Employment Status, Teaching Load, and Student Performance in Online Community College Courses

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Abstract

A continued need exists for community college administrators to develop and implement strategies to ensure sufficient staffing to meet demand for online courses and promote student success. The problem this study addressed was threefold. First, online instructors in the local setting are overextended and are consequently unable to implement best practices. Because overextended online instructors cannot offer the presence and feedback needed to promote success, online student performance as measured by final course grades suffers. Another problem was that the current institutional system encourages overload teaching assignments. Finally, increased teaching loads can have negative ramifications on online instructor attentiveness, student performance, and academic rigor. The purpose of this descriptive quantitative study was to collect relevant data to examine the relationships among (a) online instructor employment status, (b) online instructor teaching load, and (c) online student performance at a community college. The study used both comparative and correlational research designs to address the research questions using ex post facto data. No statistically significant correlations were found between student success and employment status. However, a negative correlation was discovered between course overload and student success as measured by final course grades and completion rates. Recommendations for future research include an examinaton of senority and tenure status of faculty and a wider geographic and institutional type study to ensure generalizability of the results.

Introduction

Much attention in recent disciplinary literature is devoted to the continuous increases in online enrollment as well as the workforce implications, such as faculty status and workload, for resourcing this growth (Adamowicz, 2007; Allen & Seaman, 2010; Baldwin & Wawrzynski, 2011; Beford, 2009; Puzziferro & Shelton, 2009; Sixl-Daniell, Williams, Wong, 2006; Strauss, 2009; Tipple, 2010; Wilson, 2010). Many factors contribute to student success in any instructional medium. A major contributor to student performance in online courses is the involvement and immediacy of the instructor (Baker, 2010). The increased student demand for online courses has led higher education administrators to rely on adjunct faculty more than ever before (Bedford, 2009). Palloff and Pratt (2007) drew a direct correlation between the amount of time an instructor can spend per student and the presence of effective pedagogical elements, such as instructor immediacy and involvement, in online courses. This correlation, coupled with the effect Adamowicz (2007) and Jacoby (2006) argued that adjunct status has upon instructional quality and student performance, leads to legitimate questions about the relationship among these elements in other educational contexts.

As community colleges leaders deal with dramatic enrollment increases in online classes, they "struggle to recruit faculty and offer additional sections to meet the ever-increasing student demand" (Instructional Technology Council [ITC], 2010, p. 13). While higher education administrators prefer to use full-time faculty, adjunct faculty are being utilized at a higher rate. The recruitment, training, supervision, and evaluation of adjunct online faculty are central to these strategies (ITC, 2010).

Problem Statement

The problem this study was designed to address was threefold. First, online instructors in the local setting are overextended and are, as a result, unable to implement best practices (Boston et al., 2011; Bowman, 2006; Ragan & Terheggen, 2003; Tomei, 2006). Because overextended online instructors cannot provide the individualized interactions and feedback needed to promote success, online student performance suffers. Another problem was that the current institutional system encourages overload teaching assignments (Baldwin & Wawrzynski, 2011; Bowman, 2006; DiBiase, 2004). The more courses and students an online instructor has in a given semester, the less time the instructor can provide any online class or student, yet the more income the instructor makes. This system creates a dichotomy of motivation to ensure instructional quality and student success versus motivation to earn more income.

Finally, instructor employment status determines the number of hours an online instructor is permitted to teach. Increased teaching loads can have negative ramifications on online instructor attentiveness, student performance, and academic rigor (Beford, 2009; Jaschik, 2010; Patton, 2010; Pilati, 2006). Students need attentive instructors who promote engagement and success through regular contact and individualized coaching and instruction (Baker, 2010; DeTure, 2003; Dulohery, 2009; Grant & Thornton, 2007; Kassop, 2003; Ko & Rossen, 2010; Liu, Gomez, & Cherng-Jyh, 2009). To increase student success and ensure quality, administrators must be invested in cultivating an academic environment conducive to effective teaching and learning. Thus, administrators must consider the relationships among teaching load, employment status, and online student performance.

Purpose Statement

The purpose of this descriptive, quantitative study was to collect relevant data to examine the relationships among three variables: (a) online instructor employment status, (b) online instructor teaching load, and (c) online student performance at a community college in the Midwest. The potential relationships among these variables were analyzed to measure potential impact and to guide policy development in online education. This study documented whether the teaching load and employment status of online instructors was important.

The literature reinforced the value of examining these variables, both independently and comparatively, to inform policies and practices in online higher education (Dibiase, 2004). For this study, online instructors were divided into two categories based on employment status: full-time faculty teaching online courses either as part of their regular load or as voluntary overloads and adjunct faculty teaching online courses. Educational leaders and policymakers must note the factors that affect the success of online learners, especially as growth in this population continues at an exponential rate (Boston et al., 2011).

