KEY PERFORMANCE INDICATORS OF PART-TIME EMPLOYEES TEACHING ONLINE

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ABSTRACT

Online learning has caused a seismic shift in higher education since its rise beginning at the turn of the century. A portion of that impact has been on the ascent of the part-time employee teaching online. Adjunct instructors account for the overwhelming majority of the faculty providing education to these online learners. Because an instructor's performance impacts students' learning and their resulting end of course evaluation has such a bearing upon that person's employment, it is imperative to identify key performance indicators (KPIs) of employees teaching online. The problem addressed by this study was to determine the factors that affected a part-time online employee's performance rating by their students within a higher education setting. More specifically, this study sought to identify key performance indicators for those teaching online part-time.

Correlations and regression were conducted on institutional data covering 1295 fully online courses that occurred in 2016 at a regionally-accredited, private university. Potential key performance indicators studied were faculty threads posted per week, faculty employment longevity, faculty load, average course GPA, and class size. Three of those variables were statistically significant ($p < 0.001$) in individual correlations to an adjunct's End of Course Survey score. Four of those factors were statistically significant ($p < 0.001$) in predicting students' satisfaction of a part-time employee teaching online. The key performance indicators of part-time employees teaching online include faculty threads posted per week, faculty load, average course GPA, and class size. Implications and ideas for future research were discussed.

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CHAPTER 1

INTRODUCTION

Overview

Technology continues to push the boundaries of existing entities. Individuals and organizations seek to apply innovation to domains that may be resistant to or even antagonistic toward these changes. Media, book stores, retail shopping, and telecommunications have changed dramatically over the past two decades as a result of technological innovation. Once relatively stable industries have now become volatile.

In addition to these ventures, the previously predictable and staid market of higher education has also been upset (Gray, 2013, p. 345). Disruptors have sought to increase their scope, influence, and market share, often at the expense of long-held control by public and private, non-profit institutions. With a consumer Internet approaching the end of its second decade of use, higher education is finding itself in a quagmire of competing entities. For-profits, publics, and non-profit colleges and universities are engaging the online education arena with varying levels of desire, motive, and purpose. Some seek market share, others seek revenue, and still others feel coerced to participate lest they be left behind. The resulting employment situation differs from the traditionally employed faculty member working alongside their peers. As institutions embraced technological change, how have they considered the efficacy of their instructors, especially those that are part-time workers?

Background

Prior to and inclusive of the early days of the world wide web, institutions of higher learning experimented with distance education, which "initially referred to teaching and learning that happened outside of the geographic (place-based) campus; traditionally, distance interaction between student and teacher occurred via postal mail" (Gray, 2013, p. 345). Now, those interactions are mediated via technology enhancements over the Internet. Discussion forums, blogging, web-conferencing tools, and micro-blogs have added a face-to-face component to previously remote interactions. These advances have moved the discussion of distance versus face-to-face to "online and brick-and-mortar learning" (Gray, 2013, p. 345). Picciano, Seaman, and Allen (2010) underscore this shift:

> In the United States, as well as in many other countries, there have been clarion calls for education to transform in light of new technology especially as afforded by online learning. Some observers claim that this is already occurring and within the next several years education will be completely "disrupted" experiencing a transformation in its nature and structure. (p. 18)

When discussing higher education, it is useful to delineate between courses that are (1) traditional, (2) web enhanced, (3) blended/hybrid courses, and (4) online. Allen and Seaman (2013, p. 7) provide a useful guide to distinguish those categories. Figure 1: Course classification (Allen & Seaman, 2013, p. 7) should be utilized as a reference when considering online education and its impact.

Proportion of Content Delivered Online	*Type of Course*	*Typical Description*
0%	Traditional	Course where no online technology used — content is delivered in writing or orally.
1 to 29%	Web Facilitated	Course that uses web-based technology to facilitate what is essentially a face-to-face course. May use a course management system (CMS) or web pages to post the syllabus and assignments.
30 to 79%	Blended/Hybrid	Course that blends online and face-to-face delivery. Substantial proportion of the content is delivered online, typically uses online discussions, and typically has a reduced number of face-to-face meetings.
80+%	Online	A course where most or all of the content is delivered online. Typically have no face-to-face meetings.

Figure 1: Course classification (Allen & Seaman, 2013, p. 7)

By considering both aspects of online higher education—technology impacting education and online education itself—one can begin to unpack the topic and evaluate its relevance, prevalence, and place in the twenty-first century.

Growth, Acceptance, and Significance

Online educational experts Allen and Seaman (2013) noted that when they first began to research and report about online education in 2002, "less than one-half of all higher education institutions reported online education was critical to their long-term strategy. That number is now close to seventy percent" (Allen & Seaman, 2013, p. 16). Furthermore, 32 percent of all post-secondary students have taken at least one online course, which is a record high-water mark (Allen & Seaman, 2013).

As an example of this growth, consider the institution analyzed in this research. It is a private, non-profit institution of higher learning that offers adult-education via online, hybrid, and site-based education with degrees ranging from undergraduate through doctoral in addition

to its traditional (residential, 18-22 year olds) college campus in the mid-western United States. This private, non-profit, Midwestern University is known as PNPMU for this study. PNPMU is regionally accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools. Of the nearly 14,000 total students at PNPMU in 2016, nearly 3,000 attended the traditional, brick-and-mortar campus in the rural Midwestern United States. The remaining 80 percent are adult students that primarily fall under the non-standard term arrangements. Approximately 3,500 of these students attended class onsite at one of the sixteen education centers or various local partner hosts in three states across the Midwest. Those classes would be categorized as "web-facilitated" courses because of their utilization of a learning management system for course documents, syllabus, educational tools, and assignment submission. Note, however, that the remaining 8,000 (adult, nontraditional) students utilized a fully online course modality. See for PNPMU's online enrollment trend line.

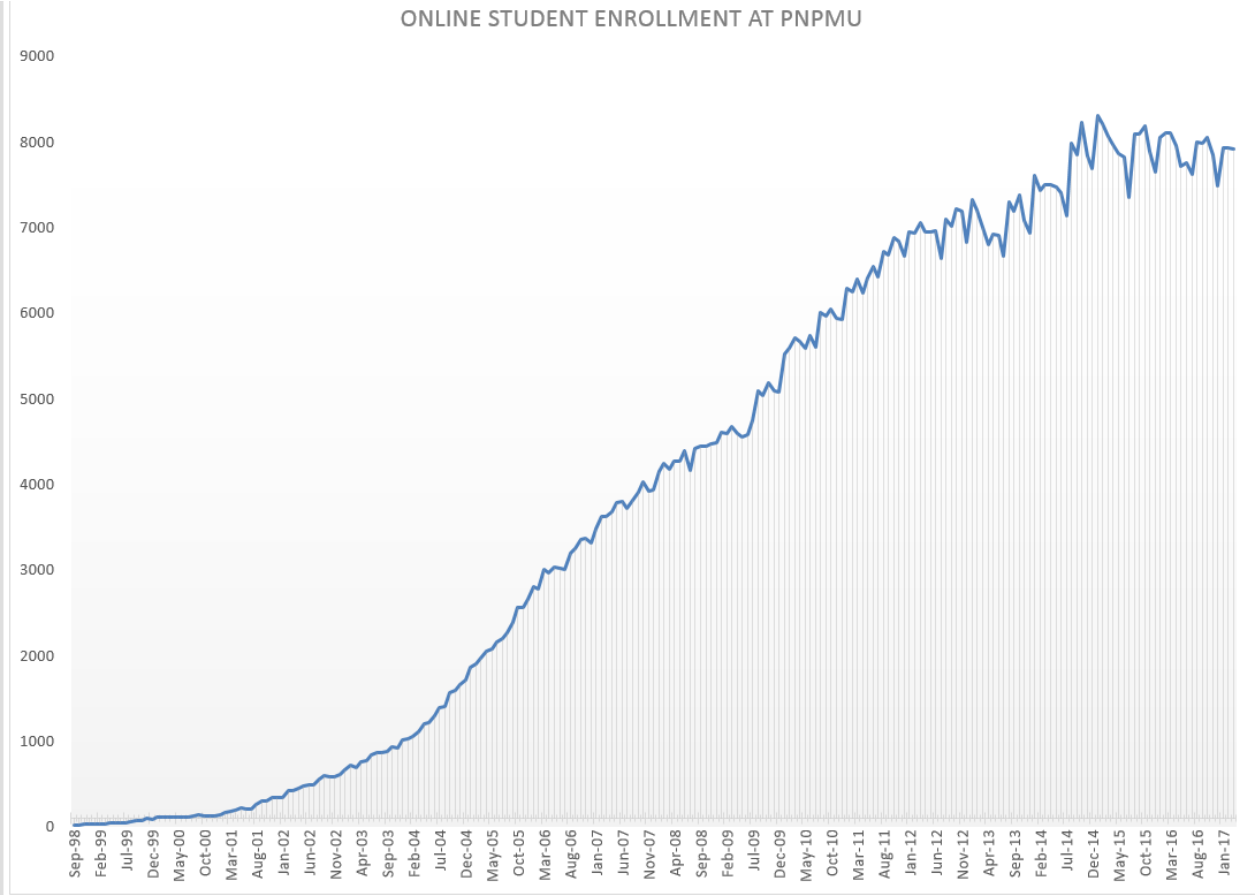

Figure 2: Online student enrollment at PNPMU

This placed PNPMU's adult student population at approximately 70 percent online and their total enrollment at 55 percent online, far outpacing the current trends as indicated in by Allen and Seaman's (2013) work as illustrated in Figure 3: Online enrollment growth trend (Allen and Seaman, 2013, p. 19).

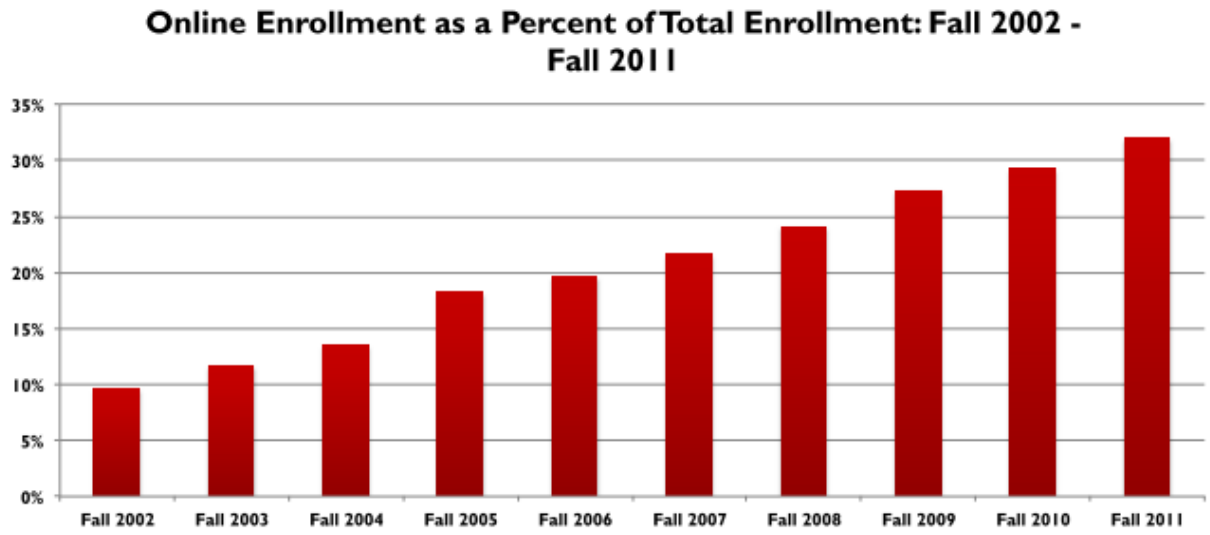

Figure 3: Online enrollment growth trend (Allen and Seaman, 2013, p. 19)

Relationship to Technology Management

The placement of technology-based or technology-mediated course delivery systems within the realm of Technology Management is valid. "Technology Management is [a] set of management disciplines that allow organizations to manage its technological fundamentals to create competitive advantage" (Sabeel, Gopal, & Rajashekhar, 2012, p. 1). Such an effort to create an aggressive lead over peer institutions is fueling the number of institutions willing to offer technology-mediated courses (Allen & Seaman, 2007a). This has stirred a proliferous growth of the users of online courses and also a rise in the number of organizations and people willing to develop technology-based course delivery systems such as Instructure's Canvas, Blackboard's Learn platform, Desire2Learn's Brightspace, and the open-source Moodle, among others. "Technology Management can…be defined as the integrated planning, design, optimization, operation and control of technological products, processes and services" (Sabeel et al., 2012, p. 1). Considering the role and scope of technology-based course delivery options, this study firmly aligns with this definition of Technology Management.

Statement of the Problem

Tenure, promotion, and course availability are influenced greatly by End of Course Surveys (EOCS) that evaluate an instructor's performance in each class (Love & Kotchen, 2010; Wallace, 2014). Thus, an adjunct faculty's evaluation becomes more than a satisfaction metric of students; it impacts a person's work life and livelihood. Because an instructor's performance impacts students' learning and the resulting evaluation has such a bearing upon that person's employment, it was imperative to identify key performance indicators (KPIs) of employees teaching online. The problem addressed by this study was to determine the factors that affected a part-time online employee's performance rating by their students within a higher education setting. More specifically, this study sought to identify key performance indicators for those teaching online part-time. The potential KPIs for this study were faculty threads posted per week, faculty employment longevity, faculty load, average course GPA, and class size. Correlation and multiple regression analyses were conducted to determine which items affected students' satisfaction with their instructor. The insights revealed here are beneficial not only for academic administrators, such as Chairs and Deans, but also for the greater academic community as it provides insights into who best reaches, teaches, and satisfies the growing online student population. With the identification of these KPIs, these variables can be addressed through the hiring, training, and ongoing development of adjunct online instructors. This not only provides insights to the researcher of this study, but to the broader academic community that has become increasingly dependent upon online enrollments and adjunct faculty. Therefore, the problem of this study was to identify key performance indicators of part-time employees teaching online for a large, private and non-profit Midwestern university.

