Comparing the Effectiveness of Intensive and Traditional Courses

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The present study investigated differences in the effectiveness of instructors from a variety of departments who taught the same course in both intensive and traditional formats within the same year, while controlling for many confounding variables. Results indicated that intensive courses did not significantly differ from traditional courses in overall instructor ratings on student evaluations of teaching effectiveness when confounding variables were taken into account. Conversely, intensive courses received significantly higher overall course ratings on student evaluations than did traditional courses, even after controlling for class size and probable grade in course. These findings provide further evidence that negative beliefs concerning intensive courses may be unjustified, and intensive courses may be as or more effective than those presented in traditional formats.

Keywords: intensive courses, teaching effectiveness, student evaluations, student ratings

BACKGROUND

Intensive courses, defined as semester- or quarter-equivalent courses taught within an accelerated format, have become quite common in colleges and universities. In 2005, 320 higher education institutions offered intensive-learning courses (Wlodkowski, as cited in Davies, 2006), and with the growth of for-profit universities focusing on accelerated programs, this number should steadily increase. Yet, criticism of this format is also widespread. Many in academia claim that an accelerated learning format compromises learning, rendering intensive courses less effective than traditional ones. Research, however, may indicate otherwise.

Scott and Conrad (1992), reviewing 50 studies of intensive courses, concluded that intensive courses result in mostly equal or superior learning outcomes in comparison to traditional-length courses. Since this seminal review, other researchers have reached similar conclusions. Daniel’s (2000) review of research indicated that intensive courses appear to provide equivalent or superior long-term and short-term learning outcomes in comparison to traditional courses, across a variety of disciplines. Such superior findings may result because students in intensive courses might be more highly motivated or reach higher motivational levels than those in traditional-length courses. Christy (1991) found that students in an intensive English course demonstrated higher levels of achievement motivation than did students in a traditional one. Additionally, Shapiro (as cited in Scott & Conrad, 1992) found that faculty reported similar results when asked to compare the motivation of students in intensive and traditional courses.

These findings suggest that perhaps students receive a variety of benefits from the intensive format. For example, Scott (2003) found that a majority of students reported an increase in their focus, stamina, and retention, with a decrease in their procrastinating behavior. This may be because intensive courses are short, concentrated, or preclude taking other courses concurrently. It may also be because the accelerated format generally influences faculty to incorporate more interaction, discussion, and other constructive teaching methods, and, as a result, improves student motivation and achievement.

In her review of intensive courses, Daniel (2000) concluded, “Though there are instructors who oppose time-shortened formats, faculty who teach intense courses typically modify their teaching techniques and usually incorporate more experiential learning and discussion” (306). Kretovics, Crowe, and Hyun (2005) reached a similar conclusion from their survey of 151 faculty members about their
perceptions of intensive courses. They found that close to half of the faculty made one or more adjustments in teaching methodology when shifting from traditional-length to intensive-length courses, such as incorporating more classroom discussion. Allen et al. (1982) and Scott (1995, as cited in Scott 2003) found that intensive courses allowed for more in-depth discussions, experiential activities, and focused learning, creating a more collegial atmosphere than in traditional courses.

Unfortunately, most research addressing differences in the effectiveness of intensive and traditional courses reflects many methodological limitations (Daniel 2000; Seamon 2004). For example, Scott and Conrad (1992) reported that, in 50 studies they reviewed, limitations were common, such as lack of control for confounding variables and unreliable or invalid instruments. In addition, few studies have used populations of younger adults (Wlodkowski 2003) or have compared course format for numerous courses from a variety of disciplines.

The purpose of the present study is to investigate differences in the effectiveness of intensive and traditional-length courses while addressing many of these limitations. To obtain a reliable and valid measure of effectiveness, class mean scores from a validated instrument for student evaluations of teaching effectiveness (SETE) were used to compare the effectiveness of both formats for the same course taught by the same instructor, for numerous courses from a variety of disciplines. To address confounding variables, controls were incorporated for GPA, class size, probable grade in course, and course workload, to reduce the possibility that differences found between formats were influenced by variables such as higher-achieving students, smaller class sizes, or more relaxed grading standards.

