

The Teaching Practices and Time Allocation of Faculty and Graduate Student Instructors

Rong Wang, Allison BrckaLorenz, and Thomas Nelson Laird  
Center for Postsecondary Research, Indiana University Bloomington

Authors' Note

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### Abstract

Few studies have compared teaching behaviors between faculty and graduate student instructors (GSIs). Using a large-scale multi-institution dataset, this study takes a closer examination of the variation of effective teaching practices, proportion of time spent on in-class activities, and time commitment on teaching-related activities of faculty and GSIs with different demographic and course characteristics. Results suggest that faculty utilize more effective teaching practices than GSIs across all demographic, course characteristics, and disciplines. Faculty spent a greater proportion of time in lecture and discussion, whereas GSIs spent more time in small-group activities. GSIs spent less time than faculty at different academic ranks in all teaching-related activities. This study recommends more resources and support should be provided to GSIs to enhance effective teaching practices and time management in teaching.

*Key words:* graduate student instructors, faculty, effective teaching practices, time allocation

### The Teaching Practices and Time Allocation of Faculty and Graduate Student Instructors

Both faculty and graduate student instructors (GSIs) play significant roles in influencing the learning of college students. Their instructional techniques, course design, and time commitment on teaching-related activities are all important factors that influence their teaching and then have further impact on student learning outcomes. However, little is known about the differences in employing effective teaching practices, their time allocation of in-class activities, and time commitment on teaching-related activities between faculty and GSIs. This study aims to compare those differences between faculty and GSIs. Specifically, the impact of faculty, GSI, and course characteristics on the effective teaching practices, in-class time allocation, and time commitment on teaching-related activities will be examined.

This paper begins with an introduction of the conceptual framework and the background of this study. After pointing out the gaps in current scholarly literature, the research questions of this study are proposed. Then the methods used in this study are discussed, which include the data source, measures, sample, analyses, and limitations. Next, the findings associated with each research question will be presented. After discussing the significance of this study for faculty, GSIs, and graduate schools, discussion and recommendations will be addressed in the end.

#### **Conceptual Framework**

Both faculty and graduate student instructors (GSIs) are salient players in influencing college students' learning outcomes. Faculty and GSIs' utilization of effective teaching practices, proportion of time spent on in-class activities, as well as their time commitment on teaching-related activities are important indicators of their teaching behaviors. Effective teaching practices, such as teaching clarity, good organization, clear standards, and prompt feedback, are closely related to college students' academic development and achievement (Pascarella & Terenzini,

2005). Studies have explored the variation of teaching preferences and effectiveness among faculty with different personal and course characteristics (Lammers & Murphy, 2002; Sherman & Blackburn, 1975; Nelson Laird, Garver, & Niskodé-Dossett, 2011). Only a small number of studies have explored teaching experiences of GSIs in the United States (Rushin, De Saix, Lumsden, Streubel, Summers, & Bernson, 1997; Volkmann & Zgagacz, 2004).

Studies on GSIs' teaching experiences suggest a variation in GSIs' teaching preferences, values, and approaches among GSI's with different characteristics, such as gender, age, degree, and discipline (Luo, Bellows, & Grady, 2000; Luo, Grady, & Bellows, 2001; Shannon, Twale, & Moore, 1998). However, literature is silent on how employing effective teaching practices varies among GSIs with different demographic and course characteristics. Furthermore, few studies, if any, have compared the differences between faculty and GSIs in employing effective teaching practices. In addition, the proportion of time spent on in-class activities directly reflects instructors' course design and pedagogies. However, little is known about the differences in time distributions of in-class activities between faculty and GSIs. Prior studies, however, have examined the time commitment of faculty (Bender, Wood, & Vredevoogd, 2004; Fairweather, 1996). Nevertheless, limited research has looked into GSIs' time commitment on teaching. No study has compared how the time devoted to teaching-related activities differs by faculty and GSIs with different demographic and course characteristics. To fill the gaps in the literature described above, this quantitative study aims to explore the differences between faculty and GSIs in employing effective teaching practices, time distribution of in-class activities, and time commitment on teaching-related activities.

## **Background**

Wilson, Shulman, and Richert (1987) indicated that effective teaching requires “knowledge of, and skill in, the use of teaching methods and pedagogical strategies that are not subject-specific” (p. 114). By examining 22 teaching characteristics, Feldman (1989) found that teaching clarity, understandableness, good preparation, and organization are perceived as the most significant teaching characteristics by both faculty and students. Blaich and Wise (2008) explored the Wabash National Study for Liberal Arts Education (WNSLAE) and found a positive relationship between students’ perceptions of various effective teaching practices and important student qualities, such as critical thinking, psychological health, leadership, and academic motivation.

Blaich and Wise’s (2008) assertion was in accord with the seven principles of quality teaching in undergraduate education proposed by Chickering and Gamson (1987). Three out of seven principles were relevant to effective teaching practices: using active teaching techniques to accommodate learning, giving detailed and prompt feedback, and communicating clear and high expectations (Chickering & Gamson, 1987). Additionally, several scholars have indicated the significance of teaching clarity as a characteristic of effective teaching (Murray, 1997; Ginsberg, 2007; Hativa, Barak, & Simhi, 2001). Previous studies also suggest a positive relationship between teaching clarity and various college education outcomes like student satisfaction and academic achievement (Pascarella & Terenzini, 2005; Chesebro & McCroskey, 2001). However, there is a gap in literature about faculty and GSIs’ characteristics and their utilizations of effective teaching practices. Little is known about the differences in the unitization of effective teaching practices between faculty and GSIs. This study aims to present the differences in effective teaching practices of those two groups.

Several studies have claimed that various in-class activities, such as lecture, discussion,

small group-activities, movies, and assessment of student learning, will contribute to teaching effectiveness, students' engagement, and learning outcomes (Lammers & Murphy, 2002; Lyon & Lagowski, 2008; Umbach & Wawrzynski, 2005; Yazedjian & Kolkhorst, 2007). A number of studies have examined the proportion of time that faculty spent on those in-class activities (Blackburn, Pellino, Boberg, & O'Connell, 1980; Lammers & Murphy, 2002; Thielens, 1987). Blackburn, Pellino, Boberg, and O'Connell (1980) found that 78 percent of faculty reported lecture was their first instructional method and 55 percent reported that discussion was their second method. Thielens's (1987) study revealed that the percentage of time devoted to lecture was highest in science majors and the percentage was lowest in the field of humanities. Additionally, Lammers and Murphy (2002) observed and recorded 58 classes across different disciplines in U.S. public universities and found that male faculty lecture more than their female colleagues. They also found a positive relationship between time spent on lecturing and class size. Those studies all reflected how faculty distributed their in-class activities. Nonetheless, little is known about the proportion of time that GSIs spend on in-class activities and how their in-class time distribution differs from faculty class-time distribution. This study will fill this gap and compare the proportion of time devoted to in-class activities between faculty and GSIs.

Prior studies have investigated faculty time allocation among research, teaching and service (Kuykendall, Johnson, Nelson Laird, Ingram, & Niskode, 2006; Link, Swann, & Bozeman, 2008). A previous study asserted that faculty spent more time on teaching-related activities (Bowen & Schuster, 1986), while another (Massy & Zemsky, 1994) held the opposite opinion. One study also found that across different ranks, faculty of color devoted more time on teaching-related activities than their white colleagues (Johnson, Kuykendall, & Nelson Laird, 2005). Bender, Wood, and Vredevoogd (2004) found that when considering per-student time,

both faculty and teaching assistants spend much more time on teaching distance courses than classroom courses. More knowledge is needed on the comparison of faculty and GSIs' time commitment on a wider range of teaching-related activities.

Therefore, our study is guided by the following research questions:

1. How does the use of Effective Teaching Practices differ between faculty and graduate student instructors (GSIs) by demographics and course characteristics?
2. How does the proportion of time spent on class activities differ between faculty and GSIs?
3. How does the time spent on teaching-related activities differ between faculty and GSIs with different demographic and course characteristics?

## **Methods**

### **Data Source**

The data for this study come from the 2015 administration of the Faculty Survey of Student Engagement (FSSE) and the 2014 and 2015 administrations of the Faculty Survey of Student Engagement for Graduate Student Instructors (FSSE-G). As companion surveys to the National Survey of Student Engagement (NSSE), FSSE and FSSE-G were designed to complement the NSSE by capturing faculty and graduate student instructors' (GSIs) involvement in and perceptions of undergraduate engagement. FSSE and FSSE-G measure the faculty and GSIs' perceptions and expectations of undergraduate engagement in educationally purposeful activities, the extent to which faculty and GSIs promote learning and development in the courses they teach, the extent of faculty and GSIs' interactions with undergraduates, and how faculty and GSIs allocate their time. FSSE 2015 was administered to 19,056 faculty at 133 institutions. FSSE-G 2014 and 2015 were administered to 2,967 GSIs at 12 research universities.

### **Measures**

A variety of items were examined from the FSSE and FSSE-G surveys including faculty and GSI characteristics such as gender identity, racial/ethnic identification, and disciplinary area. The characteristics of the courses they teach, division, course size, general education requirement, and course format (classroom instruction on campus, distance education, etc.) as well as the number of undergraduates taught in a year and the number of undergraduate courses taught were also examined. Additionally, the proportion of class time spent on various activities (lecture; discussion; small-group activities; student presentations or performances; independent student work; movies, videos, music, or other performances; assessing student learning; and experiential activities) and the time faculty and GSIs spend on various teaching-related activities (preparing class sessions, teaching class sessions, grading assignments and exams, meeting with students outside of class, course administration, and working to improve teaching) were examined. The time that faculty spend on various teaching-related activities was calculated by using midpoints of response ranges to estimate an average number of hours spent. An aggregate measure used in this study, Effective Teaching Practices (ET), combines faculty and GSI perceptions of the extent to which they use a variety of educationally effective pedagogical techniques such as clearly explaining course goals and requirements or using examples or illustrations to explain difficult points. The component items and reliability information for the Effective Teaching Practices scale can be found in Table 1.

### **Sample**

Of the faculty in the sample, around half (47.9%) identified as women and nearly three quarters (72.2%) identified as White. Smaller proportions of faculty identified as Asian, Native Hawaiian, or other Pacific Islander (6%); Black or African American (5%); Hispanic or Latino (3%); or another racial/ethnic identification (5%). Faculty members were appointed in a variety



of disciplines, with the largest proportions in Arts & Humanities (24.5%); Physical Sciences, Mathematics, & Computer Science (11.4%); and Social Sciences (12.4%). Nearly two-thirds (68.9%) of faculty were teaching four or more courses and nearly half (46.5%) taught 100 or more students overall in the 2014-2015 school year. Faculty and GSIs were requested to select one course they were teaching to respond to additional course-related questions. Slightly over half (54.6%) of faculty selected an upper-division course, and around half (49.6%) selected a course which met a general education requirement. Around a third of faculty (33.1%) selected a class with twenty or fewer students, with an additional third (32.2%) selecting a course with 21-30 students. Most faculty (80.6%) selected a course taught in a traditional on-campus classroom setting.

FSSE-G asked participants to clarify their roles in a course section, such as lab instructor, lecture or discussion instructor, reader or grader, tutor, or other. After analyzing the amount of control that GSIs have in course goals, course content, course materials, course activities, and course assessment, this study focuses on GSIs who had a substantial control of those elements in a course. Therefore, the GSIs in this study refer to graduate students, who are course instructors, lab instructors, lectures, or discussion instructors. Additionally, this study only looks at GSIs, whose selected course section is in the same academic discipline as the degree they are currently pursuing.

