2014-03-24

Exploring the Retention of Credit-Hour Value in Terms of Workload for University Core Courses Taught in a Time-Compressed Format

Lyndell E. Lutes
Brigham Young University - Provo

Exploring the Retention of Credit-Hour Value in Terms of Workload for University Core Courses Taught in a Time-Compressed Format

Lyndell E. Lutes

A dissertation submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

Randall S. Davies, Chair
Andrew S. Gibbons
Russell T. Osguthorpe
Peter J. Rich
Larry Seawright

Instructional Psychology and Technology

Brigham Young University

March 2014

ABSTRACT

Exploring the Retention of Credit-Hour Value in Terms of Workload
for University Core Courses Taught in a Time-Compressed Format

Lyndell E. Lutes
Instructional Psychology and Technology, BYU
Doctor of Philosophy

This study compared the workload and value of work done outside of class reported by 3512 undergraduate students at Brigham Young University completing 16-week semester and 8-week term University Core (General Education and Religion) classes. Based on the results of this analysis, significant differences in workloads were found when comparing them by occasion (semester versus term). Significant differences were also found in workload and value of homework based on the autonomy of the instructors. On average, the workload difference by occasion equates to approximately 54 minutes more per week in a 3-credit semester course when compared to a term course. While term workloads are lighter than semester workloads in general, both could be called "University Core lite," in that none of the courses exceeded the expected workloads of two hours outside of class per hour in class. The value of homework reported by occasion was overall not significantly different between semester and term. When comparing the reported workload based on the autonomy of the instructor to make changes to a course, statistically significant differences were found. Regardless of occasion, workload tended to decrease when the instructor had greater autonomy in designing the course. The difference in the value of homework reported by autonomy was also found to be significant. The pattern for this factor was reversed in comparison to workload. Students reported greater value in the homework done outside of class in courses when the instructor had greater autonomy. Overall, based on calculated workloads coupled with changes instructors made to their term courses, the impact to the course in terms of workloads was greatest for reading- and writing-intensive courses. Each of which reported a substantial decline in workloads when taught in term format. Math and physics courses came closest to meeting the expected workloads and remained constant between semester and terms. These and other implications are discussed, and recommendations are made regarding the types of courses that are best suited to being taught in a time-compressed format.

Keywords: accelerated course, compressed course, time-shortened course, student workload

ACKNOWLEDGEMENTS

Many thanks to my advisor, Dr. Randall Davies, for the mentorship he has provided. His expertise is matched only by his wisdom and enthusiasm for statistical analysis. I also thank my committee members: Dr. Russell Osguthorpe, who suggested I undertake this project and led the way in its early stages; Dr. Andrew Gibbons, who asked the hard questions that provided a focal point; Dr. Larry Seawright, for his insights into university operations; and Dr. Peter Rich, for his thoughtful questions. A special thank you goes to Dr. Trav Johnson who, while serving on my committee for over a year, provided encouragement and invaluable expertise in understanding student ratings.

The most significant contributor to getting this work completed was my husband, Ken. The innumerable sacrifices he made while I pursued this degree can never be repaid. He is my best cheerleader, advisor, and friend. Also, many thanks go to my son Ken, Jr., and his wife, Carissa for their patience, encouragement, and willingness to listen to my tales of triumphs and woes.

My colleagues at the Center for Teaching and Learning provided assistance in many ways. Susan Eliason helped rewrite hopelessly long and convoluted sentences while assuring me that I could complete this project. Her friendship was invaluable. Danielle Wilkinson worked small miracles to get the surveys sent out on time. Mike Johnson, Ken Plummer, Tonya Tripp, Cary Johnson, Jeff Fox, Taylor Halverson, Lynn Sorensen, Richard Swan, Dana Lipari, and Neil Parsons each provided feedback, encouragement, and much-appreciated support along the way. Above all, I am grateful to my Father in Heaven who, when I could not see the distant scene, led me on one step at a time.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Chapter 1: Introduction

Each year over 5,000 freshmen begin their academic studies at Brigham Young University (BYU). High on their list of frequently asked questions is this: What classes should I take and when should I take them? The Undergraduate Course Catalog and university advisors provide partial answers. Departments provide additional information by furnishing Major Academic Plans that outline the required courses for each major as well as the general education (GE) courses each degree requires. These academic plans often come with a recommended order in which to take courses. Informative as these resources are, they do not answer the questions most freshmen silently ask: How hard is this course? How much time will it take? Are the rumors true that I will have to do less work if I take the course during the spring or summer term rather than fall or winter semester? Does it matter from whom I take the course?

Although students know that courses are worth a specific number of credit hours and that a specific number of courses are required for graduation, few understand what credit hours mean in terms of estimating student workload or the importance of credit hours to university administration. Unknown to most students, a national credit-hour standard requires students to be in class for one hour per week per credit hour over a 15 week period, which is the standard semester format and the one used at BYU. This means that for the typical three-credit-hour class taught in a semester format, a student should attend class three hours a week. Students clearly see this when they create their schedule. However, while no national standard exists for the number of hours students must spend outside of class, most universities recommend that students plan to spend two to three hours per credit hour per week.

BYU University Core courses (General Education and Religion) range from two to four credit hours. Therefore, in addition to the time students spend in class, students should expect to

spend an additional four hours per week outside of class when taking a two-credit-hour course, six for a three-credit-hour course, and eight for a four-credit-hour course when they take it during a semester.

To give students greater flexibility in scheduling classes, as well as to accommodate the demand for core courses, BYU offers many courses in a time-compressed format during spring and summer terms. Each term is half the length of a semester. In terms of student workload, this means that students should plan to spend twice as much time per week to achieve the equivalent outcomes of the semester course.

Term courses have serious workload implications not only for students, but also for faculty, as well. The literature that discusses the challenges associated with teaching a time-compressed course informs us that doing everything the same, just in less time overall, generally does not work well (Scott, 2003). Such factors as maintaining student attention during longer class periods, acquiring skills, reflecting on learning, preparing for exams, and allowing time for students to complete homework (especially long reading, writing, problem-solving assignments, and group projects) must be addressed. In addition, the demand on instructors to consult with students, evaluate their performance, and give meaningful feedback, requires time for consideration.

Previous Research

In 2009, the Center for Teaching and Learning (CTL) conducted a study that assessed the student workload of winter and fall 2007 undergraduate courses that had fixed credit hours, in order to determine the extent to which courses met the expected standard of three hours of work per credit hour (one hour in and two hours outside of class). It was found that, in the aggregate, 68% of all course sections taught during those semesters met the expected standard of

approximately two hours of outside work per hour of class time; approximately 16% were over and 16% were under. The analysis showed that noticeable discrepancies occurred between courses. Generally speaking, performance courses such as the premier music and dance groups, several of the athletic teams, and the animation students, had three to ten times the expected workloads (Lutes & Osguthorpe, 2009).

A follow-on study, using the same data set, was completed in 2012. In this study the workloads of all winter semester undergraduate courses were compared to workloads of all spring and summer term courses in order to determine if, in the aggregate, the workloads for term courses were comparable to semester courses. Additionally, workloads for eight high-enrollment University Core courses were studied. Some of these were selected because they were rumored to have heavier workloads than expected. The analysis showed that workloads varied somewhat between semester and term sessions for a few courses. However, the greatest differences were found among sections of the same course that were taught by different instructors (Lutes & Davies, 2013).

Research Questions

The purpose of the research presented here was to replicate and expand the semester versus term student workload line of inquiry. This dissertation focuses on (1) the extent to which selected high-enrollment term core courses at BYU maintain a workload comparable to their semester counterparts, (2) how instructors modify their courses to fit a time-compressed format, and (3) how changes instructors make may affect the workload. This study used data for the academic year 2010–2011, which was comprised of fall semester of 2010 and winter semester, spring term, and summer term of 2011. In addition to a statistical analysis, data were collected and analyzed through individual case studies to determine how courses were modified for the

time-shortened term sessions in order to evaluate the implications these changes may have had in terms of student workload and learning. This study included 20 of the highest enrollment University Core courses.

The principal questions this follow-on study answered include

1. To what degree do compressed term core courses differ in workload and value of homework from their regular semester counterparts?
2. What changes do instructors who teach a high-enrollment core course make to their course when they teach it in a compressed time (term) format, and when do they make any changes?
3. How do changes instructors make affect the workload of the course with regard to meeting the expected workloads for term and semester versions of a course?

Chapter 2: Literature Review

This chapter reviews the literature relating to the components and issues that make this study relevant—including a brief history of general education in American universities and how BYU's core curriculum reflects the current best practices. It also describes how the college credit hour, which is a key factor in this study, came into existence and the role it plays in comparing course workloads. Additionally, the efficacies of time-compressed courses are reviewed, including how successful time-compressed courses are designed. Finally, because student ratings data are being used to calculate the course workload, the reliability and validity of using this data source will be addressed.

A Brief History of General Education in the United States

In order to understand the need and purpose for a credit hour, one first must understand the history and purpose for general education. Doctoral degrees were first granted to students in thirteenth-century Europe by the University of Bologna after six to eight years of study. However, four years into their program students "became a *baccalaureus"* (Levine, 1978, p. 156). With this "bachelor's degree" designation, they were authorized to tutor and give informal lectures. The baccalaureate became a milestone of study at the University of Paris and eventually at Oxford, where completing a liberal arts education was required prior to graduate study. This system was adopted by Cambridge, and from Cambridge it was imported to America.