Controlling for these variables across formats can be expected to improve the strength of findings based on scores from the SETE instrument as well. For example, although SETE instruments are the most widely used means to measure college teaching effectiveness (Marsh 1984, 1991; Saroyan & Amundsen 2001)—with numerous studies supporting their validity, reliability, and accuracy (e.g., Cohen 1990; Feldman 1989; Greenwald 1997; Marsh 1987; Saroyan & Amundsen 2001)—some review studies do indicate that class size, workload, and grading leniency variables could have a minor effect on students’ evaluations (e.g., Feldman 1997).

**METHOD**

**Instrument**

The SETE form used in the present study was the paper Course Instructor Survey (CIS) from a large public university in the southwest United States. The CIS instrument contained 11 items, 8 addressing teaching effectiveness and 3 concerning additional student or course information (see Appendix). Items 1 through 6 addressed specific characteristics of the instructor/course, and items 7 and 8 addressed global ratings of instructor effectiveness (item 7) and course effectiveness (item 8). Items 1–6 employed a five-point Likert-type scale anchored by extremes 1 = “strongly disagree” to 5 = “strongly agree.” Items 7–8 employed a five-point Likert-type scale anchored by extremes 1 = “very unsatisfactory” to 5 = “excellent.” Items 9–11 addressed course workload (1 = “excessive” to 5 = “insufficient”), overall GPA to date (1 = “Less than 2.0” to 5 = “3.5-4.0”), and probable grade in the course (1 = “A” to 5 = “F”).

Content validity of items in the CIS instrument (Table 1) was demonstrated by addressing research findings and soliciting input from local faculty. The CIS form was very similar to student-rating instruments used at a majority of U.S. universities and colleges. The design of items was grounded in prior research concerning student and faculty reports of effective teaching and in research findings showing high correlations between previously constructed items and student achievement. In addition, an administrative committee, consisting of faculty representatives from diverse departments, also approved and provided a rationale for the final selection of items for the CIS instrument.

**Sample**

At the end of every semester, students across the university are asked to complete the CIS form to evaluate teaching effectiveness for each class. The first step in the study was to obtain CIS end-of-semester data of all classes surveyed for fall 2005, spring 2006, and summer 2006. Fall and spring semesters are 15 weeks long, and summer sessions may last 5 or 9 weeks (“first” and “second” term, respectively) or 11 weeks (“whole” term). This initial step resulted in 15,458 class sections with a 78% overall response rate. Items 1–8 on the CIS instrument had an alpha of .936, suggesting an internally consistent scale.

The next step was to restructure the data set to match the same instructor teaching the same course for the fall and/or spring semesters and for a 5-week, 9-week, or 11-week summer semester. After the restructuring of the data, there were only four cases of 5-week summer classes also taught in the fall and/or spring, so these cases were eliminated from the analysis. There were also no instructors who taught more than one type of summer-length course for a specific class. As a result, the restructured data set matched the same instructor who taught the same course for the fall and/or spring semesters and who also taught this same course either in a summer 9-week or 11-week intensive format. This procedure produced a final sample of 130 cases with a total response rate of 83% (78% for fall, 79% for spring, and 91% for all summer courses from a variety of department courses across the university). The unit of analysis from the CIS forms for each case was the class mean score, because research suggests that mean scores are more appropriate for student rating research than are individual ratings (Marsh 1987).
### TABLE 1