Research Questions

The following research questions were developed to assist in analyzing the relationship among online instructor employment status, teaching load, and student performance in online courses at a community college in the Midwest:

Q1. How does student performance as measured by final course grades compare in online courses

taught by full-time faculty members versus adjunct faculty members?
Q2. How does student performance as measured by final course grades change as the number of online credit hours taught by full-time instructors increases?
Q3. How does student performance as measured by final course grades change as the number of online credit hours taught by adjunct instructors increases?
Q4. How does the number of online overload hours taught by full-time instructors compare with student performance as measured by final course grades?

Literature Review

The number of adjunct faculty has been increasing in community colleges for over 30 years. The reasons for this increase are numerous. Adjunct faculty are more cost effective to employ, they bring real-world experience into the classroom, and they can be hired as needed for increased enrollment or let go if enrollment recedes (Adamowicz, 2007; Baldwin & Wawrzynski, 2011; Banachowski, 1997; Jacoby, 2006). Likewise, practicing professionals are frequently required in the accreditation process (Bedford, 2009).

Wilson (2010) provided a 20-year perspective on the utilization of adjunct faculty within community colleges. Adjunct faculty constituted 54% of overall community college faculty in 1987. Citing a 2007 U.S. Department of Education report, Wilson reported that 69% of community college faculty comprised adjunct instructors, whereas 32% of instructors at four-year institutions were adjunct faculty.

The growth in online learning has certainly led to capacity limitations (McClure, 2009). Overcoming these limitations to expand online learning is critical for today's higher education institutions. One strategy administrators increasingly use is adjunct faculty. In community colleges especially, adjunct faculty generally outnumber full-time faculty (Wilson, 2010).

The very introduction of online education into many traditional higher education institutions has been another impetus for the increase in the numbers of online adjunct faculty. In cases where full-time faculty resisted online teaching, administrators hired adjunct faculty who were willing to develop and deliver online courses (Ochoa, 2011; Puzziferro & Kissinger, 2005). While full-time faculty are increasingly participating in online teaching, the ongoing growth in online learning has required continued reliance on online adjunct faculty to meet student demand (Jaeger & Eagan, 2011; Ochoa, 2011; Tipple, 2010).

As the number of adjunct instructors grows, so does the number of people making adjunct online teaching their full-time job (Bedford, 2009). Still, online adjuncts often face both a lack of full-time faculty support and an institutional desire to increase full-time faculty and decrease adjunct faculty (Adamowicz, 2007; Jaeger & Eagan, 2011; McClure, 2010). Adjunct instructors are being utilized at progressively higher rates to deliver online instruction across the nation's resource-challenged community colleges. Consequently, questions about student learning quality and full-time faculty workload arise. Adamowicz (2007) highlighted the erosion of shared governance, a decrease in instructional quality, and a negative impact on student performance as concerns regarding heavy use of adjunct faculty. Many higher education officials call for increased numbers of full-time faculty to serve their surging enrollments, arguing that the ratio of full-time to adjunct faculty should increase in relationship to enrollment growth out of concern for student learning and faculty workload (Wilson, 2010).

More adjunct faculty means that the limited number of full-time faculty are required to shoulder a larger share of responsibilities not extended to adjunct faculty, limiting the amount of time and attention they can give to shared governance, instructional innovation, and student engagement (Patton, 2010). In this way, Adamowicz (2007) suggested that institutional reliance on adjunct faculty "encourages full- and part-time faculty to remain divided" (para. 15). Jacoby (as cited in

Adamowicz, 2007) confirmed a correlation between the use of adjunct faculty at community colleges and student graduation rates. Jacoby (2006) discovered that, as the proportion of adjunct faculty used increases, student graduation rates in community colleges decrease.

Online Instructor Teaching Load

Palloff and Pratt (2007) drew a direct correlation between the amount of time an instructor can spend per student and the presence of effective pedagogical elements, such as instructor immediacy and involvement, in their online courses. Furthermore, Adamowicz (2007) and Jacoby (2006) argued that adjunct faculty status can have a negative effect on instructional quality and student performance. Palloff and Pratt's correlation, coupled with the admonitions of Adamowicz and Jacoby, leads to legitimate questions about the relationship among these elements within the context of online teaching and learning.

According to Palloff and Pratt (2007), teaching load accounts for the average class size taught by an instructor and the total number of classes or credit hours taught by the same instructor. Palloff and Pratt also recognized some variance exists in determining the amount of time spent on each online class. They did, however, observe one consistent calculation standard for online teaching workload: if an online instructor is being effective, each online course requires at least twice the amount of time as the corresponding seated course. Given the possible number of hours instructors may teach online, depending on their employment status, and the resulting time required per course, concerns arise regarding instructor attentiveness, student performance, and academic rigor.

