for your role as a faculty member							-0.01	0.01		-0.01	0.01	
Affect: Achieve a healthy balance between your personal life and your professional life							0.00	0.01		0.00	0.01	
Importance: Research							0.08	0.01	*	0.08	0.01	*
Importance: Teaching							0.07	0.01	*	0.06	0.01	*
Importance: Service							0.09	0.01	*	0.08	0.01	*
Hours per Week: Preparing for teaching (including reading student papers and grading)							0.01	0.00		0.00	0.00	
Hours per Week: Advising and counseling of students							0.07	0.01	*	0.07	0.01	*
Hours per Week: Commuting to campus							0.01	0.01		0.01	0.01	
Model Diagnostics												
Level-1 Explained Variance	0.6%			13.1%			16.9%			16.9%		
Level-2 Explained Variance	11.0%			35.8%			37.4%			48.5%		
Total Explained Variance	0.9%			13.7%			17.5%			17.8%		

Note: *$p < .001$

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Table 3. Results from HLM Analyses Predicting Student-Centered Pedagogy for the Full Sample of Faculty

	Model 1			Model 2			Model 3			Full Sample		
	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.
Institutional Characteristics												
Intercept	48.98	0.11		45.47	0.1991	*	45.846	0.20	*	44.32	0.47	*
Institutional control: Private										0.99	0.25	*
Selectivity (100)										-0.07	0.09	
Avg. Faculty Salary (000										-0.03	0.01	*
Undergraduate FTE										0.00	0.02	
Faculty Appointment Type												
Full-time, tenure-track	1.69	0.13	*	1.21	0.14	*	1.34	0.14	*	1.32	0.14	*
Full-time, non-tenure-track	2.01	0.15	*	1.26	0.15	*	1.82	0.16	*	1.85	0.16	*
Part-time	2.50	0.18	*	1.42	0.18	*	3.46	0.21	*	3.51	0.21	*
Demographics												
Race: Asian				-0.85	0.23	*	-0.90	0.23	*	-0.86	0.23	*
Race: Black				0.76	0.31		0.35	0.31		0.35	0.31	
Race: Hispanic				1.30	0.32	*	0.91	0.32	*	0.97	0.32	*
Race: Other				1.08	0.35	*	0.47	0.35		0.50	0.35	
Race: Two or more				1.30	0.25	*	1.03	0.25	*	1.07	0.25	*
Sex: Female				3.26	0.10	*	2.67	0.10	*	2.68	0.10	*
Age				0.00	0.00		-0.01	0.01		0.01	0.01	
Departmental Affiliation												
Dept: Realistic				-2.67	0.20	*	-2.44	0.1987	*	-2.39	0.20	*
Dept: Investigative				-5.43	0.14	*	-4.93	0.1416	*	-4.94	0.14	*
Dept: Enterprising				1.50	0.17	*	1.91	0.1678	*	1.89	0.17	*
Dept: Artistic				0.62	0.13	*	0.69	0.1248	*	0.68	0.12	*
Dept: Conventional				-7.48	0.37	*	-6.63	0.3738	*	-6.63	0.37	*
Stress and Perceptions of Campus and Departmental Climates												
Career-related stress							0.10	0.01	*	0.11	0.01	*
Satisfaction with compensation							0.00	0.01		0.00	0.01	
Satisfaction with workplace							0.02	0.01	*	0.02	0.01	*
Institutional opinion: My teaching is valued by faculty in my department							0.27	0.08	*	0.24	0.08	*
Institutional opinion: Faculty of color are treated fairly here							-0.65	0.10	*	-0.67	0.10	*
Institutional opinion: Women faculty are treated fairly here							0.06	0.10		0.02	0.10	
Institutional opinion: Gay and lesbian faculty are treated fairly here							0.03	0.08		0.09	0.08	

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Table 3 (cont). Results from HLM Analyses Predicting Student-Centered Pedagogy for the Full Sample of Faculty