In 1636, Harvard was the first college founded in what is now the United States. From its founding until the mid-1800s, most college students came from privileged backgrounds and generally attended college to prepare themselves for leadership positions within the community or state. College curricula focused on preparing their students for careers in the "church, law, or medicine" (Boning, 2007, p. 2). During this time, unified curricula provided a coherent

education. With few exceptions (the University of Virginia being one), specialized and general education courses were not separated. The concept that a general education course was a valuable and distinct part of a course of study began to emerge during the 1820s.

After the Industrial Revolution (1750–1850), the need arose for a more practical or utilitarian education (Boning, 2007). In 1862, the Morrell Land Grant Act was implemented, providing funds for states to establish colleges wherein liberal and practical classes would be available for the general population. These two events led to changes in higher education. For example, in 1869 Charles Eliot, president of Harvard University, began promoting the elective system. He believed that giving students more options would enable them to pursue studies in fields for which they were best suited.

By the 1870s, electives were widely adopted into college curricula. However, concerns soon arose that if students were allowed to choose what courses to take, they would avoid those they did not like and consequently would fail to acquire important knowledge and skills. In so doing, they could end up being deficient in some areas deemed necessary by society (Boning, 2007) and still obtain a baccalaureate degree. Educators feared that this element of choice would lessen the value of a college education. Hence began what was to become an ebb and flow of general education requirements. Over the next 90 years, a cyclical pattern emerged. When the number of electives increased, the number of required general education courses decreased; and when general education courses were reinstated, students were given fewer electives from which they could choose.

For example, following World War I, the general education movement gained momentum. Columbia, followed by Dartmouth and Reed, instituted a “contemporary civilization” survey course required of all freshmen (Boyer & Levine, 1981). During the next

few years, other colleges required similar general education courses. “The college” at the University of Chicago went so far as to create a “four year, fully required course of study” (Boyer & Levine, 1981, p. 30), leaving students without any electives. However, in the late 1920’s, as the national temperament turned from social reform to the pursuit of self-interest, the number of electives colleges offered increased once again, resulting in fewer required general education courses. But this soon changed.

During the Great Depression, unemployed engineers, lawyers, and business people lamented the fact that they did not have a broad enough education to get other types of jobs. This generated interest in reassessing general education requirements, which eventually led to the recommendation in 1945 that one-third of college curricula should be general education courses (Boning, 2007). In 1947 the American Council on Education (as cited in Bigelow, 1947) defined general education as embracing “those phases of nonspecialized and nonvocational education that should be the common possession . . . of educated persons as individuals and as citizens in a free society” (p. 258).

Twenty years later, the Higher Education Act of 1965 gave students from lower socioeconomic backgrounds greater access to education. Many of these students found that the general education requirements lacked the “perspectives of women and minorities” (Boning, 2007, p. 10). This, coupled with the belief that the general education requirements should not be applicable to those who were seeking vocational education, caused the tide of general education requirements to ebb once again. Nearly 75% of colleges reduced their general education requirements. Concurrently, the percentage of electives from which students could choose rose from 27% to 52% nationwide (Blackburn, Armstrong, Conrad, Didham, & McKune, 1976).

In the late 70s and early 80s, a movement began to reconstruct general education curricula. It was instigated by the release of *Missions of the College Curriculum* by the Carnegie Foundation for the Advancement of Teaching, wherein general education was described as a "disaster area" (2007). The foundation contended that the lack of common student experience devalued the baccalaureate degree. Additionally, declining test scores and complaints from businesses that graduates lacked thinking and communications skills, spurred the latest reformation in general education requirements.

Although no single definition has been established, in 1988 the Task Group on General Education offered this heuristic: general education is "the knowledge, skills, and attitudes that all of us use and live by during most of our lives—whether as parents, citizens, lovers, travelers, participants in the arts, leaders, volunteers, or good Samaritans" (Gaff, 1994, p. 1). Over the years since general education was declared a disaster area, colleges and universities have done a number of things to strengthen general education requirements, including, "raising standards, restricting options, increasing requirements, and creating learning communities" (Boning, 2007, p. 8). They also have incorporated moral reflection, promoted active learning, extended general education requirements through all four years of a degree, improved the assessment of student learning, and encouraged community service (Gaff, 1991). To add further value to the baccalaureate degree, general education course requirements expanded in the 1990s to include "skill development courses, shared experiences for freshmen, capstone projects for seniors, involving undergraduate students in research, and service learning opportunities" (Boning, 2007, p. 13).

In 1994 the Association of American Colleges and Universities (AAC&U), reacting to continual calls for reform in college curriculum and general education, wrote

> The concern is not primarily about students being competent specialists in biology, philosophy, or sociology, for instance. It is that students do not possess the marks of a generally educated person—that is, having such qualities as a broad base of knowledge in history and culture, mathematics and science, the ability to think logically and critically, the capacity to express ideas clearly and cogently, the sensitivities and interests, and the capability to work independently and collaboratively. (Gaff, 1994, p. 1)

In 2009, 433 Association of American Colleges and Universities (AAC&U) member institutions were surveyed about general trends in higher education. Included in the study were questions about general education. Among the administrators interviewed, 78% said that they have established learning outcomes for all of their undergraduate students. In addition they now emphasize writing, critical thinking, quantitative reasoning, and oral communication skills. In addition, 56% of these administrators reported that general education has increased as a priority; only 3% said that it was becoming less important.

Today, the AAC&U has defined general education to be "the part of a liberal education curriculum shared by all students. It provides broad exposure to multiple disciplines, and it forms the basis for developing important intellectual and civic capacities" (Wehlburg, 2010, p. 3). To ensure that general education courses provide meaningful learning, regional accreditors in the U.S. now require written student learning outcomes for all general education courses.

Purpose and Need for a Credit Hour

Today, the credit hour is closely aligned with virtually all colleges in the U.S., but such was not always the case. From the seventeenth through the mid-nineteenth century, American colleges and universities granted hundreds of bachelor degrees. Throughout this time, progress toward degrees was measured in terms of completing parts of a specified curriculum, also known

as a course of study. Although a variety of subjects was taught, the curriculum was not divided into courses. Elective courses were unheard of and the concept of a credit hour did not exist.

The college credit hour came into being in the 1870s, primarily due to the introduction of electives into college curricula. No longer was a course of study totally dictated by professors and college administrators. By 1897 Harvard, Cornell, and Stanford were at the forefront of the elective movement. This newly found freedom of choice for students changed the face of higher education in America over the next few decades. In so doing, it created a need to assess the academic worth of an individual course (Rudolph, 1977). Concurrently, standards became necessary to enable colleges to evaluate the educational readiness of students applying for admission. Establishing a credit-hour system for both secondary and higher education solved both problems.

Although colleges began to assign credit hours as a measure of the "teaching of subject matter" (Levine, 1978, p. 159) during the 1870s, it wasn't until the early 1900s that credit hours were assigned to both high school and college courses. Graduation requirements were soon set in terms of earned credit hours. For high schools, the concept of credit hours was expressed as "units." One unit was defined as a "course lasting not less than 35 weeks and consisting of four to five meetings a week for not less than 45 minutes each" (p. 160). For colleges, credit hours, as we know them now, became the unit of measure for learning, although they were no more than a measure of time on task. Unlike the unit in secondary education, a fixed number could not be required for the baccalaureate degree because academic terms varied in length among colleges—a semester term averages 15 weeks, a quarter term averages 10. Consequently, at least 120 semester hours, or 185 quarter hours are generally required for a baccalaureate degree nationwide.

Current uses of the credit hour. Today, federal and state governments use the credit hour not only as a measure of time spent in front of an instructor, but also as a means for calculating progress toward a degree, determining enrollment levels, and qualifying students and institutions for various federal aid programs and grants. According to Wellman, "Degree-granting programs are required by law to record course work in credit hours" (2003, p. 75). She goes on to clarify that—

> The law references the credit hour only as a measure of time on task and a building block toward a degree. It is used synonymously with contact hours, implying that time spent outside of the classroom with no instructor physically present is not recognized for credit. The federal government requires colleges to offer at least thirty weeks of regularly scheduled instruction per year, during which time full-time students are expected to complete twenty-four semester hours or thirty-six quarter hours. (p. 75)

In recent years, the focus of many colleges and universities has turned to specifying student learning outcomes as one way to improve teaching and learning. Innovative methods are being employed to improve and document student learning. Some of these methods do not fit well with the engrained notion of a fixed amount of contact time as defined by the assigned number of credit hours. Nevertheless, most institutions recognize that the credit hour is still the "coin of the realm for academic and administrative measurement in higher education" (Erlich, 2003, p. 34).

Other less obvious aspects of how engrained the credit hour has become center around budgeting and faculty workload. For many years institutions created and successfully used credit-hour formulas to document how funds were spent. Credit hours are also used as a basis for estimating budget requirements (Wellman & Ehrlich, 2003). Faculty workload also has ties to

the credit hour, typically specified by many colleges as the number of credit hours to be taught per academic year (Wolanin, 2003).

Another place where the credit hour comes into play is allowing students the freedom to change majors or even colleges without having to start over. For example, the same calculus course required for engineering may also be used to complete a major in economics. Additionally, because the credit hour is well defined in the United States, students often can transfer to other institutions and take some, if not all, of their credits there.