<table>
<thead>
<tr>
<th>CIS Item</th>
<th>Correlation to Student Learning</th>
<th>Theoretical Reasoning for Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The course was well organized.</td>
<td>$r = .57$ (Feldman, 1996)</td>
<td>“A course that is well organized generally includes clear specifications of expectations, well-developed interrelatedness of topics, well-thought-out activities and evaluation strategies, all of which lead to student confidence and better performance.”</td>
</tr>
<tr>
<td>2. The instructor communicated information effectively.</td>
<td>$r = .56$ (Feldman, 1996)</td>
<td>“If a good proportion of the content is being communicated by instructor lecture, clarity is critical to understanding since no other verification source is being used. In addition, instructors with good communications skills can generally identify when students are having difficulties and compensate for them.”</td>
</tr>
<tr>
<td>3. The instructor showed interest in the progress of students.</td>
<td>$r = .30$ (Feldman, 1996)</td>
<td>“This item would be related to learning to the degree that an instructor is able to recognize student misunderstandings and correct for them before learning goes too far. Also, students will have more trust in instructors who show concern for their progress and will be more willing to take the risks necessary for learning.”</td>
</tr>
<tr>
<td>4. The tests/assignments were usually graded and returned promptly.</td>
<td>none</td>
<td>“Students could be using this information as a place holder for the overall evaluation system and how it is carried out in a class. They are obviously concerned about the degree and type of evaluation.”</td>
</tr>
<tr>
<td>5. The instructor made me feel free to ask questions, disagree, and express my ideas.</td>
<td>$r = .36$ (Feldman, 1996)</td>
<td>“This item probably taps two different sources of effectiveness. One is the value of active learning. Encouraging students to ask questions and to discuss encourages a deeper processing of the material. In addition, the instructor is providing a role model of scholarly discourse to help students learn how to disagree in a scholarly manner.”</td>
</tr>
<tr>
<td>6. At this point in time, I feel that this course will be (or has already been) of value to me.</td>
<td>$r = .46$ (Feldman, 1996)</td>
<td>“This item probably taps two different sources of effectiveness as well. The first would be student recognition that what is being taught has relevance for their lives, a source of motivation and hence achievement. Alternatively, the students may be saying that they recognize how much the instruction is causing them to learn.”</td>
</tr>
<tr>
<td>7. Overall, this instructor was</td>
<td>$r = .43$ (Cohen, 1981)</td>
<td>“This global item is a condensation of all the other items. For purposes of summative evaluation, this item has been recommended as being very stable and reliable.”</td>
</tr>
<tr>
<td>8. Overall, this course was</td>
<td>$r = .47$ (Cohen, 1981)</td>
<td>“This item is like the one [above], but focuses on the course instead of the instructor.”</td>
</tr>
</tbody>
</table>

### Procedure

Four steps were followed in performing data analysis.

1. Mean values for each course were calculated for “overall instructor ratings” (CIS item 7), “overall course ratings” (CIS item 8), “class size” (last day of enrollment), “course workload” (CIS item 9), and “probable grade in course.” Labels for semester length included traditional 15-week (an average between fall and spring terms), intensive 9-week, and intensive 11-week courses. Probable grade in course was calculated while controlling for prior student achievement by reverse coding the response scale for probable grade in course (CIS item 11, with $1 = \text{“F”}$ to $5 = \text{“A”}$) and then subtracting this score from overall GPA (CIS item 10). As a result, a positive number for probable grade in course indicated that a class believed it should receive (or would be given) a course grade higher than the current average GPA of the class.

2. Standardized differences for each semester-length course were computed using dependent $t$-tests to determine which variables should be considered in the analyses in steps 3 and 4.

3. Overall instructor ratings were regressed on semester length (dummy coded) while controlling for class size, course workload, and probable grade in course. Multiple regression analysis was used to determine the relative importance of the effect of semester length on overall instructor ratings, while controlling for other variables.

4. Overall course ratings were regressed on semester length (dummy coded) while controlling for class size, course workload, and probable grade in course. Multiple regression analysis was used to determine the relative importance of the effect of semester length on overall course ratings, while controlling for other variables.

### RESULTS

After the means of all variables were calculated for each semester length, dependent $t$-tests were used to obtain the standardized differences for each variable, which are
The dependent *t*-tests indicated that instructors who taught the same course under the intensive 9-week format received significantly and moderately higher instructor and course ratings than if they had taught this course in a traditional semester. Intensive courses that were taught in 11 weeks reflected a small but significant effect on overall course ratings in comparison to those for the same courses taught in traditional-length semesters.

However, the analysis also indicated that other variables, such as class size and probable grade in course, differed significantly for intensive courses compared to traditional courses. Concerning class size, intensive 9-week and 11-week courses were significantly smaller than the same course taught in traditional-length semesters. Concerning course workload, there were no statistical differences across semester-length. Concerning probable grade in course, students in the intensive 9-week courses indicated that they would receive (or would be given) a grade higher than that indicated by students who were in similar traditional courses.