Research Questions and Hypotheses

The following questions and subsequent hypotheses provided direction to this study:

Research Question 1: In what way do the variables of faculty threads posted per week, faculty employment longevity, faculty load, average course GPA, and class size correlate to an adjunct instructor's End of Course Survey score?

H1a: There is a positive correlation between faculty threads posted per week and an adjunct instructor's End of Course Survey score.

H1b: There is a positive correlation between faculty employment longevity and an adjunct instructor's End of Course Survey score.

H1c: There is a negative correlation between faculty load and an adjunct instructor's End of Course Survey score.

H1d: There is a positive correlation between average course GPA and an adjunct instructor's End of Course Survey Score.

H1e: There is a negative correlation between class size and an adjunct instructor's End of Course Survey score.

Research Question 2: In what way does the combination of variables of faculty threads posted per week, faculty employment longevity, faculty load, average course GPA, and class size predict an adjunct instructor's End of Course Survey score?

H2: The combination of faculty threads posted per week, faculty employment longevity, faculty load, average course GPA, and class size predict an adjunct instructor's End of Course Survey score.

Statement of the Purpose

The discovery of key indicators that contribute to students' overall satisfaction of instructors could be very useful for faculty, student, and academic institution. First, training can be identified to coach faculty in areas of control such as time inside the learning management activity or adherence to grading guidelines. Similarly, if instructors are resistant to training on such critical matters or do not wish to improve in certain areas, they might not be given course assignments in the future. This would allow the institution to maintain institutional policies and academic rigor while potentially increasing retention as a result of overall improved student satisfaction with their instructors.

Similarly, faculty from the millennial generation have rapidly entered the workforce. Determining key performance indicators for faculty success is critical to provide feedback, flexibility, and value to this emerging group (Eversole, Venneberg, & Crowder, 2012). Retaining existing faculty while onboarding new instructors is paramount to maintaining a successful, long-term employment pool of adjunct faculty as is faculty load. Too few hours taught in one calendar year could weaken the bond between adjunct and institution. Conversely, it is possible that overloading a part-time worker could stress their available time and diminish their connection with and overall performance to students.

Likewise, GPA is an unknown. Some studies on grade inflation (Eiszler, 2002; Germaine & Scandura, 2005; Stroebe, 2016) attribute higher evaluations with higher grades. Others refute that claim and draw no correlation between GPA and end of semester evaluations (Benton & Cashin, 2012; Feldman, 2007; Marsh, 2001, 2007). This study addressed that concern by analyzing the averaged GPA of the class. This provided insight into its potential effect on students' satisfaction with their instructor.

In addition, this study addressed the topic of class size with regard to students' satisfaction. In the online, year-round accelerated model in operation at PNPMU, class size is a variable that is managed more easily than site-based enrollments that are dependent upon geographical availability. As a result, this study's results could be applied to class size considerations.

Statement of the Need

Using the National Center for Education Statistics, Jolley, Cross, and Bryant (2014) determined that "adjunct faculty members are the mainstream within United States institutions of higher education, representing upwards of 70% of college and university faculty" (p. 219). What used to be a supplemental income opportunity is now increasingly giving way to the rise of the professional adjunct who seeks to earn a living from teaching (Goldstene, 2012, p. 7). Given the disproportionate notion of traditional and nontraditional faculty roles and the impact on domestic college students' satisfaction (Croxton, 2014), studying the interactions between faculty and students is critical to understanding this employment pool and student persistence (Tomei, 2006). Such insights into learning management system activities, faculty longevity, faculty load, students' GPA, and class size was useful not just for the thousands of online students each year at the participant institution, but for the millions of online students and hundreds of institutions offering courses.

Statement of Assumptions

One assumption of this study was that all data retrieved was accurate as compared to another instructor's data. In other words, when the Learning Management System recorded discussion activity, it recorded them in the same fashion for all participants.

Another assumption of this study was that GPA, Grade Point Average, was calculated uniformly among all students on a 4.0 scale for grades ranging from A (4.0) to F (0.0) according to PNPMU standards set forth by the University Catalog and maintained by the Registrar. From the PNPMU catalog, the official equivalents were as follows from Table 1: Grade and GPA Equivalents:

Table 1

Grade and GPA Equivalents

Grade	Quality Points (per credit)
A	4.0
A-	3.7
B+	3.3
B	3.0
B-	2.7
C+	2.3
C	2.0
C-	1.7
D+	1.3
D	1.0
F	0.0

A final assumption was that all students, instructors, and university administrators were unaware of this study and did not unduly influence any factors such as survey scoring, discussion thread activity in LMS, grading, course load, or class size.

Statement of Limitations

This study was dependent upon the preexisting data of End of Course Survey (EOCS) ratings. As such, courses with three or less students or respondents to the survey were omitted from the study. This was consistent with the institutional policy that does not return End of

Course Survey forms to instructors with so few students. This protects the students' privacy lest they be singled out from their scoring and/or free form comments.

Another limitation of this study was that not every course was reviewed because of the nature of students' first course in his or her program. Because the university operates in a lock-step cohort model, a student's first course is not only an academic introduction to the program but often serves as an introduction to the school and the program's operational aspects. Thus, activity levels, responsiveness, and other factors may not be consistent with the majority of courses beyond the starting point. As a result, start courses were omitted from this study. Their impact may have been useful but would likely merit their own review.

For similar but slightly different reasons, students' final course of a program were excluded as well. Though it is obviously not an introduction to the school, these courses often had capstone projects that differed from normal course assignments and activities. Inclusion of those courses might skew data and were therefore not retained in this study.

Lastly, certain programs were excluded from this study. The Nursing School and the Seminary have varied faculty expectations and organizational constructs. As a result, this research effort focused on associate's, bachelor's, and master's level courses within the college of adult studies at PNPMU.

Statement of Methodology

Institutional data was used for this study. Raw data was acquired for End of Course Survey results from the appropriate assessment department at PNPMU. Student enrollment and grade distributions by course were extracted from the institution's data warehouse and provided to this researcher. The number of discussion threads in the course were extracted using backend enterprise reporting functions of the institution's learning management system.

Faculty longevity information was extracted from the institutional data and calculated from the last date in the year 2016. For this data there was high reliability based upon the state and federal reporting systems to which it is bound. For LMS data, strong accuracy was also noted. The provider operates many systems for hundreds of similar institutions with myriad of reporting requirements for accreditation and federal education bodies.

Once the data was collected and organized, an exploration was conducted using correlation and regression analysis. As part of this data collection, course designations were included so this researcher might be able to identify certain factors that affect EOCS scores while others do not.

Statement of Terminology

The following words are defined to augment the consistency within the study and establish a common frame of reference for author and reader.

Adjunct refers to a short- or long-term contractual instructor that has not achieved that institution's definition of a full-time worker. This term is most often used in context of higher education institutions. The term does not include nor exclude tenure potential or other employment status at the institution but only refers to the employment arrangement for an individual course. Thus, an employee working for the institution in another capacity (e.g. administrative function) could serve as an adjunct worker on a per-course basis.

End of Course Survey (EOCS) refers to the final survey instrument provided to students at the end of each course. In the literature, these are sometimes referred to as Student Evaluations of Teaching (SET). Students rank their instructor's performance attributes on a Likert scale of 1 (low) to 5 (high). They also rank curricular items on the same scale although this study does not consider the curricular scoring nor did it review open-ended solicitations for

comments. Such surveys are anonymous to instructors and provided to them only in aggregate form when the respondents number four or more.

Full-time refers to any hourly, salary, or contractual employee that meets his or her institution's definition of a full-time worker. The term does not include nor exclude tenure potential.

Grade Point Average, or GPA, is the calculated grading summary for students that accounts for the grade earned for a course on a typical 0.0 to 4.0 scale. See Table 1: Grade and GPA Equivalents for the equivalents.

Key Performance Indicator, or KPI, is a metric that is used to particularize a factor or characteristic that correlates with improved performance (Badawy, El-Aziz, Idress, Hefny, & Hossam, 2016). They should be used as a "guide for decision making for universities" (Azma, 2010).

Learning Management System (LMS) is the web-based software that allows faculty and students to securely log-in, submit assignments, read course information, converse via discussion posts, exchange documents, and receive graded/assessed work. Common platforms as of this writing include Blackboard Learn, Desire2Learn's Brightspace, Instructure's Canvas, and Moodle.

Online learning is "a course where most or all of the content is delivered online. [They] typically have no face-to-face meetings" (Allen & Seaman, 2013, p. 7). For PNPMU, students may be located near its main campus or around the world. Therefore, no face-to-face meetings occur in its online modality.

Part-time refers to a short- or long-term contractual instructor that has not achieved that institution's definition of a full-time worker. It can be used for hourly, contractual, or instructor-

level positional workers. It is used interchangeably in this study with the term adjunct as defined above.

PNPMU refers to the Private, Non-Profit Midwestern University that is the research subject. Its enrollment of 14,000 total students, of which 8,000 are fully online, provides a large sampling. In addition, its utilization of 1,500 part-time/adjunct faculty serves as an ideal test subject for this study.

Technology-based course delivery and its related phrases refer to academic or non-academic instruction delivered via intranet or Internet. Examples of such course systems include online, hybrid, web-based, virtual, online simulation, and virtual reality. For the purposes of this study, isolated or self-paced coursework without an assessing instructor are excluded (e.g. most Massive Open Online Courses, Rosetta Stone, etc.).

CHAPTER 2

LITERATURE REVIEW

The Climate of Online Higher Education

For decades, higher education in the United States was dependent upon the learner traveling to a physical location to sit in the presence of a subject matter expert (Gray, 2013; Moore & Kearsley, 2011). For some, it became a rite of passage from childhood to adulthood as "'everyone' wants their children to go to university, if possible" (Aspromourgos, 2015, p. 80). For many more, it meant that any obstacle or interruption in this process would be the end of their post-secondary degree pursuit. Some would pursue correspondence courses but credible offerings were not widely available nor vetted. However, in the mid-1990s, a more appealing tool began to break down barriers of access and distance: a course offered over the Internet (McPherson & Bacow, 2015). Such "enabling technologies have been dramatically changing human life, knowledge acquisition, and the way works are performed and people learn" (Coccoli, Guercio, Maresca, & Stanganelli, 2014, p. 1003). Higher education was fundamentally altered by this onset of online learning (Kaplan & Haenlein, 2016).

This new option was a viable option for many older adults for whom the traditional college experience was either not available or did not conclude the way in which they had hoped. By utilizing an educational experience online, nontraditional working adults were able to pursue the degree that had been elusive (Kane, Shaw, Pang, Salley, & Snider, 2015). As a result,

students could complete their degree during the day, evenings, or weekends, and often on their own weekly timetable. Schedules are not disrupted by rigid class meetings across town. In addition, the need for child care was diminished, which aids in student success (Carney-Crompton & Tan, 2002). Asynchronous discussions, digital uploads of assignments, increasingly prevalent Internet connections (later, broadband), and targeted curriculum for working adults assisted students in achieving their goals of obtaining a degree.

As a result, by 2012, nearly one-third of all post-secondary students had taken at least one online course, up from just one-fifth in 2006 (Allen & Seaman, 2007b, 2013). Great increases in enrollment were realized in the first fifteen years of the twenty-first century (Allen & Seaman, 2013). Strong enrollment continues, though it has dropped below previously expected thresholds; growth was measured at only 9.3 percent in 2012 (Allen & Seaman, 2013; Clinefelter & Magda, 2013; Gray, 2013). As one indicator of higher education's overall domestic importance, between 1986 and 2003, education itself has grown from 2.6 percent of the United States gross domestic product (GDP) to 3.2 percent (Tierney & Hentschke, 2007). This represents a 23 percent increase within just two decades.

Increased Competition

This increasingly available technology broadened the scope of higher educational institutions that were willing to dabble in the creation of online courses and the subsequent development of fully online programs. In addition, standardized learning management systems (LMS) became more available and widely recognized. Such an influx of technology "lower[s] entry barriers, increase[s] competition, and compress[s] product life cycles" (Arora, Fosfuri, & Gambardella, 2001, p. 421). Visionary individuals at some institutions pushed for these advances. In others, reluctant administrators were pulled into the field to investigate the

excitement and, in some cases, consternation. In either case, competition among colleges and universities in the online market was heating up as higher education became a crowded marketplace (Kane et al., 2015; Pucciarelli & Kaplan, 2016).

Schools from within the Council of Independent Colleges are typically small to mid-sized private universities while the schools from the American Association of State Colleges and Universities schools are four-year public universities (Clinefelter & Magda, 2013). Clinefelter and Magda (2013) surveyed Chief Academic Officers at universities within the CIC and the AASCU and found that approximately 40 percent of CIC and over 80 percent of AASCU members offer at least one fully online program.

Noteworthy is that Allen and Seaman (2010) underscored the increased competition for online students and identified much of the struggle "has come from the growth of existing offerings, not from institutions new to online starting new programs" (p. 4). At this point in a matured market, it is less that new entrants are entering the market as it is that institutions that have been engaged in online learning are increasing their program offerings and enrollments. Thus, colleges and universities that have not already waded into online learning are already at a strong disadvantage when considering market share.

For-Profit Higher Education

In addition to increased competition with peers among private and public institutions, for-profit institutions (for-profits) pushed into this territory quite aggressively. It remains helpful, therefore, to distinguish between the varieties of higher education entities. "For-profit institutions operate as businesses; revenue can be distributed by the agency or board that runs the institution… In contrast, at public and nonprofit institutions, all surplus revenue must be reinvested in the institution" (Arbeit & Horn, 2017, p. 2). Public institutions are feeling most of

the pressure from the for-profit sector (Allen & Seaman, 2010; Tierney & Hentschke, 2007), but all types of institutions are feeling pressured to entertain online options (Al-Salman, 2013).

King and Sen (2013) identified for-profit universities as one of the four largest threats to modern universities: "…for-profits are low-touch operations, without residential campuses but with accessible instructors and teaching assistants. This alternative model, with its lower salaries for teaching staff and the absence of scholarly research operations, is considerably less expensive compared to traditional universities" (p. 85). Their enrollments and growth are unmistakable as evidenced in Figure 3: The Rise of Non-Profits (King & Sen, 2013, p. 84).