Although an argument for eliminating the credit hour as an appropriate measure of learning could well be made, it is evident that the credit hour is thoroughly engrained in our educational systems. Perhaps the well-known naturalist John Muir expressed it best when he wrote of the natural world, "When we try to pick out anything by itself, we find it hitched to everything else in the universe" (1917, p. 158). Clearly the credit hour is a thread tightly woven through the tapestry of college curricula and administration.

The credit hour as a measure of student workload. Although the credit hour is ubiquitous on college campuses, not much about its usefulness or its relationship to student workload appears in professional journals, despite extensive research. The majority of findings deal with the credit hour as a measure for assigning faculty workload; establishing student status (full or part time, which is important in determining eligibility for scholarships and grants); setting tuition and fees; and determining the point at which a degree can be conferred. One study, however, is relevant to the subject of this research. Jessica M. Shedd (2003) gathered survey data from U.S. colleges and universities as part of a study that looked at policies and practices in enforcing credit hours. Of the 55 schools that completed the survey, 19 were research universities while 17, 10, and 9 granted master, baccalaureate, and associate of arts degrees,

respectively. Questions asked included information about the predominant way they record student learning (in credit hours, by course, etc.); whether their faculty handbook or course catalog defined a credit unit; whether their state code defined a student credit unit; if their course catalog or regulations set expectations for students about time spent outside of class in relation to class time; whether they had a policy or guidelines for determining the number of credits a new course should be worth; if faculty workload policies refer to class hours, course hours, or other measures; and whether their academic calendars were semesters, quarters, or other.

The most relevant finding to this study is that 95% reported the credit hour is the "predominant means of recording student learning" (Shedd, 2003, p. 14). However, 55% of the institutions do not define credit hours in any official publication. Regarding the existence of state definitions of credit hours, respondents were almost equally divided between having them, not having them, and not knowing if they had them. Ninety percent reported that they did not have "formal written guidelines for students specifying expectations for out-of-class study time" (p. 14).

From this we see that while credit hours are still predominantly used to record student learning, most colleges and universities do not define them nor do they have any written guidelines indicating the amount of time students should expect to spend outside of class. However, this survey included only 55 of over 4300 colleges in the U.S. (http://nces.ed.gov /programs/digest/d07/tables/dt07_255.asp.) and, while interesting to note, this information has no statistical significance, according to the author (Shedd, 2003, p. 21).

In the last few years, more and more for-profit colleges have opened their doors. Many of them offer accelerated courses that do not require as much contact time with an instructor as students in traditional institutions would have. This development has started conversations about

the idea of measuring learning rather than time on task. The arguments being made are not without merit. The tradition of awarding credit hours has an underlying assumption that courses across all institutions of higher learning are equivalent when they have the same number of credit hours. Perhaps Robert Mendenhall, president of Western Governor's University, sums up the sentiment of many with this statement: "It's time we measured learning rather than time" (Blumenstyk, 2010, para. 6). The implication is that students should pay for learning rather than for time spent in class. The problem is how to measure quality of learning. Since the inception of the credit hour, there has been a "gentlemanly presumption" (2010, para.17) of course equivalency across various kinds of institutions. At the same time, the very fact that many universities require key general education and major courses be completed at their institution belies the presumption.

Education Practices at BYU

Brigham Young Academy was founded in 1875 in Provo, Utah, under the direction of Brigham Young, President of the Church of Jesus Christ of Latter-day Saints. Despite financial and other difficulties at the onset, the student population grew. In 1903 Brigham Young Academy became Brigham Young University (BYU). Today over 30,000 undergraduates from 110 countries are enrolled. Full-time faculty members number over 1500. Students can earn bachelor's degrees in 193 programs, master's degrees in 62, and doctorates in 26 (BYU Daily Universe Staff, 2013).

University core. To graduate with a baccalaureate degree from BYU, students must complete at least 120 credit hours from a combination of University Core, major, and elective requirements, and they must have a GPA of at least 2.0. The University Core curriculum consists of religious and general education courses. According to the undergraduate catalog, the

categories of courses required for graduation "are not partitioned off from one another; none claims preeminence; together they comprise a whole, a harmony" (http://saas.byu.edu/catalog/2010-2011ucat/UnivCore.php; Accessed May 31, 2012).

The influence of the latest general education reforms in the U.S. is apparent at BYU. The general education curriculum requires 31.5 to 72 hours, "depending upon tracks chosen by students or as a result of departmental requirements" (http://ge.byu.edu/ge/universitycore-2012). Students are required to take courses from three core components: (1) The Individual and Society, (2) Skills, and (3) Arts, Letters, and Science. Within "The Individual and Society" they must choose one of 62 courses from Global and Cultural Awareness, and either American Heritage or American Government and Society or a combination of two other approved history and political science courses. In the skills area they must complete

- A first-year writing course;
- An advanced (upper division) written and oral communication course;
- One of a specific set of quantitative reasoning courses (unless a sufficiently high score was earned on the SAT or ACT math tests); and
- An additional math/statistics course or a second-year foreign language course.

In "Arts, Letters, and Science" students must take—

- Two world history courses;
- One fine arts, literature, biology, and a physical science or chemistry course; and
- One of a specified set of courses in economics or the social sciences.

In addition to the required courses, the Office of First-Year Experience was established to help students in their transition to university life. Entering freshmen are encouraged to participate in the Freshman Mentoring program, which gives them priority enrollment in the high-demand

core courses that are required during the freshman year. It also provides them with a sense of community. Those participating in this program receive the active support of a peer mentor (who is an upperclass student). By graduation students should have developed skills in mathematical reasoning, statistical analysis, computer literacy, laboratory techniques, and library research. Senior capstone projects are required throughout all programs. BYU also encourages undergraduate students to participate in research projects and publish their findings. Further, abundant service opportunities are available through The Center for Service and Learning on campus and by participation in community and Church-related off-campus programs. These and aforementioned requirements clearly reflect the recommendations made by the Carnegie Foundation and the AAC&U.

In addition to providing a comprehensive general education program for students, the university administration urges faculty members to enhance student learning by pursuing excellent practices in teaching GE courses. To encourage better teaching, the university recognizes several faculty members each year for outstanding performance as instructors of GE courses.

In summary, the catalog best describes what a Brigham Young University baccalaureate really means.

> Many people, when they think of university education, think primarily of the major—a bachelor's degree in, for example, economics or chemistry or engineering. But a baccalaureate is much more than a major and much more than job-based training in a particular field. Although your diploma states your major, something greater has been

> earned and conferred—a *university* baccalaureate. (http://saas.byu.edu/catalog/2012-2013ucat/UnivCore.php, p.48.)

Credit hours and workload. At BYU every university course has credit hours assigned to it, with the exception of a few preparatory and remedial courses. Each program within a college or school has its own set of course requirements, including the number of credit hours needed to complete a major or minor. BYU adheres to the national standard that defines a credit hour as 50 minutes of instruction with a 10-minute break. According to the BYU undergraduate catalog,

> The expectation for undergraduate courses is three hours of work per week per credit hour for the average student who is appropriately prepared; much more time may be required to achieve excellence. These three hours may include one hour of lecture plus two hours of work outside of class, three hours in a laboratory with little outside work, or any other combination appropriate to a particular course. (http://saas.byu.edu/catalog/2013-2014ucat/GeneralInfo/Registration.php, para 21)

With this established guideline, it seems reasonable to assume that training for new faculty would ensure that instructors design their classes with this standard in mind. However, according to D. Lynn Sorensen, who consulted with faculty on course design for over 20 years at BYU, this subject is rarely, if ever, discussed (personal communication, February 9, 2009). Additionally, few books about designing college courses include estimating time needed to complete assignments. The BYU Faculty Center's website does reference the book *Tools for Teaching,* wherein it states,

> Be conscious of workload. At most colleges, students are expected to spend two to three hours on outside work for each hour in class. For simple texts, you might estimate that

students can read about twenty pages an hour—though, obviously, the rate will depend on your students' abilities and the nature of the reading material." (Davis, 1993, p. 10)

This guideline, though minimally helpful, at least acknowledges the need to plan homework according to an expected hours-per-credit-unit standard.

References to hours students are expected to spend outside of class are sparsely scattered throughout the literature. The Center for Teaching Excellence at the University of New Hampshire reported that students claimed to have spent 4.7 hours per week outside class for each course, which it acknowledges is below the expected 6 hours per week (2005). St. Mary's University, in establishing expected workload for students, states that for every hour in class a student should expect to spend two hours outside of class on assignments and study group meetings (smu.ca/future students/visit-exchange.html, 2012). While this expectation is common among university administrators, it is not well known among students. In 2010, the U.S. Department of Education reiterated the expectation that one credit hour should consist of two hours of out-of-class work per hour of class time. These reports show that BYU's expectations are within the norm.

In a paper presented at the Annual Meeting of the American Psychological Association (2001), Ansburg reported that students believed they should spend 4.9 hours per week outside of class per course, which would be 66 minutes less than expected for the typical three-credit class. Additionally, students reported that a course requiring 6–9 hours of outside work would be considered a difficult course.

Number of Hours U.S. Students Report Spending Outside of Class

According to Babcock and Marks (2010), the hours per week that full-time students at four-year colleges in the U.S. spent studying, fell from about 24 hours per week in 1961 to 14

hours by 2003. According to the authors, “Study time fell for students from all demographic subgroups, for students who worked and those who did not, within every major, and at four-year colleges of every type, degree structure, and level of selectivity for students from all demographic subgroups” (p. 1). As part of their study, researchers looked at how the questions were worded and framed and determined that “study-time decline is not an artifact of the way the questions were asked” (p. 3).