	Model 1			Model 2			Model 3			Full Sample		
	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.
Feelings and Behaviors Related to the Teaching and Learning Environment												
Affect: Feel that the training you received in graduate school prepared you well for your role as a faculty member							0.00	0.08		0.00	0.08	
Affect: Achieve a healthy balance between your personal life and your professional life							-0.03	0.08		-0.03	0.08	
Importance: Research							0.51	0.06	*	0.56	0.06	*
Importance: Teaching							1.37	0.10	*	1.34	0.10	*
Importance: Service							1.42	0.07	*	1.40	0.07	*
Hours per Week: Preparing for teaching (including reading student papers and grading)							0.05	0.03	*	0.04	0.03	*
Hours per Week: Advising and counseling of students							0.81	0.05	*	0.81	0.05	*
Hours per Week: Commuting to campus							0.18	0.06		0.18	0.06	
Model Diagnostics												
Level-1 Explained Variance	1.4%			14.6%			20.2%			20.2%		
Level-2 Explained Variance	12.5%			34.5%			42.1%			52.5%		
Total Explained Variance	1.8%			15.4%			21.1%			21.6%		

Note: *$p < .001$

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Table 4. Results from HLM Analyses Predicting Experientially-Grounded Instruction for the Full Sample of Faculty

	Model 1			Model 2			Model 3			Full Sample		
	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.
Institutional Characteristics												
Intercept	-0.07	0.01		-0.22	0.1991	*	-0.19	0.02	*	-0.23	0.47	*
Institutional control: Private										0.04	0.25	*
Selectivity (100)										-0.02	0.09	
Avg. Faculty Salary (000										0.00	0.01	
Undergraduate FTE										0.00	0.02	
Faculty Appointment Type												
Full-time, tenure-track	0.09	0.01	*	0.13	0.14	*	0.15	0.01	*	0.15	0.01	*
Full-time, non-tenure-track	0.18	0.01	*	0.16	0.15	*	0.19	0.02	*	0.19	0.02	*
Part-time	0.15	0.02	*	0.13	0.18	*	0.29	0.02	*	0.29	0.02	*
Demographics												
Race: Asian				-0.07	0.02		-0.07	0.02		-0.06	0.02	
Race: Black				0.00	0.03		-0.01	0.03		-0.01	0.03	
Race: Hispanic				0.10	0.03		0.07	0.03		0.08	0.03	
Race: Other				0.13	0.03	*	0.08	0.03		0.09	0.03	
Race: Two or more				0.13	0.02	*	0.12	0.02	*	0.12	0.02	*
Sex: Female				0.20	0.01	*	0.15	0.01	*	0.15	0.01	*
Age				0.00	0.00		0.00	0.00		0.00	0.00	
Departmental Affiliation												
Dept: Realistic				-0.13	0.02	*	-0.12	0.02	*	-0.11	0.02	*
Dept: Investigative				-0.34	0.01	*	-0.29	0.01	*	-0.29	0.01	*
Dept: Enterprising				-0.04	0.02	*	-0.01	0.02		-0.01	0.02	
Dept: Artistic				-0.26	0.01	*	-0.24	0.01	*	-0.24	0.01	*
Dept: Conventional				-0.52	0.04	*	-0.51	0.04	*	-0.51	0.04	*
Stress and Perceptions of Campus and Departmental Climates												
Career-related stress							0.03	0.00	*	0.03	0.01	*
Satisfaction with compensation							0.00	0.00		0.00	0.01	
Satisfaction with workplace							0.00	0.00		0.00	0.01	
Institutional opinion: My teaching is valued by faculty in my department							0.00	0.01		0.00	0.08	
Institutional opinion: Faculty of color are treated fairly here							-0.01	0.01		-0.01	0.10	
Institutional opinion: Women faculty are treated fairly here							0.00	0.01		-0.01	0.10	
Institutional opinion: Gay and lesbian faculty are treated fairly here							0.02	0.01		0.02	0.08	

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Table 4 (cont). Results from HLM Analyses Predicting Experientially-Grounded Instruction for the Full Sample of Faculty