Of the GSIs in the sample, around half (53.1%) identified as women and nearly three quarters (70.5%) identified as White. Smaller proportions of GSIs identified as Asian, Native Hawaiian, or other Pacific Islander (12%); Black or African American (3%); Hispanic or Latino (3%); or another racial/ethnic identification (6%). GSIs taught their selected course section in a variety of disciplinary areas, with the largest proportions in Arts & Humanities (29.5%); Physical

Sciences, Mathematics, & Computer Science (17.7%); and Social Sciences (15.0%). Around half (49.0%) of GSIs taught two courses. Around a quarter (27.2%) taught courses with 100 or more students overall. Over half (53.6%) of GSIs selected a lower-division course, and nearly three-quarters (71.5%) selected a course which met a general education requirement. Around a third of GSIs (28.2%) selected a class with twenty or fewer students, with an additional third (31.1%) selecting a course with 21-30 students. Nearly all GSIs (96.1%) selected a course taught in a traditional on-campus classroom setting. More details about the sample in this study can be found in Table

### **Analyses**

To answer the first research question about how the use of Effective Teaching Practices (ET) differs between faculty and GSIs by demographics and course characteristics, *t*-tests and Cohen's *d* effect sizes were calculated, comparing ET scores between faculty and GSIs within demographic and course characteristics (i.e. comparing women faculty to women GSIs).

Additionally an Ordinary Least Squares (OLS) regression model was used to predict the impact of faculty, GSI, and course characteristics on ET. With ET as the independent variable, the dependent variables entered into the model were gender identity, racial/ethnic identification, disciplinary area, the number of undergraduate students faculty or GSIs teach in the school year, the number of undergraduate courses they teach, course division, course size, course meeting a general education requirement, and the course format so that we could examine these characteristics as predictors of increased ET. We ran three OLS regression models to examine the ET predicted by faculty, GSI, and course characteristics. Those three models were: the ET predicted by overall faculty, GSI, and course characteristics; the ET predicted by the demographic and course characteristics of faculty only; and the ET predicted by the demographic

and course characteristics of GSIs only. The dependent variable ET was standardized prior to entry into the regression model.

To answer the second research question about how the proportion of class time spent on various activities differs by faculty and GSIs, *t*-tests and Cohen's *d* effect sizes were used to look at the differences between the average percentage of time spent on various in-class activities between faculty and GSIs.

To answer the third research question about how the time spent on teaching-related activities differs between faculty and GSIs, *t*-tests and Cohen's *d* effect sizes were used to look at the differences between the average time spent on activities by faculty and GSIs. Additional ANOVAs with post hoc Tukey tests were used to look at the differences in time spent by full Professors, Associate Professors, Assistant Professors, full-time Lecturers/Instructors, part-time Lecturers/Instructors, and GSIs. Finally, a series of OLS regression equations were used to predict the impact of faculty, GSI, and course characteristics on time spent on teaching-related activities. With the average number of hours spent on various teaching activities as the independent variable, the dependent variables entry into the model were gender identity, racial/ethnic identification, disciplinary area, the number of undergraduate students faculty or GSIs teach in the school year, the number of undergraduate courses they teach, course division, course size, course meeting a general education requirement, and the course format so that we could examine these characteristics as predictors of increased time spent on teaching-related activities. For each teaching-related activity, we ran three OLS regression models to examine the teaching-related activity predicted by faculty, GSI and course characteristics. Those three models for each teaching-related activity were: the teaching-related activity predicted by overall faculty, GSI, and course characteristics; the teaching-related activity predicted by the demographic and

course characteristics of faculty only; and the teaching-related activity predicted by the demographic and course characteristics of GSIs only. All the dependent variables were standardized prior to entry into the regression models.

### **Limitations**

Despite these promising findings, this study has two primary limitations that may impact the generalization of this study. First, the samples included in this study were not a random sample selected from all U.S. four-year institutions. That means, rather than FSSE and FSSE-G randomly selecting participants to the surveys, institutions decided to register and administer FSSE and FSSE-G on their campus and further selected which groups of faculty or GSIs were invited to respond to the surveys. Institutions might invite faculty or GSIs who set good examples in teaching. In that circumstance, we would not know whether our data and results are representative of the level of effective teaching and time allocation of all participating faculty and GSIs generally. Second, FSSE and FSSE-G asked participants to select a specific course section they taught in the school year and report on their teaching behaviors in that course. It is possible that if their teaching practices were examined in all of the courses they teach or if they had selected a different section to respond to questions about, that our findings could be different.

### **Findings**

1. How does the use of Effective Teaching Practices differ between faculty and GSIs by demographics and course characteristics?

Faculty with differing identifying demographics, teaching different types of courses, and within different disciplinary areas consistently report increased used of Effective Teaching Practices over GSIs within those same demographics, course types, and disciplinary areas. Many of these differences have notably large effect sizes. Some of the largest differences are for

faculty and GSIs in Health Professions ( $p < .001$ ,  $d = 1.00$ ); in Physical Sciences, Mathematics, and Computer Science ( $p < .001$ ,  $d = .79$ ); teaching a combination of in-class and distance education ( $p < .01$ ,  $d = .78$ ); in Business ( $p < .001$ ,  $d = .77$ ); and those teaching a class size of 31-40 students ( $p < .001$ ,  $d = .71$ ). These results indicate that faculty in these fields, teaching combination format classes, and those teaching mid-size courses perceive that they display noticeably more effective teaching practices than graduate students in those fields or teaching those kinds of courses. Only in a few of the characteristics examined were there no differences between the ET scores of faculty and GSIs: for those in Social Service Professions and those teaching either classroom instruction at an auxiliary location or distance education. This indicates that faculty and GSIs in Social Service Professions and those teaching in distance settings feel that they display the same amount of effective teaching practices. More details about the differences in ET between faculty and GSIs can be found in Table 3.

We further examined ET with a series of regression equations to predict the impact of various demographic and course-related characteristics. Table 4 shows that a variety of faculty, GSI, and course characteristics were significant predictors of ET. We found that when examining the impact of overall faculty, GSI, and course characteristics on ET, faculty had much higher ET than GSIs ( $B = .37$ ,  $p < .001$ ). When looking into gender identity, we found that women had the highest ET ( $B = .24$ ,  $p < .001$ ). Racial and ethnic identification is also a significant indicator of ET. Asian, Native Hawaiian, or other Pacific Islanders had the highest ET ( $B = .35$ ,  $p < .001$ ), followed by Hispanic or Latinos ( $B = .26$ ,  $p < .001$ ) and Black or African Americans ( $B = .24$ ,  $p < .001$ ). White faculty or GSIs had the lowest ET. Significant variations were also found among faculty or GSIs in different disciplinary areas. Faculty or GSIs in Education had the highest ET ( $B = .19$ ,  $p < .001$ ), yet faculty or GSIs in the Engineering had the lowest ET ( $B = -.45$ ,  $p < .001$ ).

Additionally, faculty or GSIs, who taught 26 to 50 undergraduate students ( $B = .06, p < .05$ ) and taught 76 to 100 undergraduate students during the school year had the highest ET. Faculty and GSIs who taught a lower level-course had lower ET than those who taught an upper-level course ( $B = -.07, p < .001$ ). Faculty or GSIs who taught a course with a general education requirement had higher ET than the ones whose course does not have a general education requirement ( $B = .17, p < .001$ ). Additionally, course format is another significant indicator of different ET scores. Faculty or GSIs who taught a course in a distance education format had the highest ET ( $B = .27, p < .001$ ), followed by the ones who taught a course in a combination of class instruction and distance format ( $B = .21, p < .001$ ) and those who taught a course with a classroom instruction at an auxiliary location format ( $B = .18, p < .01$ ). Faculty or GSIs, who taught an on-campus course, had the lowest ET. The model is significant ( $F = 41.685, p < .001$ ) and the adjusted  $R^2$  suggests that 9.1% of the variance in Effective Teaching Practices is explained by faculty, GSI, and course characteristics included in the model.

When looking at faculty's demographic and course characteristics alone, women faculty had the highest ET ( $B = .24, p < .001$ ), whereas men faculty had the lowest. Faculty with different racial and ethnic identification also had significantly various levels of ET. Faculty, who are Asian, Native Hawaiian, or other Pacific Islander, had the highest ET ( $B = .36, p < .001$ ), followed by Hispanic or Latino ( $B = .26, p < .001$ ), and Black or African American ( $B = .24, p < .001$ ) faculty. White faculty had the lowest ET. Similar as the trend of how ET varies among overall faculty and GSIs with different disciplinary areas, faculty in the Education had the highest ET ( $B = .22, p < .001$ ), yet faculty in the Engineering had the lowest ET ( $B = -.39, p < .001$ ). Faculty who taught 76 to 100 undergraduate students during the school year had higher ET than the ones taught more than 100 undergraduate students ( $B = .05, p < .05$ ). Faculty who

taught only one undergraduate course during the school year had slightly lower ET than the ones who taught four or more courses ( $B = -.08, p < .05$ ). Faculty who taught a course with a general education requirement had higher ET than the ones whose course does not have a general education requirement ( $B = .16, p < .001$ ). Additionally, course format is another significant indicator of different ET. Faculty who taught a course in a distance education format had the highest ET ( $B = .27, p < .001$ ), followed by the ones who taught a course in a combination of class instruction and distance format ( $B = .21, p < .001$ ) and those who taught a course with a classroom instruction at an auxiliary location format ( $B = .17, p < .01$ ). Faculty who taught an on-campus course had the lowest ET. The model is significant ( $F = 32.687, p < .001$ ) and the adjusted  $R^2$  suggests that 7.7% of the variance in Effective Teaching Practices is explained by the faculty demographic and course characteristics included in the model.

Finally, among GSIs, women GSIs still had the highest ET ( $B = .21, p < .01$ ). Nevertheless, GSIs with another gender identity had the lowest ET, which is different from the previous two models that men had the lowest ET. GSIs, who are Asian, Native Hawaiian, or other Pacific Islander, had the highest ET ( $B = .35, p < .01$ ), followed by the GSIs who preferred not to respond to racial and ethnic identification ( $B = .31, p < .05$ ). No significant differences were found among GSIs with other racial/ethnic identifications, such as Black and Hispanic etc. Disciplinary area is also an important indicator of ET among GSIs. GSIs in the Engineering also had the lowest ET ( $B = -.86, p < .001$ ). GSIs in Physical Sciences, Mathematics, and Computer Science had the second lowest ET ( $B = -.84, p < .001$ ). Different from the previous two models, GSIs who taught three undergraduate courses had higher ET than the ones who taught four or more courses ( $B = .32, p < .01$ ). The general education requirement in a course is also an important indicator of ET. Similarly as in the two previous models, GSIs who taught a course

with a general education requirement had much higher ET than those whose course does not have a general education requirement ( $B = .29, p < .001$ ). The model is significant ( $F = 6.5, p < .001$ ) and the adjusted  $R^2$  suggests that 13.4% of the variance in Effective Teaching Practices is explained by the GSI demographic and course characteristics included in the model. Additional details about the results from these models can be found in Table 4.

2. How does the proportion of time spent on class activities differ between faculty and GSIs?

Overall, faculty spent the largest proportion of their class time, a little over third of class time (37.9%), on lecturing, followed by a quarter of time (24.7%) on discussion, and then 15.7% of class time on small-group activities. Most of the remaining activities took about ten percent of faculty class time: experiential activities (12.3%), assessing student learning (11.6%), independent student work (11.5%), and student presentations or performances (10.8%). Only a small amount of time, 5.6%, was spent on movies, videos, music, or other performances not involving or produced by students.