The National Survey of Student Engagement (NSSE) acknowledges a “well-established rule of thumb” that expects students to spend two hours of study outside of class for every hour in class. Their research shows that students fall well below that expectation. On average, students report spending one hour out of class for each hour in class; this finding has been constant from 2000–2010. When looking specifically at full-time freshmen from 950 four-year institutions, they found that “only eleven percent reported studying twenty-six or more hours per week” (McCormick, 2011, para. 2). Expectations for a typical 15-credit-hour workload would be 15 hours in class and 30 hours per week outside of class.

Compressed Courses

At most universities, some courses develop reputations for being easier or more difficult than others. At BYU this happens frequently when comparing semester courses with time-compressed term courses, the latter being rumored as having a substantially lighter student workload despite consistent contact time. In order to maintain the integrity of the curriculum, the workload of a compressed course should be similar to that of a regular course.

Definition. A compressed course is typically defined as having the standard 15 hours of contact time with the instructor per credit hour but within a shorter overall time period. This is usually accomplished by increasing the length of a class period, decreasing the interval between

classes, or a combination of the two. Throughout the literature such courses are also referred to as intensive (Ferguson & DeFelice, 2010; Scott, 2003), short term (Seamon, 2004), accelerated (Wlodkowski, 2003), abbreviated (Anastasi, 2007), summer (Bowling, Ries, & Ivanitskaya 2002), and block (Burton & Nesbitt, 2008). Note that some researchers use "accelerated" to describe courses where contact time is reduced.

Efficacy. Despite maintaining the same numbers of contact hours, compressed courses are often criticized by faculty because they "necessitate sacrificing breadth of knowledge and result in a reduction of academic rigor" (Hyun, Kretovics, & Crowe, 2006, p. 31). "Reduced rigor" implies that students do not achieve similar learning outcomes. However, when using the grade earned as a measure, numerous studies suggest that those enrolled in a compressed course do at least as well in achieving the specified learning outcomes as those taking a traditional course (Anatasi, 2007; Austin & Gustafson, 2006; Caskey, 1994; Daniel, 2000; Feldhaus & Fox, 2004; Scott, 2003; Sheldon & Durdella, 2010; Vreven & McFadden, 2007), assuming that the grading scale remained the same in both instances of the course. Additionally, evidence exists that the nature of the course may be an important factor. For example, Boddy (1985) found that students did better in the compressed version of a computer science course.

Despite these findings, some questions are left unanswered. For instance, in the Sheldon and Durdella (2010) study, students enrolled in the time-compressed course achieved the same results as students in the regular course. However, the students in the compressed course were older. Could their greater maturity have been a factor? In Caskey's study, it is unclear if the content was equally rigorous. While Ferguson and DeFelice (2010) reported that content, assignments, and assessments were held constant, there was doubt about how well the instructor

maintained the same pedagogy in the compressed course. None of the studies considered the degree to which student workload varied between regular and compressed courses.

Modifications teachers make to compressed courses. "A paucity of research addresses how higher education faculty members perceive the effectiveness of time-compressed courses in terms of curriculum development and delivery" (Hyun, et al. 2006, p. 29). Nevertheless, a study conducted by Krevtovics, Crowe, and Hyun (2005), is noteworthy. This research focused on how faculty made adjustments to pedagogical matters when converting a 15-week semester course to a compressed summer course of varying lengths (from less than 2 weeks to 12 weeks). Researchers found that a little over one-third of faculty members made pedagogical adjustments to compressed courses and tenured professors did so more frequently than non-tenured faculty. Adjustments included changing teaching methods, modifying the syllabus, reducing content, changing texts, extending group discussions, replacing some papers with essay tests, changing projects, modifying assessments, and modifying assignments (both reading and writing).

In another study, Kops (2009) interviewed 27 of the best instructors with a rank of professor or lecturer who taught at various campuses of the University of California, about what they did when they taught a compressed course. He found that they restructured their course by reorganizing content and focusing on outcomes rather than content delivery. They also deconstructed assignments into shorter, more frequent ones, which allowed them to give feedback earlier on in the course. Longer assignments were scheduled over weekends. They also "coached" their students on time management and cautioned them not to overextend themselves. They encouraged group work and allowed reading assignments to be divided up among the members. Each member could then share salient points with others in the group. Faculty also

provided handouts of lecture notes and slides. Throughout summer sessions they experimented with new methods that often improved the semester-length course.

Student Ratings as a Reliable and Valid Data Source

Because this study uses data from student ratings, it is important to address the issue of reliability and validity of student ratings in general and of BYU's in particular. Researchers have reported on student ratings of instructors and instruction since 1927, and students have been completing them since 1954 (Kulik, 2001). In 1993, 86% of American colleges reported that they use student ratings (2001) as a prime source for evaluating teaching nationwide. On the whole, teachers view them as a reliable and valid measurement of effective instruction (Kulik, 2001; Thornton, Adams, & Sepehri 2010). Kulik reports that the best data often come from multi-section courses and that "students generally give high ratings to teachers from whom they learn the most" (p. 10).

Student ratings data are not without their detractors, however. An often-referenced study by Rodin and Rodin in 1972 concluded that student ratings are negatively correlated with student learning. They contend that students give better ratings to instructors who give higher grades than those who do not. However, problems with methodology, which have been pointed out by other researchers, cause many to question their conclusions. Other research has shown that "in general, student evaluations can be taken to report honestly student perceptions" (Zhao & Gallant, 2012, p. 1). However, some researchers are concerned that when ratings are done in class, students may be influenced by others in the class.

In an in-depth analysis of student ratings of instructors, Feldman found that "interrater associations produce substantial reliabilities" (1977, p. 19). Studies by Benton and Cashin (2012), Centra (2003), and Kulik (2001) concluded that student ratings of instructors are

generally reliable and valid. Benton and Cashin (2012) determined that when as few as 10 students in a course completed a rating, the interrater reliability was .78. As expected, when class size increased, reliability also increased. In classes with 50 or more students, the interrater reliability was .94.

Conclusion

This literature review indicates that general education (GE) courses are vital to what educators consider a well-rounded education. Using GE courses for this study should be of interest to members of the higher education community nationwide. Specifically this study sheds light on why BYU has structured its general and religious education courses as currently delineated in the course catalog. Because a course credit hour provides a primary data element for establishing and comparing workloads, it is important to know that the credit hour plays an essential role in higher education and it will likely be relevant for years to come, despite current conversations that eventually may render the credit hour meaningless.

Additionally, this review provides some evidence that students enrolled in well-designed time-compressed courses can achieve learning outcomes comparable to those taking conventional courses. It also identifies modifications excellent instructors make to ensure that learning outcomes are achieved when teaching in a time-compressed format. Lastly, because student ratings data produce valid and reliable results when assessing teaching effectiveness, a case can be made for using it in this research. Hopefully this study will add to the conversation and shed light on some of the grey areas surrounding the efficacy and therefore the value of time-compressed courses when compared to their semester-long counterparts.

Chapter 3: Methods

This study used a mixed-methods strategy to answer the research questions. Extant quantitative data from course evaluations (student ratings) were used to determine if there were differences in workload between semester and term courses. Specifically, the number of hours students reported spending outside of class on homework and their assessment of the value of that homework for semester and term courses were analyzed. Surveys, interviews, and syllabi comparisons were employed to determine what changes, if any, instructors made to their course when they taught it in a compressed time (term) format and when they made such changes.

The survey gathered both quantitative and qualitative data from instructors who were selected from a variety of the departments included in this study. Instructors were asked about the extent to which they modified content, assignments, and teaching methods for their term courses. Follow-up interviews were conducted with selected instructors who completed the survey. During the interviews, modifications made to term courses and how those changes may have affected student learning, were explored. In addition, data on class demographics were collected with the purpose of accounting for possible confounding variables reported in the literature. Next, semester and term syllabi from instructors included in the survey were studied to identify similarities and differences in course structure and content. Specifically, differences in course schedule, texts, content, assignments, assessments, and grading scales were examined in detail. The quantitative and qualitative data combined were used to determine how differences may have affected the credit-hour value of the term course.

Selecting Courses

The BYU Center for Teaching and Learning provided the data for the statistical analyses. Data came from the 2010–2011 course evaluations. During the rating process, students

responded to a 24-item survey (see Appendix A). These data were collected during the three weeks before finals for semester courses and the last two weeks of term courses. The data were furnished in a spreadsheet that included responses for fall and winter semesters, and spring and summer terms, for the requested 30 highest-enrollment University Core courses (see Table 1). These courses were partially identified in a previous study conducted by the author (see Lutes & Davies, 2013). In preparation of the prospectus for this study, further analysis was done to finalize the list of highest-enrollment University Core courses at BYU from which the statistical analysis would be completed (see Table 2).

To qualify for inclusion in this study, a course needed to have at least two instructors who taught one or more sections of the same course during one or both semesters and one or both terms. In addition, and in consultation with an associate director at the BYU Center for Teaching and Learning, it was decided that in order to include as many sections as possible and still obtain valid results, at least 10 students or 40% of the enrolled students must have responded. This percentage was based on results from a previous study conducted at BYU that indicated that there was a difference of only .1% when the response rate was reduced from 60% to 40%. Using the above criteria, all course sections that did not have a sufficient number of student responses were deleted. This left 426 course sections (semester and term) from 20 courses for the statistical analysis. Among the 20 courses selected, all except Rel A 121 and 122 (Book of Mormon), and Rel C 324 (Doctrine and Covenants) were required courses in one or more majors at BYU.