	Model 1			Model 2			Model 3			Full Sample		
	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.
Feelings and Behaviors Related to the Teaching and Learning Environment												
Affect: Feel that the training you received in graduate school prepared you well for your role as a faculty member							-0.01	0.01		-0.01	0.01	
Affect: Achieve a healthy balance between your personal life and your professional life							0.01	0.01		0.01	0.01	
Importance: Research							0.01	0.01		0.01	0.01	
Importance: Teaching							0.10	0.01	*	0.10	0.01	*
Importance: Service							0.16	0.01	*	0.16	0.01	*
Hours per Week: Preparing for teaching (including reading student papers and grading)							-0.03	0.00	*	-0.03	0.00	*
Hours per Week: Advising and counseling of students							0.09	0.01	*	0.09	0.01	*
Hours per Week: Commuting to campus							0.03	0.01	*	0.03	0.01	*
Model Diagnostics												
Level-1 Explained Variance	0.6%			6.7%			12.2%			12.2%		
Level-2 Explained Variance	9.0%			26.1%			35.9%			51.7%		
Total Explained Variance	0.9%			7.5%			13.1%			13.7%		

Note: *$p < .001$

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Table 5. Results from HLM Analyses Predicting Habits of Mind for the Subset of Part-time Faculty

	Model 1			Model 2			Model 3			Model 4			Full Sample		
	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.
Institutional Characteristics															
Intercept	0.04	0.042		-0.15	0.083		-0.13	0.084		-0.13	0.087		-0.42	0.156	
Institutional control: Private													0.165	0.072	
Selectivity													-0.03	0.029	
Avg. Faculty Salary (000													0.006	0.00	
Undergraduate FTE													0.00	0.00	
Faculty Appointment Type															
Involuntary Part-time	0.16	0.05	*	0.10	0.05		0.10	0.05		0.05	0.05		0.05	0.05	
Demographics															
Race: Asian				-0.26	0.12		-0.23	0.12		-0.22	0.13		-0.25	0.13	
Race: Black				0.11	0.13		0.13	0.14		0.05	0.14		0.07	0.14	
Race: Hispanic				0.10	0.13		0.08	0.13		-0.02	0.13		-0.05	0.13	
Race: Other				0.18	0.14		0.17	0.14		0.18	0.15		0.17	0.15	
Race: Two or more				-0.03	0.10		-0.05	0.10		-0.03	0.10		-0.02	0.10	
Sex: Female				0.19	0.04	*	0.18	0.05	*	0.15	0.05	*	0.16	0.05	*
Age				0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	
Departmental Affiliation															
Dept: Realistic				-0.34	0.11		-0.34	0.11		-0.29	0.12		-0.31	0.12	
Dept: Investigative				-0.69	0.08	*	-0.70	0.08	*	-0.61	0.08	*	-0.60	0.08	*
Dept: Enterprising				0.27	0.07	*	0.27	0.07	*	0.32	0.07	*	0.32	0.07	*
Dept: Artistic				0.17	0.05		0.16	0.06		0.18	0.06		0.17	0.06	
Dept: Conventional				-0.68	0.27		-0.66	0.27		-0.58	0.28		-0.62	0.28	
Psychologically and Structurally Empowering Work Environments															
Psychological Empowerment							-0.05	0.03		-0.10	0.03		-0.10	0.03	
Social-Structural Empowerment							-0.01	0.01		-0.01	0.01		0.00	0.01	
Stress and Perceptions of Campus and Departmental Climates															
Career-related stress										0.00	0.00		-0.10	0.00	
Satisfaction with compensation										0.00	0.00		0.00	0.00	
Satisfaction with workplace										0.01	0.00		0.00	0.00	
Institutional opinion: My teaching is valued by faculty in my department										0.01	0.04		0.00	0.04	
Institutional opinion: Faculty of color are treated fairly here										-0.06	0.06		0.00	0.06	
Institutional opinion: Women faculty are treated fairly here										0.00	0.06		0.02	0.06	
Institutional opinion: Gay and lesbian faculty are treated fairly here										0.06	0.04		-0.07	0.04	

Table 5 (cont). Results from HLM Analyses Predicting Habits of Mind for the Subset of Part-time Faculty