Overall, GSIs spent their class time differently. Around a third of class time (33.7%) was spent on lecture and less than a quarter on discussion (23.3%) and small-group activities (20.5%). Experiential activities took 15% of GSIs' class time. Less than 10% of class time was spent on independent student work (9.5%); assessing student learning (8.7%); student presentations or performances (7.8%); and movies, videos, music, or other performances not involving or produced by students (5.0%).

The biggest differences in how faculty and GSI's spend their time was that GSI's spend more time on small group activities ( $p < .001, d = -.29$ ), faculty spend more class time on assessing student learning ( $p < .001, d = .22$ ), and faculty spend more time on student presentations or performances ( $p < .001, d = .20$ ). Less notable were that faculty spend more



time on lecturing ( $p < .001$ ,  $d = .17$ ), GSIs spend more time on experiential activities ( $p < .001$ ,  $d = -.14$ ), and faculty spend more time on independent student work ( $p < .001$ ,  $d = .11$ ).

Differences between faculty and GSI time spent on discussion and movies, videos, music, or other performances not involving or produced by students were minimal. More details about the differences in how faculty and GSIs structure their class time can be found in Table 5.

3. How does the time spent on teaching-related activities differ between faculty and GSIs with different demographic and course characteristics?

In general, faculty spend the most time teaching class sessions (9.01 hours per week) followed by preparing class sessions (8.03), and grading assignments and exams (6.77). They spend around four hours per week on the remaining activities studied: course administration (4.82), meeting with students outside of class (4.24), and working to improve their teaching (4.22). Understandably, GSIs spend less time overall on these activities as they are more likely to be employed part-time. They spend around four hours per week on grading assignments and exams (4.43), preparing class sessions (4.37), and teaching class sessions (4.19). They spend fewer hours, around two to three, per week on course administration (2.83), meeting with students outside of class (2.46), and working to improve their teaching (2.10). All differences between these activities for faculty and GSIs were significant ( $p < .001$ ). Additional information about the differences between the average amounts of time spent on teaching-related activities by faculty and GSIs can be found in Table 6.

As it could be expected that GSIs would spend less time on teaching activities, we additionally examined the differences in time spent by faculty at different academic ranks, including part-time Instructors/Lecturers. Assistant Professors spend the most time (9.0 hours) preparing for class, followed by full-time Lecturers/Instructors (8.5 hours), full Professors (8.0)

and Associate Professors (8.0), part-time Lecturers/Instructors (6.5), and GSIs (4.4) ( $p < .05$ ). Full-time Lecturers/Instructors spend the most time teaching classes (10.3), followed by Assistant Professors (9.8), Associate Professors (9.4), full Professors (9.0), part-time Lecturers/Instructors (6.5), and GSIs (4.2) ( $p < .05$ ). Full-time Lecturers/Instructors spend the most time grading assignments and exams (7.8 hours); followed by Assistant Professors (6.9), Associate Professors (6.8), and full Professors (6.7); part-time Lecturers/Instructors (6.2), and GSIs (4.4) ( $p < .05$ ). Full-time Lecturers/Instructors (4.7 hours) and Assistant Professors (4.6) spent the most time meeting with students outside of class; Assistant Professors spent as much such time as Associate Professors (4.4) and full Professors (4.3) followed by part-time Lecturers/Instructors (2.8), and GSIs (2.5) ( $p < .05$ ). Full-time Lecturers/Instructors (5.3 hours) and Assistant Professors (5.0) spent the most time on course administration; Assistant Professors spent as much such time as Associate Professors (4.9) and full Professors (4.8), followed by part-time Lecturers/Instructors (4.0), and GSIs (2.8) ( $p < .05$ ). Full-time Lecturers/Instructors (4.5), full Professors (4.2), and Assistant Professors (4.2) spent the most time working to improve their teaching; full Professors and Assistant Professors spent as much time as part-time Lecturers/Instructors (4.1) and Associate Professors (4.0), followed by GSIs (2.1) ( $p < .05$ ). Additional information about the differences in average number of hours spent on teaching-related activities by academic rank can be found in Tables 7-12.

We further examined time spent on teaching-related activities with a series of regression equations to predict the impact of various demographic and course-related characteristics. As we introduced in the Methods section, we examined the time that faculty or GSIs spent on seven teaching-related activities: preparing class sessions, teaching class sessions, grading assignment

and exams, meeting with students outside of class, course administration, and working to improve teaching.

**Preparing Class Sessions.** When looking at only faculty demographic and course characteristics, racial and ethnic identification, disciplinary area, the number of undergraduate students taught in the school year, the number of undergraduate classes they teach, course division, the general education requirement, and course format are all significant indicators of the time faculty spend on preparing class sessions. Faculty who are Asian, Native Hawaiian, or other Pacific Islander spend the largest proportion of time on preparing course session ( $B = .30, p < .001$ ), whereas White faculty spend the least amount of time on preparing course sessions. Faculty in Health Professions spend the largest proportion of time on preparing class sessions ( $B = .11, p < .01$ ), and faculty in Communications, Media, and Public Relations spend the least time ( $B = -.13, p < .01$ ). Faculty who taught over 100 undergraduate students in the school year spend the largest proportion of time on preparing class sessions, whereas faculty who taught 26 to 50 students spend the least time ( $B = -.18, p < .001$ ). Additionally, faculty who taught four or more undergraduate courses, who taught upper-division courses, who had more than 100 students in their course ( $B = .03, p < .001$ ), or whose courses had a general education requirement ( $B = .13, p < .001$ ), spend the largest proportion of time on preparing class session. Faculty who taught a course in a combination of class instruction and distance format spend the largest proportion of time on class preparation ( $B = .07, p < .05$ ). The model is significant ( $F = 20.095, p < .001$ ) and adjusted  $R^2$  suggests that 4.8% of the variance in the time spent on preparing class sessions can be explained by this model.

When looking at GSI demographic and course characteristics only, the indicators of preparing for class sessions are very different than the ones of faculty. Only disciplinary area and

course division are significant indicators of time spent preparing class session for GSIs. GSIs in Engineering spend the least time on preparing class sessions ( $B = -.29, p < .001$ ). Same as the trend among faculty, GSIs who taught a course in upper division spend the largest proportion of time on preparing class sessions. The model is significant ( $F = 2.520, p < .001$ ) and adjusted  $R^2$  suggests that 4.1% of the variance in the time spent on preparing class sessions can be explained by this model.

The overall model with faculty, GSI, and course characteristics tells us that faculty would spend more time on preparing class sessions than GSIs ( $B = .56, p < .001$ ). The trend of other indicators in the overall model is very similar as the ones in the model with only faculty and course characteristics. However, gender identity is a significant indicator for the time faculty or GSIs spend on preparing course sessions in the overall model. Faculty or GSIs who preferred not to respond to gender identity ( $B = .09, p < .05$ ) and those who are women ( $B = .03, p < .05$ ) spend more time on preparing class sessions than men. The model is significant ( $F = 36.298, p < .001$ ) and adjusted  $R^2$  suggests that 8.0% of the variance in time spent on preparing class sessions can be explained by this model. Additional information about time spent on preparing class sessions can be found in Table 13.

**Teaching Class Sessions.** When looking at only faculty demographic and course characteristics, racial and ethnic identification, disciplinary area, the number of undergraduate students taught in the school year, the number of undergraduate classes they teach are significant indicators of the time faculty spend on preparing class sessions. For example, faculty who are Black or African American spend the largest proportion of time on teaching class sessions ( $B = .28, p < .001$ ), whereas White faculty spend the least time. Faculty in the Social Service Professions spend the least time on teaching class sessions among faculty in all other disciplinary

areas ( $B = -.36, p < .001$ ). Faculty who taught over 100 undergraduate students in the school year, who taught over four undergraduate courses, and who taught an “other” division course ( $B = .26, p < .001$ ), spend the largest proportion of time on teaching class sessions. Faculty whose course size was 31 to 40 ( $B = -.10, p < .001$ ) and whose course was taught through distance education ( $B = -.53, p < .001$ ) spend the least amount of time on teaching class sessions. The model is significant ( $F = 83.995, p < .001$ ) and adjusted  $R^2$  suggests that 18% of the variance in the time spent on teaching class sessions can be explained by this model.

When looking at only GSI demographic and course characteristics, only disciplinary areas and the number of undergraduate course are significant indicators of the time spent on teaching class sessions. GSIs in Physical Sciences, Mathematics, and Computer Science spend the largest proportion of time on teaching class sessions ( $B = .47, p < .001$ ), whereas GSIs in Business spend the least time ( $B = -.12, p < .01$ ). This finding tells us due to the nature in different disciplines, the amount of courses that need GSIs might be different. STEM disciplines may need more GSIs to teach lab courses or to provide tutorial sessions to students, whereas Business may prefer having more experienced faculty teach courses. The model is significant ( $F = 5.871, p < .001$ ) and adjusted  $R^2$  suggests that 12.1% of the variance in the time spent on teaching class sessions can be explained by this model. Additional information about the time spent on teaching class sessions can be found in Table 14.

**Grading Assignment and Exams.** It is worth noting that gender identity, racial/ethnic identification, disciplinary areas, the number of undergraduate students taught in the school year, the number of undergraduate courses, division, course size, the general education requirement, and course format are all significant indicators for the time spent on grading assignment and exams among faculty. The model is significant ( $F = 49.212, p < .001$ ) and adjusted  $R^2$  suggests

that 11.4% of the variance in the time spent on teaching class sessions can be explained by this model.

Nevertheless, only racial/ethnic identification, disciplinary area, and course size were significant predictors of time spent on grading assignment and exams among GSIs. For example, GSIs who did not respond to their racial and ethnic identification spend the largest proportion of time on grading assignments and exams. GSIs in Social Science spend less time on grading assignments and exams than those in Arts and Humanities ( $B = -.21, p < .01$ ). GSIs who taught a course with 31 to 40 students spend less time on grading assignments than GSIs who taught 20 or fewer students ( $B = -.06, p < .01$ ). The model is significant ( $F = 1.724, p < .01$ ) and adjusted  $R^2$  suggests that 2.0% of the variance in the time spent on teaching class sessions can be explained by this model. Additional information about the time spent on teaching class sessions can be found in Table 15.

**Meeting with Students Outside of Class.** As Table 16 shows, except for the general education requirement, all other demographic and course characteristics included in the model were significant indicators of variation in the time spent on meeting with students outside of class for both the faculty model and the overall model. However, among GSIs, only disciplinary area and course size indicate some variance in the time spent on meeting with students outside of class. Both the faculty model and GSI model were significant.

**Course Administration.** The time spent on course administration varies greatly among faculty in all the demographic and course characteristics entry into the model. Specifically, faculty who reported another gender identity ( $B = .64, p < .05$ ), who are Black or African American ( $B = .41, p < .001$ ), who are in Education ( $B = .25, p < .001$ ), who taught more than 100 students in their course ( $B = .46, p < .001$ ), or who taught a course in a combination of class

instruction and distance format ( $B = .45, p < .001$ ) spend the largest proportion of time on course administration. Among GSIs, great variations in the time spent on course administration was predicted by course format. GSIs who taught a course in a distance education format spend the largest proportion of time on course administration ( $B = .81, p < .001$ ). Among both faculty and GSIs, those who taught a course with a general education requirement spend more time on course administration. Additional information about the time spent on teaching class sessions can be found in Table 17.