Table 1

Thirty Highest-Enrollment University Core Courses

Course Designation	Brief Course Description	Credits: Class Hours
A HTG 100	American Heritage	3:3
ANTHR 101	Social/Cultural Anthropology	3:3
BIO 100	Biology	3:3
CHEM 105	General College Chemistry	4:5
ECON 110	Economic Principles and Problems	3:3
ENGL 312	Persuasive Writing	3:3
ENGL 316	Technical Communication	3:3
GEOG 120	Geography and World Affairs	3:3
GEOL 101	Introduction to Geology	3:2
HIST 201	World Civilization to 1500	3:3
HIST 202	World Civilization from 1500	3:3
HUM 201	Western Humanities 1	3:3
HUM 202	Western Humanities 2	3:3
M COM 320	Communication in Organizational Settings	3:3
MATH 112	Calculus 1	4:5
MATH 113	Calculus 2	4:5
MATH 119	Introduction to Calculus	4:4
MFG 201	History of Creativity 1	3:3
MFG 201	History of Creativity 2	3:3
MUSIC 101	Introduction to Music	3:3
PDBIO 220	Human Anatomy	3:2
PHSCS 105	Introductory Applied Physics	3:3
PSYCH 111	General Psychology	3:3
REL A 121	Book of Mormon 1	2:2
REL A 122	Book of Mormon 2	2:2
REL A 211	New Testament 1	2:2
REL A 212	New Testament 2	2:2
REL C 324	Doctrine and Covenants 1	2:2
STAT 121	Principles of Statistics	3:3
WRTG 150	Writing and Rhetoric	3:3

Table 2

Twenty Courses Selected for Statistical Analysis

Course Designation	Brief Course Description	Credits: Class Hours
A HTG 100	American Heritage	3:3
BIO 100	Biology	3:3
ECON 110	Economic Principles and Problems	3:3
ENGL 312	Persuasive Writing	3:3
ENGL 316	Technical Communication	3:3
HIST 201	World Civilization to 1500	3:3
HIST 202	World Civilization from 1500	3:3
HUM 201	Western Humanities 1	3:3
HUM 202	Western Humanities 2	3:3
M COM 320	Communication in Organizational Settings	3:3
MATH 112	Calculus 1	4:5
MUSIC 101	Introduction to Music	3:3
PHSCS 105	Introductory Applied Physics	3:3
PSYCH 111	General Psychology	3:3
REL A 121	Book of Mormon 1	2:2
REL A 122	Book of Mormon 2	2:2
REL A 211	New Testament 1	2:2
REL C 324	Doctrine and Covenants 1	2:2
STAT 121	Principles of Statistics	3:3
WRTG 150	Writing and Rhetoric	3:3

To maintain the required confidentiality, instructor codes and course codes were assigned to each section in the spreadsheet. Instructor codes were assigned in numerical order. Course codes were assigned alphabetically by course name.

Statistical Analysis

BYU course evaluations (student ratings) provided the data needed to run a multivariate analysis of variance (MANOVA). The MANOVA was selected because it allows for the analysis of separate interaction effects between dependent variables and independent variables.

In this study the independent variables were occasion (i.e., semester or term) and instructor autonomy (i.e., the freedom an instructor had to make course design decisions or changes). The two dependent variables were workload (i.e., the number of hours students spent on class work outside of class) and value of homework (i.e., the value students placed on work completed outside of class). Differences in workload and value of homework were compared for each of the 426 course sections from the 20 courses included in this study. In calculations of semester and term workloads, term workloads were divided by two to make them comparable to the hours reported in a semester.

In addition to the multivariate analyses, descriptive statistics were used to compare the semester and term workloads students reported to the expected workloads based on the credit hours of the course. To do this, the mean hours of work that students reported completing outside of class was calculated and tabulated by course section and then compared to the number of hours expected for that course.

Survey, Interview, and Syllabi Analyses

Instructor surveys, follow-up interviews, and syllabi comparisons were completed to answer the second research question that focused on the ways that instructors modified their semester courses to fit a term schedule. Surveys collected high level information about the extent to which instructors modified course content, assessments, and teaching methods for their term courses. Interviews focused on student learning, class demographics, final grades, efficacy of term courses, and when changes were made. Syllabi were used to compare content, readings, assignments, quizzes, exams, grading scales, and textbooks between semester and term courses.

Surveys. The first step was to gather and add contact information (email address and phone numbers) to the list of instructors included in the statistical analysis portion of the study.

This information came primarily from the BYU online directory. Some was gathered from department websites and CTL consultants. Table 3 lists the courses from which instructors were selected to complete the survey. The only difference between the courses included in the statistical analysis, shown in Table 2, and the survey analysis, shown in Table 3, were two math courses. While Math 112 qualified for the statistical analysis, no instructor contact information could be located, so that course was excluded from the list of instructors to receive a survey. On the other hand, Math 119 was included because contact information was available, even though the number of student responses was insufficient for that course to qualify for the statistical analysis. Including this course was desirable so that the math and sciences would be better represented in the qualitative analysis.

Qualtrics Survey Software was selected to create, analyze, and report instructors' responses to a seven-question survey. The survey consisted of four Likert-scale items and three open-response items shown in Table 4. The survey was sent to all instructors for whom an email address could be found and who had taught a semester and term version of one or more sections of the courses listed in Table 3. The survey asked each participant to read the informed consent statement prior to beginning. Proceeding with the survey served as participants' acceptance of the IRB conditions. To maintain confidentiality, each instructor was assigned a numeric instructor code.

The first six survey questions inquired about changes an instructor made to the content, assignments, and teaching methods for a specified course when he or she taught the course in a term time frame. Each course was identified by name, number, and year taught. The last question asked if the instructor would consent to be interviewed. Three options were given to encourage a

positive response. Instructors could choose “yes,” “no,” or “yes, depending on my schedule.” To maximize the response rate, each email

- Addressed the instructor by name and included the course name.
- Identified the researcher and the purpose of the study.
- Explained the benefits of participating.
- Gave the estimated mean time to complete (less than four minutes).
- Assured them that their replies would be kept confidential.
- Explained that 12 respondents who completed the survey would be selected at random to receive a gift certificate for a BYU ice cream cone.

Table 3

Twenty Courses Used for Instructor Surveys

Course Designation	Brief Course Description	Credits: Class Hours
A HTG 100	American Heritage	3:3
BIO 100	Biology	3:3
ECON 110	Economic Principles and Problems	3:3
ENGL 312	Persuasive Writing	3:3
ENGL 316	Technical Communication	3:3
HIST 201	World Civilization to 1500	3:3
HIST 202	World Civilization from 1500	3:3
HUM 201	Western Humanities 1	3:3
HUM 202	Western Humanities 2	3:3
M COM 320	Communication in Organizational Settings	3:3
MATH 119	Introduction to Calculus	4:5
MUSIC 101	Introduction to Music	3:3
PHSCS 105	Physics and Astronomy	3:3
PSYCH 111	General Psychology	3:3
REL A 121	Book of Mormon 1	2:2
REL A 122	Book of Mormon 2	2:2
REL A 211	New Testament 1	2:2
REL C 324	Doctrine and Covenants 1	2:2
STAT 121	Principles of Statistics	3:3
WRTG 150	Writing and Rhetoric	3:3

Table 4

Instructor Survey Questions

1. As compared to my regular semester course, the amount of content covered in my spring or summer term course is
   □ reduced considerably/significantly
   □ reduced somewhat
   □ exactly the same
   □ increased somewhat
   □ increased considerably/significantly

2. Please explain the reason for any differences. Specify which changes were made prior to the course and which were made during the course.

3. As compared to my semester course, the number of assignments (including assessments) given in my spring or summer term course are
   □ reduced considerably/significantly
   □ reduced somewhat
   □ exactly the same
   □ increased somewhat
   □ increased considerably/significantly

4. Please explain the reason for any differences. Specify which changes were made prior to the course and which were made during the course.

5. As compared to my semester course, my classroom teaching methods and activities change
   □ considerably/significantly
   □ somewhat
   □ not at all

6. Please explain the change(s).

7. Would you be willing to be interviewed at a time and place convenient for you about the changes you made to your term course?

Survey distribution. The survey was originally sent to 86 instructors. While more than a dozen completed the survey, most did not. Five days later it was resent to those who had not responded. Five surveys were not delivered due to invalid email addresses. After two weeks, four separate survey requests were sent to each of two Math 119 instructors whose sections had not qualified for the statistical analysis and to each of two Phscs 105 instructors who had not responded to the first request. The value of having math and sciences better represented in the study was explained in the email. One Math 119 instructor replied. Neither of the physics teachers responded.

The goal specified in the prospectus was to receive at least 30 responses and get a 30% response rate. Over the course of two weeks, 36 people responded for a response rate of 42%, which is slightly above average for an email survey (Hoonakker & Carayon, 2009; Shih & Fan, 2008). Of the 36 respondents, 25 agreed to be interviewed.