Best practices in online teaching and learning call for a variety of high-touch, time-intensive strategies to promote student learning in the virtual classroom. These strategies include open and frequent communication between students and the instructor, substantive instructor feedback on student assignments, quality discussion facilitation, and other methods of interaction and collaboration (Palloff & Pratt 2007; Pelz, 2010; Puzziferro & Shelton, 2009). The confluence of these interactions creates instructor presence, which Baker (2010) defined as the ways in which instructors make themselves seen and heard in an online course. Baker described a related dimension of online pedagogy, instructor immediacy, as the direct interaction between students and instructors. To measure student commitment and understanding of instructor immediacy and presence, Baker administered a survey instrument to all students in the seventh week of an online course. The survey comprised five items to measure student perceptions of instructor immediacy and presence as well as student affective learning, cognition, and motivation.

The results (yielded by a regression analysis and an ANOVA) are relevant to this study: While instructor immediacy has a positive correlation to student affective learning, cognition, and motivation, instructor presence is a more significant predictor of the aforementioned (Baker, 2010). That instructor presence directly affects student affective learning, cognition, and motivation stresses the amount of time required to teach online.

Because of the amount of time required to teach an online course effectively, research has been conducted to determine the appropriate number of students per online class (Colwell & Jenks, 2004; Palloff & Pratt, 2007; Willging & Johnson, 2009). Tomei (2006) observed that teaching online takes more time than teaching face-to-face. Before logging the hours, Tomei (2006) categorized time spent teaching online into three groups: instruction, advisement, and assessment. The differences in time between online and face-to-face teaching is most apparent in the advisement and assessment hours spent. Tomei (2006) went on to suggest that "the ideal traditional class size was 17 students while the ideal online class size was 12 students" (para. 45).

Student Performance in Online Courses

Two primary reasons students drop out include the depersonalized nature of the learning

environment and the lack of one-on-one interaction between the instructor and student (Willging & Johnson, 2004). Both of these factors are significantly higher in online classes in which instructors must manage a large number of online students (Bowman, 2006). Thus, the more students that instructors have in a given online section, the less attention they are able to provide in terms of building a personalized learning community and providing frequent communication and feedback, which has been shown to affect student performance directly.

Instructors who teach both online and face-to-face courses cite their online courses as more time consuming, particularly in terms of preparation time, "with some estimates ranging from 66% to 500% greater" (Colwell & Jenks, n.d., pp. 3–4). These researchers went on to comment that online communication between faculty and students requires considerably more time than face-to-face courses. Similarly, online instructors must provide office hours at nontraditional times that support online students' schedules (Colwell & Jenks, n.d.). Clearly, the literature readily establishes that effective online instructors spend a significant amount of time interacting with students and facilitating the learning process (Willging & Johnson, 2004).

Engagement on this level takes much time and diligence on the part of the online instructor. The more courses or students an instructor teaches, the less one-on-one attention students likely receive. DiBiase (2004) stated that "[a]nalysis of instructor time recorded through eight course offerings over a three and one-half year period confirms the strong relationship between enrollment and instructor effort" and that "a twelve percent decrease in instructor effort per student was achieved" (p. 57). This study affirmed that, the more students enrolled in a class, the less time the instructor has to spend with each student, which can, in turn, affect an online student's academic performance in and satisfaction with the course (DiBiase, 2004). Research also highlights the important role faculty play in identifying students who need additional assistance with online coursework, which takes additional time (Pilati, 2006).

Methodology

By analyzing an existing dataset to identify relationships among three variables, this nonexperimental study used a descriptive approach (McMillan, 2008). The study included both comparative and correlational research designs to address the research questions. In comparative designs, the purpose is to identify "relationships by forming groups of individuals in whom the independent variable is present or absent—or present at several levels—and then determining whether the groups differ on the dependent variable" (Gall, Gall, & Borg, 2007, p. 306). Comparative studies are distinctive in measuring the independent variable in categories or groups (McMillan, 2008). While some definitions of comparative research suggest intent of determining cause-and-effect relationships, Gall et al. (2007) cautioned that "inferences about causality on the basis of the collected data are necessarily tentative" (p. 310). Arguably, a more valid way to interpret comparative research results is to use them as evidence that the assumptions of comparisons or relationships among variables are significant in developing or adjusting educational policy or other action (Cook & Cook, 2008).

In correlational studies, researchers seek to describe statistical relationships among variables, not to suggest cause-and-effect relationships. As Cook and Cook (2008) observed, correlational designs enhance the study by providing statistical data regarding the degree of relationship among online instructor employment status, teaching load, and student performance. While, as with comparative design, correlation does not explain causality, it does provide valuable information about how these three important elements in online higher education might be related (Cohen, 2007).

The design of this research study can also be called ex post facto (Adetoro, Simisaye, & Oyefuga, 2010). Ex post facto research is often the only technique by which educational researchers can gather important information about the characteristics of certain groups of people, and the approach can offer valuable insight into instructional planning and policy development. Ary, Jacobs,

Sorenson, and Razavieh (2009) noted that an ex post facto study "permits researchers to investigate situations in which controlled variation is impossible to introduce" (p. 349).