**Working to Improve Teaching.** Except for the number of undergraduate students taught in the school year, all other demographic and course characteristics entered into the model were indicators of the variations in the time spent on working to improve teaching for faculty, such as gender identity, racial/ethnic identification, disciplinary area, etc. GSIs, who are Black or African American ( $B = .25, p < .01$ ), Hispanic or Latino ( $B = .22, p < .05$ ), who are in Education ( $B = .14, p < .05$ ), or who had a course size of 41 to 50 ( $B = .13, p < .05$ ) spend the largest proportion of time on working to improve teaching. Additional information about the time spent on teaching class sessions can be found in Table 18.

### **Significance, Discussion, and Recommendations**

This study is significant for faculty and GSIs to establish mutual understanding about each other's teaching patterns, which helps them to learn from each other in the process of enhancing teaching and supporting college students' academic achievement. In particular, this study is important for graduate schools, faculty advisors, and academic support staff to understand the instructional behaviors of GSIs and their efforts and contribution in teaching undergraduate courses. Generally, faculty utilize more effective teaching practices than GSIs across demographics, course types, and disciplines, which suggests that GSIs have more space to

improve their effective teaching practices. Meanwhile, this finding suggests that graduate schools, faculty advisors, and academic support staff should provide more support and resources in facilitating GSIs' effective teaching practices. We found that in particular fields and in particular teaching situations, GSIs feel particularly less effective with their teaching practices giving ample evidence for places in which teaching development staff and mentoring faculty can help provide assistance to developing GSIs.

This study found that both faculty and GSIs spent the largest proportion of class time on lecturing and the second largest proportion of time on discussion. This is in accord with what Thielens (1987) and Lammers and Murphy (2002) found in their studies. Interestingly, faculty spent a higher proportion of time on lecture and discussion and GSIs spent more time on small-group activities. More communication and exchanging of ideas are recommended between faculty and GSIs on course design and evaluation. It is possible that the nature of the courses that GSIs teach, for example laboratory or supplementary sessions which may require more small-group activities and less lecture and discussion, may not be training GSIs for the types of courses they may be teaching as faculty. Further thought should be given to ensuring that GSIs have experience in teaching in a variety of contexts with a variety of teaching methods to best prepare them as future faculty. We also believe that there is not an ideal or perfect time allocation for in-class activities, both faculty and GSIs should explore the most appropriate time allocation that fits the subject matter and helps students to achieve learning goals.

Our results tell us GSIs generally had lower levels of Effective Teaching Practices (ET) than faculty. This means that GSIs are in the developmental stage in their teaching. Knowing their differences in ET with faculty will help GSIs set high goals in their teaching and learn more from faculty. Meanwhile, this finding tells us that GSIs need more support and resources to



improve their teaching while they are in graduate school, which will better prepare them to be future faculty.

In terms of time commitment on teaching-related activities, in addition to full-time Lecturers and Instructors who spent the most time on teaching-related activities, Assistant Professors spend the second largest portion time in almost all categories of teaching-related activities. This suggests that in the process of pursuing tenure, Assistant Professors place teaching in a prime place and devote fairly large amounts of time on teaching. Although GSIs spend less time than full-time and part-time faculty, graduate schools can utilize the findings of this study to measure GSIs' time spent on teaching-related activities and compare it with school expectations on time commitment. Based on our results about the time commitment on teaching-related activities, the time commitment of GSIs usually varies among students with different racial and ethnic identifications, disciplinary areas, course sizes, and course formats. With this information, graduate schools will be able to better support GSIs in teaching through adjusting expectations and work load. Furthermore, graduate schools can also explore the reasons that a certain group of GSIs had comparatively less amount of time committed to teaching-related activities, such as the nature of the disciplinary area, the course design, and the support those GSIs need, etc. GSIs additionally should be helped to understand the teaching time commitments required of faculty so that their expectations can more easily transfer in their future careers as faculty. Particularly, when supporting GSIs with professional development and teaching, graduate schools should understand that what GSIs need in enhancing teaching may be different from what faculty need. Therefore, different attention, care, and support should be customized for and provided to GSIs in order to help their improvement in effective teaching practices, in-class time allocation, and time management.

### **Conclusion**

Regardless of whether or not students are taught by faculty or graduate student instructors (GSIs), employing effective teaching practices is beneficial to promote student learning outcomes. GSIs generally had lower levels of effective teaching practices than faculty. However, GSIs have more potential to enhance their teaching as they learn more from faculty role models and practice more during graduate school. Thus, graduate schools and faculty advisors should provide more care and support to GSIs in improving their teaching practices. Additionally, understanding the different in-class time allocations of faculty and GSIs will help GSIs to learn the nature of the discipline and help GSIs to explore the most appropriate time allocation of in-class activities for their course sessions. Finally, understanding the differences in time commitment between faculty and GSIs on teaching-related activities will help GSIs gain a good understanding about the time commitment of faculty positions, which will assist GSIs to better prepare themselves for their future career as faculty.

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## Appendix.

Table 1.

## Component Items in the Effective Teaching Practices (ET) Scale

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In your undergraduate courses, to what extent do you do the following?

Response options: Very much=60, Quite a bit=40, Some=20, Very little=0

- a. Clearly explain course goals and requirements
  - b. Teach course sessions in an organized way
  - c. Use examples or illustrations to explain difficult points
  - d. Use a variety of teaching techniques to accommodate diversity in student learning styles
  - e. Review and summarize material for students
  - f. Provide standards for satisfactory completion of assignments (rubrics, detailed outlines, etc.)
  - g. Provide feedback to students on drafts or works in progress
  - h. Provide prompt and detailed feedback on tests or completed assignments
- 

Note: FSSE 2015  $\alpha = .761$ ; FSSE-G 2014-2015  $\alpha = .813$

Table 2.  
Select Sample Characteristics

		Faculty (%)	GSI (%)
Gender identity	Man	46.6	42.8
	Woman	47.9	53.1
Racial/Ethnic identification	Asian, Native Hawaiian, or other Pacific Islander	5.6	11.5
	Black or African American	4.9	2.7
	Hispanic or Latino	3.1	3.0
	White	72.2	70.5
	American Indian, Alaska Native, Other, Multiracial	4.5	6.3
Disciplinary area	Arts & Humanities	24.5	29.5
	Biological Sciences, Agriculture, & Natural Resources	6.9	8.3
	Physical Sciences, Mathematics, & Computer Science	11.4	17.7
	Social Sciences	12.4	15.0
	Business	9.7	2.2
	Communications, Media, & Public Relations	4.0	5.3
	Education	8.6	6.8
	Engineering	3.6	5.7
	Health Professions	9.3	4.9
	Social Service Professions	3.4	1.4
	Other disciplines	6.2	3.2
	Number of undergraduate students taught in school year	25 or less	7.7
26 - 50		14.4	26.7
51 -75		14.4	19.7
76 -100		16.9	15.5
100 or more		46.5	27.2
The number of undergraduate courses	1	6.6	23.9
	2	12.8	49.0
	3	11.5	13.5
	4 or more	68.9	13.3
Division	Lower Division	41.1	53.6
	Upper Division	54.6	41.1
Course size	20 or fewer	33.1	28.2
	21-30	32.2	31.3
	31-40	15.1	10.1
	41-50	7.4	8.7
	51-100	8.6	14.2
	More than 100	3.6	7.5
General education requirement	No	50.4	28.5
	Yes	49.6	71.5
Course format	Classroom instruction on-campus	80.6	96.1
	Classroom instruction at an auxiliary location	2.0	< 1
	Distance education	7.9	1.0
	Combination of class instruction and distance	9.5	2.5



Table 3.  
Differences in Effective Teaching Practices (ET) between Faculty and GSIs

		Faculty		GSIs		Sig.	<i>d</i>	
		Mean	SD	Mean	SD			
Gender identity	Man	47.66	8.82	43.21	10.47	***	.50	
	Woman	50.41	7.98	46.43	10.27	***	.48	
Racial/Ethnic identification	Asian, Native Hawaiian, or other Pacific Islander	50.95	8.54	45.79	11.10	***	.57	
	Black or African American	51.32	7.98	45.59	12.26	**	.69	
	Hispanic or Latino	51.36	8.23	46.51	10.33	**	.57	
	White	48.62	8.48	44.68	10.16	***	.46	
	American Indian, Alaska Native, Other, Multiracial	49.81	8.77	44.30	11.83	***	.60	
Disciplinary area	Arts & Humanities	49.88	8.26	48.48	8.98	**	.17	
	Biological Sciences, Agriculture, & Natural Resources	46.90	8.60	42.69	10.83	***	.47	
	Physical Sciences, Mathematics, & Computer Science	46.84	8.89	39.56	10.86	***	.79	
	Social Sciences	48.34	8.51	44.58	10.32	***	.43	
	Business	49.13	8.46	42.57	10.76	***	.77	
	Communications, Media, & Public Relations	50.30	7.87	48.14	8.45	*	.27	
	Education	51.87	7.92	49.10	9.12	**	.35	
	Engineering	46.01	9.07	40.91	11.34	***	.54	
	Health Professions	50.42	7.96	42.29	10.90	***	1.00	
	Social Service Professions	50.51	8.17	48.17	7.89		.29	
	Other disciplines	49.08	9.08	45.60	9.62	**	.38	
	Number of undergraduate students taught in school year	25 or less	49.32	8.83	45.06	10.03	***	.47
		26 - 50	49.59	8.65	46.25	10.54	***	.37
51 -75		49.24	8.46	46.02	9.67	***	.37	
76 -100		49.26	8.54	45.11	9.78	***	.48	
100 or more		48.87	8.48	43.07	11.07	***	.67	
The number of undergraduate courses	1	48.68	9.05	43.81	10.59	***	.51	
	2	49.03	8.81	44.92	10.38	***	.44	
	3	49.02	8.37	47.82	9.12	*	.14	
	4 or more	49.20	8.47	44.68	10.99	***	.53	
Division	Lower Division	48.88	8.59	45.15	10.44	***	.42	
	Upper Division	49.27	8.53	44.79	10.58	***	.51	
Course size	20 or fewer	49.22	8.61	45.55	10.60	***	.42	
	21-30	49.39	8.52	46.49	9.76	***	.34	
	31-40	49.18	8.46	43.05	11.08	***	.71	
	41-50	48.78	8.55	45.48	9.53	***	.38	
	51-100	48.41	8.42	42.55	10.90	***	.66	
	More than 100	48.28	9.12	42.38	11.90	***	.61	
General education requirement	No	48.53	8.63	43.23	10.60	***	.61	
	Yes	49.75	8.46	46.52	10.17	***	.37	
Course format	Classroom instruction on-campus	48.63	8.61	44.90	10.49	***	.42	
	Classroom instruction at an auxiliary location	51.10	7.92	50.31	8.71		.10	
	Distance education	51.56	8.11	46.39	11.67		.63	
	Combination of class instruction and distance	51.09	8.00	44.74	12.33	**	.78	

Note: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Table 4.