Tracking and analyzing survey data. Survey results were downloaded to a spreadsheet. Data that were not germane to the analysis were deleted (e.g., response ID numbers, IP and email addresses, and start and end times). Columns for instructor codes, course names, willingness to be interviewed codes, and interview mode (i.e., in person, phone, or email) were added to track interview progress. Of the 36 respondents, 23 made comments to one or more of the questions. Only 11 wrote more than a one-sentence response, and only two commented on all three questions. Occasionally, comments made following one question referred to a previous or subsequent question. In this case adjustments were made when the findings were reported. The percentage of each numerical response by question was calculated. The comments were recorded verbatim for analysis.

Interviews. The purpose of conducting interviews was threefold. The first was to follow up with questions about survey responses. This was intended to improve the credibility of the results utilizing a member-check process to verify the data and its interpretation. The second purpose was to inquire about student demographics that the literature indicated could confound the results. The final purpose was to probe in greater depth each instructor's rationale for changes he or she made to term courses including when changes were made and how those changes may have affected the credit value of the course.

During the first interviews, instructors expressed concern that the term format did not provide adequate time for students to achieve deep learning. This question, along with a question about the overall equivalency of student learning between semester and term courses, was included in the remaining interviews.

Selecting and inviting instructors to interview. Instructors from as wide a variety of courses as possible were selected to be interviewed in order to maximize the diversity of situations and contexts. Their willingness to be interviewed was also a requirement of IRB approval. An exception occurred in the statistics class because the sole statistics instructor who agreed to be interviewed taught only two sections, neither of which was one of the 42 daytime sections on the Provo campus. Obtaining an additional opinion about student learning was desired, so an email request was sent to an instructor who had completed the survey and who had taught numerous daytime sections, even though she had not indicated a willingness to be interviewed on the survey. This instructor responded by providing the percentage of students who failed the final in each semester and term.

To invite instructors to be interviewed, requests were emailed to individuals over a period of several weeks. Because the course evaluation data set was from two years earlier, it was

expected and found that some instructors were no longer in the area. However, when those at a distance indicated a willingness to participate, they were interviewed by phone or completed questions emailed to them. Eighteen interviews were completed between March 22 and May 14, 2013, two by email, five by phone, and eleven in person.

Preparing interview questions. The interview questions followed a semi-structured format. Each instructor was asked a basic set of 11 questions shown in Table 5. Additional questions were asked as needed to probe specific topics that emerged during the interview. All questions centered around three factors:

1. Their responses to the survey questions, which asked about modifications to content, assignments, and teaching methods, including what, why, and when they made such changes.
2. Issues brought up in the literature that might affect the value of courses, apart from changes instructors made to a term course. These included demographics of students, differences in final course grades, and class size.
3. Adequacy of time for reflection and overall student learning during a term.

Conducting instructor interviews. Prior to interviews, the questions and process were beta tested with a statistics instructor. The interview was timed so that other instructors could receive an accurate estimate of how long it should take. The beta interview took 17 minutes; the subsequent interviews ranged from 15 to 20 minutes.

Table 5

Instructor Interview Questions

Did you increase the number of office hours during a term? If so, from what to what?
Did you notice a difference in the age of your students during spring or summer? If so what did you observe?
Roughly how many students were in a class during spring or summer, and how did that number compare to semester enrollments?
Did you find that there was enough time between class sessions for students to have time to reflect and deepen their learning?
Did you do exams and quizzes in class?
Did you do group work in class?
Did you find that final grades for the course were about the same for your term course as for your semester course? If not, what differences did you observe?
Are all [course name] courses equivalent (same texts, same assignments, same assessments), or do instructors have as much leeway as they want to achieve the learning outcomes?
Did you believe that student learning was the same in semester and term versions of the course?
Do you have any other comments about the efficacy of term courses as compared to semester courses or your preference for teaching one or the other?
Based on the survey you completed, you indicated that _____ (described reported changes). Tell me more about the changes you made and when you made them.

At the beginning of the interview, each instructor was asked to sign an Institutional Review Board informed consent form. In order to establish rapport, the first questions dealt with the least-sensitive issues regarding differences between semester and term classes, such as the age of students, final grades, changes in office hours, and class size. Then the more significant questions were asked, which centered on the depth of student learning in the term as compared to the semester and the efficacy of term classes in general. Finally, responses given on the survey regarding changes made to course content, assignments, and teaching methods were discussed. Occasionally, an instructor digressed from the topic, which provided additional insights into philosophies, attitudes, and preferences for teaching in semester or term formats.

Analyzing interview data. Following each interview, the instructor's responses were transcribed into a Word document. Next, a spreadsheet was created with columns for instructor codes, instructor rank, course names, and responses to each question. Relevant information from the data transcription was copied into the spreadsheet.

To analyze the data, emerging themes and possible relationships between them were coded using Ruona's (2005) method. The process consisted of creating and revising categories until all of the significant elements of instructor responses were captured. This iterative process was considered complete when each piece of data fit into one, and only one, category. Care was taken to ensure that the categories were conceptually congruent and that the category names accurately described the data. Each category was then assigned a number in order to facilitate calculating the percentage of the various responses for each question.

For the most part, expected responses were given, and they fell into discrete categories. However, in several cases, unexpected responses were given. For example, the student age data fell into the three expected categories of younger, similar, and older, and one unexpected

category—both younger and older—which was reported by three instructors. Research revealed that these courses were not prerequisites to another course (unless the student was majoring in that subject), nor were they promoted by the Office of First-Year Experience to be taken during the freshman year. Consequently, students often either took these courses during their freshman year to get them out of the way, or they deliberately put off or forgot about them until the last semester when such courses were needed to graduate.

Syllabi comparisons. Eighteen pairs of syllabi (one semester and one term) from 20 course sections taught by the same instructor were gathered from instructors and BYU online resources. Each was reviewed and the common components that could affect the equivalency of the courses were listed. These included textbooks, content (topics) for class periods, readings (and other non-graded learning activities), graded assignments, quizzes, exams, and grading scale.

Differences between term and semester course components were noted while reading each syllabus. Where variations occurred, an approximate percentage of difference was estimated. The number and percentage of those components that remained the same and differed between semesters and terms were tallied.

Value of Homework

The word *value* as it is applied to the workload assigned to students has several meanings. The first is subjective because it is based on the opinions of instructors about the equivalency of student learning between a semester and term course. The second carries another, more specific, meaning, based on the number of hours students are expected to spend outside of class. As previously stated, the ratio of hours students are expected to spend outside of class to hours in class is 2:1 per credit hour of the class. When semester and term course workloads are

not similar, the value of the term or semester course could be questionable. Such a finding could be the result of a semester course having an excessive amount of busywork or the term course lacking important course work. A third use of value comes from the student ratings wherein students assessed the degree to which what they did outside of class contributed to their learning; i.e., value of the homework.

Summary

In summary, to ascertain the extent to which selected University Core term courses retained their workload value when compared to their semester counterparts, the following analyses were conducted

- Multivariate analyses of variance compared semester and term courses to determine if significant differences existed between workloads and the value of the time students reported spending out of class by occasion and instructor autonomy.
- Instructors were surveyed regarding changes they made to their semester courses when they taught them in a term format, and their responses were tabulated.
- Instructors were interviewed to follow up on their survey responses and to investigate other factors that may have affected the value of term courses. These results were tabulated and summarized.
- Paired syllabi were analyzed to determine what, if any, published differences existed between semester and term courses. The results were also tabulated.

Chapter 4: Results

This study used both quantitative and qualitative data sets to answer the research questions that focused on the extent to which selected sections from 20 of the highest enrollment University Core courses (general education and religion) retained their credit-hour value in terms of workload when taught in the term format. To provide additional perspectives in answering the research questions, findings from instructor surveys, interviews, and syllabi were also reported.

Research Question 1: Workload Differences Between Semester and Term Courses

This research question sought to discover if there were significant differences in workload between semester and term courses. To answer this question, the responses students gave during the course ratings process, regarding hours spent outside of class on homework, were used.

Dependent and independent variables. Statistical analyses were run to determine if differences existed between semester and term courses based on the dependent variables of (a) the amount of time students spent on course work outside of class (i.e., homework) and (b) the value students placed on the homework they did outside of class. While occasion (semester or term) was the primary focus of this study, previous research revealed that the instructor influences the dependent variables, as well (Lutes & Davies, 2012). During the interview phase of this study, it was also learned that the autonomy instructors have in designing their courses might moderate any individual differences an instructor may introduce. Consequently, autonomy likely supersedes much of the variability introduced by individual instructor differences. Therefore, autonomy was used as a second independent variable.

A multivariate analysis of variance (MANOVA) was run using data from student course evaluations. The two dependent variables were the *hours* students reported spending on

homework outside of class (semester and term) and the *value* that the time spent was to their learning. The independent variables were *occasion* and the *autonomy* instructors had in designing and modifying a course.

Workload differences based on occasion and autonomy. A MANOVA was run to determine whether significant differences existed in the dependent variable of workload outside of class and the perceived value students placed on the work they did outside of class. The descriptive statistics for this result are presented in Table 6. Based on the results of this analysis, a significant difference was found between *workload* and *value of homework* by *occasion*, V = .252, $F(3,420) = 47.1$, $p < .001$, $\eta^2 = .252$. There also was a significant difference in the *workload* and *value of homework* by *autonomy*, V = .294, $F(6,842) = 24.2$, $p < .001$, $\eta^2 = .147$.