This study was designed in response to the lack of internal evidence indicating whether online instructor employment status and teaching load have a relationship to student performance in online courses at a community college in the Midwest. The study included both comparative and correlational research designs to address the research questions. An analysis was conducted utilizing an existing dataset from Fall 2010 to compare student performance in terms of grade distribution and withdrawal rates in online courses with the employment status and teaching load of instructors assigned to teach those online courses. Specifically, student performance was measured by students' final grades in online courses according to a standard collegiate grading scale: A = excellent or outstanding; B = above average; C = average; D = passing; F = failing; W = withdrawal. Data were extracted from official academic and human resources records available via the community college database for statistical analyses.

The student performance criteria selected for this study reflected those of the National Community College Benchmark Project (NCCBP). Annually, representatives of NCCBP collect and compare student performance data, defined by the same letter grades as above, in hundreds of community colleges across the country. In doing so, NCCBP (2010) data promote inter-institutional comparison and provide national benchmarks for measuring student learning and institutional effectiveness. Created by administrators at Johnson County Community College, this project helps to satisfy federal, state, and accreditation demands for accountability and continuous quality improvement. Recently, more than 260 community colleges across the nation participated in this process, contributing to its validity and reliability (NCCBP, 2010).

Findings

Archival data from 189 faculty members were used. A power analysis (Faul, Erdfelder, Buchner, & Lang, 2009) determined the minimum sample size to be 109 for the predictor variables with a medium effect size of .15, an alpha level of .01, and a power of .80. To ensure the minimum sample size was attained, all faculty who taught online in the Fall 2010 semester were included in the sample. As such, the number of participants allowed for conclusive determinations of statistical significance as indicated in the measures denoted below. Table 2 displays the frequency counts for selected variables. More than twice as many adjunct faculty members (68.8%) as full time faculty members (31.2%) were included in the study. Among the full-time faculty, most (n = 41) were regular faculty with fewer lead instructors (n = 12) or department chairs (n = 6). Sixty-eight percent lived locally, and the most common department type was general education at 68.3% (Table 2).

Table 2

Frequency Counts for Selected Variables (N = 189)

Variable	Category	*n*	%
Employment Status			
	Full time faculty	59	31.2
	Adjunct faculty	130	68.8
Seniority			
	Regular Adjunct (15 hours)	130	68.8
	Regular FT (12 hours)	41	21.7
	Lead Instructor (12 hours)	12	6.3
	Department Chair (9 hours)	6	3.2

Location			
	Local	129	68.3
	Remote	60	31.7
Department Type			
	Business, Accounting, and Economics	25	13.2
	General Education	129	68.3
	Allied Health	12	6.3
	Technical Education	23	12.2

Table 3 displays the descriptive statistics for selected variables. The mean teaching load was *M* = 11.95 units and *M* = 71. Twelve percent of the courses were taught online. Overall student performance was *M* = 71. 29% of students completing the course and *M* = 61.75 percent of students that were given A, B, or C grades (Table 3).

Table 3

Descriptive Statistics for Selected Variables (N = 189)

Variable	*M*	*SD*	Low	High
Total Teaching Load	11.95	5.06	2.00	21.00
Percent Online Teaching	71.12	31.91	14.29	100.00
Overload Hours	-0.61	4.32	-10.00	7.00
Number of Online Hours	7.49	3.61	2.00	15.00
Percent Completing Course	71.29	12.81	36.67	100.00
Percent ABC Grades Given	61.75	16.68	18.75	100.00

Table 4 displays the *t* test comparisons for selected variables based on employment status (full-time versus adjunct). Full-time faculty had larger teaching loads ($p = .001$), a lower percentage of online courses ($p = .001$), more overload hours ($p = .001$), and fewer online hours ($p = .001$) (Table 4).

Table 4

t Test Comparisons for Selected Variables Based on Employment Status (N = 189)

Variable	Status	*n*	*M*	*SD*	*r*pb	*t*	*p*
Total Teaching Load					.64	11.41	.001
	Full time	59	16.75	4.25			
	Adjunct	130	9.77	3.73			
Percent Online Teaching					.73	14.72	.001
	Full time	59	36.52	15.60			
	Adjunct	130	86.83	24.04			
Overload Hours					.56	9.20	.001
	Full time	59	2.97	3.29			

	Adjunct	130	-2.23	3.73			
Number of Online Hours					.29	4.18	.001
	Full time	59	5.93	2.53			
	Adjunct	130	8.20	3.80			
Percent Completing Course					.03	0.41	.68
	Full time	59	70.72	13.83			
	Adjunct	130	71.54	12.36			
Percent ABC Grades Given					.05	0.67	.50
	Full time	59	60.55	13.66			
	Adjunct	130	62.30	17.90			

*r*pb = Point-biserial correlation.