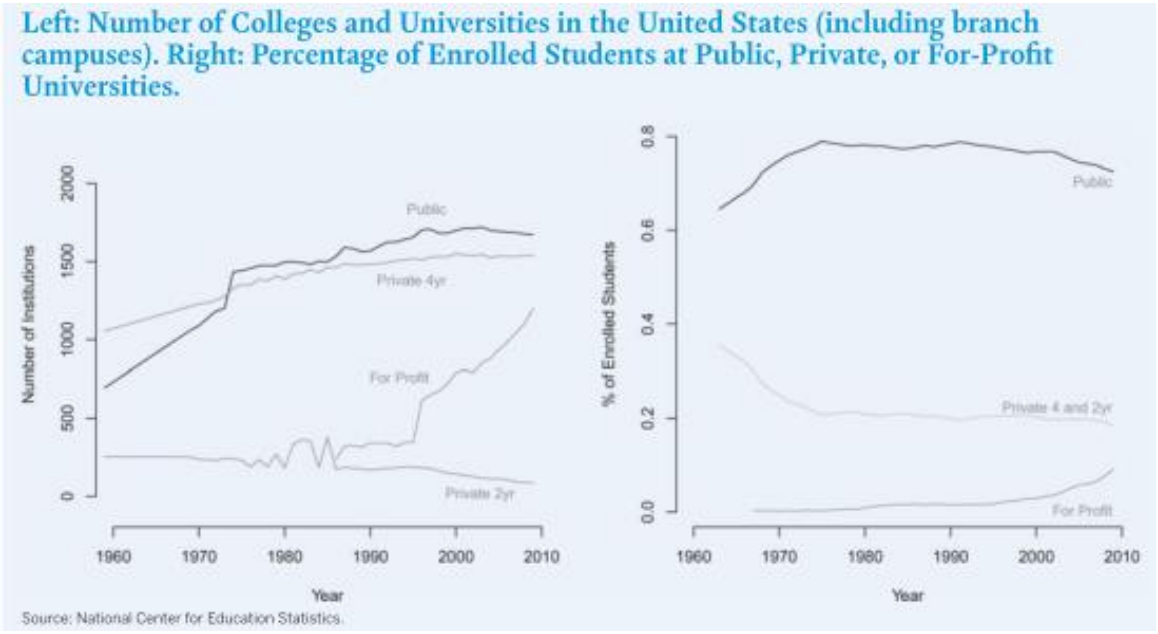

Figure 4: The Rise of Non-Profits (King & Sen, 2013, p. 84)

In 2012, nearly one in seven college students was attending a for-profit college or university (Deming, Yuchtman, Abulafi, Goldin, & Katz, 2016). Perhaps even more revealing is that "for-profit colleges account for 42 percent of postsecondary enrollment growth from 2002 to 2012…and accounted for nearly 20 percent of the growth of US bachelor's degrees (BAs)"

(Deming et al., 2016, p. 779). Thus, not only are they growing in enrollment, but for-profit entities have fueled the post-secondary enrollment boom of the early twenty-first century.

As noted by Cosentino (2011), for-profit entities are not entitled to direct subsidies like public institutions, but their students are often eligible for federal and state funding. This provides an opportunity to fund their students' academic pursuits. As a result, it provides an impetus for these institutions to pursue students and to conduct their business as efficiently as possible. Budgetary pressures and increased competition in the higher education market are squeezing institutions, both public and private, to be more fiscally responsible with less resources (Pucciarelli & Kaplan, 2016). It is noteworthy that Starcher and Mandernach (2016) discovered no significant differences for gender, highest earned degree, instructor category, or satisfaction between non-profit and for profit institutions. In fact, the "online adjunct faculty at for-profit and non-profit institutions are remarkably similar with regards to personal and academic characteristics as well as their motivation for and satisfaction with teaching online in an adjunct capacity" (Starcher & Mandernach, 2016, p. 1). As a consequence, the findings from this research study can be applied to for-profit and non-profit institutions that serve nontraditional students online.

Nontraditional Student Demographics

Whether public, private non-profit, or private for-profit, there are unique characteristics of students that choose fully online degree programs. Most often, they are nontraditional learners seeking a flexible and convenient educational experience (Bell, 2012; Choy, 2002; Kim, Kwon, & Cho, 2011). Radford, Cominole, and Skomsvold (2015) characterized nontraditional undergraduate students as "being independent for financial aid purposes, having one or more dependents, being a single caregiver, not having a traditional high school diploma, delaying

postsecondary enrollment, attending school part time, and being employed full time" (p. 1). They are likely to be older than their twenties, female, and are often raising children, sometimes as a single parent (Brock, 2010; Choy, 2002; Dutcher, 2016). Though a misnomer at this stage, 73 percent of all nontraditional undergraduates meet at least one of those characteristics (Choy, 2002). Thus, although postsecondary education is stereotyped as a group of 18-22 year olds on campus at the café, the actual predominant group in higher education is more likely to be represented by a middle-aged student completing assignments at a kitchen table with her child nearby.

In addition to age and work experience variety among students, there are additional benefits to online, nontraditional learners. "University classes are currently composed of students from a multitude of social, religious, ethnic, and geographical backgrounds" (Pucciarelli & Kaplan, 2016, p. 315). This diversity of students adds a richness to the experiences of all students. Homogeneity of a class of online students is reduced greatly. The variety of ages, background, races, marital status, and even hometown origination is multitudinous (Crose, 2015).

Motivations for enrolling in college, or coming back to finish a degree, vary. Many individuals discovered that they must have the degree to keep their position at work. For others, it is to provide options to change jobs or enter in new careers (Zipkin, 2014). Yet for others, it is simply to achieve a life-long goal or to set an example for children or younger family members (Zipkin, 2014).

Retention for this group of online learners is often lower than for traditional learners (Robb & Sutton, 2014). It often is a result of having to balance work, family needs, and the academic workload in addition to the fears associated with (re)entering a formal learning

environment (Castleman, 2013). It can also be the result of a lack of inspiration and social connectedness (Kim et al., 2011). Robb and Sutton (2014) wrote that "Since motivating elements found in a traditional class, such as group pressure, social interaction and a familiar learning environment, can be absent in online settings, motivational strategies should be purposefully integrated into the course to enhance learner motivation" (p. 3). However, Castleman (2013) asserts that mature adult learners

> … exhibit a larger degree of practicality that enhances the learning process due to both their life and work experiences. Because of these factors, adult learners have a greater sense of direction, seriousness, and mature approach to their education. More importantly, they possess a deeper grasp of the reflective approach, and they understand how this element can strengthen their learning. (p. 35)

The tension between intrinsic motivation of a mature adult and the work/life/school balance is what holds a nontraditional learner between retention and attrition. Thus, if motivation can be sustained via the course content, online environment, and instructor actions, adult learners can persist and thrive in an online environment. This provides opportunity not only for the students to achieve their goals, but for the institutions to maintain a modicum of growth.

Indeterminate Future

As stated previously, though online learning's enrollment has slowed the past several years, it still remains in a growth trajectory (Allen & Seaman, 2013; Clinefelter & Magda, 2013; Gray, 2013). However, because of political and economic forces, higher education as a whole appears to be ripe for a disruptive change (King & Sen, 2013). With increasing expenses and their relatively static funding sources of tuition, fees, and philanthropic donations, institutions will not likely sustain themselves (King & Sen, 2013). However, implementing cost-cutting

measures is not the only approach. It is imperative that colleges and universities "fundamentally re-examine how they can increase their students' success rather than continuously reduce investments in their existing traditional model to the point of dysfunction" (D. P. Jones & Johnstone, 2016, p. 28). Higher education administrators must consider alternate strategies to meet students' needs. The use of data analytics is one method that could provide students with support and encouragement (Poulin & Straut, 2017). Fully online learning lends itself to the collection and application of analytics.

Because the marketplace in online higher education has become more crowded, it is important that an institution promote its distinguishing features. This approach is known as branding, which

> is a manifestation of the institution's features that distinguish it from others, reflect its capacity to satisfy students' needs, engender trust in its ability to deliver a certain type and level of higher education, and help potential recruits to make wise enrolment decisions. (Bennett & Ali-Choudhury, 2009, pp. 85-86)

As colleges and universities look toward a potentially tumultuous future, it is important that they communicate the unique value that their institution brings to potential students. No longer can it be that offering online courses adds to the university brand (Allen & Seaman, 2007b) but that the university is enhancing the value proposition of its online courses and programs to constituents.

Lastly, it is imperative that a higher educational institution provide attention to those presenting its mission, brand, and reputation to students: its instructors. This workforce cannot become a footnote in the institution's efforts to grow its enrollment, increase its rankings, or reduce costs. As Jones and Johnstone (2016) stated:

> The favored approach on the instructional side has been to utilize lower-cost inputs (substituting part-time/adjunct faculty for full-time/tenured faculty) but not fundamentally changing the mode of how they provide instruction. In some institutions the strategy has been employed to the point where the quality of the educational outcomes (outputs) has been called into question, and important tasks typically performed by permanent faculty have gone undone. This is not a recipe for long-term success. (p. 28)

Administrators rarely interface directly with students. Rather, it is the instructor that is the representative of the university (Satterlee, 2008). Astonishingly, nearly two-thirds of all college and university instructors are adjuncts and nearly 80 percent are part-time at for-profits (S. G. Cook, 2013). It was this overlooked but highly influential group of employees that was the focus of this study.

The Role of Part-Time Faculty

Defining the Adjunct

Part-time instructors, or adjunct faculty, have become the workhorse for many higher education institutions (S. G. Cook, 2013; Estes, 2016; Gappa, 2000; Jolley et al., 2014; Maynard & Joseph, 2008; Milliron & de los Santos, 2004; Shiffman, 2009; Toutkoushian & Bellas, 2003). From Fall 2005 to Fall 2013, their distribution of utilization had increased from 35.7 percent to 70.9 percent, which is an increase of 98.6 percent (American Federation of Teachers, 2017).

In professional settings, adjunct faculty are often called part-time, temporary, or contingent workers (Al-Salman, 2013; Anderson, 2016; Connelly, 2004; Hill, 2014; Hopkins, 2013). Pejorative references, sometimes by adjuncts themselves, have used the terms ghost,

invisible, stranger, or forgotten instructor (Gappa, 2000; Gappa & Leslie, 1993; Kazarian, 2008; McLean, 2006; Roueche, Roueche, & Milliron, 1996).

Adjunct faculty are difficult to characterize (Charlier, 2010) but are often more easily defined by what they are not: permanent. Full-time instructors may receive a regular paycheck, standard course loads, designated office space, tenure opportunities, health and dental insurance, retirement benefits, personal or sick time, and/or tuition incentives (Martindill, 2008; Petersen, 2015; Peterson, 2009; Shiffman, 2009). Adjuncts are rare recipients of those advantages unless part of a unionized pool (Casagrande, 2015). In addition, as an adjunct worker noted, full-time faculty have the respect of their peers and attention from the institution (Trent, 2008), which is sorely lacking from the vantage of the adjunct worker (Shiffman, 2009; Toth, Griffiths, & Thirolf, 2013). Instead, an adjunct perceives an academic caste system that has relegated them to the lower status (Gappa & Leslie, 1993; Shiffman, 2009).

The lack of consistent payment is a challenge of the part-time instructor. Schedules for remuneration vary between extremes of a weekly cycle to a lump sum at the conclusion of the semester (Martindill, 2008). Some instructors' payments are held ransom until final grades are submitted (Martindill, 2008). This behavior not only raises questions about the legality of an institution's payment schedule, it demeans the effort that the adjunct instructor has placed into the classroom (Martindill, 2008).

With regard to course loading, the adjunct worker is often reduced to an emergency substitute (Gappa & Leslie, 1993). Understandably, institutions assign their full-time faculty within the contractual parameters and then offer the remainder to adjuncts. This accommodates institutional fluctuations in enrollment. However, a full schedule for one term may not mean a full schedule for the entire year. For those adjuncts seeking an additional income beyond their

retirement or full-time work, this is welcomed and manageable (Shiffman, 2009; Worthen, 2013). However, for the individual dependent upon this work for their primary income, job insecurity can become challenging and stressful (Gappa, 2000; Gappa & Leslie, 1993; Kezar & Maxey, 2013). Furthermore, part-time faculty are paid at just a fraction of what a full-time faculty member may receive (Adamowicz, 2007; Gappa & Leslie, 1993; Munday, 2016; Worthen, 2013). Similarly, the inequitable amount of health, dental, and retirement benefits (Shiffman, 2009) can impede an adjunct instructor from providing more robust familial support.

A temporary course assignment for a college or university rarely includes a designated office space (Powers, 2016). Instead, open "bull pen" (Gappa & Leslie, 1993, p. 166) office areas, shared cubicles, or the instructor's home office or kitchen table become the grading, administration, and correspondence center (Carnevale, 2004; Shiffman, 2009; Trent, 2008). Compounding the difficulty for the instructor and students is the lack of regular office hours (Powers, 2016). Without designated space, it becomes difficult for the instructor to regularly engage students with intentional times to meet, guide, and mentor students (Kezar & Maxey, 2013). This lack of space also limits both their intentional and informal interactions with students (Eberly, 2009; Umbach, 2007). The limitations of this interaction can be detrimental to the educational effectiveness of students' overall performance (Astin & Astin, 2000; Eberly, 2009).

Adjunct Motivation and Variants

Given the frequent adverse conditions and outlook, one might wonder why an adjunct teaches part-time (Hopkins, 2013). The pioneering adjunct study completed by Gappa and Leslie (1993) identified intrinsic and extrinsic motivations for an adjunct to teach. Intrinsic motivations include a desire to give back to society, the need to promote education, the feeling of

satisfaction that teaching brings, the desire to serve as a role model, and the ability to operate within a specific institutional mission (moral priority or religion) (Gappa & Leslie, 1993). Extrinsic motivations include status, earning income, and aspirations of moving into teaching full-time (Gappa & Leslie, 1993).