*Regression Results of Effective Teaching Practices and Faculty/GSI Characteristics*

	<i>Effective Teaching Practices<sup>a</sup></i>								
	<i>Overall</i>			<i>Faculty only</i>			<i>GSIs only</i>		
	<i>B</i>	<i>SE of B</i>	<i>Sig.</i>	<i>B</i>	<i>SE of B</i>	<i>Sig.</i>	<i>B</i>	<i>SE of B</i>	<i>Sig.</i>
<b>Student Characteristics</b>									
(Constant)	-.55	.04	***	-.18	.03	***	-.64	.15	***
Faculty	.37	.03	***	--	--	--	--	--	--
<b>Gender identity (Man = reference group)</b>									
Woman	.24	.02	***	.24	.02	***	.21	.07	**
Another gender identity	.01	.19		.04	.27		-.09	.30	
Prefer to not respond	.16	.04	***	.17	.04	***	-.04	.21	
<b>Racial/Ethnic identification (White = reference group)</b>									
Asian, Native Hawaiian, or Other Pacific Islander	.35	.03	***	.36	.04	***	.35	.10	**
Black or African American	.24	.04	***	.26	.04	***	.14	.18	
Hispanic or Latino	.26	.04	***	.27	.05	***	.13	.19	
American Indian or Alaska Native, Other, and Multiracial	.09	.04	*	.10	.04	**	.04	.12	
I prefer not to respond	.11	.03	**	.09	.03	**	.31	.15	*
<b>Disciplinary area (Arts and humanities = reference group)</b>									
Biological Sciences, Agriculture, & Natural Resources	-.31	.03	***	-.27	.03	***	-.62	.13	***
Physical Sciences, Mathematics, & Computer Science	-.36	.03	***	-.30	.03	***	-.84	.10	***
Social Sciences	-.21	.03	***	-.19	.03	***	-.36	.10	***
Business	-.10	.03	**	-.08	.03	*	-.36	.24	
Communications, Media, & Public Relations	.06	.04		.06	.04		.05	.14	
Education	.19	.03	***	.22	.03	***	.05	.14	
Engineering	-.45	.04	***	-.39	.05	***	-.86	.15	***
Health professions	-.03	.03		.01	.03		-.51	.17	**
Social Service Professions	-.02	.05		-.01	.05		.14	.24	
All Other disciplines	-.15	.04	***	-.13	.04	***	-.27	.18	
<b>Number of undergraduate students taught in school year (100 or more = reference group)</b>									
Less than 25	.00	.04		-.01	.04		.03	.15	
26-50	.06	.03	*	.04	.03		.08	.11	
51-75	.04	.03		.03	.03		.09	.11	
76-100	.06	.02	*	.05	.02	*	.17	.10	
<b>The number of undergraduate courses (4 or more = reference group)</b>									
0	-.04	.18		-.18	.19		.88	.56	
1	-.08	.04	*	-.08	.04	*	.14	.12	
2	-.04	.03		-.04	.03		.14	.10	
3	-.01	.03		-.03	.03		.32	.12	**
<b>Division (Upper division = reference group)</b>									
Lower Division	-.07	.02	***	-.07	.02	***	-.08	.07	
Other Division	-.02	.04		.00	.04		-.19	.14	
<b>Course size (20 or fewer = reference group)</b>									
21-30	.05	.02	*	.03	.02		.14	.08	
31-40	.03	.03		.03	.03		-.11	.12	
41-50	.03	.03		.00	.03		.14	.13	
51-100	.00	.03		.00	.03		-.06	.12	
More than 100	.00	.05		.03	.05		-.12	.15	
<b>General education requirement (No = reference group)</b>									
	.17	.02	***	.16	.02	***	.29	.07	***
<b>Course format (Classroom instruction on-campus = reference group)</b>									
Classroom instruction at an auxiliary location	.18	.06	**	.17	.06	**	.61	.42	
Distance education	.27	.03	***	.27	.03	***	.20	.27	
Combination of class instruction and distance	.21	.03	***	.21	.03	***	.06	.20	
<i>R</i>	.306			.282			.398		
Adjusted <i>R</i> <sup>2</sup>	.091			.077			.134		
<i>F</i>	41.685***			32.687***			6.5***		

Note. \* p&lt;.05, \*\* p&lt;.01, \*\*\*p&lt;.001, two-tailed.

a Dependent variable was standardized prior to entry into the model.

Table 5.  
Differences in the Average Percentage of Time Spent on In-Class Activities

	Faculty		GSIs		Sig.	<i>d</i>
	Mean Percentage	SD	Mean Percentage	SD		
Lecture	37.90	24.62	33.67	24.46	***	.17
Discussion	24.65	18.73	23.31	19.31	**	.07
Small-group activities	15.67	16.35	20.53	21.26	***	-.29
Student presentations or performances	10.80	15.05	7.78	12.99	***	.20
Independent student work	11.53	17.64	9.54	16.32	***	.11
Movies, videos, music, or other performances not involving or produced by students	5.62	9.77	4.99	9.85	*	.06
Assessing student learning	11.64	13.16	8.74	11.07	***	.22
Experiential activities	12.26	19.33	15.11	25.53	***	-.14

Note: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Table 6.  
Differences in the Average Number of Hours Spent on Teaching-Related Activities

	Faculty		GSIs		Sig.	<i>d</i>
	Mean Hours	SD	Mean Hours	SD		
Preparing class sessions	8.03	5.26	4.37	3.40	***	.72
Teaching class sessions	9.01	4.78	4.19	2.83	***	1.04
Grading assignment and exams	6.77	4.80	4.43	3.48	***	.50
Meeting with students outside of class	4.24	3.49	2.46	1.57	***	.53
Course administration	4.82	3.86	2.83	1.96	***	.54
Working to improve your teaching	4.22	3.98	2.10	2.26	***	.55

Note: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Table 7.  
Differences in the Average Number of Hours Spent on Preparing Class Sessions by Academic Rank

			Mean diff.	SE	Sig.	LB	UB
Preparing class sessions	Full Professor	Associate Professor	0.02	0.12		-0.32	0.36
		Assistant Professor	-0.96	0.12	***	-1.30	-0.62
		FT Lecturer/Instructor	-0.52	0.15	**	-0.94	-0.09
		PT Lecturer/Instructor	1.54	0.14	***	1.12	1.95
	Associate Professor	GSI	3.63	0.15	***	3.22	4.05
		Full Professor	-0.02	0.12		-0.36	0.32
		Assistant Professor	-0.98	0.12	***	-1.33	-0.64
		FT Lecturer/Instructor	-0.54	0.15	**	-0.97	-0.11
	Assistant Professor	PT Lecturer/Instructor	1.51	0.15	***	1.10	1.93
		GSI	3.61	0.15	***	3.19	4.03
		Full Professor	0.96	0.12	***	0.62	1.30
		Associate Professor	0.98	0.12	***	0.64	1.33
	FT Lecturer/Instructor	FT Lecturer/Instructor	0.45	0.15	*	0.02	0.87
		PT Lecturer/Instructor	2.50	0.15	***	2.08	2.91
		GSI	4.60	0.15	***	4.18	5.01
		Full Professor	0.52	0.15	**	0.09	0.94
	PT Lecturer/Instructor	Associate Professor	0.54	0.15	**	0.11	0.97
		Assistant Professor	-0.45	0.15	*	-0.87	-0.02
		PT Lecturer/Instructor	2.05	0.17	***	1.57	2.54
		GSI	4.15	0.17	***	3.66	4.64
	GSI	Full Professor	-1.54	0.14	***	-1.95	-1.12
		Associate Professor	-1.51	0.15	***	-1.93	-1.10
		Assistant Professor	-2.50	0.15	***	-2.91	-2.08
		FT Lecturer/Instructor	-2.05	0.17	***	-2.54	-1.57
	GSI	GSI	2.10	0.17	***	1.62	2.58
		Full Professor	-3.63	0.15	***	-4.05	-3.22
		Associate Professor	-3.61	0.15	***	-4.03	-3.19
		Assistant Professor	-4.60	0.15	***	-5.01	-4.18
GSI	FT Lecturer/Instructor	-4.15	0.17	***	-4.64	-3.66	
	PT Lecturer/Instructor	-2.10	0.17	***	-2.58	-1.62	

Note: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Table 8.  
Differences in the Average Number of Hours Spent on Teaching Class Sessions by Academic Rank

			Mean diff.	SE	Sig.	LB	UB
Teaching class sessions	Full	Associate Professor	-0.37	0.11	**	-0.67	-0.07
	Professor	Assistant Professor	-0.78	0.11	***	-1.08	-0.48
		FT Lecturer/Instructor	-1.29	0.13	***	-1.66	-0.92
		PT Lecturer/Instructor	2.50	0.13	***	2.13	2.86
		GSI	4.82	0.13	***	4.45	5.18
	Associate Professor	Full Professor	0.37	0.11	**	0.07	0.67
	Professor	Assistant Professor	-0.41	0.11	**	-0.71	-0.11
		FT Lecturer/Instructor	-0.92	0.13	***	-1.30	-0.54
		PT Lecturer/Instructor	2.87	0.13	***	2.50	3.24
		GSI	5.19	0.13	***	4.82	5.56
	Assistant Professor	Full Professor	0.78	0.11	***	0.48	1.08
	Professor	Associate Professor	0.41	0.11	**	0.11	0.71
		FT Lecturer/Instructor	-0.51	0.13	**	-0.89	-0.14
		PT Lecturer/Instructor	3.28	0.13	***	2.91	3.64
		GSI	5.60	0.13	***	5.23	5.96
	FT Lecturer/Instructor	Full Professor	1.29	0.13	***	0.92	1.66
		Associate Professor	0.92	0.13	***	0.54	1.30
		Assistant Professor	0.51	0.13	**	0.14	0.89
		PT Lecturer/Instructor	3.79	0.15	***	3.36	4.22
		GSI	6.11	0.15	***	5.68	6.54
	PT Lecturer/Instructor	Full Professor	-2.50	0.13	***	-2.86	-2.13
		Associate Professor	-2.87	0.13	***	-3.24	-2.50
		Assistant Professor	-3.28	0.13	***	-3.64	-2.91
		FT Lecturer/Instructor	-3.79	0.15	***	-4.22	-3.36
		GSI	2.32	0.15	***	1.90	2.74
	GSI	Full Professor	-4.82	0.13	***	-5.18	-4.45
		Associate Professor	-5.19	0.13	***	-5.56	-4.82
		Assistant Professor	-5.60	0.13	***	-5.96	-5.23
		FT Lecturer/Instructor	-6.11	0.15	***	-6.54	-5.68
		PT Lecturer/Instructor	-2.32	0.15	***	-2.74	-1.90

Note: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Table 9.  
Differences in the Average Number of Hours Spent on Grading Assignments and Exams by Academic Rank

			Mean diff.	SE	Sig.	LB	UB
Grading assignments and exams	Full Professor	Associate Professor	-0.08	0.11		-0.40	0.24
		Assistant Professor	-0.23	0.11		-0.55	0.08
		FT Lecturer/Instructor	-1.15	0.14	***	-1.54	-0.76
		PT Lecturer/Instructor	0.51	0.13	**	0.13	0.90
	Associate Professor	GSI	2.25	0.13	***	1.86	2.63
		Full Professor	0.08	0.11		-0.24	0.40
		Assistant Professor	-0.15	0.11		-0.47	0.16
		FT Lecturer/Instructor	-1.07	0.14	***	-1.47	-0.68
	Assistant Professor	PT Lecturer/Instructor	0.59	0.14	***	0.21	0.98
		GSI	2.33	0.14	***	1.94	2.71
		Full Professor	0.23	0.11		-0.08	0.55
		Associate Professor	0.15	0.11		-0.16	0.47
	FT Lecturer/Instructor	FT Lecturer/Instructor	-0.92	0.14	***	-1.31	-0.52
		PT Lecturer/Instructor	0.75	0.13	***	0.36	1.13
		GSI	2.48	0.13	***	2.10	2.86
		Full Professor	1.15	0.14	***	0.76	1.54
	PT Lecturer/Instructor	Associate Professor	1.07	0.14	***	0.68	1.47
		Assistant Professor	0.92	0.14	***	0.52	1.31
		PT Lecturer/Instructor	1.66	0.16	***	1.21	2.11
		GSI	3.40	0.16	***	2.95	3.85
	GSI	Full Professor	-0.51	0.13	**	-0.90	-0.13
		Associate Professor	-0.59	0.14	***	-0.98	-0.21
		Assistant Professor	-0.75	0.13	***	-1.13	-0.36
		FT Lecturer/Instructor	-1.66	0.16	***	-2.11	-1.21
		GSI	1.73	0.15	***	1.29	2.17
		Full Professor	-2.25	0.13	***	-2.63	-1.86
		Associate Professor	-2.33	0.14	***	-2.71	-1.94
		Assistant Professor	-2.48	0.13	***	-2.86	-2.10
	FT Lecturer/Instructor	-3.40	0.16	***	-3.85	-2.95	
	PT Lecturer/Instructor	-1.73	0.15	***	-2.17	-1.29	

Note: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Table 10.