Research Question 1 asked, "How does student performance as measured by final course grades compare in online courses taught by full-time faculty members versus adjunct faculty members?" To answer this question, Table 4 displays the relevant t tests for independent means along with the accompanying point-biserial correlations (Pearson product-moment correlations between a dichotomous variable and a continuous variable used to measure the strength of the relationship). Inspection of the table found no differences or relationships for employment status with either the percentage of students completing the course ($p = .68$) or the percentage of A, B, or C grades given ($p = .50$) (Table 4). This combination of findings provided support to retain the null hypothesis.

Research Question 2 asked, "How does student performance as measured by final course grades change as the number of online credit hours taught by full-time instructors increases?" To answer this question, Table 5 displays the Spearman rank-ordered correlations for the full-time faculty subsample ($n = 59$), comparing the number of online credit hours taught with the two measures of student performance. Spearman rank-ordered correlations were chosen over the more common Pearson product-moment correlations due to non-normally distributed data. Inspection of the table found the number of online credit hours taught was negatively related to both the percentage of students completing the course ($rs = -.33$, $p < .01$) and the percentage of A, B, or C grades given ($rs = -.38$, $p < .005$) (Table 5). This combination of findings provided support to reject the null hypothesis.

Table 5

Spearman Rank-Ordered Correlations for Online Credit Hours Taught with Student Performance Variables for Three Samples-All Faculty, Full-Time Only, and Adjunct Only

	Number of Online Credit Hours Taught		
	All Faculty	Full-Time Only	Adjunct Only
Student Performance	*N* = 189	*n* = 59	*n* = 130
Percent Completion	-.24****	-.33**	-.23**
Percent ABC Grades	-.20**	-.38***	-.15

* $p < .05$. ** $p < .01$. *** $p < .005$. **** $p < .001$.

Research Question 3 asked, "How does student performance as measured by final course grades change as the number of online credit hours taught by adjunct instructors increases?" To answer this question, Table 5 displays the Spearman rank-ordered correlations for the adjunct faculty subsample (n = 130), comparing the number of online credit hours taught with the two measures of student performance. Inspection of the table found the number of online credit hours taught to be negatively related to the percentage of students completing the course (rs = -.23, p < .01) but not to the percentage of A, B, or C grades given (rs = -.15, p = .09) (Table 5). This combination of findings provided support to reject the null hypothesis when considering grades issued alone. If; however, completion rates are considered, the null hypothesis was partially rejected.

Research Question 4 asked, "How does the number of online overload hours taught by full-time instructors compare with student performance as measured by final course grades?" To answer this question, Table 6 displays the Spearman rank-ordered correlations for the full-time faculty subsample (n = 59). Inspection of the table found the number of online overload hours taught was not significantly related to either the percentage of students completing the course (rs = -.09, p = .50) or the percentage of A, B, or C grades given (rs = -.14, p = .31) (Table 6). This combination of findings provided support to retain the null hypothesis.

Table 6

Spearman Rank-Ordered Correlations for Online Overload Hours with Student Performance Variables for Three Samples-All Faculty, Full-Time Only, and Adjunct Only

	Number of Online Overload Hours		
	All Faculty	Full-Time Only	Adjunct Only
Student Performance	N = 189	n = 59	n = 130
Percent Completion	-.10	-.09	-.11
Percent ABC Grades	-.11	-.14	-.08

* p < .05. ** p < .01. *** p < .005. **** p < .001.

Additional Findings

Table 7 displays the Spearman rank-ordered correlations for the percentage of courses taught online with the two student performance variables. For the entire sample (n = 189), the percentage of courses taught online was unrelated to either the percentage of students completing the course (rs = -.10, rs2 = .010, p = .15) or the percentage of A, B, or C grades given (rs = -.09, rs2 = .008, p = .21). For the adjunct faculty subsample (n = 130), the percentage of courses taught online was unrelated to either the percentage of students completing the course (rs = -.13, rs2 = .017, p = .15) or the percentage of A, B, or C grades given (rs = -.10, rs2 = .010, p = .28). However, for the full-time faculty subsample (n = 59), the percentage of courses taught online was negatively related to both the percentage of students completing the course (rs = -.39, rs2 = .152, p = .003) and the percentage of A, B, or C grades given (rs = -.40, rs2 = .160, p = .002) (Table 6). Inspection of the coefficients of determination (rs2) found the strength of the relationships between the percentage of courses taught online and the two student performance variables to be considerably higher (8 to 16 times more variance explained) in the full-time faculty subsample as compared to the adjunct faculty subsample.

Table 7

Spearman Rank-Ordered Correlations for Percentage of Courses Taught Online with Student Performance Variables for Three Samples-All Faculty, Full-Time Only, and Adjunct Only

	Percentage of Courses Taught Online		
	All Faculty	Full-Time Only	Adjunct Only
Student Performance	$N = 189$	$n = 59$	$n = 130$
Percent Completion	-.10	-.39***	-.13
Percent ABC Grades	-.09	-.40***	-.10

* $p < .05$. ** $p < .01$. *** $p < .005$. **** $p < .001$.