The reasons that an adjunct has for seeking part-time work are not exclusive to only intrinsic or only extrinsic motivations, let alone one or two subcomponents. An individual might appreciate the sense of accomplishment that comes from teaching but also may teach to fund a vacation, child's college fund, or the mortgage. In order to classify academic "part-timers" into a taxonomy, Tuckman (1978) placed adjuncts into seven exclusive categories:

1. Semiretired: a distinct and homogenous group consisting of former academics and professionals.
2. Students: Graduate students working for other institutions to gain experience and/or income.
3. Hopeful Full-Timers: Aspiring full-time faculty who have not yet obtained a permanent position.
4. Full-Mooners: Individuals working full-time (>35 hours per week) elsewhere.
5. Homeworkers: Those working part-time because of commitments to care for children or relatives.
6. Part-Mooners: Individuals working part-time (<35 hours per week) elsewhere.
7. Part-Unknowners: Individuals teaching part-time for unknown reasons. (pp. 307-308)

To simplify these categories into more distinct groups, Gappa and Leslie (1993) renamed and combined several categories. The semiretired group were renamed to career enders to indicate those that are transitioning from "well established careers (mostly outside of higher

education) to a preretired or retired status in which part-time teaching plays a significant role" (Gappa & Leslie, 1993, p. 47). The full-mooner group was renamed to specialist, expert, or professional as they typically have a permanent job elsewhere (Gappa & Leslie, 1993). Similarly, Gappa and Leslie (1993) retitled hopeful full-timers to aspiring academics because it is not always their intent to obtain full-time employment inside the academy; often they desire to be "fully participating, recognized, and rewarded members of the faculty" (p. 48). The final classification is an amalgamation of homeworkers, part-mooners, and part-unknowners that were termed freelancers because they choose to remain part-time in their teaching (Gappa & Leslie, 1993). It is important to note this revised taxonomy when discussing adjunct classifications as it serves as a key reference point in the literature (Shiffman, 2009) even though others have attempted to vary the classifications slightly (Schnitzer & Crosby, 2003). Powers (2016) notes that whether referred to as part-time or adjunct faculty,

> individuals who perform in this capacity share the following characteristics: they represent an addition to the existing full-time faculty to enable a college or university to staff all classes being run in a given term; their teaching load is less than full time; and they do not receive the same level of benefits and job security as full-time faculty. (p. 26)

This summative definition is helpful although it requires clarity when referring to teaching load. Within each institution, an adjunct usually teaches less than a full time load. However, because of the prevalence of the adjunct teaching online for multiple institutions, an adjunct's cumulative teaching load among multiple colleges and universities may easily exceed a full-time faculty load (Bedford, 2009; Mandernach, Register, & O'Donnell, 2015; Samora, 2013; Shiffman, 2009).

The Online Adjunct

Understanding the categories of part-time workers provides a foundational understanding of the more specialized adjunct that (primarily) teaches online. A growing subset of part-time faculty includes a category of the online adjunct instructor (Puzziferro & Shelton, 2009). This individual shares most of the characteristics of all adjuncts (lack of benefits, less pay, and job insecurity) but is not tied geographically to a specific area (Cuddie, 2016; DeLotell, 2014; Hopkins, 2013). Thus, instead of working for a handful of schools within driving distance, an online adjunct instructor could teach for the college down the road or the university on the other side of the world (Schnitzer & Crosby, 2003). A distinct advantage for the online adjunct over a face-to-face instructor is the numerous options available to them for this part-time employment. As Cuddie (2016) noted, "Freelancers who teach for multiple institutions can be selective in the colleges and universities they teach for" (p. 102). This benefit presents a disadvantage as well. The potential workforce for a desired institution is equally scattered around the world. This competition within the labor pool often requires a potential adjunct to be more self-promoting and shrewd in his or her attempt to secure part-time employment (Hess, 2004).

This absence of geographic restrictions is one of the three primary explanations for adjuncts to pursue this work in this modality (Samora, 2013). In her study, Hopkins (2013) identified the three principal reasons for individuals to teach online as the:

(1) flexibility to work from any location and at any time,

(2) the convenience to add online teaching into their otherwise busy lifestyle regardless of geographic boundaries or physical limitations, and

(3) the opportunity to connect with adult learners in the same circumstances. (p. 58)

This geographic flexibility incurs additional challenges beyond increased competition, however. When compared to their on-campus colleagues and within the context of online higher education courses, adjuncts "are less visible when they teach 100% online and are rarely seen by full-time faculty and university administration" (Cuddie, 2016, p. 2). The invisibility as described by Gappa and Leslie (1993) is exacerbated by the remote nature of an adjunct pool that may never before have set foot on campus (Carnevale, 2004; Jacobs, 2015). Therefore, an online adjunct and an institutional administrator might seldom, if ever, meet (DeLotell, 2014).

For this reason, it is imperative that adjuncts feel inspiration, encouragement, and motivation from the institutions for whom they teach (Samora, 2013). They must feel connected to their university employer(s) as they should not operate in seclusion (Schnitzer & Crosby, 2003). "It is in the college's best interest of appreciating the investment value of them [adjuncts], and ultimately in the interest of establishing and maintaining the college's reputation for teaching excellence" (Roueche, 1995, p. 120).

To combat isolation and to promote teaching excellence, some higher education institutions create orientation and/or mentoring programs (Vaill & Testori, 2012; Vitale, 2010; Wallace, 2014; Ziegler & Reiff, 2006). Such efforts are directed toward introducing the adjunct to the university's process; providing access to training on the learning management system and other technical applications; modeling successful instruction; imparting pedagogical/andragogical overview; and developing a relationship between mentor and mentee (Vaill & Testori, 2012; Ziegler & Reiff, 2006). These efforts are also intended to increase the likelihood of a successful class experience for students, which is often measured by student retention, persistence, and an end of term evaluations of their instructor (Hammonds, Mariano, Ammons, & Chambers, 2017; S. J. Jones, 2012; Puzziferro & Shelton, 2009).

With the growth of online course offerings, online adjunct instructors have firmly planted themselves into the daily operation of most colleges and universities. Given the respectable growth of students taking online courses (Puzziferro & Shelton, 2009), those online adjuncts are establishing themselves as the face of the universities for whom they teach.

Because of increased competition within the geographically unrestricted labor pool, what used to be a supplemental income opportunity is now increasingly giving way to the rise of the professional adjunct who seeks to earn a living from teaching (Goldstene, 2012, p. 7; Puzziferro & Shelton, 2009). Given the disproportionate notion of online adjunct faculty roles and the impact on domestic college students' success, studying the interactions between faculty and students was critical to understanding this employment pool and student persistence. Student evaluations of instructors are quite helpful to provide insight into this phenomenon (S. J. Jones, 2012).

Faculty Evaluations

Overview

"A paramount concern of higher education institutions with their increasing enrollments and declining resources is ensuring that members of the new faculty majority are consistently high quality performers in the classroom as well as in their other assignments" (Gappa, 2000, pp. 77-78). To gauge the quality of those in the onsite and online classroom, institutions have frequently turned to the evaluation of faculty (Carrell & West, 2010). Issued first in 1987, Chickering and Gamsom's Seven Principles for Good Practice in Undergraduate Education have served as a template for such evaluations. As such, good practice

- Encourages student-faculty contact
- Encourages cooperation among students

- Encourages active learning
- Gives prompt feedback
- Emphasizes time on task
- Communicates high expectations
- Respects diverse talents and ways of learning (Chickering & Gamson, 1999, p. 76)

Permitting students to evaluate their instructor often generates controversy and capacious research (Benton & Cashin, 2012; Feldman, 2007; Galbraith, Merrill, & Kline, 2012). However, it is naïve to believe that such performance appraisals are a recent development. In her article from the mid-twentieth century, Geen (1950) recalled her feelings in 1946 when her dean of students promoted the idea. She was put off by feelings that such efforts would be a "student intrusion" and could promote in students a "false ideas of authority" (Geen, 1950, p. 290). In addition, she was taken aback that the advocate was from the administration and not faculty (Geen, 1950). However, her opinion changed as she came to "believe wholeheartedly in student evaluation of teaching, since I think that students are well qualified to judge the quality of the teaching" (Geen, 1950, p. 297).

Perceptions of Student Ratings

Misunderstandings about student evaluations of faculty abound (Aleamoni, 1987; Benton & Cashin, 2012; Feldman, 2007). In fact, Benton and Cashin (2012) dispute the phrase "student evaluations of teacher [SETs] performance [or effectiveness]" and its variants; instead they prefer "student ratings" because evaluation connotes an assessment of worth whereas rating refers to data that needs interpretation. This researcher affirms that terminology because its use in this study required interpretation and application, not a wholesale terminal judgment of an instructor's value. Because of its prevalence in the literature, evaluation and rating were used

interchangeably in this study.

Misconceptions regarding students' ratings of teachers persist (Al-Hinai, 2011; Aleamoni, 1987; Feldman, 2007; Gallagher, 2000; Marsh, 1987). Benton and Cashin (2012) summarize the most widely circulated misconceptions as:

- Students cannot make consistent judgments.
- Student ratings are just popularity contests.
- Student ratings are unreliable and invalid.
- The time of day the course is offered affects ratings.
- Students will not appreciate good teaching until they are out of college a few years.
- Students just want easy courses.
- Student feedback cannot be used to help improve instruction.
- Emphasis on student ratings has led to grade inflation. (p. 2)

This is not aided by conflicting studies such as those challenging the relevance of student evaluations (Carrell & West, 2010; Feeley, 2002; Germaine & Scandura, 2005; Stroebe, 2016). However, many other prominent studies affirm their use (Bosshardt & Watts, 2001; Feldman, 2007; Hammonds et al., 2017; S. J. Jones, 2012; Kulik & McKeachie, 1975; Marsh, 1987). Benton and Cashin (2012) aptly stated that "student ratings tend to be statistically reliable, valid, and relatively free from bias or the need for control, perhaps more so than any other data used for faculty evaluation" (p. 12). Marsh (2007) summarized the value and reliability of student evaluations of teachers (SETs) as remaining:

> … multi-dimensional, reliable and stable, primarily a function of the instructor who teaches a course rather than the course that is taught, relatively valid against a variety of indicators of effective teaching, relatively unaffected by a variety of potential biases, and

seen to be useful by faculty, students, and administrators. (p. 372)

Context within Accelerated, Online Courses to Nontraditional Students

As a result, the study of students' ratings of their instructors is not only relevant, but sorely needed within the context of the pool of adjuncts teaching online. Because PNPMU utilizes standardized curriculum and learning outcomes, those variables are controlled. In addition, PNPMU operates its courses in an accelerated format. Each course is time-compressed and lasts five or six weeks. This eliminates the challenge of asking students to reflect on an instructor's performance that previous sixteen-week semester. Whereas some studies point to receiving feedback with greater frequency and/or at a midpoint (Abbott, Wulff, Nyquist, Ropp, & Hess, 1990; Marsh, 1987, 2007; McDonnell & Dodd, 2017), an accelerated class allows for a feedback cycle that is equally compressed to occurring every five to six weeks.

Online students have similar but varying needs as compared to their face-to-face counterparts due the very nature of the medium used. "Online education has added a completely new dimension, and overall, these trends have challenged, stretched and even redefined the learning paradigm in interesting ways" (Puzziferro & Shelton, 2009, p. 2). Faculty feel on-call around the clock (Maguire, 2008; Samora, 2013). Interactions between faculty and students are weighted more heavily when online due to the isolation one might feel when removed from the institution and because of the nature of online discussion forums (Chickering & Gamson, 1999; S. J. Jones, 2012; Maguire, 2008).

In addition, nontraditional students add a unique dynamic to the evaluation process. Instead of the typical 18-22 year old evaluating an elder faculty member, a nontraditional student might be evaluating a similarly aged peer. Such a topic is often overlooked as it may impact the rating results (Wachtel, 1998).

Factors Affecting Student Satisfaction with Their Instructor

As a result of the rising number of nontraditional students taking courses fully online, it is important to study what, if any, determinants affect students' ratings of their instructor. Such insight could be beneficial for faculty recruiting, development, and training. To provide a more complete picture, the following behavioral items were reviewed and included in the study of this research.

Instructor Interaction within the Learning Management System

The importance of instructors' activity within the learning management system (LMS) has long been touted as a requirement of distance education (Chickering & Gamson, 1999; S. J. Jones, 2012; Maguire, 2008). By providing connectedness with students (Johnson, 2014), it can aid with retention of students in the course and/or program (Estes, 2016; Falloon, 2011; McLean, 2006). For the population of this study, it is more critical. Patterson and McFadden (2009) discovered that online students drop out at a higher rate than campus-based students. In addition, the study discovered that older students were more likely to dropout as compared to their younger counterparts (Patterson & McFadden, 2009). "Student satisfaction within the online classroom is directly affected by quantity and quality of interactions between the assigned faculty member and the enrolled online students" (S. J. Jones, 2012). Because interactions between faculty and students are so important when online due to the distance between student, instructor, and institution, that item was included in this study as a factor (Chickering & Gamson, 1999; Maguire, 2008).

Faculty Longevity

As required by its accreditor and standard for regionally accredited institutions, PNPMU requires all of its full-time and adjunct faculty to have a minimum of a master's degree with at

least 18 hours of graduate credit covering the discipline in which they teach. Because it utilizes a practitioner model, not all adjuncts have a doctorate degree. Thus, there are differentially degreed faculty teaching similar courses. In Starcher and Manderach's (2016) study of nonprofit and for-profit institutions, they investigated an instructor's highest earned degree. Through the research, it was discovered that 50 percent held a doctorate degree and the other 50 percent held at least one master's degree as their highest level of education (Starcher & Mandernach, 2016). In a study within online higher education, Kane et al. (2015) found that an instructor's degree was not a predictor of student satisfaction. However, that same study discovered that an instructor's student satisfaction scores improved over seven semesters (2015). As a result, they concluded that an institution should attempt to retain faculty; teaching longer for the university was a positive to students, potentially because it allowed faculty to improve their own performance (Kane et al., 2015). Benton and Cashin (2012) found no correlation to teaching experience and student ratings. In Chingos' (2016) student success study, he noted a large difference between first time instructors and returning instructors as did Centra and Gaubatz (2000), but no established pattern with years of experience were discovered. This could be due to an inexperienced instructor's unfamiliarity with conducting the course.