Differences in the Average Number of Hours Spent on Meeting with Students Outside of Class by Academic Rank

			Mean diff.	SE	Sig.	LB	UB
Meeting with students outside of class	Full Professor	Associate Professor	-0.08	0.08		-0.31	0.14
		Assistant Professor	-0.27	0.08	**	-0.49	-0.05
		FT Lecturer/Instructor	-0.45	0.10	***	-0.72	-0.17
		PT Lecturer/Instructor	1.48	0.09	***	1.21	1.75
	Associate Professor	GSI	1.84	0.09	***	1.57	2.10
		Full Professor	0.08	0.08		-0.14	0.31
		Assistant Professor	-0.19	0.08		-0.41	0.04
		FT Lecturer/Instructor	-0.36	0.10	**	-0.64	-0.08
	Assistant Professor	PT Lecturer/Instructor	1.56	0.10	***	1.29	1.83
		GSI	1.92	0.10	***	1.65	2.19
		Full Professor	0.27	0.08	**	0.05	0.49
		Associate Professor	0.19	0.08		-0.04	0.41
	FT Lecturer/Instructor	FT Lecturer/Instructor	-0.17	0.10		-0.45	0.10
		PT Lecturer/Instructor	1.75	0.09	***	1.48	2.02
		GSI	2.11	0.09	***	1.84	2.38
		Full Professor	0.45	0.10	***	0.17	0.72
	PT Lecturer/Instructor	Associate Professor	0.36	0.10	**	0.08	0.64
		Assistant Professor	0.17	0.10		-0.10	0.45
		PT Lecturer/Instructor	1.92	0.11	***	1.60	2.24
		GSI	2.28	0.11	***	1.96	2.60
	GSI	Full Professor	-1.48	0.09	***	-1.75	-1.21
		Associate Professor	-1.56	0.10	***	-1.83	-1.29
		Assistant Professor	-1.75	0.09	***	-2.02	-1.48
		FT Lecturer/Instructor	-1.92	0.11	***	-2.24	-1.60
	GSI	GSI	0.36	0.11	*	0.05	0.67
		Full Professor	-1.84	0.09	***	-2.10	-1.57
		Associate Professor	-1.92	0.10	***	-2.19	-1.65
		Assistant Professor	-2.11	0.09	***	-2.38	-1.84
GSI	FT Lecturer/Instructor	-2.28	0.11	***	-2.60	-1.96	
	PT Lecturer/Instructor	-0.36	0.11	*	-0.67	-0.05	

Note: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$



Table 11.  
Differences in the Average Number of Hours Spent on Course Administration by Academic Rank

			Mean diff.	SE	Sig.	LB	UB
Course administration	Full Professor	Associate Professor	-0.10	0.09		-0.35	0.15
		Assistant Professor	-0.25	0.09		-0.50	0.00
		FT Lecturer/Instructor	-0.56	0.11	***	-0.87	-0.24
		PT Lecturer/Instructor	0.77	0.11	***	0.47	1.07
	Associate Professor	GSI	1.97	0.11	***	1.66	2.27
		Full Professor	0.10	0.09		-0.15	0.35
		Assistant Professor	-0.15	0.09		-0.40	0.10
		FT Lecturer/Instructor	-0.45	0.11	***	-0.77	-0.14
	Assistant Professor	PT Lecturer/Instructor	0.87	0.11	***	0.56	1.18
		GSI	2.07	0.11	***	1.76	2.37
		Full Professor	0.25	0.09		0.00	0.50
		Associate Professor	0.15	0.09		-0.10	0.40
	FT Lecturer/Instructor	FT Lecturer/Instructor	-0.31	0.11		-0.62	0.00
		PT Lecturer/Instructor	1.02	0.11	***	0.71	1.32
		GSI	2.21	0.11	***	1.91	2.52
		Full Professor	0.56	0.11	***	0.24	0.87
	PT Lecturer/Instructor	Associate Professor	0.45	0.11	***	0.14	0.77
		Assistant Professor	0.31	0.11		0.00	0.62
		PT Lecturer/Instructor	1.32	0.13	***	0.97	1.68
		GSI	2.52	0.13	***	2.16	2.88
	GSI	Full Professor	-0.77	0.11	***	-1.07	-0.47
		Associate Professor	-0.87	0.11	***	-1.18	-0.56
		Assistant Professor	-1.02	0.11	***	-1.32	-0.71
		FT Lecturer/Instructor	-1.32	0.13	***	-1.68	-0.97
	GSI	GSI	1.20	0.12	***	0.84	1.55
		Full Professor	-1.97	0.11	***	-2.27	-1.66
		Associate Professor	-2.07	0.11	***	-2.37	-1.76
		Assistant Professor	-2.21	0.11	***	-2.52	-1.91
	GSI	FT Lecturer/Instructor	-2.52	0.13	***	-2.88	-2.16
		PT Lecturer/Instructor	-1.20	0.12	***	-1.55	-0.84

Note: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Table 12.  
Differences in the Average Number of Hours Spent on Working to Improve Your Teaching by Academic Rank

			Mean diff.	SE	Sig.	LB	UB
Working to improve your teaching	Full Professor	Associate Professor	0.22	0.09		-0.04	0.48
		Assistant Professor	0.06	0.09		-0.20	0.32
		FT Lecturer/Instructor	-0.21	0.11		-0.53	0.10
		PT Lecturer/Instructor	0.11	0.11		-0.20	0.42
		GSI	2.15	0.11	***	1.84	2.46
	Associate Professor	Full Professor	-0.22	0.09		-0.48	0.04
		Assistant Professor	-0.16	0.09		-0.42	0.10
		FT Lecturer/Instructor	-0.44	0.11	**	-0.76	-0.12
		PT Lecturer/Instructor	-0.11	0.11		-0.42	0.20
		GSI	1.93	0.11	***	1.62	2.24
	Assistant Professor	Full Professor	-0.06	0.09		-0.32	0.20
		Associate Professor	0.16	0.09		-0.10	0.42
		FT Lecturer/Instructor	-0.28	0.11		-0.60	0.05
		PT Lecturer/Instructor	0.05	0.11		-0.26	0.37
		GSI	2.09	0.11	***	1.78	2.41
	FT Lecturer/Instructor	Full Professor	0.21	0.11		-0.10	0.53
		Associate Professor	0.44	0.11	**	0.12	0.76
		Assistant Professor	0.28	0.11		-0.05	0.60
		PT Lecturer/Instructor	0.33	0.13		-0.04	0.69
		GSI	2.37	0.13	***	2.00	2.73
	PT Lecturer/Instructor	Full Professor	-0.11	0.11		-0.42	0.20
		Associate Professor	0.11	0.11		-0.20	0.42
		Assistant Professor	-0.05	0.11		-0.37	0.26
		FT Lecturer/Instructor	-0.33	0.13		-0.69	0.04
		GSI	2.04	0.13	***	1.68	2.40
	GSI	Full Professor	-2.15	0.11	***	-2.46	-1.84
		Associate Professor	-1.93	0.11	***	-2.24	-1.62
Assistant Professor		-2.09	0.11	***	-2.41	-1.78	
FT Lecturer/Instructor		-2.37	0.13	***	-2.73	-2.00	
PT Lecturer/Instructor		-2.04	0.13	***	-2.40	-1.68	

Note: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Table 13.

*Regression Results of Time Spent on Preparing Class Sessions and Faculty/GSI Characteristics*

	<i>Time Spent on Preparing Class Sessions<sup>a</sup></i>								
	<i>Overall</i>			<i>Faculty only</i>			<i>GSIs only</i>		
	<b>B</b>	<b>SE of B</b>	<b>Sig.</b>	<b>B</b>	<b>SE of B</b>	<b>Sig.</b>	<b>B</b>	<b>SE of B</b>	<b>Sig.</b>
<b>Student Characteristics</b>									
(Constant)	-.46	.04	***	.10	.03	**	-.65	.08	***
Faculty	.56	.03	***	--	--	--	--	--	--
<b>Gender identity (Man = reference group)</b>									
Woman	.03	.02	*	.03	.02		.06	.04	
Another gender identity	.18	.19		.30	.28		-.06	.16	
Prefer to not respond	.09	.04	*	.09	.05		.05	.11	
<b>Racial/Ethnic identification (White = reference group)</b>									
Asian, Native Hawaiian, or Other Pacific Islander	.26	.03	***	.30	.04	***	.02	.06	
Black or African American	.24	.04	***	.26	.04	***	.13	.10	
Hispanic or Latino	.12	.05	*	.12	.05	*	.03	.10	
American Indian or Alaska Native, Other, and Multiracial	.11	.04	**	.10	.04	**	.15	.07	*
I prefer not to respond	.14	.03	***	.14	.03	***	.04	.08	
<b>Disciplinary area (Arts and Humanities = reference group)</b>									
Biological Sciences, Agriculture, & Natural Resources	.04	.03		.07	.04		-.24	.07	***
Physical Sciences, Mathematics, & Computer Science	-.03	.03		.01	.03		-.28	.05	***
Social Sciences	-.07	.03	*	-.06	.03	*	-.09	.05	
Business	-.07	.03	*	-.06	.03		.07	.13	
Communications, Media, & Public Relations	-.12	.04	**	-.13	.05	**	-.09	.07	
Education	.00	.03		.03	.03		-.13	.07	
Engineering	-.01	.05		.03	.05		-.29	.08	***
Health Professions	.07	.03	*	.11	.04	**	-.21	.09	*
Social Service Professions	-.09	.05	*	-.08	.05		.04	.13	
All Other disciplines	-.07	.04	*	-.06	.04	***	-.17	.10	
<b>Number of undergraduate students taught in school year (100 or more = reference group)</b>									
Less than 25	-.14	.04	***	-.16	.04	***	.12	.08	
26-50	-.15	.03	***	-.18	.03	***	.08	.06	
51-75	-.09	.03	**	-.10	.03	***	.12	.06	*
76-100	-.04	.02		-.05	.02		.11	.06	*
<b>The number of undergraduate courses (4 or more = reference group)</b>									
0	.03	.18		.01	.20		.23	.30	
1	-.31	.04	***	-.34	.04	***	-.03	.06	
2	-.27	.03	***	-.28	.03	***	-.02	.05	
3	-.13	.03	***	-.13	.03	***	-.01	.06	
<b>Division (Upper division = reference group)</b>									
Lower Division	-.10	.02	***	-.10	.02	***	-.17	.04	***
Other Division	-.04	.04		-.03	.04		-.13	.08	
<b>Course size (20 or fewer = reference group)</b>									
21-30	.04	.02		.03	.02		.06	.04	
31-40	.01	.03		-.01	.03		.13	.07	
41-50	.05	.03		.04	.04		.07	.07	
51-100	.06	.03		.05	.04		.12	.07	
More than 100	.18	.05	***	.03	.05	***	.21	.08	*
<b>General education requirement (No = reference group)</b>	.12	.02	***	.13	.02	***	.07	.04	
<b>Course format (Classroom instruction on-campus = reference group)</b>									
Classroom instruction at an auxiliary location	-.10	.06	***	-.09	.06		-.21	.23	
Distance education	-.25	.03	***	-.25	.03	***	-.16	.15	
Combination of class instruction and distance	.07	.03	*	.07	.03	*	.00	.11	
R	.288			.225			.261		
Adjusted R <sup>2</sup>	.080			.048			.041		
F	36.298***			20.095***			2.520***		

Note. \* p&lt;.05, \*\* p&lt;.01, \*\*\*p&lt;.001, two-tailed.

a Dependent variable was standardized prior to entry into the model.