To control for these variables, two multiple regression analyses\(^1\) were performed. In one, overall instructor ratings were regressed on semester length (with one dummy-coded variable: intensive 9-week using traditional 15-week as the reference group), while controlling for class size and probable grade in course.\(^2\) The model used to test overall instructor ratings included three independent variables: overall instructor rating (*Y*) = intensive 9-week (*X1*) + class size (*X2*) + probable course grade (*X3*). The overall multiple regression was not statistically significant (*R*\(^2\) = .026, *F*\([3, 232]\) = 2.098, *p* = .101) and, therefore, no other coefficients were investigated.

In the other regression, overall course ratings were regressed on semester length (with two dummy-coded variables: intensive 9-week and intensive 11-week courses using traditional 15-week as the reference group), while controlling for class size and probable grade in course. The model used to test overall course ratings included four independent variables: overall course rating (*Y*) = intensive 9 (*X1*) + intensive 11 (*X2*) + class size (*X3*) + probable course grade (*X4*).

The overall multiple regression was statistically significant (*R*\(^2\) = .996, *F*\([4, 231]\) = 6.107, *p* < .001), and the four independent variables accounted for 10% of the variance in overall course ratings. Intensive 9-week and 11-week courses also had a statistically significant effect on overall course ratings, after controlling for class size and probable grade in course. The unstandardized regression coefficient for intensive 9-week courses was .285 (*t*\([231]\) = 3.263, *p* = .001), which suggests that, for courses taught in nine weeks, overall course ratings will increase by .285 compared to traditional 15-week courses. This moderate effect holds true even after differences in class size and probable grade in course are taken into account. The unstandardized regression coefficient for intensive 11-week courses was .219 (*t*\([231]\) = 2.947, *p* = .004), which suggests that, for courses taught in eleven weeks, overall course ratings will increase by .219 compared to traditional courses. This moderate effect holds true even after differences in class size and probable grade in course are taken into account (see Table 3).

The practical significance of this finding is that instructor Y teaching course X (on average) in a traditional semester could receive a mean overall course rating of 3.8 (“Neutral”), while in an intensive formant, instructor Y teaching course X (on average) could receive a rating of 4.0 (“Very Good”).

### DISCUSSION

The focus of the present study was to investigate differences in the effectiveness of intensive and traditional length

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\(^{1}\) Assumptions for models were investigated by performing residual analysis and exploring normality of dependent variables.

\(^{2}\) Course workload difference was not statistically significant for semester-length, and intensive 11-week courses did not differ from traditional semesters on instructor ratings. Therefore, both of these variables were excluded in this analysis.
courses, while addressing limitations in many prior studies, such as failing to control for confounding variables, to use a younger adult population, to include multiple courses from a variety of departments, and to use a validated instrument. The results indicate that instructors’ effectiveness was rated similarly under both intensive and traditional formats, while course effectiveness was rated more highly under the intensive format. These findings support prior research that has found equivalent—and at times superior—learning outcomes from intensive courses. The present study provides further evidence that negative beliefs concerning intensive courses may be unjustified and that intensive courses may be more effective than ones using traditional formats.

Some may argue that these findings were obtained because intensive courses are (1) relatively smaller, (2) assumed to be easier, and (3) attract more highly motivated or focused students, variables that may have influenced students to rate the effectiveness of intensive courses more highly. However, these possibilities were addressed in the study. Although there were differences in class size between intensive and traditional classes, the differences were not found to directly affect student ratings. The intensive courses did not present lighter course workloads than did traditional classes; they were not perceived as “easier.” And while students in intensive courses either learned more or were more highly motivated—as indicated by “probable grade in course” minus “overall GPA”—such a response would seem to be a result, not a cause, because of Feldman’s (1997) finding that “students who learn more earn higher grades, and thus legitimately give higher evaluations.” However, even after this variable is taken into account, intensive courses still received higher course ratings.

Others may argue that the season in which a semester occurred may have confounded the findings, suggesting effectiveness ratings may be affected by a factor peculiar to the summer season other than course format. Because summer intensive courses were the only type of intensive course addressed in the study, this claim cannot be directly refuted. However, a study by Beran and Violato (2005) may provide some insight. The researchers analyzed a total of 371,131 student ratings and investigated many student and course characteristics that could possibly bias student ratings. Season was one of these course characteristic variables, which included fall, winter, spring, and summer terms. They found that, when excluding the student characteristic variable “expected grade,” all other student characteristics (class attendance, workload, program) and course characteristics (status, season, duration, year, and type of course) accounted for only 1% of the variance in student ratings. They concluded, “Why a student gives a high (or low) rating of an instructor cannot be explained by qualities of the students or course per se. Rather, our results suggest that students may give high ratings to instructors they consider to be effective” (599–600).