	Model 1			Model 2			Model 3			Model 4			Full Sample		
	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.
Feelings and Behaviors Related to the Teaching and Learning Environment															
Affect: Feel that the training you received in graduate school prepared you well for your role as a faculty member										-0.02	0.04		-0.02	0.04	
Affect: Achieve a healthy balance between your personal life and your professional life										0.03	0.04		0.03	0.04	
Importance: Research										0.12	0.03	*	0.11	0.03	*
Importance: Teaching										0.04	0.05		0.04	0.05	
Importance: Service										0.12	0.03	*	0.12	0.03	*
Hours per Week: Preparing for teaching (including reading student papers and grading)										0.03	0.01		0.03	0.01	
Hours per Week: Advising and counseling of students										0.09	0.03	*	0.09	0.03	*
Hours per Week: Commuting to campus										-0.03	0.03		-0.03	0.03	
Model Diagnostics															
Level-1 Explained Variance	1.3%			11.9%			11.6%			15.7%			16.2%		
Level-2 Explained Variance	51.6%			36.3%			40.0%			56.6%			67.9%		
Total Explained Variance	2.7%			12.6%			12.4%			16.8%			17.6%		

Note: *$p < .001$

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Table 6. Results from HLM Analyses Predicting Habits of Mind for the Subset of Part-time Faculty

	Model 1			Model 2			Model 3			Model 4			Full Sample		
	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.
Institutional Characteristics															
Intercept	0.07	0.04		-0.24	0.09		-0.26	0.09		-0.23	0.10		-0.19	0.16	
Institutional control: Private													-0.01	0.07	
Selectivity													0.05	0.03	
Avg. Faculty Salary (000													-0.01	0.00	*
Undergraduate FTE													0.01	0.00	
Faculty Appointment Type															
Involuntary Part-time	0.12	0.05		0.08	0.05		0.08	0.05		0.02	0.05		0.02	0.05	
Demographics															
Race: Asian				-0.17	0.12		-0.16	0.12		-0.13	0.13		-0.11	0.13	
Race: Black				0.25	0.13		0.29	0.14		0.20	0.14		0.20	0.14	
Race: Hispanic				0.14	0.13		0.15	0.13		0.07	0.13		0.09	0.13	
Race: Other				0.15	0.14		0.14	0.15		0.11	0.15		0.12	0.15	
Race: Two or more				0.29	0.10		0.28	0.10		0.30	0.10		0.30	0.10	
Sex: Female				0.14	0.05	*	0.14	0.05	*	0.13	0.05	*	0.12	0.05	*
Age				0.01	0.01		0.01	0.01		0.00	0.01		0.00	0.01	
Departmental Affiliation															
Dept: Realistic				-0.09	0.11		-0.08	0.11		-0.05	0.12		-0.05	0.12	
Dept: Investigative				-0.08	0.08		-0.07	0.08		-0.01	0.08		0.00	0.08	
Dept: Enterprising				0.26	0.07	*	0.27	0.07	*	0.31	0.07	*	0.31	0.07	*
Dept: Artistic				0.22	0.06	*	0.23	0.06	*	0.23	0.06	*	0.23	0.06	*
Dept: Conventional				-0.72	0.28		-0.72	0.28		-0.72	0.29		-0.66	0.29	
Psychologically and Structurally Empowering Work Environments															
Psychological Empowerment							-0.01	0.03		-0.01	0.03		-0.02	0.03	
Structural Empowerment							0.01	0.01		0.01	0.01		0.00	0.01	
Stress and Perceptions of Campus and Departmental Climates															
Career-related stress										0.01	0.00		0.01	0.00	
Satisfaction with compensation										0.00	0.00		0.00	0.00	
Satisfaction with workplace										0.00	0.00		0.00	0.00	
Institutional opinion: My teaching is valued by faculty in my department										-0.02	0.04		-0.02	0.04	
Institutional opinion: Faculty of color are treated fairly here										0.03	0.06		0.02	0.06	
Institutional opinion: Women faculty are treated fairly here										0.05	0.06		0.05	0.06	
Institutional opinion: Gay and lesbian faculty are treated fairly here										-0.06	0.04		-0.05	0.04	

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Table 6 (cont). Results from HLM Analyses Predicting Habits of Mind for the Subset of Part-time Faculty