Discussion

With the influx of students enrolled in community colleges across the nation, the strategic role of online learning has increased. As community colleges leaders address dramatic enrollment increases in online classes, they meet ever-increasing student demand (Instructional Technology Council, 2010). While regional accreditors and higher education administrators prefer the use of full-time faculty, adjunct faculty are being utilized at alarmingly higher rates. A continued need exists for community college administrators to develop and implement strategies to ensure sufficient staffing resources that enable the institution to meet student demand for online courses and promote student success. The most important elements in promoting online student learning include attentive facilitation, substantive and individualized feedback for each student, and abundant communication between student and instructor (Palloff & Pratt, 2007). These pedagogical imperatives require the most time. Because of the time involved in effective online instruction, understanding how employment status and teaching load affect student course completion and success is critical.

The data show that students from both adjunct and full-time faculty performed equally well in terms of final course grades and completion rates. Further, teaching load did affect student outcomes: The higher the overload in teaching, the worse students performed as measured by final grades and course completion. Prior to this research, student success outcomes related to faculty employment status was not thoroughly studied. The results from this study have added to practitioner knowledge on how workloads for both adjunct and full-time faculty influence student success.

Limitations

This research study included data from a single semester (Fall 2010) for a large community college in the Midwest. Data for full-time and adjunct faculty and students enrolled in online courses were examined to determine how employment status and teaching load affected student performance outcomes. One limitation of this study was that community college student demographics are typically broader than is representative of a traditional undergraduate university population. This narrowed scope might have influenced performance outcomes. Another limitation was that the researcher did not include information regarding teaching senority. Those faculty members with fewer years of experience might have dedicated additional time above their normal teaching load to ensure a positive student experience. Finally, this study was conducted prior to the changes affecting

employment as a result of new healthcare legislation. Data are not reflective of employment shifts resulting from this legislation.

Recommendations

Recommendations for future research related to this study are numerous. As full-time online faculty positions are created and filled (as opposed to full-time faculty whose assignment is only partially online), administrators should study the student performance rates in online courses taught by those individuals as compared with other groups teaching online courses. Administrators should similarly explore the relationship between grade inflation and full-time faculty teaching load in seated classes in addition to online classes to inform further efforts in policy development and quality assurance of instruction. Furthermore, limited local staffing resources have resulted in the need to use remote adjunct instructors at an increasing rate in an effort to encourage local adjuncts to teach seated courses that are difficult to staff. The effects of this shift in staffing policy might warrant further investigation.

The results from this study provide meaningful insight into best employment factors to ensure student success for both full-time and adjunct online community college faculty. Further research is needed to identify how other employment factors influence student outcomes. The number of online courses used in this study ($n = 189$) was sufficient for statistically significant findings; however, the study should be conducted across a variety of institutions and with additional faculty variables to determine if findings are generalizable.

This study included data from the Fall 2010 semester, prior to the implementation of the Affordable Care Act. This legislation has had sweeping implications for adjunct faculty as limits are now placed on the number of hours one can work per week without being offered healthcare benefits. Accordingly, one strong recommendation for further research would be to replicate this study with data post changes to healthcare legislation. Further, collection of data from across a wide discipline of undergraduate and graduate courses should be conducted to see if findings are the same across a broad swath of fields of study. As well, generalization beyond the sample in terms of geographic restrictions is desired. This study was conducted at a community college in the Midwest. Determining if findings are similar across a wide geographical sample outside of the Midwest would be both interesting and valuable to online higher education administrators.

One important variable excluded in this study was student enrollment in the courses sampled. Because of the importance of instructor presence as demonstrated in the literature, smaller classes would allow faculty to spend more time with each student. Class enrollment was not a consideration in this study but would add valuable data to support best online teaching practices if included in future studies.

The data in this study largely reinforced the literature and suggested that faculty teaching load is a significant factor affecting student success. The higher the teaching load, the less time faculty members have to spend with students in each course. Because online presence is a key factor to student success, teaching overloads cause the faculty to be less available to and present for their online students.

This study could be further enhanced by comparing employment status of faculty members in fully online institutions, specifically looking at any differences in student academic achievements between the two groups: full-time and adjunct faculty. Additionally, more research could be developed around the challenges faculty identified in balancing workload with financial opportunities of adding duties above the normal teaching load. Lastly, as online programs grow across all sectors of higher education, more research should be done on such faculty conditions as seniority and tenure status.