Faculty Load

Research to determine a correlation between an instructor's course load and student satisfaction is scarce. Because an adjunct instructor is considered a part-time employee, it is assumed that their workload is well below a full-time instructor (Kazarian, 2008). However, some adjuncts carry a similar load to a permanent employee (Gappa & Leslie, 1993; Kazarian, 2008; Martindill, 2008). It is also possible that a higher performing adjunct would receive more course opportunities. To ascertain if a relationship exists and to add to the literature, an adjunct

instructor's load over the period of study was factored into this research.

GPA of Students

Most nontraditional college level students return to school for learning, but they are also desirous of a good grade; however, overall GPA of online students tend to be lower (Driscoll, Jicha, Hunt, Tichavsky, & Thompson, 2012; Xu & Jaggars, 2014). Research is contradictory with regard to GPA and student satisfaction. Several studies indicate a potential connection to higher student evaluations of faculty and increased overall GPA as awarded, which leads to grade inflation (Eiszler, 2002; Germaine & Scandura, 2005; Stroebe, 2016). Other studies refute the connection between student GPA and instructor ratings (Benton & Cashin, 2012; Feldman, 2007; Marsh, 2001, 2007). Germaine and Scandura (2005) suggested that "incorporating individual differences of students into models of faculty evaluations will improve understanding of the implications on grade inflation" (p. 64). As a result, this study utilized the averaged overall GPA for a given course on the typical 4.0 scale.

Class Size

The number of students in a course would appear to affect student evaluations of teaching. Centra and Gaubatz (2000) state that class size "affects evaluations in that teachers of classes with under 15 students get higher evaluations" (p. 17). During Tomei's (2006) study, he identified that due to teaching load requirements (instructional content, counsel and advisement, and student assessment), "the ideal class size for online format was 12 students" (p. 539). Presumably, this not only assists the instructor with balancing the workload, but its structure allows for helpful faculty-student engagement (Centner, 2014). In addition, due to the emphasis on timely feedback, responsiveness, and grading (Chaney, 2010), class size would likely impact

the students' ratings of faculty related to Chickering and Gamsom's (1999) Seven Principles for Good Practice. As such, it was included in this research.

Summary

Higher education has been profoundly impacted by the arrival of online learning (Kaplan & Haenlein, 2016). Its appeal to nontraditional students (Kane et al., 2015) is part of what has fueled the explosive and continued growth over the past twenty years (Allen & Seaman, 2007b, 2013). Its increased role in the United States' economy (Tierney & Hentschke, 2007) became more evident as it drew public, private nonprofits, and private for-profits into the mix (Kane et al., 2015; Pucciarelli & Kaplan, 2016).

As nontraditional learners seek to balance work, family, and academics, they desire a flexible and convenient educational environment (Bell, 2012; Choy, 2002; Kim et al., 2011). Online learning can provide opportunities that face-to-face courses do not: asynchronous discussions, geographic flexibility, reduced (eliminated) travel costs to/from class, and the elimination of childcare needs.

As a result of this growth, colleges and universities offering online courses have needed to add staffing quickly. This has triggered a heavy dependence on adjunct faculty teaching online (S. G. Cook, 2013; Estes, 2016; Gappa, 2000; Jolley et al., 2014; Maynard & Joseph, 2008; Milliron & de los Santos, 2004; Shiffman, 2009; Toutkoushian & Bellas, 2003). These workers are classified as part-time, but their loads may vary from one class per year to multiple classes per term, rivaling their full-time counterparts. Job insecurity, a frequent lack of benefits, and reduced pay are the frequent hallmarks of an adjunct instructor (Adamowicz, 2007; Gappa, 2000; Gappa & Leslie, 1993; Kezar & Maxey, 2013; Munday, 2016; Worthen, 2013). For some categories of adjuncts, this is less stressful but for those anticipating full-time employment or

seeking to make a living, it is a challenge (Gappa & Leslie, 1993; Goldstene, 2012; Puzziferro & Shelton, 2009).

Adjuncts teaching online have realized a wide-open market in demand for their services (Puzziferro & Shelton, 2009) because of the removal of geographic boundaries (Cuddie, 2016; DeLotell, 2014; Hopkins, 2013). Institutions have discovered that because of the geographical spread of their online students, these faculty are quickly becoming the face of the university. As a result, higher education institutions are scrambling to discern adjunct faculty quality and effectiveness.

To accomplish this, many higher education administrators are increasing their reliance upon surveys to students regarding their instructors' effectiveness (Carrell & West, 2010; Gappa, 2000). This satisfaction score by the student regarding their faculty are often referred to as students' evaluations of teaching (SETs), faculty evaluations, or student ratings (Al-Hinai, 2011; Benton & Cashin, 2012). The appropriateness and efficacy of these ratings are ardently contested, but they frequently serve as a primary means to determine future assignments and evaluate an instructor's performance (Al-Hinai, 2011; Aleamoni, 1987; Benton & Cashin, 2012; Bosshardt & Watts, 2001; Carrell & West, 2010; Feeley, 2002; Feldman, 2007; Galbraith et al., 2012; Germaine & Scandura, 2005; Hammonds et al., 2017; S. J. Jones, 2012; Kulik & McKeachie, 1975; Stroebe, 2016).

As a result of this contentious topic, many variables exist that are associated with variations within those evaluations of faculty. Equally debated on both sides of these student ratings are the variables of instructor thread activity within the LMS, faculty employment longevity, faculty load, student GPA, and overall class size (Benton & Cashin, 2012).

In summary, the need for an investigation into the factors contributing to positive or negative students' evaluations of teachers is evident based upon the literature reviewed. Online learning continues to grow, the use of adjuncts online was pronounced among all higher education institutions, and the factors contributing to these evaluations was contested. In order to conduct such a study, an analysis of student ratings of faculty and each potential factor was required.

CHAPTER 3

METHODOLOGY

Overview

The utilization of data to determine correlations is not new. This applied research project attempted to "extend the findings from basic research into useful techniques that may be developed into products to cover the needs of society" (Beach & Alvager, 1992, p. 9). In this context, "society" was the realm of higher education and "needs" included that of the part-time instructor and his or her students. Thus, this ex-post-facto, non-experimental quantitative study provided insight into potential connections between disparate instructor and student data and students' perceptions of their instructor at a course level basis. As such, multiple sources of information were employed to provide for greater reliability. Such an observational study utilized institutional data from PNPMU, statistical correlations and regressions, and analysis of those results. This chapter provides an overview of the data, its collection, and the statistical models used in the study.

Research Questions and Hypotheses

The following questions and subsequent hypotheses provided direction to this study: Research Question 1: *In what way do the variables of faculty threads posted per week, faculty employment longevity, faculty load, average course GPA, and class size correlate to an adjunct instructor's End of Course Survey score?*

H1a: There is a positive correlation between faculty threads posted per week and an adjunct instructor's End of Course Survey score.

H1b: There is a positive correlation between faculty employment longevity and an adjunct instructor's End of Course Survey score.

H1c: There is a negative correlation between faculty load and an adjunct instructor's End of Course Survey score.

H1d: There is a positive correlation between average course GPA and an adjunct instructor's End of Course Survey Score.

H1e: There is a negative correlation between class size and an adjunct instructor's End of Course Survey score.

Research Question 2: In what way does the combination of variables of faculty threads posted per week, faculty employment longevity, faculty load, average course GPA, and class size predict an adjunct instructor's End of Course Survey score?

H2: *The combination of faculty threads posted per week, faculty employment longevity, faculty load, average course GPA, and class size predict an adjunct instructor's End of Course Survey score.*

Research Design

This project drew inspiration from Sperry's (2014) project to predict student retention and probationary status based upon many variables of institutional data. Such a correlational design seeks to "model a relationship between variables…to predict an outcome variable from a predictor variable" (Field, 2013, p. 263).

Correlations for each independent variable were conducted to the dependent variable of End of Course Survey score for each Instructor in each course. This was to explore the first

research question. In order to answer the second research question, multiple regression analysis was then conducted with the factors to determine what, if any, correlations exist among various independent variables and the dependent variable. Those items became the key performance indicators of part-time faculty teaching online.

Population Focus

As a large, private non-profit university offering associates, bachelors, masters, and doctorate degrees, PNPMU was a worthy candidate for analysis. With the majority of its students taking fully online courses (Allen & Seaman, 2013) utilizing generally prescriptive curriculum, PNPMU was an ideal study subject. In addition, over 50 percent of PNPMU's entire student population was comprised of nontraditional students taking accelerated courses online. For a three-credit hour course, the class lasts five or six weeks. By design, students usually take one class at a time, back-to-back, in a non-term format. This permits students to start their program virtually any time of the year and not force them into waiting for typical semester-based starts two or three times per year. Most students, therefore, complete seven to ten courses per year. PNPMU offers approximately 6,000 courses online in a given twelve month span. Because of this demand, the institution utilizes a large contingent of adjunct faculty numbering around 1,500 per year. This rolling, large-scale online enrollment of adult students and adjunct faculty was ideal for a study such as this. PNPMU's model provides a large number adjuncts and courses to analyze within a curriculum-controlled context. This provided an excellent environment to study potential performance indicators of adjunct faculty so that higher educational institutions can focus their efforts on serving, educating, and retaining students in order to reach their academic goals.

Institutional Review Board

Approvals to obtain all data for this quantitative research study were obtained by both PNPMU, owners of the data, and Indiana State University, sponsors of this dissertation project. Once approved, the researcher then obtained all necessary data from administrators and/or staff at PNPMU as directed.

Data Selection

Information from PNPMU used in this study utilized the following: anonymous End of Course Survey results per course; learning management system (LMS) activity metrics via the number of faculty discussion threads; employment longevity with the university and course load data for faculty; individual course grades; and class size for each course.

Dependent Variable

As explained in the Statement of Terminology, the End of Course Survey, or EOCS, refers to the survey instrument provided to students at the end of each course. Students anonymously rank their instructor's performance attributes and curricular content on a Likert scale of 1 (low) to 5 (high). There are nine questions for the Instructor section and four for the Course Content (curriculum) section. There are also opportunities for open-ended comments for each section. None of those free-form comments were included in this study. The four curricular items were not considered in this study. Several additional items are worth noting:

1. Many courses provide ten points (1%) of extra credit for completing the End of Course Survey. Once completed, students are given a PDF showing completion of the EOCS. This is provided to the Instructor as evidence of completion but instructors cannot connect overall scoring results to individual students.
2. If a course and/or survey has three or less respondents, the survey is not returned to

the instructor for fear that anonymity is lost.

3. Survey results are provided only in aggregate to instructors approximately 30 days after the course has ended. This is transmitted automatically as a PDF via institutional email to the instructor.

The eight pertinent questions from the current End of Course Survey are listed below. Surveys do change on occasion. As such, the current survey from 2016 was utilized. It can be found in Appendix A: Sample End of Course Survey. As the dependent value constraint, implementation of the most recent survey assisted in setting the date range from which all other data were provided by the PNPMU. For this study, the calendar year of 2016 was the sample from which courses and End of Course Surveys were drawn. The relevant questions to this study in that End of Course Survey are listed below.

1.2) The instructor respected me as an adult learner by demonstrating qualities such as patience and kindness.

1.3) The instructor demonstrated a willingness to assist students.

1.4) The instructor's knowledge of course content was evident in the instruction of the course.

1.5) The instructor was active in discussions.

1.6) The instructor's feedback provided direction or encouragement beneficial to my academic success.

1.7) The instructor's grading and feedback aligned with course rubrics, scoring guides, and written directives.

1.8) The instructor responded to student questions within 48 hours.

1.9) The instructor returned graded work within seven days after the due date.

Questions 1.2 through 1.9 were the eight questions utilized to create the overall

composite score called EOCS.SCORE. This was an average value across all questions for all respondents in the course. Therefore, this was a continuous variable between 1.00 and 5.00. The questions focus on an instructor's demeanor (1.2, 1.3), knowledge (1.4), interaction (1.5), assessment ability (1.6, 1.7), and timeliness (1.8, 1.9). These also aligned with university expectations for faculty, whether full-time or adjunct, of nontraditional, adult students. A sample End of Course Survey can be found in Appendix A: Sample End of Course Survey.

Independent Variables

The literature on student evaluations of teachers by students, online faculty performance, adjunct faculty needs, and student success blend well with this researcher's 15 years of experience in online higher education. As such, several expected items were culled from institutional data for analysis to identify key performance indicators for adjunct faculty teaching online at PNPMU.

Instructor Thread Activity per Week in LMS

Instructor activity can take several forms. One is the amount of time per week spent in the course. Rather than relying on a simplistic number of minutes of time spent logged into the learning management system, this study investigated active interaction by an instructor. Thus, the form of instructor activity studied here pertained to the number of discussion posts made by the instructor over the duration of the course. Its inclusion in the study was to reflect an active indication of interaction by the adjunct because of the importance of such dialogue (S. J. Jones, 2012). This number, as provided by the back end enterprise reporting functions of the LMS, was divided by the course length to provide accurate comparison between five and six week courses. It was recorded as FAC.AVG.THREAD.

Faculty Employment Longevity

Faculty employment longevity was reported to this researcher using the date of the first course taught for PNPMU by that instructor. That year of the first course taught was then subtracted from the year 2016, which became the faculty employment longevity date parameter for this study, recorded as FAC.EMP. It was stored as a whole number. For instructors who began their first course with PNPMU in 2016, this value was zero.

Faculty Load

Faculty load reported the credit hours taught by each instructor for calendar year 2016. Because PNPMU does not operate its nontraditional courses on a semester basis and instead uses rolling course starts, this annual load calculation was the most accurate for this research. It was recorded as FAC.LOAD. Because courses can span calendar years, either starting in 2015 or ending in 2017, those courses were excluded from this calculation. Therefore, faculty load counted courses that wholly started and ended in 2016.