	Model 1			Model 2			Model 3			Model 4			Full Sample		
	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.
Feelings and Behaviors Related to the Teaching and Learning Environment															
Affect: Feel that the training you received in graduate school prepared you well for your role as a faculty member										0.04	0.04		0.04	0.04	
Affect: Achieve a healthy balance between your personal life and your professional life										0.07	0.04		0.08	0.04	
Importance: Research										0.09	0.03	*	0.10	0.03	*
Importance: Teaching										0.10	0.05		0.10	0.05	
Importance: Service										0.08	0.03		0.07	0.03	
Hours per Week: Preparing for teaching (including reading student papers and grading)										0.03	0.01		0.03	0.01	
Hours per Week: Advising and counseling of students										0.08	0.03		0.09	0.03	
Hours per Week: Commuting to campus										0.01	0.03		0.01	0.03	
Model Diagnostics															
Level-1 Explained Variance	15.1%			19.5%			18.7%			23.5%			23.0%		
Level-2 Explained Variance	46.5%			51.8%			44.5%			9.5%			74.3%		
Total Explained Variance	15.8%			20.2%			19.3%			23.2%			24.0%		

Note: *$p < .001$

Table 7. Results from HLM Analyses Predicting Student-Centered Pedagogy for the Subset of Part-time Faculty

	Model 1			Model 2			Model 3			Model 4			Full Sample		
	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.
Institutional Characteristics															
Intercept	50.60	0.438	*	46.88	0.915	*	46.96	0.932	*	47.21	0.969	*	45.73	1.671	*
Institutional control: Private													1.20	0.791	
Selectivity													0.01	0.316	
Avg. Faculty Salary (000													0.02	0.027	
Undergraduate FTE													0.04	0.048	
Faculty Appointment Type															
Involuntary Part-time	1.82	0.50		1.13	0.51		1.21	0.52		0.75	0.54		0.64	0.55	
Demographics															
Race: Asian				-2.61	1.27		-2.47	1.29		-2.60	1.33		-2.64	1.34	
Race: Black				2.37	1.36		3.07	1.41		1.85	1.41		1.85	1.41	
Race: Hispanic				1.56	1.36		1.49	1.37		1.49	1.36		1.49	1.37	
Race: Other				2.20	1.51		2.02	1.52		2.07	1.52		2.07	1.52	
Race: Two or more				0.67	1.02		0.41	1.04		0.25	1.06		0.22	1.06	
Sex: Female				2.92	0.47	*	2.84	0.48	*	2.53	0.50	*	2.11	0.50	*
Age				0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	
Departmental Affiliation															
Dept: Realistic				-3.64	1.15		-3.69	1.16		-2.55	1.21		-2.60	1.21	
Dept: Investigative				-6.81	0.82	*	-6.85	0.82	*	-5.80	0.85	*	-5.72	0.85	*
Dept: Enterprising				2.51	0.73	*	2.56	0.73	*	3.20	0.75	*	3.22	0.75	*
Dept: Artistic				0.50	0.57		0.41	0.58		0.86	0.59		0.72	0.60	
Dept: Conventional				-6.46	2.84		-6.39	2.84		-6.07	2.89		-6.26	2.89	
Psychologically and Structurally Empowering Work Environments															
Psychological Empowerment							-0.43	0.27		-1.00	0.35		-0.93	0.36	
Structural Empowerment							0.01	0.13		-0.01	0.14		0.00	0.14	
Stress and Perceptions of Campus and Departmental Climates															
Career-related stress										0.03	0.03		0.05	0.03	
Satisfaction with compensation										0.04	0.03		0.02	0.03	
Satisfaction with workplace										0.07	0.39		0.04	0.03	
Institutional opinion: My teaching is valued by faculty in my department										-1.36	0.60		0.11	0.39	
Institutional opinion: Faculty of color are treated fairly here										0.32	0.60		-1.41	0.60	
Institutional opinion: Women faculty are treated fairly here										0.76	0.41		0.41	0.60	
Institutional opinion: Gay and lesbian faculty are treated fairly here										-0.05	0.23		0.81	0.42	

Table 7 (cont). Results from HLM Analyses Predicting Student-Centered Pedagogy for the Subset of Part-time Faculty