Conclusion

The purpose of this ex post facto quantitative study was to compare faculty employment status, workload, and student success for full-time and adjunct faculty. This study included internal evidence of the relationship among online instructor employment status, teaching load, and student performance in online courses. With an increasing demand for online learning at community colleges, administrators hire increasing numbers of adjunct instructors to develop and deliver online courses (Beford, 2009; Puzziferro & Shelton, 2009; Sixl-Daniell, Williams, Wong, 2006; Tipple, 2010; Wilson, 2010). The literature provides compelling evidence for maintaining a sufficient ratio of full-time-to-adjunct faculty to ensure student success (Adamowicz, 2007; Banachowski, 1997; Hogan et al., 2006; Jacoby, 2006; Pilati, 2006; Patton, 2010; Wilson, 2010). This research reinforces the relationship among employment status, teaching load, and student success.

The results from this study indicated some important findings. While student success as measured by course grades and completion rates did not statistically differ for full-time versus adjunct faculty, a decrease in student course completion and higher numbers of failing grades issued by faculty teaching overloads were revealed. This outcome is a strong indicator that faculty loads should be carefully monitored to ensure the highest rates of student success possible.

The research in this study indicates that both adjunct and full-time faculty play an important role in online student success. Both types of employees are affected by teaching overloads as evidenced by lower student course completion and higher issuance of failing grades. As surmised, instructors play a clear and central role in student success in online courses, particularly in the community college setting.

References

Adamowicz, C. (2007, November/December). On adjunct labor and community colleges. Academe, 93(24), 24-27.

Adetoro, N., Simisaye, A. O., & Oyefuga, A. B. (2010, September). Relationships between perceived self-efficacy and information literacy among library and information science undergraduates in a Nigerian university of education. *Ife Psychologia*, *18*(2), 172–191.

Allen, I. E., & Seaman, J. (2010, January). *Learning on demand: Online education in the United States, 2009*. Retrieved from http://onlinelearningconsortium.org/survey_report/2009-learning-demand-online-education-united-states/

Ary, D., Jacobs, L. C., Sorenson, C., & Razavieh, A. (2009). *An introduction to research in education* (8th ed.). Belmont, CA: Cengage Learning.

Baker, C. (2010). The impact of instructor immediacy and presence for online student affective learning, cognition, and motivation. *Journal of Educators Online*, *7*(1), 1–30. Retrieved from Education Research Complete database.

Baldwin, R. G., & Wawrzynski, M. R. (2011). Contingent faculty as teachers: What we know; what we need to know. *American Behavioral Scientist, 55*(11), 1485-1509.

Banachowski, G. (1997). Advantages and disadvantages of employing part-time faculty in community colleges. *ERIC Clearinghouse for Community Colleges*. Retrieved from http://www.ericdigests.org/1997-4/part.htm

Beford, L. A. (2009). The professional adjunct: An emerging trend in online instruction. *Online Journal of Distance Learning Administration*, *13*(3). Retrieved from http://www.westga.edu/~distance/ojdla/fall123/bedford123.html

Boston, W. E., Ice, P., & Gibson, A. M. (2011, Spring). Comprehensive assessment of student retention in online learning environments. *Online Journal of Distance Learning Administration, 4(1). Retrieved from* http://www.westga.edu/~distance /ojdla/spring141/boston_ice_gibson141.html

Bowman, L. S. (2006, August). *Class size in online learning: Student Dropout, teacher workload, and student-teacher satisfaction*. Springfield, MO: Ozarks Technical Community College.

Cohen, L. (2007). *Research methods in education* (6th ed.). New York, NY: Routledge.

Cook, B. G., & Cook, L. (2008, November). Nonexperimental quantitative research and its role in guiding instruction. *Intervention in School and Clinic*, *44*(2), 98–104.

DeTure, M. L. (2003, May). Investigating the predictive value of cognitive style and online technologies self-efficacy in predicting student success in online distance education courses. ProQuest Dissertations and Theses. (Accession No. LD1780 2003.D483)

DiBiase, D. (2004). The impact of increasing enrollment on faculty workload and student satisfaction over time. *Journal of Asynchronous Learning Networks, 8*(1), pp. 45–60. Retrieved from https://www.e-education.psu.edu/files/sites/file/Scaling_Up_II.pdf

Dulohery, Y. (2009). Online classroom quality improvement: A measure of online learning and teaching effectiveness. *Journal of Instruction Delivery Systems*, *23*(2), 21–26. Retrieved from Education Research Complete database.

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods, 41*, 1149-1160.

Gall, M. D., Gall, J. P., & Borg, W. R. (2007). *Educational research: An introduction* (8th ed.). Boston, MA: Pearson.

Grant, M. R., & Thornton, H. R. (2007, December). Best practices in undergraduate adult-centered online learning: Mechanisms for course design and delivery. *Journal of Online Learning and Teaching*, *3*(4). Retrieved from http://jolt.merlot.org/documents/grant.pdf

Hogan, R. L., McKnight, M. A., & Legier, J. T. (2006, November). Moving from traditional to online instruction: Considerations for improving trainer and instructor performance. *Journal of Human Resources and Adult Learning*, *2*(2), 34–38.