Average GPA of All Students Completing Course

Average GPA of all students completing the course (AVG.GPA) (as recommended by Marsh, 2007) was calculated by using Microsoft® Excel. Anonymous grades received for all students completing each unique course were tallied and averaged on a standard 4.0 scale as found in Table 1: Grade and GPA Equivalents and repeated here for ease of reference in Table 2: Grade and GPA Equivalents:

Table 2

Grade and GPA Equivalents

Grade	Quality Points (per credit)
A	4.0
A-	3.7
B+	3.3
B	3.0
B-	2.7
C+	2.3
C	2.0
C-	1.7
D+	1.3
D	1.0
F	0.0

This calculated average included all passing and non-passing grades. It did not include withdrawals as there is no GPA equivalent nor would it have been helpful in this specific study. By selecting a date range beyond that which Incompletes remain open (90 days beyond the class end date), it ensured that all outstanding course grades were finalized. Therefore, only grades A through F were included in the calculations.

Class Size

Class size was the number of students completing the course with an earned grade of A through F. Withdrawals do not count into this number, even if a student withdraws the day before the course ends. Incompletes, though rare, would remain within the Class Size parameter. This remains consistent with their inclusion in the End of Course Survey completion as well. This value was recorded as CLASS.SIZE.

If a class size was at or below three students, it was discarded from the study. Such situations omit a valid End of Course Survey from reaching the instructor and are not utilized

from an institutional purpose. As such, to remain consistent with PNPMU's practice, those courses were not included in the study.

Preparation of Data

Once the data was received from the appropriate office(s) at the PNPMU, it was cataloged, de-identified, and backed-up. The time period for the data was selected as courses that took place in the calendar year of 2016. Additional refinement of the data was conducted to isolate the pool of courses analyzed. This was done to standardize the courses reviewed so that comparisons were similar based upon instructor expectations, course length, and credit hours. Detailed explanations of this refinement is listed in Appendix B: Qualification of Data.

Data Analysis

Once the preparatory work was completed, correlations and multiple regression using IBM® SPSS (version 24) were employed. A Type I error rate, or alpha level, of 0.05 was utilized (Barlett, Kotrlik, & Higgins, 2001). The process of utilizing multiple regression was ideal to assist in the influence of the independent values (faculty threads posted per week, faculty employment longevity, faculty load, average course GPA, and class size) to the dependent value, End of Course Survey score (Field, 2013; Norušis, 2009).

The sample size of this regression was dependent upon the number of overall courses minus those courses that are start, capstone, or three or fewer students. Even with those exclusions, nearly 3,200 courses were relevant to study. So as to not skew LMS activity, additional refinement to eliminate courses with a week-long course break (or more) further reduced this number to nearly 1,300. However, given the five predictors in this study, the total courses analyzed easily exceeded Field's (2013) recommended sample size of 46 for a large effect, 98 cases for a medium effect, and 667 cases for a small effect (p. 314). Additionally, this

sample size appeared to be a strong representation of the population per Hair Jr., Black, Babin, Anderson, and Tatham (2010).

A hierarchical regression model was not chosen for this study because there was not a replicable study of all five predictor variables. Though stepwise method regression is not ideal because of the reliance on SPSS' selection of criteria order, it can be useful for exploratory Model building (Field, 2013, pp. 322-323). Telmo, Lousada, and Moreira (2010) describe a backward stepwise regression as "starting with all candidate variables and testing them one by one for statistical significance, deleting any that are not significant" (p. p. 3813). This process examines all potential independent variables and allows for the elimination of "the variable that causes the least change in multiple R^2, provided that it meets the preset criterion for removing a variable" (Norušis, 2009, p. 255). This minimized suppressor effects and Type II errors by including factors that could predict an effect (Field, 2013; Marrs, 2013). As a result, backward stepwise regression was utilized in this multiple linear regression.

Within SPSS, Regression and then Linear was selected. The dependent factor of End of Course Survey score was selected. Faculty threads posted per week, faculty employment longevity, faculty load, average course GPA, and class size were selected as independent variables.

Descriptive statistics were selected in the Statistics option. In addition to providing general information about the dependent and independent variables, it provided the R^2 value for the entire Model. This value indicated the percentage of variability in the EOCS.SCORE factor by all of the independent factors. The output included several models that indicated the best predictor (Model 2) and the least helpful (Model 1). Also returned were the F-test values within

the ANOVA table for each helpful Model. Their values with the significance (p-value) indicated that the Model was a good fit for all of the data (P. F. Cook, 2010).

CHAPTER 4

ANALYSIS OF DATA

Overview

The purpose of this study was to identify key performance indicators that contribute to students' overall satisfaction of part-time instructors teaching online. The approach of this study was the analysis of existent data pertaining to fully online courses offered during calendar year 2016 at PNPMU. The methods of analysis utilized descriptive statistics, correlation, and multiple regression as described in the previous chapter. It examined the data to identify the existence of key performance indicators of part-time employees teaching online. A review of the hypotheses and the consequent data analysis follows.

Profile of Variables

Of the 7923 courses conducted online in at least a portion of 2016 at PNPMU, 1295 courses met the qualifications of this study with regard to start/end timeframe, faculty expectations, lack of additional break(s), enrollment of four or more students, and instruction conducted by an adjunct. A detailed explanation of this refinement is listed in Appendix B: Qualification of Data. The 1295 courses were instructed by 597 different adjunct instructors. The dependent variable, EOCS.SCORE, had a mean score of 4.5031 and a standard deviation of 0.40881. See Table 3: Descriptive Statistics for Dependent Variable for the descriptive statistics of the End of Course Survey score variable.

Table 3

Descriptive Statistics for Dependent Variable

Descriptive Statistics						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
EOCS.SCORE	1295	2.84	2.16	5.00	4.5031	0.40881
Valid N (listwise)	1295					

The descriptive statistics returned 1295 valid cases for all factors. Full descriptive parameters are listed in Table 4: Descriptive Statistics for Independent Variables.

Table 4

Descriptive Statistics for Independent Variables

Descriptive Statistics						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
FAC.AVG.THREAD	1295	101	0	101	10.1044	9.54402
FAC.EMP	1295	25	0	25	6.95	5.863
FAC.LOAD	1295	54	3	57	19.53	11.001
AVG.GPA	1295	2.94	1.06	4.00	3.2261	0.51273
CLASS.SIZE	1295	14	4	18	9.61	3.162
Valid N (listwise)	1295					

For FAC.AVG.THREAD, the range spans its entire minimum and maximum values of 0 through 101. Its mean of 10.1044 means that an instructor is, on average, posting about ten times per week. Adjunct instructors had taught for PNPMU for an average of 6.95 years with some having just started in 2016 (0 years) and at least one that began in 1991 (25 years). Their load ranged from just 3 credit hours to a high of 57 hours. A mean of 19.53 credit hours per course per year reflects an average of six or seven courses per. The deviation is at 11.001. For class size, PNPMU has a maximum class size of 18, accounting for its upper end range. Because

of the data qualification discussed previously, a course required at least four students to be part of the study, explaining the minimum value. The mean value was 9.61 with a standard deviation of 3.162.

Report of Findings

Research Question 1

(RQ1): *In what way do the variables of faculty threads posted per week, faculty employment longevity, faculty load, average course GPA, and class size correlate to an adjunct instructor's End of Course Survey score?*

In order to answer each hypothesis pertaining to the first research questions, bivariate correlations were conducted in SPSS. Correlation tables are found in Appendix C: Correlation Tables for RQ1.

H1a: *There is a positive correlation between faculty threads posted per week and an adjunct instructor's End of Course Survey score.*

There was a positive correlation between average faculty thread postings per week and his/her End of Course Survey score, $r = 0.220$ and it was significant at the 0.01 level ($p < 0.001$). The standalone correlation coefficient (r^2) is at 4.84%. Thus, an instructor's number of average thread postings per week accounts for 4.84% of his/her End of Course Survey score. Therefore, H1a is accepted. There is a positive correlation between faculty threads posted per week and an adjunct instructor's End of Course Survey score.

H1b: *There is a positive correlation between faculty employment longevity and an adjunct instructor's End of Course Survey score.*

There was a slightly positive correlation between an instructor's employment longevity and his/her End of Course Survey score, $r = 0.040$. It was not significant at the 0.01 level ($p =$

0.153). Therefore, H1b is rejected. There is no correlation between faculty employment longevity and an adjunct instructor's End of Course Survey score.

H1c: *There is a negative correlation between faculty load and an adjunct instructor's End of Course Survey score.*

There was a positive correlation between an instructor's load and his/her End of Course Survey score, $r = 0.102$. It was significant at the 0.01 level ($p < 0.001$). Thus, faculty load accounts for 1.04% of the variability within the End of Course Survey score. Therefore, H1c is rejected. There is a positive correlation between faculty load and an adjunct instructor's End of Course Survey score.

H1d: *There is a positive correlation between average course GPA and an adjunct instructor's End of Course Survey Score.*

There was a positive correlation between an average course GPA and an instructor's End of Course Survey score, $r = 0.191$. It was significant at the 0.01 level ($p < 0.001$). Thus, average course GPA accounts for 3.64% of the variability within the End of Course Survey score. Therefore, H1d is accepted. Average course GPA does slightly predict an adjunct instructor's End of Course Survey Score. There is a positive correlation between average course GPA and an adjunct instructor's End of Course Survey Score.

H1e: *There is a negative correlation between class size and an adjunct instructor's End of Course Survey score.*

There was a slightly negative correlation between class size and an instructor's End of Course Survey score, $r = -0.012$. However, it was not significant at the 0.01 level ($p = 0.679$). Therefore, H1e is rejected. There is no statistical correlation between class size and an adjunct instructor's End of Course Survey score.

As a result of the bivariate correlations conducted between the End of Course Survey score and each dependent variable, three variables were found to be statistically significant and two were not statistically significant. Those that were statistically significant included faculty threads posted per week, faculty load, and average course GPA. Faculty employment longevity and class size were not statistically significant in their respective bivariate correlation so H1b and H1e were rejected. H1a and H1d were accepted. H1c was rejected because instead of a negative association, there was a positive correlation.

Research Question 2

RQ2: *In what way does the combination of variables of faculty threads posted per week, faculty employment longevity, faculty load, average course GPA, and class size predict an adjunct instructor's End of Course Survey score?*

H2: *The combination of faculty threads posted per week, faculty employment longevity, faculty load, average course GPA, and class size predict an adjunct instructor's End of Course Survey score.*

A backward stepwise multiple regression was used for this exploratory model building investigation (Field, 2013, pp. 322-323; Norušis, 2009; Telmo et al., 2010). The computation generated two Models based upon that backward stepwise method in SPSS. The first block contained all five variables: faculty threads posted per week, faculty employment longevity, faculty load, average course GPA, and class size. The second block contained four variables: faculty threads posted per week, faculty load, average course GPA, and class size; faculty employment longevity was removed. These Models are detailed in Table 5: Variables Entered and Removed.

Table 5

Variables Entered and Removed

Variables Entered/Removed[a]			
Model	Variables Entered	Variables Removed	Method
1	CLASS.SIZE, FAC.LOAD, AVG.GPA, FAC.AVG.THREAD, FAC.EMP[b]	.	Enter
2	.	FAC.EMP	Backward (criterion: Probability of F-to-remove >= 0.100).
a. Dependent Variable: EOCS.SCORE			
b. All requested variables entered.			

For multiple regression, R^2 "is the proportion of variability in the dependent variable that is attributable to the regression equation" (Norušis, 2009, p. 245). According to Table 6: Model Summary of Multiple Regression, the first Model has an R^2 value of 0.108. Therefore, 10.8% of the variance in End of Course Survey scores was attributable to faculty threads posted per week, faculty employment longevity, faculty load, average course GPA, and class size. The second Model excludes faculty employment longevity but has an R^2 value of 0.107, virtually the same as the first Model. Restated, it indicated that 10.7% of the variance in End of Course Survey scores were attributable to faculty threads posted per week, faculty load, average course GPA, and class size. The adjusted R^2 values in Table 6: Model Summary of Multiple Regression were 0.104 for Model 1 and for Model 2. Subtracting this value from the R^2 value (0.108 - 0.104) provides a shrinkage of just 0.004 or 0.4% indicating a close fit to the general population from the sample

(Field, 2013). In summary, R^2 for the best Model was 10.7% with an adjusted R^2 of 10.4%.

Table 6

Model Summary of Multiple Regression

Model Summary[c]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.328[a]	0.108	0.104	0.38695	
2	0.327[b]	0.107	0.104	0.38688	1.911
a. Predictors: (Constant), CLASS.SIZE, FAC.LOAD, AVG.GPA, FAC.AVG.THREAD, FAC.EMP					
b. Predictors: (Constant), CLASS.SIZE, FAC.LOAD, AVG.GPA, FAC.AVG.THREAD					
c. Dependent Variable: EOCS.SCORE					

Both Models were significant per Table 7: ANOVA Results. The combination of faculty threads posted per week, faculty employment longevity, faculty load, average course GPA, and class size at least somewhat influenced an adjunct instructor's End of Course Survey score in Model 1, $F(5,1289) = 31.069$, $p < 0.001$

.

Table 7

ANOVA Results

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.260	5	4.652	31.069	0.000[b]
	Residual	193.002	1289	0.150		
	Total	216.262	1294			
2	Regression	23.175	4	5.794	38.708	0.000[c]
	Residual	193.087	1290	0.150		
	Total	216.262	1294			
a. Dependent Variable: EOCS.SCORE						
b. Predictors: (Constant), CLASS.SIZE, FAC.LOAD, AVG.GPA, FAC.AVG.THREAD, FAC.EMP						
c. Predictors: (Constant), CLASS.SIZE, FAC.LOAD, AVG.GPA, FAC.AVG.THREAD						

Model 2 was also significant. Thus, the combination of faculty threads posted per week, faculty load, average course GPA, and class size statistically affected an adjunct instructor's End of Course Survey score, $F(4,1290) = 38.708$, $p < 0.001$. This confirmed the use of backward stepwise as the method for multiple regression. One predictor did not make a statistically significant contribution to the Model and was therefore eliminated (Field, 2013; Telmo et al., 2010). Though allowable in Model 1, the existence of faculty employment longevity was not of statistical importance to include in the resulting model.