Table 14.

*Regression Results of Time Spent on Teaching Class Sessions and Faculty/GSI Characteristics*

	<i>Time Spend on Teaching Class Sessions<sup>a</sup></i>								
	<i>Overall</i>			<i>Faculty only</i>			<i>GSIs only</i>		
	<b>B</b>	<b>SE of B</b>	<b>Sig.</b>	<b>B</b>	<b>SE of B</b>	<b>Sig.</b>	<b>B</b>	<b>SE of B</b>	<b>Sig.</b>
<b>Student Characteristics</b>									
(Constant)	-.14	.04	***	.52	.03	***	-.66	.07	***
Faculty	.64	.03	***	--	--	--	--	--	--
<b>Gender identity (Man = reference group)</b>									
Woman	-.04	.02	**	-.04	.02	**	-.02	.03	
Another gender identity	-.05	.17		-.22	.26		.06	.14	
Prefer to not respond	-.03	.04		-.03	.04		-.11	.10	
<b>Racial/Ethnic identification (White = reference group)</b>									
Asian, Native Hawaiian, or Other Pacific Islander	.11	.03	***	.10	.03	**	.08	.05	
Black or African American	.26	.03	***	.28	.04	***	-.03	.09	
Hispanic or Latino	.05	.04		.06	.04		-.01	.09	
American Indian or Alaska Native, Other, and Multiracial	.07	.03	*	.08	.04	*	-.08	.06	
I prefer not to respond	.11	.03	***	.11	.03	***	.08	.05	
<b>Disciplinary area (Arts and Humanities = reference group)</b>									
Biological Sciences, Agriculture, & Natural Resources	.09	.03	**	.04	.03		.06	.07	
Physical Sciences, Mathematics, & Computer Science	-.06	.03	*	-.08	.03	**	.47	.06	***
Social Sciences	-.23	.03	***	-.24	.03	***	.12	.05	*
Business	-.15	.03	***	-.16	.03	***	-.12	.05	**
Communications, Media, & Public Relations	-.11	.04	**	-.13	.04	**	-.03	.11	
Education	-.03	.03		-.04	.03		.05	.06	
Engineering	-.18	.04	***	-.21	.05	***	.06	.06	
Health Professions	.06	.03	*	.06	.03		.03	.07	*
Social Service Professions	-.35	.04	***	-.36	.05	***	.17	.08	
All Other disciplines	-.15	.03	***	-.17	.03	***	-.12	.11	
<b>Number of undergraduate students taught in school year (100 or more = reference group)</b>									
Less than 25	-.31	.04	***	-.29	.04	***	-.19	.07	**
26-50	-.22	.03	***	-.22	.03	***	-.11	.05	*
51-75	-.17	.02	***	-.18	.02	***	.04	.05	
76-100	-.11	.02	***	-.12	.02	***	.04	.05	
<b>The number of undergraduate courses (4 or more = reference group)</b>									
0	-.24	.17		-.27	.18		.16	.26	
1	-.75	.03	***	-.84	.04	***	-.26	.06	***
2	-.68	.02	***	-.71	.03	***	-.29	.05	***
3	-.45	.02	***	-.44	.03	***	-.33	.06	***
<b>Division (Upper division = reference group)</b>									
Lower Division	-.01	.02		-.01	.02		-.01	.03	
Other Division	.23	.04	***	.26	.04	***	.05	.07	
<b>Course size (20 or fewer = reference group)</b>									
21-30	-.05	.02	*	-.04	.02	*	-.07	.04	
31-40	-.10	.02	***	-.10	.03	***	-.15	.06	**
41-50	.00	.03		.00	.03		-.08	.06	
51-100	-.05	.03		-.04	.03		-.07	.06	
More than 100	-.10	.04	*	-.09	.05		-.13	.07	
<b>General education requirement (No = reference group)</b>	.02	.02		.02	.02		.05	.03	
<b>Course format (Classroom instruction on-campus = reference group)</b>									
Classroom instruction at an auxiliary location	-.03	.05		-.04	.06		.14	.20	
Distance education	-.53	.03	***	-.53	.03	***	-.30	.13	*
Combination of class instruction and distance	-.04	.03		-.04	.03		-.02	.09	
<i>R</i>	.494			.427			.382		
Adjusted <i>R</i> <sup>2</sup>	.242			.180			.121		
<i>F</i>	129.086	***		83.995	***		5.871	***	

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , two-tailed.

a Dependent variable was standardized prior to entry into the model.

Table 15.

*Regression Results of Time Spent on Grading Assignment and Exams and Faculty/GSI Characteristics*

Student Characteristics	Grading Assignment and Exams <sup>a</sup>								
	Overall			Faculty only			GSIs only		
	B	SE of B	Sig.	B	SE of B	Sig.	B	SE of B	Sig.
(Constant)	-.18	.04	***	.08	.03	***	-.38	.09	***
Faculty	.26	.03	***	--	--	--	--	--	--
<b>Gender identity (Man = reference group)</b>									
Woman	.19	.02	***	.20	.02	***	.07	.04	
Another gender identity	-.11	.18		-.19	.28		-.14	.19	
Prefer to not respond	.21	.04		.21	.04	***	.12	.13	
<b>Racial/Ethnic identification (White = reference group)</b>									
Asian, Native Hawaiian, or Other Pacific Islander	.04	.03		.05	.04		-.07	.07	
Black or African American	.28	.04	***	.29	.04	***	.15	.12	
Hispanic or Latino	.12	.04	**	.12	.05	**	.12	.12	
American Indian or Alaska Native, Other, and Multiracial	.12	.04	**	.14	.04	***	-.05	.08	
I prefer not to respond	.10	.03	**	.09	.03	**	.21	.10	*
<b>Disciplinary area (Arts and Humanities = reference group)</b>									
Biological Sciences, Agriculture, & Natural Resources	-.25	.03	***	-.27	.04	***	-.09	.08	
Physical Sciences, Mathematics, & Computer Science	-.25	.03	***	-.26	.03	***	-.14	.06	*
Social Sciences	-.29	.03	***	-.30	.03	***	-.21	.06	**
Business	-.24	.03	***	-.24	.03	***	-.28	.15	
Communications, Media, & Public Relations	.08	.04		.07	.04		.12	.09	
Education	-.01	.03		.00	.03		-.16	.09	
Engineering	-.18	.04	***	-.21	.05	***	-.04	.09	
Health Professions	.00	.03		.01	.03		-.13	.11	
Social Service Professions	-.20	.05	***	-.20	.05	***	-.16	.15	
All Other disciplines	-.08	.04	*	-.07	.04	*	-.12	.11	
<b>Number of undergraduate students taught in school year (100 or more = reference group)</b>									
Less than 25	-.38	.04	***	-.39	.04	***	-.17	.09	
26-50	-.30	.03	***	-.32	.03	***	-.08	.07	
51-75	-.19	.02	***	-.20	.03	***	-.04	.07	
76-100	-.10	.02	***	-.10	.02	***	-.05	.07	
<b>The number of undergraduate courses (4 or more = reference group)</b>									
0	.09	.18		.20	.20		-.43	.36	
1	-.27	.03	***	-.31	.04	***	-.02	.08	
2	-.26	.03	***	-.28	.03	***	.00	.06	
3	-.17	.03	***	-.16	.03	***	-.06	.08	
<b>Division (Upper division = reference group)</b>									
Lower Division	-.06	.02	**	-.06	.02	**	-.03	.04	
Other Division	-.12	.04	**	-.13	.04	**	.00	.09	
<b>Course size (20 or fewer = reference group)</b>									
21-30	.09	.02	***	.09	.02	***	.01	.05	
31-40	.03	.03		.03	.03		-.06	.08	**
41-50	.04	.03		.04	.04		.03	.08	
51-100	.04	.03		.06	.04		-.03	.08	
More than 100	-.01	.04		.02	.05		-.08	.10	
<b>General education requirement (No = reference group)</b>									
	.12	.02	***	.12	.02	***	.07	.05	
<b>Course format (Classroom instruction on-campus = reference group)</b>									
Classroom instruction at an auxiliary location	.00	.06		.01	.06		-.15	.27	
Distance education	.57	.03	***	.57	.03	***	.33	.17	
Combination of class instruction and distance	.23	.03	***	.23	.03	***	-.01	.13	
R	.355			.341			.218		
Adjusted R <sup>2</sup>	.124			.114			.020		
F	57.553***			49.212***			1.724**		

Note. \* p&lt;.05, \*\* p&lt;.01, \*\*\*p&lt;.001, two-tailed.

a Dependent variable was standardized prior to entry into the model.

Table 16.