Instructional Technology Council. (2010, March). *Trends in elearning: Tracking the impact of elearning at community colleges*. Retrieved from http://www.itcnetwork.org/attachments/article/87/AnnualSurveyApril2013.pdf

Jacoby, D. (2006, November/December). Effects of part-time faculty employment on community college graduate rates. *The Journal of Higher Education*, *77*(6), 1081–1103.

Jaeger, A. J., & Eagan, M. K. (2011). Examining retention and contingent faculty use in a state system of higher education. *Educational Policy 25*(3), 507-37.

Jaschik, S. (2010, April). Do caps help adjuncts? *Inside Higher Ed*. Retrieved from

http://www.insidehighered.com/news/2010/04/22/adjuncts

Kassop, M. (2003, May/June). Ten ways online education matches, or surpasses, face-to-face learning. *The Technology Source*. Retrieved from http://technologysource.org/article/ten_ways_online_education_matches_or_surpasses_facetoface_learning/

Ko, S., & Rossen, S. (2010). *Teaching online: A practical guide* (3rd ed.). New York, NY: Routledge.

Liu, S., Gomez, J., & Cherng-Jyh, Y. (2009). Community college online course retention and final grade: Predictability of social presence. *Journal of Interactive Online Learning*, *8*(2), 165–182. Retrieved from Education Research Complete database.

McClure, A. (2010, January). Virtual capacity: Using distance learning to manage surging enrollment. *University Business*. Retrieved from http://www.universitybusiness.com/article/virtual-capacity

McMillan, J. H. (2008). *Educational research: Fundamentals for the consumer* (5th ed.). Boston, MA: Pearson.

National Community College Benchmark Project. (2010). *About us*. Retrieved from http://www.nccbp.org

Ochoa, A. (2011). Contingent faculty: Helping or harming students? *The Journal of the Professoriate 6*(1), 136-151.

Palloff, R. M., & Pratt, K. (2007). *Building online learning communities: Effective strategies for the virtual classroom*. San Francisco, CA: Jossey-Bass.

Patton, J. (2010, April). The need for full-time faculty (again). *Academic Senate for California Community Colleges*.

Pelz, B. (2010, March). (My) three principles of effective online pedagogy. *Journal of Asynchronous Learning Networks*, *14*(1). Retrieved from https://www.ccri.edu/distancefaculty/pdfs/Online-Pedagogy-Pelz.pdf

Pilati, M. L. (2006, February). Why full-time faculty matter. *Academic Senate for California Community Colleges*. Retrieved from http://www.asccc.org/content/why-full-time-faculty-matter

Puzziferro, M., & Shelton, K. (2009, Fall). Supporting online faculty: Revisiting the seven principles (A few years later). *Online Journal of Distance Learning Administration*, *12*(3). Retrieved from http://www.westga.edu/~distance/ojdla/fall123/puzziferro123.html

Puzziferro, M., & Kissinger, J. (2005, June). Supporting online adjunct faculty: A virtual mentoring program. *Journal of Asynchronous Learning Networks*, *9*(2). Retrieved from http://onlinelearningconsortium.org/jaln_full_issue/volume-9-issue-2-june-2005/

Ragan, L. C., & Terheggen, S. L. (2003). *Effective workload management strategies for the online environment: A report funded by The Alfred P. Sloan Foundation to The Pennsylvania State University World Campus*. Retrieved from http://www.worldcampus.psu.edu/sites/default/files/legacy_static/pdf/fac/workload_strat.pdf

Sixl-Daniell, K., Williams, J. B., & Wong, A. (2006, Spring). A quality assurance framework for recruiting, training (and retaining) virtual adjunct faculty. *Online Journal of Distance Learning*

Administration, *9*(1). Retrieved from http://www.westga.edu/~distance/ojdla/spring91/daniell91.htm

Strauss, V. (2009, May 31). Community colleges get student influx in bad times. *The Washington Post*. Retrieved from http://www.virginia21.org/community-colleges-get-student-influx-in-bad-times/

Tipple, R. (2010, Spring). Effective leadership of online adjunct faculty. *Online Journal of Distance Learning Administration*, *13*(1). Retrieved from http://www.westga.edu/~distance/ojdla/spring131/tipple131.html

Tomei, L. A. (2006). The impact of online teaching on faculty load: Computing the ideal class size for online courses. *Journal of Technology and Teacher Education*, *14*(3), 531–541.

Willging, P. A., & Johnson, S. D. (2009, October). Factors that influence students' decision to dropout of online courses. *Journal of Asynchronous Learning Networks*, *13*(3). Retrieved from http://files.eric.ed.gov/fulltext/EJ862360.pdf

Wilson, D. M. (2010, May/June). The casualties of the twenty-first century community college. *Academe*. Retrieved from http://www.aaup.org/article/casualties-twenty-first-century-community-college#.VX771kYw0Zw

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