	Model 1			Model 2			Model 3			Model 4			Full Sample		
	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.
Feelings and Behaviors Related to the Teaching and Learning Environment															
Affect: Feel that the training you received in graduate school prepared you well for your role as a faculty member										-0.05	0.40		-0.05	0.40	
Affect: Achieve a healthy balance between your personal life and your professional life										0.56	0.41		0.56	0.41	
Importance: Research										1.07	0.27	*	1.07	0.27	*
Importance: Teaching										1.53	0.51		1.53	0.51	
Importance: Service										1.65	0.31	*	1.65	0.31	*
Hours per Week: Preparing for teaching (including reading student papers and grading)										0.18	0.15		0.18	0.15	
Hours per Week: Advising and counseling of students										1.06	0.31	*	1.06	0.31	*
Hours per Week: Commuting to campus										-0.03	0.26		-0.03	0.26	
Model Diagnostics															
Level-1 Explained Variance	1.7%			10.9%			10.9%			16.6%			16.7%		
Level-2 Explained Variance	2.8%			4.0%			4.5%			8.7%			17.2%		
Total Explained Variance	1.7%			10.8%			10.7%			16.5%			16.8%		

Note: *p < .001

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Table 8. Results from HLM Analyses Predicting Experientially-Grounded Instruction for the Subset of Part-time Faculty

	Model 1			Model 2			Model 3			Model 4			Full Sample		
	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.
Institutional Characteristics															
Intercept	0.06	0.04		0.01	0.09		0.02	0.08		0.01	0.09		-0.01	0.17	
Institutional control: Private													0.02	0.08	
Selectivity													0.03	0.03	
Avg. Faculty Salary (000)													0.00	0.00	
Undergraduate FTE													0.00	0.00	
Faculty Appointment Type															
Involuntary Part-time	0.07	0.05		0.05	0.05		0.05	0.05		0.02	0.05		0.02	0.05	
Demographics															
Race: Asian				-0.12	0.11		-0.08	0.13		-0.10	0.13		-0.10	0.13	
Race: Black				0.32	0.18		0.39	0.17		0.21	0.14		0.22	0.14	
Race: Hispanic				0.15	0.16		0.17	0.15		-0.04	0.13		-0.04	0.13	
Race: Other				0.17	0.13		0.18	0.12		0.17	0.14		0.18	0.14	
Race: Two or more				0.08	0.11		0.09	0.11		0.09	0.10		0.10	0.10	
Sex: Female				0.14	0.04	*	0.14	0.04	*	0.14	0.05	*	0.13	0.05	*
Age				0.00	0.00		0.00	0.00		0.00	0.01		0.00	0.01	
Departmental Affiliation															
Dept: Realistic				-0.27	0.10		-0.27	0.10		-0.19	0.12		-0.18	0.12	
Dept: Investigative				-0.46	0.08	*	-0.46	0.07	*	-0.38	0.08	*	-0.37	0.08	*
Dept: Enterprising				-0.12	0.06		0.13	0.06		-0.05	0.07		-0.05	0.07	
Dept: Artistic				-0.23	0.06	*	-0.22	0.06	*	-0.17	0.06	*	-0.17	0.06	*
Dept: Conventional				-0.03	0.17		-0.03	0.17		-0.12	0.27		-0.11	0.28	
Psychologically and Structurally Empowering Work Environments															
Psychological Empowerment							0.02	0.02		-0.03	0.03		-0.03	0.03	
Structural Empowerment							-0.02	0.01		-0.02	0.01		-0.02	0.01	
Stress and Perceptions of Campus and Departmental Climates															
Career-related stress										0.02	0.01		0.02	0.01	
Satisfaction with compensation										0.00	0.00		0.00	0.00	
Satisfaction with workplace										0.00	0.00		0.00	0.00	
Institutional opinion: My teaching is valued by faculty in my department										0.01	0.04		0.01	0.04	
Institutional opinion: Faculty of color are treated fairly here										-0.11	0.06		-0.11	0.06	
Institutional opinion: Women faculty are treated fairly here										0.04	0.06		0.04	0.06	
Institutional opinion: Gay and lesbian faculty are treated fairly here										0.01	0.04		0.01	0.04	

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Table 8 (cont). Results from HLM Analyses Predicting Experientially-Grounded Instruction for the Subset of Part-time Faculty