On average, the *workload* difference by *occasion* was 0.30 hours per credit hour. This result is statistically significant, $F(1,422) = 107.8$, $p < .001$, $\eta^2 = .203$. This difference equates to approximately 54 minutes more per week in a three-credit-hour semester course compared to a three-credit-hour term course. The *value of homework* reported by *occasion* was not significantly different overall, $F(1,422) = 0.813$, $p = .368$.

The *workload* difference by *autonomy* was statistically significant, $F(2,422) = 20.3$, $p < .001$, $\eta^2 = .088$. There was a trend indicating that, regardless of occasion, workload decreased as the instructor had greater autonomy over the course. For example, students in classes where the instructors had the greatest autonomy reported workloads of about .12 hours per credit hour less than those of classes in which the instructors had low autonomy. This equates to about 19 minutes less per week in a three-credit course. For courses with moderate autonomy compared to those with high autonomy, the difference was about double that (i.e., 35 minutes per week).

The differences in *value of work* reported by *autonomy* was also found to be statistically significant, $F(2,422) = 15.6$, $p < .001$, $\eta^2 = .069$. The pattern for this factor was reversed in comparison to workload. Students reported greater value in the work done outside of class in courses where the instructor had greater autonomy. For example, students in classes where the instructors had the greatest autonomy reported that 84.5% of the work done outside of class was valuable compared to 81.8% in classes where the instructors have low autonomy.

Table 6

Workload Out of Class, Value of Work Out of Class, by Occasion and Instructor Autonomy

Dependent Variables	Occasion	Autonomy	N	Mean	SD
Workload Outside of Class	Semester	Low	28	1.4	0.3
		Moderate	107	1.4	0.3
		High	134	1.2	0.3
		Total	269	1.3	0.3
	Term	Low	27	1.1	0.4
		Moderate	53	1.1	0.2
		High	77	0.9	0.3
		Total	157	1.0	0.3
	Total	Low	55	1.2	0.4
		Moderate	160	1.3	0.3
		High	211	1.1	0.3
		Total	426	1.2	0.3
Value of Work Done Outside of Class	Semester	Low	28	81.9	4.8
		Moderate	107	80.3	6.8
		High	134	84.6	7.2
		Total	269	82.6	7.1
	Term	Low	27	81.6	4.0
		Moderate	53	82.0	5.6
		High	77	84.5	6.5
		Total	157	83.2	5.9
	Total	Low	55	81.8	4.4
		Moderate	160	80.8	6.5
		High	211	84.5	6.9
		Total	426	82.7	7.66

Workload means. University administrators generally agree that some courses are more demanding than others for the average student. Among the University Core courses, math and science courses often have reputations for requiring a substantially greater amount of work outside of class than other courses do. In addition reading-, writing-, and research-intensive courses are also reputed to be demanding of students' time. On the other hand, religion courses are sometimes thought to be among the less rigorous, even for their two-credit-hour value.

In this study, 15 of the 20 courses were 3 credit hours. Math 112 was a four-credit- hour course, and the four religion courses carried two credit hours. Table 7 shows the average workload mean for all semester and term sections of a course. In all instances, at minimum, two instructors taught at least one semester and one term section.

Analysis revealed that none of the course means met the expected number of hours of outside work during either the semester or the term. Semester students in Math 112 and in Phscs 105 came closest to meeting expectations with mean workloads reaching 85% and 82% respectively. Students taking Bio 100, Hist 201, Hist 202, and Music 101 had mean workloads in the low 40% bracket. Somewhat unexpectedly, given the reputation many religion courses have for being easy, students in most of the religion courses reported spending 60–65% of what was expected for a two-credit class. During the term, the percent of courses with a workload mean that met expectations ranged from 5–15% lower than the semester. The only exceptions were the math and physics courses; they had a 3% higher workload mean during the term.

Table 7

Mean Outside Workload for Semester and Term Courses Compared to Expected Workload

Course (number of sections, semester and term)	Credit Hours	Semester		Term*		Weekly Minutes Outside of Class Difference from Semester to Term
		Reported Workload Mean per Week/ Expected	% of Expected Workload	Reported Workload Mean per Week/ Expected	% of Expected Workload	
AHtg 100 (8, 5)	3	3.3/6	55	2.9/6	48	- 24
Bio 100 (8, 3)	3	2.5/6	42	2.0/6	33	- 30
Econ 110 (3, 3)	3	4.3/6	72	3.7/6	62	- 36
Eng 312 (10, 7)	3	3.6/6	60	3.3/6	55	- 18
Eng 316 (23, 11)	3	4.2/6	70	3.5/6	58	- 42
Hist 201 (9, 7)	3	2.6/6	43	2.0/6	33	- 36
Hist 202 (6, 5)	3	2.6/6	43	2.2/6	37	- 14
Hum 201 (14, 5)	3	3.4/6	57	2.5/6	42	- 66
Hum 202 (12, 7)	3	3.5/6	58	3.2/6	53	- 18
M COM 320 (31, 13)	3	4.0/6	66	3.4/6	57	- 36
Math 112 (5, 3)	4	6.8/8	85	7.0/8	88	+ 12
Music 101 (7, 3)	3	2.5/6	42	1.8/6	30	- 42
Phscs 105 (4, 2)	3	4.9/6	82	5.1/6	85	+ 12
Psych 111 (11, 8)	3	3.3/6	55	2.9/6	48	- 24
Rel A 121 (22, 15)	2	2.6/4	65	2.2/4	55	- 18
Rel A 122 (11, 9)	2	2.4/4	60	2.0/4	50	- 24
Rel A 211 (18, 9)	2	2.6/4	65	2.1/4	53	- 30
Rel C 324 (16, 6)	2	2.1/4	53	1.7/4	43	- 24
Stat 121 (19, 22)	3	3.2/6	53	2.8/6	47	- 24
Wrtg 150 (32, 14)	3	3.9/6	65	3.4/6	57	- 30

Note. *Term workload was divided by two to give comparable results. Courses with semester and/or term workloads over 59% are in boldface.

In addition to analyzing differences in *workloads by course,* it was also important to understand differences in *workloads between instructors teaching the same course during each occasion*. A complete listing of workloads by instructor code is in Appendix B. Overall, 10% of instructors had workloads that differed by 2 to almost 2.5 hours more per week in the semester than in the term. Of those 10%, 80% were instructors who taught reading- and writing-intensive courses. Among the remaining 90% of instructors, 31% had semester courses that ranged between one and two hours more per week during the semester; 50% ranged between having no difference to slightly less than an hour; and 9% ranged from a few minutes to close to two hours more during the term than the semester.

Among the 20 courses in this study, differences in workloads between semester and term courses were under an hour among all the instructors who taught sections of Hist 202, Math 112, Rel A 121, Rel C 324, and Stat 121. One or more instructors teaching Eng 316, Hist 201, Hum 201, M Com 320, Psych 111, and Writing 150 had workload reductions of two or more hours per week between their semester and term courses. Overall, practical differences in workloads exist for most instructors between their semester and term courses.

When averaging workload differences among instructors teaching the same course, as seen in Table 8, Econ 110, Hum 202, and Rel A 121 had less than an hour variance between instructors in their respective courses, while students taking Hist 201, Phscs 105, reported doing as much as 2.5 hours more in these courses, depending on who was teaching the course.

Table 8

Minutes per Week Differences Among Instructors in Semester and Term Courses

Minutes	Courses
0–50	Econ 110, Hum 202, Rel A 121
51–100	AHtg 100, Bio 100, Hist 202, Math 112, Music 101, Rel A 122, Rel A 211, Rel C 324, Stat 121
101–150	Hum 201, Eng 312, Eng 316, M COM 320, Psych 111, Wrtg 150
151+	Hist 201, Phscs 105

Descriptive statistics for workload differences based on occasion. Figures 1 and 2 display the mean workloads outside of class for *only the three-credit-hour course sections* included in this study (i.e., Math 112 and all religion courses were excluded). For three-credit-hour semester courses, the mean workload was 3.90 hours per week (1.3 hours per credit). The term mean of 2.97 hours per week was even lower (0.99 hours per credit). Both means fell well below the expected outside workload of six hours per week or two hours per credit. This difference suggests that students taking a course during a semester might spend on average about 57 minutes per week (19 minutes per credit) more work outside of class during the semester than they would during a term.