Individual coefficients were produced for each predictor variable. The association between the End of Course Survey score and each predictor is represented with these β values (Field, 2013). The significance value listed for each predictor reflects the likelihood of variations in other samples. A significance of less than 0.05 indicates that the predictor has made

a substantial difference to the Model.

Both models demonstrate useful coefficients to envisage End of Course Survey scores with minor exception. For ease of reference, all predictors with significance ($p < 0.05$) are listed in bold print. See Table 8: Coefficients for Model 1 from Regression for those values.

Table 8

Coefficients for Model 1 from Regression

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.904	0.074		52.866	0.000
	FAC.AVG.THREAD	0.011	0.001	0.254	9.403	0.000
	FAC.EMP	0.001	0.002	0.021	0.753	0.451
	FAC.LOAD	0.003	0.001	0.086	3.016	0.003
	AVG.GPA	0.170	0.022	0.213	7.894	0.000
	CLASS.SIZE	-0.014	0.004	-0.107	-3.872	0.000
a. Dependent Variable: EOCS.SCORE						

For faculty threads posted per week ($\beta = 0.254$, $p < 0.001$), faculty load ($\beta = 0.086$, $p = 0.003$), average course GPA ($\beta = 0.213$, $p < 0.001$), and class size ($\beta = -0.107$, $p < 0.001$) were all individually significant. Faculty employment longevity ($\beta = 0.021$, $p = 0.451$) was not significant.

In Model 2 (see Table 9: Coefficients for Model 2 from Regression), faculty threads posted per week ($\beta = 0.254$, $p < 0.001$), faculty load ($\beta = 0.094$, $p < 0.001$) average course GPA ($\beta = 0.212$, $p < 0.001$), and class size ($\beta = -0.105$, $p < 0.001$) were all individually significant at

the previous levels. Only slight changes occurred from Model 1 to Model 2 with regard to faculty load (β increased from 0.086 to 0.094), average course GPA (β decreased from 0.213 to 0.212), and class size (β changed from -0.107 to -0.105). Faculty employment longevity was removed because of the backward stepwise regression between Models 1 and 2.

Table 9

Coefficients for Model 2 from Regression

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
2	(Constant)	3.909	0.073		53.199	0.000
	FAC.AVG.THREAD	0.011	0.001	0.254	9.386	0.000
	FAC.LOAD	0.004	0.001	0.094	3.569	0.000
	AVG.GPA	0.169	0.022	0.212	7.866	0.000
	CLASS.SIZE	-0.014	0.004	-0.105	-3.823	0.000
a. Dependent Variable: EOCS.SCORE						

As a result of the backward stepwise multiple regression, H2 is rejected. If faculty employment longevity was statistically significant, H2 would have been accepted. Because one of the five variables was eliminated, the entire hypothesis is rejected. Therefore, "The combination of faculty threads posted per week, faculty employment longevity, faculty load, average course GPA, and class size does not predict an adjunct instructor's End of Course Survey score."

Resultant of Model 2, the most predictive variables of the End of Course Survey score of instructors were faculty threads posted per week, faculty load, average course GPA, and class

size. Those predictor variables accounted for 10.4% of the variability in End of Course Survey scores.

Therefore, using the coefficient values generated during the multiple linear regression, the most substantial predictive equation is as follows:

End of Course Survey Score =

3.909

+ 0.254 (Faculty Threads per Week)

+ 0.094(Faculty Load)

+ 0.212(Average Course GPA)

- 0.105(Class Size)

where Faculty Threads per Week is any positive number, Faculty Load is measured in credit hours per 12 months, Average Course GPA is measured on the standard 0.00 to 4.00 scale, and Class Size is between 4 and 18.

CHAPTER 5

DISCUSSION

Overview

Technological innovation, consumer demands, and increased competition have pushed traditionally lethargic institutions of higher education into meeting students' needs in ways typically associated with growing for-profit and private colleges and universities (Allen & Seaman, 2013; Arbeit & Horn, 2017; Aud et al., 2011; Deming et al., 2016; McPherson & Bacow, 2015). Whether seeking market share or as a means to reach students outside its normal geographic boundaries, higher education has embraced, though occasionally reluctantly, the modality of fully online courses (Allen & Seaman, 2010). As a result, a new growth market for faculty to teach online has become prevalent (S. G. Cook, 2013; Estes, 2016; Gappa, 2000; Jolley et al., 2014; Maynard & Joseph, 2008; Milliron & de los Santos, 2004; Shiffman, 2009; Toutkoushian & Bellas, 2003). From Fall 2005 to Fall 2013, the distribution of adjunct's utilization had increased 98.6 percent overall, from 35.7 percent to 70.9 percent (American Federation of Teachers, 2017; Jolley et al., 2014).

As a result of the increased pool of students, institutions, and adjuncts utilizing coursework online, it is imperative that universities and colleges study the interactions between faculty and students to understand this employment pool and student persistence (Tomei, 2006). Because an adjunct instructor's performance impacts students' learning and the resultant

evaluation has such potential upon that faculty member's employment, this study attempted to identify key performance indicators (KPIs) of employees teaching online. The problem addressed by this study was to determine the factors that affected a part-time online employee's performance rating by their students within a higher education setting. The potential KPIs for this study were faculty threads posted per week, faculty employment longevity, faculty load, average course GPA, and class size. The institution analyzed in this research has a rich depth and breadth of online experience. It first started offering courses online in 1996 and its annual online student headcount exceeds 8,000. In this study, nearly 1,300 individual courses were analyzed (N = 1295). Those courses were instructor by 597 part-time instructors. Correlation and multiple regression analyses were conducted to determine which items affected students' satisfaction with their instructor.

Summary and Implications of Findings

This researcher anticipated that the findings would identify at least two fundamental variables of the five independent factors that affect the adjunct online instructor's end of course survey score. It was desired that such results would underscore not only the impact that an adjunct has on student satisfaction, but also that such variables could be addressed through the hiring, training, and ongoing development of adjunct online instructors. By doing so, it would positively impact the institution with regard to overall student satisfaction, retention, and reputation. Given the increasingly competitive nature of higher education and the high stakes of student success, this analysis would be helpful to PNPMU and the academy in general.

Research Question 1

The first research question in this study asked: *In what way do the variables of faculty threads posted per week, faculty employment longevity, faculty load, average course GPA, or*

class size predict an adjunct instructor's End of Course Survey score? Addressed via bivariate correlation, only two items were found to be insignificant statistically to End of Course Survey score at the 0.01 level: faculty employment longevity (H1b) ($r = 0.040$, $p = 0.153$) and class size (H1e) ($r = -0.012$, $p = 0.679$). Even if statistically significant, each item accounted for less than 0.2% of an instructor's End of Course Survey score. Both items were retained for the regression as the backward stepwise regression would eliminate items that did not factor into the whole regression model.

The three other factors were statistically significant at the 0.01 level with regard to an instructor's End of Course Survey score. There was a positive correlation between average faculty thread postings per week and his/her End of Course Survey score ($r = 0.220$, $p < 0.001$). Individually, this would account for 4.84% of the variability. There was also positive correlation for faculty load and End of Course Survey score ($r = 0.102$, $p < 0.001$). Additionally, a positive correlation was discovered between average course GPA and End of Course Survey score ($r = 0.191$, $p < 0.001$).

From an individual standpoint, it is logical and consistent with the literature that an increase in adjunct faculty activity via discussion threads would increase an End of Course Survey score. This serves as validation for that literature (S. J. Jones, 2012). This functions as a means of connectedness, encouragement, and education. There is the potential that such interactions would be negative (critical, demeaning, or brusque) but for an educated, professional pool of adjunct, that should be infrequent. This research would appear to indicate that those interactions as based upon frequency were helpful to students' sense of satisfaction with the instructor of the course to the extent of 4.84%.

Because of the positive correlation between faculty load and End of Course Survey score,

several discussion points arise. From this study, an increased loading impacts the student satisfaction score by 1.04%. Though not large, it does indicate a conclusive relationship between the variables. This is likely because of several potential factors. With a greater load, a part-time employee would sense an increase of institutional commitment both to his/her employer and from his/her employer. The institution's investment into the adjunct might create a sense of reciprocity that is helpful to students' satisfaction level.

In addition, when an adjunct receives additional course assignments, it may indirectly affect their assignments at another institution. It is possible that an adjunct would forego an offer from another university to dedicate time to the current institution. If this reduces the number of institutions for which an adjunct teaches, it would seemingly increase such institutional commitment.

Lastly, beyond the institutional commitment of an adjunct to the university is that of a financial investment. If an instructor begins to sense a responsibility to an institution's students and has reduced commitments elsewhere, it is likely that the adjunct's financial dependence on that institution has increased. In other words, if University A was 25% of an adjunct's pay in a given year but it has increased to 50% of their annual adjunct pay, the adjunct would likely be more intentional about demonstrating care in their teaching. The adjunct may not be able to afford reduced teaching opportunities if course offers decreased. As a result, attentiveness, adherence to expectations, and greater care of students follows.

Average course GPA was the final statistically significant correlated factor to End of Course Survey score. It accounted for 3.64% of its increase. Given the opposing perspectives of those concerned with grade inflation (Eiszler, 2002; Germaine & Scandura, 2005; Stroebe, 2016) and those that do not see a connection (Benton & Cashin, 2012; Feldman, 2007; Marsh, 2001,

2007), this result could be used to strengthen either side's argument. To those that believe grade inflation contributes to higher evaluations of teaching, this research study documents that an increase of the average course GPA results in an increase of the End of Course Survey score. However, those that refute that argument would be wise to consider this study's parameters. The three credit courses at PNPMU are in an accelerated model of just five or six weeks. Students complete the survey in the last ten days or so of the course. This means that grades have only been returned for less than 83% of the course (four of five weeks or five of six weeks). With many points often due in the last week, a student's grade is not yet determined until the course is completed which is often well after the survey was completed. As a result, it would be difficult to select the increased grade as the cause and the increased satisfaction score as the result. Instead, it is possible that improved teaching (interaction, feedback, and motivation) could be increasing students' overall performance.

The results of this correlational study with regard to faculty employment longevity (H1b) ($r = 0.040$, $p = 0.153$) and class size (H1e) ($r = -0.012$, $p = 0.679$ were somewhat unanticipated. The results were consistent with the hypotheses of this study. It was anticipated that the longer an adjunct had been employed by the institution, the higher the students' satisfaction with that instructor's performance in a given course. This could be the result of a higher institutional commitment, adherence to university policies, and greater familiarity with the learning management system and/or processes. However, though slightly positive in its correlation ($r = 0.040$), it was not statistically significant ($p = 0.153$).

Similarly, it was anticipated that a negative correlation between class size and End of Course Survey score would exist. The increase in class size would plausibly affect a student's overall satisfaction because the attention given to individual students would decrease. Even with

the marginal impact (r = -0.012) it was not statistically significant (p = 0.679), however. Possible investigations of this matter are mentioned in Suggestions for Future Research.

Research Question 2

The second research question of this study asked: *In what way does the combination of variables of faculty threads posted per week, faculty employment longevity, faculty load, average course GPA, and class size predict an adjunct instructor's End of Course Survey score?* Two Models were generated during the regression analysis. Four of five values demonstrated statistical significance ($p < .001$) in the first Model. The second Model did not include faculty employment longevity, which was the value that was not statistically significant ($p = 0.451$) in the first Model. Using the adjusted R^2 value, all factors account can account for 10.4% of a part-time instructor's End of Course Survey score and the same percentage account when faculty employment longevity is excluded and only faculty threads posted per week, faculty load, average course GPA, and class size are included.

As a result of this regression, it is clear that the combination of faculty threads posted per week, faculty load, average course GPA, and class size impact an adjunct instructor's end of course satisfaction level from the students' perspective as measured on an End of Course Survey. The implications of this are varied.

From an institutional perspective, this Model underscores the importance of faculty interaction in a fully online course. The university expects faculty to interact with students in the discussion forums. However, it would be helpful to design prescriptive course curriculum to encourage such interaction between an instructor and students. Creating artificial obstacles between faculty and students is detrimental not just to the students' opportunity to gain insights from their instructor, but also to students' overall sense of satisfaction of their instructor in the

course.

For an adjunct, this Model demonstrates the importance that students place on interacting with the instructor. Online courses can become cold and distant; discussion forum interaction can warm the environment, provide common points of connection, and open students to learning that may not have otherwise occurred. For both institution and adjunct, it is imperative then that clear expectations, sound curriculum, and proper on-boarding and training are conducted with regard to the frequency, quantity, and quality of interactions between an adjunct and his/her online students.

The inclusion of faculty load in the Model highlights the role that course loading has on part-time faculty. This becomes more important for the adjunct that strings opportunities from several schools together to piecemeal a livelihood. Additionally, it might increase an adjunct's sense of connectedness and familiarity to the institution. Lastly, it provides familiarity with processes, contacts, and systems from the adjunct to the institution.

Predictive power within a course's average student GPA is reasonable in this Model as well. Its individual importance was demonstrated with its correlation to End of Course Survey score. The establishment of its extrapolative capacity is noteworthy for similar reasons. Better grades contribute to higher satisfaction. If adjuncts follow established guidelines and policies within the course, it follows that students' satisfaction with their own learning and accomplishment is reflected in their assessment of the instructor.

Class size also retained predictive capability in the regression Model in an anticipated direction. As class size decreases, overall student satisfaction increases in the regression equation. Adjuncts rarely have influence over class size unless it is stated in the offer of the course. However, colleges and universities can often, though not always, determine section size,

numbers at which courses combine or split, and the appropriate student-faculty ratio. Such considerations must be considered with financial implications with regard to student success and satisfaction.

The predictive power of the equation generated by the regression could vary by application, but from this research is as follows:

End of Course Survey Score =

3.909

+ 0.254 (Faculty Threads per Week)

+ 0.094(Faculty Load)

+ 0.212(Average Course GPA)

- 0.105(Class Size)

where Faculty Threads per Week is any positive number, Faculty Load is measured in credit hours per 12 months, Average Course GPA is measured on the standard 0.00 to 4.00 scale, and Class Size is between 4 and 18.