Therefore, there appears to be some other variables accounting for differences in student ratings across intensive and traditional semesters. The research literature suggests that differences could result because intensive courses are short, concentrated, or preclude taking other courses concurrently, or because the accelerated format generally influences faculty to incorporate more interaction, discussion, and other constructive teaching methods.

Future research should investigate these possible explanations directly. If findings support the research literature, additional research could address two central questions to improve effectiveness in traditional formats: how can faculty create an “intensive” atmosphere and how can instructors increase student interaction and active learning in a larger class spread over 15 weeks? It is reasonable to believe that answering such questions can reveal ways to enhance the classroom experience for students and instructors, no matter the course format.

The results of the present study must be interpreted in light of some potential limitations. The study’s generalizability is limited, because it was conducted at a single institution. Future research is needed to cross-validate these results. Because the sample CIS data in this study were obtained from previous semesters, it was not possible to survey instructors to directly assess what instructional practices—if any—differed between traditional and intensive courses. And the data were compiled for a single academic year, with only 130 cases. Replication across more years and more cases would allow for greater confidence in the research findings.

### TABLE 3
Regression Coefficients for Overall Course Rating

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant) Traditional</td>
<td>3.721</td>
<td>.061</td>
</tr>
<tr>
<td>Avg Class Size</td>
<td>.000</td>
<td>.001</td>
</tr>
<tr>
<td>Probable Grade</td>
<td>.220</td>
<td>.090</td>
</tr>
<tr>
<td>Intensive 9</td>
<td>.285</td>
<td>.087</td>
</tr>
<tr>
<td>Intensive 11</td>
<td>.219</td>
<td>.074</td>
</tr>
</tbody>
</table>

*Statistically significant (p < .05).*
REFERENCES


APPENDIX: COURSE-INSTRUCTOR SURVEY FORM

The major objective of this survey is to aid in improving teaching effectiveness. Your responses provide valuable feedback to instructors, administrators, and other students. The results are used by administrators to make promotion and salary decisions, and responses to some of the items are also made available on the Web for students to use in selecting classes. Your responses to the questions are extremely important, so please respond honestly and fairly. Consider the semester as a whole and try not to focus on isolated incidents.

Instructions:
Please complete this form using a #2 pencil.
Complete the course information in the box to the right.
Make sure your marks are complete.
Make sure any erasures are complete.

Questions 1-6 use the same response scale.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The course was well organized.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>The instructor communicated information effectively.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>The instructor showed interest in the progress of students.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>The tests/assignments were usually graded and returned promptly.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>The instructor made me feel free to ask questions, disagree, and express my ideas.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>At this point in time, I feel that this course will be (or has already been) of value to me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For questions 7–11, choose the appropriate response from those given for each question.

<table>
<thead>
<tr>
<th></th>
<th>Very unsatisfactory</th>
<th>Unsatisfactory</th>
<th>Neutral</th>
<th>Very good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.</td>
<td>Overall, this instructor was</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Overall, this course was</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>In my opinion, the workload in this course was</td>
<td>Excessive</td>
<td>High</td>
<td>Average</td>
<td>Light</td>
</tr>
<tr>
<td>10.</td>
<td>My overall G.P.A. to date at UT is</td>
<td>Less than 2.00</td>
<td>2.00-2.49</td>
<td>2.50-2.99</td>
<td>3.00-3.49</td>
</tr>
<tr>
<td>11.</td>
<td>My probable grade to date in this course is</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
</tbody>
</table>

Optional questions provided by instructor

1. A B C D E
2. A B C D E
3. A B C D E
4. A B C D E
5. A B C D E

Comments

In many ways your written comments can be the most important part of your evaluation of the course and instructor. In the space provided, please indicate what aspects of the course content and instruction were best, how the instructor could improve his or her teaching, and how the content of the course might be improved. The instructor will receive this form after the semester is over.

You may continue comments on the other side.