	Model 1			Model 2			Model 3			Model 4			Full Sample		
	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.	Coef.	SE	Sig.
Feelings and Behaviors Related to the Teaching and Learning Environment															
Affect: Feel that the training you received in graduate school prepared you well for your role as a faculty member										0.03	0.04		0.03	0.04	
Affect: Achieve a healthy balance between your personal life and your professional life										0.04	0.04		0.04	0.04	
Importance: Research										0.06	0.03		0.06	0.03	
Importance: Teaching										0.02	0.05		0.02	0.05	
Importance: Service										0.21	0.03	*	0.21	0.03	*
Hours per Week: Preparing for teaching (including reading student papers and grading)										-0.04	0.01		-0.04	0.01	
Hours per Week: Advising and counseling of students										0.14	0.03	*	0.14	0.03	*
Hours per Week: Commuting to campus										0.05	0.02		0.05	0.02	
Model Diagnostics															
Level-1 Explained Variance	0.5%			4.5%			4.8%			11.8%			11.9%		
Level-2 Explained Variance	6.6%			7.1%			10.8%			11.7%			15.3%		
Total Explained Variance	0.6%			4.5%			4.9%			11.8%			11.9%		

Note: *$p < .001$

Appendix D:

Correlation Matrix of Faculty Subgroupings and Independent Variables

Appendix D1. Full Matrix Displaying Correlation Coefficient Between Faculty Subgrouping and Independent Variables

Independent Measures	Part-Time	Sig.	Full-Time, Non-Tenure-Track	Sig.	Full-Time, Tenure-Track	Sig.
Institutional Characteristics						
Institutional control: Private	0.02	*	0.01		0.01	
Selectivity	-0.14	*	0.01		-0.02	
Avg. Faculty Salary (000)	-0.04	*	-0.01		-0.03	*
Undergraduate FTE	-0.04	*	-0.01	*	-0.03	*
Demographics						
Race: Asian	-0.02	*	-0.02	*	0.08	*
Race: Black	0.02	*	0.01	*	0.03	*
Race: Hispanic	0.01		0.01		0.01	
Race: Other	0.01		0.00		0.02	*
Race: Two or more	0.02	*	0.01		0.01	*
Sex: Female	0.04	*	0.06	*	0.06	*
Age	0.02		-0.06	*	-0.41	*
Departmental Affiliation					-0.01	
Dept: Realistic	-0.02	*	-0.03		0.00	
Dept: Investigative	-0.08	*	0.01	*	-0.01	
Dept: Enterprising	0.08	*	0.00		-0.02	
Dept: Artistic	0.03	*	0.00		0.01	*
Dept: Conventional	-0.02	*	0.04	*	0.01	*
Stress and Perceptions of Campus and Departmental Climates						
Career-related stress	-0.38	*	-0.09	*	0.17	*
Satisfaction with compensation	-0.35	*	-0.07	*	0.02	*
Satisfaction with workplace	-0.08	*	0.01		-0.02	*
Institutional opinion: My teaching is valued by faculty in my department	-0.02	*	-0.01		0.03	*
Institutional opinion: Faculty of color are treated fairly here	0.08	*	0.05	*	0.03	*
Institutional opinion: Women faculty are treated fairly here	0.08	*	0.02	*	-0.04	*
Institutional opinion: Gay and lesbian faculty are treated fairly here	0.06	*	0.04	*	-0.04	*

Note: Column header reads "Faculty Comparison Groups (ref. Full-Time, Tenured Faculty)"

	Faculty Comparison Groups (ref. Full-					
Independent Measures	**Part-Time**	**Sig.**	**Full-Time, Non-Tenure-Track**	**Sig.**	**Full-Time, Tenure-Track**	**Sig.**
Feelings and Behaviors Related to the Teaching and Learning Environment						
Affect: Feel that the training you received in graduate school prepared you well for your role as a faculty member	-0.01		-0.06		0.00	
Affect: Achieve a healthy balance between your personal life and your professional life	0.14	*	0.00		-0.12	*
Importance: Research	-0.18	*	-0.18	*	0.12	*
Importance: Teaching	-0.03	*	0.03	*	-0.02	*
Importance: Service	0.06	*	0.06	*	-0.07	*
Hours per Week: Preparing for teaching (including reading student papers and grading)	-0.09	*	0.03	*	0.10	*
Hours per Week: Advising and counseling of students	-0.19	*	0.14		0.03	*
Hours per Week: Commuting to campus	-0.07	*	0.08	*	0.02	*

Note: *$p < .01$ (2-tailed)

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