Contributions to the Field

The results of this research study are useful to several groups of individuals. Because of its utilization and analysis of part-time instructors' performance indicators within fully online courses in a private, nonprofit institution, the study may be of use to those that utilize an accelerated format and/or prescriptive curriculum, higher education administrators of online courses and programs, division chairs and supervisors of adjunct instructors, assessment professionals, nontraditional education researchers, and those that explore student satisfaction, retention and success.

Research pertaining to student satisfaction is often conducted within the realm of the traditional student. This research contributes to the literature by examining students' satisfaction of their part-time instructor within the fully online course structure. Even more unique is its investigation into those courses that are accelerated and do not fit the traditional semester timeframe. Rather, the courses studied here are five or six weeks in length which is a marked difference from semesters lasting three times as long. As such, it aids in the growth, delivery, and efficacy of accelerated courses within the online modality.

This study is also helpful to individuals responsible for the hiring, onboarding, and supervising of adjunct instructors teaching online. The identification of key performance indicators in this research project allows higher education administrators to focus their training, emphases, and policies on items most important to students. This effort is not just to satisfy adjuncts and their subsequent student ratings, but to target items that increase learning, engagement, and education of those students' ratings of satisfaction.

Suggestions for Future Research

Though the study found statistical significance with faculty threads posted per week, faculty load, average course GPA, and class size, their summative influence demonstrate a loose relationship for the independent factors to the dependent variable at 10.4% (adjusted R^2). On an individual basis, faculty employment longevity and class size were not statistically significant. Resultant correlations, however, demonstrate that there is something worthwhile to investigate (McDonald, 2009).

This study's findings also point to the possibility that additional factors affecting End of Course Survey scores were outside of the variables selected for this study. Perhaps timeliness as a measure of response time to students is more helpful. It is conceivable that emails, video chats,

and messaging (within or outside of the LMS) contributes to students' satisfaction of their instructor. A promising area of a future qualitative investigation from this study is the importance of an instructor's actions in less objective methods. Such an investigation could consider the content or disposition (encouraging, correcting, guiding, etc.) of an instructor's discussion thread as being more meaningful than how frequently an instructor does so. Similarly, the amount, depth, and timeliness of the grading feedback could be a stronger predictor than the factors in this study.

As a result, future research should unpack each of the variables from this study to determine unique characteristics that may point to tightly related factors. Comparative testing could be undertaken to study what happens when instructors make the same announcement or discussion posting to different sections of the same course on the same calendar cycle. Because PNPMU and other similar schools utilize prescriptive curriculum, it would be an ideal study for pre/post group interventions. It could also allow for certain variables to be kept constant (number of discussion threads, approximate time in class, class size, and instructor threads in the course, and others) to study the remaining variables. Furthermore, isolating this study to review identical courses would eliminate any variations in course level, grading activity, student satisfaction with the curriculum, and inconsistent demands of the instructor.

With regard to faculty employment longevity and faculty load, it may be useful to place instructors into pre-defined groups based upon specific values. With employment longevity, placing instructors into groups such as new, established, and well-established might provide additional insight into the unique needs or characteristics of each. These could be segmented by the literature or standard deviation of the sample. Similarly, examining segments of faculty with regard to their annual loading might provide insights. Possible categorizations of an adjunct's

teaching load could include infrequent, common, very frequent, and full-time equivalent adjunct instructors.

In such a prescriptive curricular Model, in-depth study of grading variations among the same courses by varying instructors could be helpful. This might also open options to compare standard deviations of grading as a potential factor. This would not just consider the average GPA of the course but how dispersed those grades were from the mean.

Comparing courses of similar class size (or groupings of enrollments) could provide additional understanding of this regression Model. For added insight, comparisons of the same course with varying enrollments could isolate class size as the variable. If one instructor often teaches the same class with fluctuating registrations, supplementary insight could be obtained by such an analysis.

An additional recommendation for future study would include a review of demographic characteristics of instructor and students. Perhaps similar age, backgrounds, or even ethnicities allow students to bond with an instructor and provide more favorable reviews of their performance? Such factors could explore how students perceive their instructor. Such future studies might even include presenting similar or dissimilar biographies, images, and interests to match a student's pre-declared characteristics. For other students, it would be the polar opposite. This would probe bias in a student's perception of his/her instructor with regard to student satisfaction. An asynchronous, fully online class is the ideal setting for such an investigation, especially if it utilizes prescriptive curriculum so that additional variables could be isolated from potential factors.

This study could be extended to other colleges and universities that operate in a similar accelerated and fully online format. Though this study analyzed many courses, the utilization of

using another institution could be beneficial. In addition, a comparison could be made of multiple institutions using a common general course theme such as the first 100-level writing course or similar.

Lastly, each of these variables could be studied to see their effect on certain questions, or themes of questions, of the survey. An average score of their tabulation may or may not be the best dependent variable for such as study as this. Perhaps one or more independent variables could be associated with a specific question on the End of Course Survey at PNPMU.

Conclusion

The problem addressed by this study was to determine the factors that affected a part-time online employee's performance rating by their students within a higher education setting. More specifically, this study sought to identify key performance indicators for those adjuncts teaching online part-time. The potential KPIs for this study were faculty threads posted per week, faculty employment longevity, faculty load, average course GPA, and class size. Correlation and multiple regression analyses were conducted to determine which items affect students' satisfaction with their instructor as measured by end of semester evaluations of teaching.

This study found most factors statistically significant. Four of the five factors analyzed in this research account for 10.4% of an instructor's end of semester evaluation. Therefore, at a large, private and non-profit Midwestern university this study was able to successfully identify four key performance indicators of part-time employees teaching online: faculty threads posted per week, faculty load, average course GPA, and class size.

For higher educational administrators, the identification of these key performance indicators is helpful. The amount of faculty threads posted per week can be promoted,

curriculum can be designed to maximize this interaction, and training can be done to encourage adjunct instructors to engage students in forums. Likewise, administrators can review course loads to maximize commitment to adjuncts to in turn receive greater investment into the institution by those adjuncts. Similarly, class size can be addressed to find the optimal class range to maximize value for university, student, and adjunct. Course grading expectations are often an area of training with adjunct instructors. Such efforts could continue while keeping grade inflation concerns in check.

The encouraging result for adjunct instructors from this study is that good instruction, as measured by students at the end of the course, is not completely relegated to clicks, posts, and high grades. Though it may comprise a portion of that satisfaction measure, there is something more that was not yet quantified by this study. Perhaps teaching, even when mediated miles apart over the Internet, has at its core the art and not just the measurable science.

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APPENDIX A: SAMPLE END OF COURSE SURVEY

Class Climate	CAPS ~ Jan-2015	SCANTRON
		INDIANA WESLEYAN

Mark as shown: ☐☒☐☐☐ Please use a ball-point pen or a thin felt tip. This form will be processed automatically.
Correction: ☐■☐☒☐ Please follow the examples shown on the left hand side to help optimize the reading results.

Please read each statement below and mark your opinion on the scale.

1. INSTRUCTOR

1.1	The instructor incorporated his/her personal Christian faith and a biblical worldview throughout the course.	Not at All	☐	☐	☐	☐	☐	AGREE (entirely)
1.2	The instructor respected me as an adult learner by demonstrating qualities such as patience and kindness.	Not at All	☐	☐	☐	☐	☐	AGREE (entirely)
1.3	The instructor demonstrated a willingness to assist students.	Not at All	☐	☐	☐	☐	☐	AGREE (entirely)
1.4	The instructor's knowledge of course content was evident in the instruction of the course.	Not at All	☐	☐	☐	☐	☐	AGREE (entirely)
1.5	The instructor was active in discussions.	Not at All	☐	☐	☐	☐	☐	AGREE (entirely)
1.6	The instructor's feedback provided direction or encouragement beneficial to my academic success.	Not at All	☐	☐	☐	☐	☐	AGREE (entirely)
1.7	The instructor's grading and feedback aligned with course rubrics, scoring guides, and written directives.	Not at All	☐	☐	☐	☐	☐	AGREE (entirely)
1.8	The instructor responded to student questions within 48 hours.	Not at All	☐	☐	☐	☐	☐	AGREE (entirely)
1.9	The instructor returned graded work within seven days after the due date.	Not at All	☐	☐	☐	☐	☐	AGREE (entirely)

2. COURSE CONTENT

2.1	The course was without significant errors in the syllabus, workshop documents, tests/quizzes, etc.	Not at All	☐	☐	☐	☐	☐	AGREE (entirely)
2.2	Assignments and activities in this course expanded my knowledge of the subject(s).	Not at All	☐	☐	☐	☐	☐	AGREE (entirely)
2.3	The instructional and reference materials provided were relevant to the course.	Not at All	☐	☐	☐	☐	☐	AGREE (entirely)
2.4	My workload was appropriately distributed throughout the course.	Not at All	☐	☐	☐	☐	☐	AGREE (entirely)

3. Please share comments about your experience in this course, and offer suggestions to help us make a better future for IWU students. Your ideas are valuable.

Class Climate	CAPS ~ Jan-2015	SCANTRON

3. Please share comments about your experience in this course, and offer suggestions to help us make a better future for IWU students. Your ideas are valuable. [Continue]

3.1 Comments on the instructor?

3.2 Comments on the curriculum?

APPENDIX B: QUALIFICATION OF DATA

Following Institutional Review Board approvals at both PNPMU and Indiana State University, existing data were obtained from PNPMU. Five distinct files (.csv and/or Excel) were received: 1) End of Course Survey data; 2) faculty activity in the Learning Management System; 3) faculty longevity with calendar year 2016 minus the year in which an instructor first taught for PNPMU; 4) faculty loading; and 5) course information including individual grades and number of students.

Preliminary reviews were conducted in Excel and focused on data integrity. All files were complete and met the qualifications of this study. The first evaluation of data identified fully-online courses that started on or after January 1, 2016 and ended on or before December 31, 2016. This is a critical component because the courses in this study at PNPMU do not operate on a typical semester basis. Instead, they function in an accelerated format where students take one course at a time in a sequential format. These courses may start and end at any time. Therefore, any course that started in 2015 or ended in 2017 was excluded. Similarly, course loads were calculated based upon entire courses that were conducted in 2016. Partial courses, classes starting in 2015 or ending in 2017, were therefore excluded from the course load parameter.

Since this study utilized a composite End of Course Survey score as the dependent variable, it was critical that the parameters of those EOCS were followed. Because survey results are not provided to instructors of courses with three or less student respondents, those

surveys were also excluded from this research project. Independent study courses were also removed.

To maintain consistency in the analysis, several additional exclusions were made. Nursing, Seminary, and all doctoral-level courses were omitted because of their dissimilar faculty requirements; only courses in the 100-600 range remained. Also, as a result of the study's focus on part-time instructors, courses instructed by full-time faculty were eliminated. Additionally, only courses that were three credit hours were included in the study. Lastly, to ensure consistency in the measure of LMS activity by each instructor, courses that had week-long breaks (or more) were dismissed. This was to prevent six-week courses from being compared to six-week courses that were extended to seven or eight week courses because of holiday breaks. Because the availability of the course does not change, it could skew that measure and was excluded. Beginning program courses and capstone courses were also eliminated due to their tendency to have an extra week of orientation and/or because of their abnormal requirements for faculty involvement.

After the data was filtered to meet the criteria of this research study, it had to be distilled into one usable file. To accomplish this task, two primary steps were undertaken. First, a primary key was created in each file. This unique field identified the information in each of the five files. Second, Microsoft® Power BI was utilized to combine the file files into one common database dashboard. The resulting file was exported to Excel. This created the flat file that was imported into IBM® SPSS for analysis.

Because of the lock-step, accelerated model used by PNPMU, its first courses of a program are extended one week longer than a normal three credit hour class. The requirements are tweaked just slightly as well to encourage more interaction among students and their

instructor. As a result, LMS activity and grade distributions might vary from a normal class. Likewise, this was often the first time a student has seen the End of Course Survey form. As a result, all start courses for each program were omitted from the study.

Similar to the first course of each program, the final course in each program has a varied approach. Often called Capstone courses, these require cumulative projects, summative assignments, or less frequent interaction between students and instructor. For similar reasons, these Capstone courses were excluded from the survey.

Lastly, this study focused on only three credit hour courses at the associate's, bachelor's, and master's level. Doctoral-level coursework was not be utilized in this analysis. Therefore, for PNPMU, this study included courses in the 100-600 levels. The courses studied belonged to either the Schools or Divisions of Business, Education, Liberal Arts, or Service and Leadership. All courses pertaining to Nursing or Seminary were excluded because their requirements and expectations for instructor behavior vary greatly.

APPENDIX C: CORRELATION TABLES FOR RQ1

Correlations

		EOCS.SCORE	FAC.AVG.THREAD
EOCS.SCORE	Pearson Correlation	1	0.220**
	Sig. (2-tailed)		0.000
	N	1295	1295
FAC.AVG.THREAD	Pearson Correlation	0.220**	1
	Sig. (2-tailed)	0.000	
	N	1295	1295

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations

		EOCS.SCORE	FAC.EMP
EOCS.SCORE	Pearson Correlation	1	0.040
	Sig. (2-tailed)		0.153
	N	1295	1295
FAC.EMP	Pearson Correlation	0.040	1
	Sig. (2-tailed)	0.153	
	N	1295	1295

Correlations

		EOCS.SCORE	FAC.LOAD
EOCS.SCORE	Pearson Correlation	1	0.102**
	Sig. (2-tailed)		0.000
	N	1295	1295
FAC.LOAD	Pearson Correlation	0.102**	1
	Sig. (2-tailed)	0.000	
	N	1295	1295

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations

		EOCS.SCORE	AVG.GPA
EOCS.SCORE	Pearson Correlation	1	0.191**
	Sig. (2-tailed)		0.000
	N	1295	1295
AVG.GPA	Pearson Correlation	0.191**	1
	Sig. (2-tailed)	0.000	
	N	1295	1295

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations

		EOCS.SCORE	CLASS.SIZE
EOCS.SCORE	Pearson Correlation	1	-0.012
	Sig. (2-tailed)		0.679
	N	1295	1295
CLASS.SIZE	Pearson Correlation	-0.012	1
	Sig. (2-tailed)	0.679	
	N	1295	1295