*Regression Results of Time Spent on Meeting with Students Outside of Class and Faculty/GSI Characteristics*

	<i>Meeting with Students Outside of Class<sup>a</sup></i>								
	<i>Overall</i>			<i>Faculty only</i>			<i>GSIs only</i>		
	<b>B</b>	<b>SE of B</b>	<b>Sig.</b>	<b>B</b>	<b>SE of B</b>	<b>Sig.</b>	<b>B</b>	<b>SE of B</b>	<b>Sig.</b>
<b>Student Characteristics</b>									
(Constant)	-.35	.04	***	.06	.03	*	-.46	.06	***
Faculty	.42	.03	***	--	--	--	--	--	--
<b>Gender identity (Man = reference group)</b>									
Woman	.04	.02	*	.04	.02	*	-.03	.03	
Another gender identity	.17	.19		.31	.29		-.07	.12	
Prefer to not respond	.05	.04		.05	.05		-.01	.09	
<b>Racial/Ethnic identification (White = reference group)</b>									
Asian, Native Hawaiian, or Other Pacific Islander	.14	.03	***	.17	.04	***	-.05	.04	
Black or African American	.52	.04	***	.55	.04	***	.11	.07	
Hispanic or Latino	.15	.05	**	.15	.05	**	-.01	.08	
American Indian or Alaska Native, Other, and Multiracial	.22	.04	***	.24	.04	***	.02	.05	
I prefer not to respond	.12	.03	***	.12	.04	**	.03	.06	
<b>Disciplinary area (Arts and Humanities = reference group)</b>									
Biological Sciences, Agriculture, & Natural Resources	.02	.03		.03	.04		-.11	.05	*
Physical Sciences, Mathematics, & Computer Science	.07	.03	*	.07	.03	*	.04	.04	
Social Sciences	-.10	.03	***	-.12	.03	***	.02	.04	
Business	-.12	.03	***	-.12	.03	***	-.01	.10	
Communications, Media, & Public Relations	.13	.04	**	.14	.05	**	.06	.06	
Education	.10	.03	**	.11	.03	**	.06	.06	
Engineering	.05	.05		.04	.05		.16	.06	*
Health Professions	.10	.03	**	.11	.04	**	-.06	.07	
Social Service Professions	-.05	.05		-.06	.05		.03	.10	
All Other disciplines	.03	.04		.03	.04		.02	.07	
<b>Number of undergraduate students taught in school year (100 or more = reference group)</b>									
Less than 25	-.12	.04	**	-.13	.04	**	-.08	.06	
26-50	-.06	.03	*	-.07	.03	*	-.08	.04	
51-75	-.07	.03	**	-.08	.03	**	-.08	.04	
76-100	-.03	.02		-.03	.03		-.07	.04	
<b>The number of undergraduate courses (4 or more = reference group)</b>									
0	.25	.18		.26	.21		.29	.23	
1	-.24	.04	***	-.25	.04	***	-.06	.05	
2	-.17	.03	***	-.19	.03	***	.01	.04	
3	-.16	.03	***	-.16	.03	***	-.04	.05	
<b>Division (Upper division = reference group)</b>									
Lower Division	-.09	.02	***	-.10	.02	***	.02	.03	
Other Division	-.04	.04		-.03	.04		-.10	.06	
<b>Course size (20 or fewer = reference group)</b>									
21-30	.03	.02		.03	.02		.01	.03	
31-40	.03	.03		.03	.03		.09	.05	**
41-50	.05	.03		.05	.04		.06	.05	
51-100	.12	.03		.13	.04	***	.02	.05	
More than 100	.25	.05	***	.28	.05	***	.04	.06	
<b>General education requirement (No = reference group)</b>	.00	.02		.00	.02		.04	.03	
<b>Course format (Classroom instruction on-campus = reference group)</b>									
Classroom instruction at an auxiliary location	-.18	.06	**	-.18	.06	**	-.14	.17	
Distance education	-.37	.03	***	-.38	.03	***	-.12	.11	
Combination of class instruction and distance	.11	.03	***	.11	.03	***	.02	.08	
<i>R</i>	.262			.228			.215		
Adjusted <i>R</i> <sup>2</sup>	.066			.049			.019		
<i>F</i>	29.204***			20.280***			1.664**		

Note. \* p&lt;.05, \*\* p&lt;.01, \*\*\*p&lt;.001, two-tailed.

a Dependent variable was standardized prior to entry into the model.

Table 17.

*Regression Results of Time Spent on Course Administration and Faculty/GSI Characteristics*

	<i>Course Administration<sup>a</sup></i>								
	<i>Overall</i>			<i>Faculty only</i>			<i>GSIs only</i>		
	<b>B</b>	<b>SE of B</b>	<b>Sig.</b>	<b>B</b>	<b>SE of B</b>	<b>Sig.</b>	<b>B</b>	<b>SE of B</b>	<b>Sig.</b>
<b>Student Characteristics</b>									
(Constant)	-.42	.04	***	-.10	.03	**	-.55	.07	***
Faculty	.33	.03	***	--	--	--	--	--	--
<b>Gender identity (Man = reference group)</b>									
Woman	.10	.02	***	.11	.02	***	.02	.03	
Another gender identity	.35	.20		.64	.29	*	-.06	.15	
Prefer to not respond	.10	.04	*	.11	.05	*	-.06	.10	
<b>Racial/Ethnic identification (White = reference group)</b>									
Asian, Native Hawaiian, or Other Pacific Islander	.17	.03	***	.20	.04	***	-.08	.05	
Black or African American	.39	.04	***	.41	.04	***	.05	.08	
Hispanic or Latino	.29	.04	***	.29	.05	***	.18	.09	*
American Indian or Alaska Native, Other, and Multiracial	.15	.04	***	.16	.04	***	.06	.06	
I prefer not to respond	.10	.03	**	.10	.03	**	.03	.07	
<b>Disciplinary area (Arts and Humanities = reference group)</b>									
Biological Sciences, Agriculture, & Natural Resources	-.11	.03	**	-.11	.04	**	-.15	.06	*
Physical Sciences, Mathematics, & Computer Science	-.15	.03	***	-.16	.03	***	-.08	.05	
Social Sciences	-.11	.03	***	-.12	.03	***	-.02	.05	
Business	-.03	.03		-.03	.03		.02	.11	
Communications, Media, & Public Relations	.11	.04	**	.12	.05	**	.06	.06	
Education	.22	.03	***	.25	.03	***	.01	.06	
Engineering	-.09	.04	*	-.10	.05	*	-.03	.07	
Health Professions	.16	.03	***	.18	.03	***	-.02	.08	
Social Service Professions	.01	.05		.02	.05		.08	.11	
All Other disciplines	-.01	.04		-.01	.04		.09	.08	
<b>Number of undergraduate students taught in school year (100 or more = reference group)</b>									
Less than 25	-.15	.04	***	-.15	.04	***	-.06	.07	
26-50	-.10	.03	***	-.11	.03	**	-.09	.05	
51-75	-.07	.03	**	-.08	.03	**	.01	.05	
76-100	-.04	.02		-.04	.02		-.05	.05	
<b>The number of undergraduate courses (4 or more = reference group)</b>									
0	.02	.19		.01	.21		.24	.26	
1	-.19	.04	***	-.22	.04	***	.04	.06	
2	-.19	.03	***	-.21	.03	***	.05	.05	
3	-.08	.03	**	-.08	.03	**	.03	.06	
<b>Division (Upper division = reference group)</b>									
Lower Division	-.08	.02	***	-.09	.02	***	-.01	.03	
Other Division	.02	.04		.04	.04		-.04	.07	
<b>Course size (20 or fewer = reference group)</b>									
21-30	.05	.02	**	.06	.02	*	.02	.04	
31-40	.03	.03		.03	.03		.04	.06	
41-50	.09	.03	**	.09	.04	*	.05	.06	
51-100	.15	.03	***	.16	.04	***	.04	.06	
More than 100	.42	.04	***	.46	.05	***	.16	.07	*
<b>General education requirement (No = reference group)</b>	.04	.02	*	.04	.02	*	.07	.03	*
<b>Course format (Classroom instruction on-campus = reference group)</b>									
Classroom instruction at an auxiliary location	.14	.06	*	.14	.06	*	-.01	.21	
Distance education	.38	.03	***	.38	.03	***	.81	.13	***
Combination of class instruction and distance	.45	.03	***	.45	.03	***	.31	.09	**
<i>R</i>	.309			.284			.278		
Adjusted <i>R</i> <sup>2</sup>	.093			.078			.050		
<i>F</i>	42.136***			32.905***			2.865***		

Note. \* p&lt;.05, \*\* p&lt;.01, \*\*\*p&lt;.001, two-tailed.

<sup>a</sup> Dependent variable was standardized prior to entry into the model.

Table 18.

*Regression Results of Time Spent on Improving Your Teaching and Faculty/GSI Characteristics*

	<i>Working to Improve Your Teaching<sup>a</sup></i>								
	<i>Overall</i>			<i>Faculty only</i>			<i>GSIs only</i>		
	<b>B</b>	<b>SE of B</b>	<b>Sig.</b>	<b>B</b>	<b>SE of B</b>	<b>Sig.</b>	<b>B</b>	<b>SE of B</b>	<b>Sig.</b>
<b>Student Characteristics</b>									
(Constant)	-.50	.04	***	-.07	.03	*	-.45	.07	***
Faculty	.43	.03	***	--	--	--	--	--	--
<b>Gender identity (Man = reference group)</b>									
Woman	-.04	.02	*	-.04	.02	*	-.02	.03	
Another gender identity	.18	.19		.42	.29		-.02	.15	
Prefer to not respond	.05	.04		.05	.05		.10	.10	
<b>Racial/Ethnic identification (White = reference group)</b>									
Asian, Native Hawaiian, or Other Pacific Islander	.26	.03	***	.29	.04	***	.08	.05	
Black or African American	.56	.04	***	.58	.04	***	.25	.09	**
Hispanic or Latino	.34	.05	***	.34	.05	***	.22	.10	*
American Indian or Alaska Native, Other, and Multiracial	.26	.04	***	.28	.04	***	.09	.06	
I prefer not to respond	.13	.03	***	.13	.03	**	.03	.08	
<b>Disciplinary area (Arts and Humanities = reference group)</b>									
Biological Sciences, Agriculture, & Natural Resources	-.14	.03	***	-.14	.04	***	-.23	.06	***
Physical Sciences, Mathematics, & Computer Science	-.17	.03	***	-.17	.03	***	-.20	.05	***
Social Sciences	-.17	.03	***	-.17	.03	***	-.17	.05	**
Business	-.04	.03		-.03	.03		-.14	.12	
Communications, Media, & Public Relations	.04	.04		.05	.05		-.06	.07	
Education	.20	.03	***	.21	.03	***	.14	.07	*
Engineering	-.14	.05	**	-.14	.05	**	-.15	.07	*
Health Professions	.09	.03	**	.10	.04	**	-.07	.08	
Social Service Professions	-.06	.05		-.05	.05		-.19	.12	
All Other disciplines	.05	.04		.06	.04		.01	.09	
<b>Number of undergraduate students taught in school year (100 or more = reference group)</b>									
Less than 25	.08	.04		.07	.04		.12	.07	
26-50	.02	.03		.02	.03		.01	.05	
51-75	.01	.03		.00	.03		.02	.05	
76-100	-.01	.02		-.01	.02		-.01	.05	
<b>The number of undergraduate courses (4 or more = reference group)</b>									
0	.23	.18		.23	.20		.16	.28	
1	-.18	.04	***	-.18	.04	***	-.10	.06	
2	-.13	.03	***	-.14	.03	***	-.04	.05	
3	-.08	.03	**	-.08	.03	**	-.01	.06	
<b>Division (Upper division = reference group)</b>									
Lower Division	-.08	.02	***	-.08	.02	***	-.03	.03	
Other Division	.04	.04		.06	.04		-.11	.07	
<b>Course size (20 or fewer = reference group)</b>									
21-30	.01	.02		.01	.02		.06	.04	
31-40	.01	.03		.00	.03		.03	.06	
41-50	.04	.03		.03	.04		.13	.07	*
51-100	.03	.03		.04	.04		-.03	.06	
More than 100	.18	.05		.19	.05	***	.09	.08	
<b>General education requirement (No = reference group)</b>	.14	.02	***	.15	.02	***	.04	.04	
<b>Course format (Classroom instruction on-campus = reference group)</b>									
Classroom instruction at an auxiliary location	.07	.06		.07	.06		.17	.21	
Distance education	.17	.03	***	.17	.03	***	.25	.13	
Combination of class instruction and distance	.30	.03	***	.31	.03	***	-.06	.10	
<i>R</i>	.280			.284			.278		
Adjusted <i>R</i> <sup>2</sup>	.076			.078			.050		
<i>F</i>	34.145***			32.905***			2.865***		

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , two-tailed.<sup>a</sup> Dependent variable was standardized prior to entry into the model.