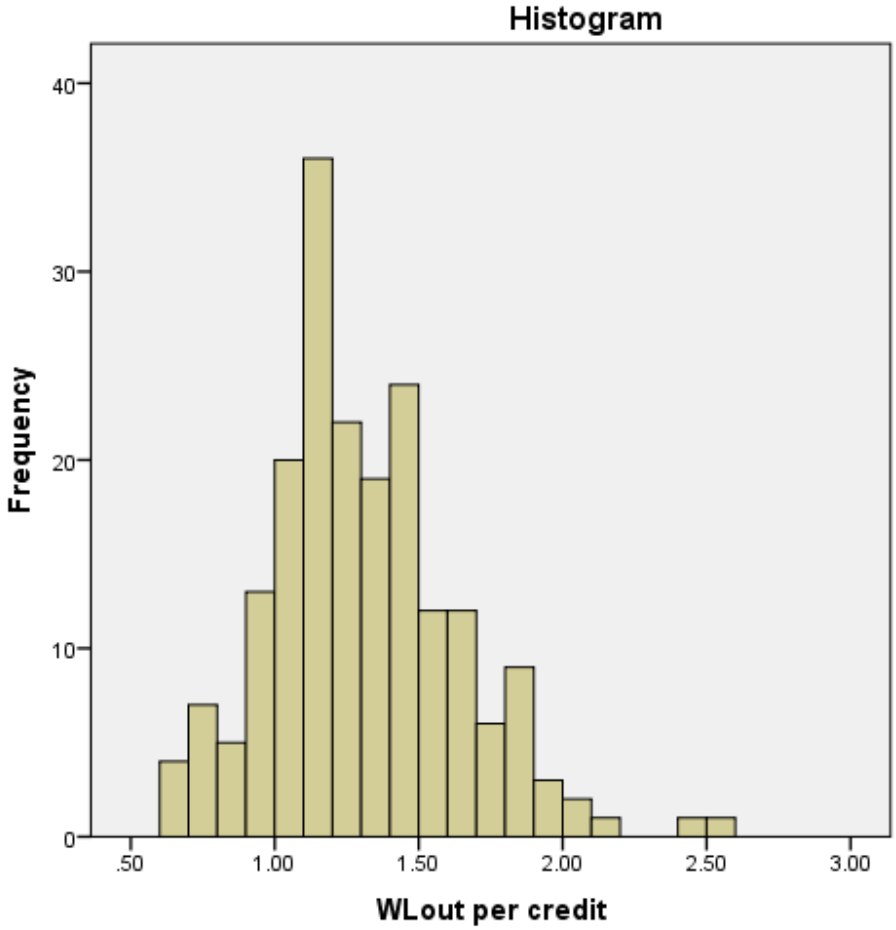

Figure 1. Descriptive statistics for three-credit semester courses. This chart presents the distribution of reported workload hours outside of class for semester courses. It illustrates that the student-reported hours spent outside of class are skewed toward the lower end of the expected range. Descriptive statistics for three-credit-hour semester courses included in the statistical analysis: N = 197, Mean = 1.30 *per credit hour*, Median = 1.25, Mode = 1.25, Standard Deviation .328, Range = 1.86.

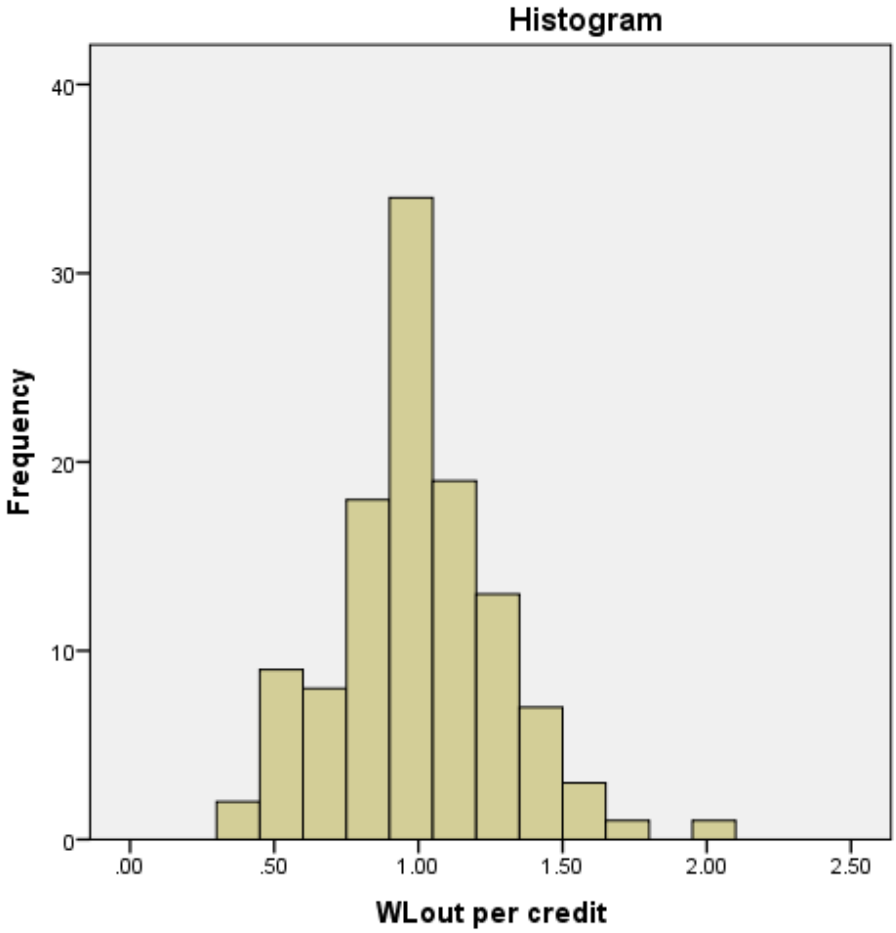

Figure 2. Descriptive Statistics for three-credit term courses. This chart presents the distribution of reported workload hours outside of class for term courses. It illustrates that the student-reported hours spent outside of class are skewed toward the lower end of the expected range. Descriptive statistics for three-credit-hour term courses included in the statistical analysis: N = 115, Mean = .99 *per credit hour*, Median = .97, Mode = 1.25, Standard Deviation .286, Range = 1.65.

Workload differences based on autonomy. Figure 3 shows the range of student workloads among instructors who taught the same course during the semester according to their autonomy. Generally, during the semester instructors teaching the courses with the greatest autonomy tended to have workloads that were roughly the same among the instructors. In the first quartile (i.e., the lowest 25% of classes in terms of workload differences between semester and term sessions), all five courses had little difference in workload among the instructors. They also had high autonomy; note that three of the five were religion courses. In the second and third quartiles, there was a fairly even mix of autonomies among the courses. In the fourth quartile, the greatest variances among instructors were seen in the high and moderate autonomy courses only.

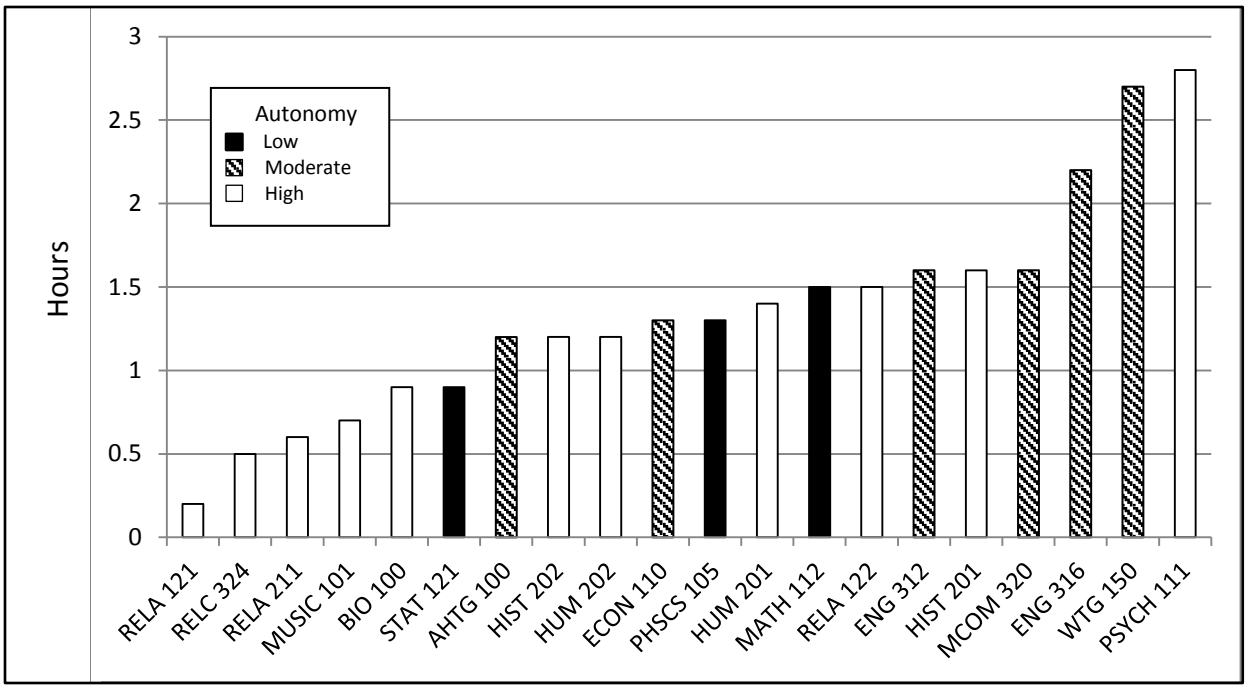

Figure 3. Semester Differences in Workload Ranges Among Instructors by Autonomy. This figure illustrates the degree to which workloads vary among instructors teaching the same course during the semester. For example, students taking Rel C 324 reported spending no more than a half hour difference per week regardless of who the instructor was. On the opposite end of the scale, students in Wtg 150 and Psych 111 reported spending as much as two-and-a-half hours more per week depending on the instructor. During the semester, courses where instructors have the least autonomy (black bars) have moderate differences in workloads. Courses where instructors have moderate autonomy (striped bars) tend to have more variance among instructors. Interestingly while religion instructors report having the greatest autonomy, three of the four courses (white bars) have the least variance in outside work among themselves.

Figure 4 shows the range of student workloads among instructors who taught the same course during the term. Although there were similarities with the semester, there were some noticeable differences, as well. In the term, courses with the least autonomy tended to cluster in the middle; courses with moderate autonomy tended to be on the high end of workload differences; and those with little autonomy appear as bookends—having the most and least difference in workload among instructors.

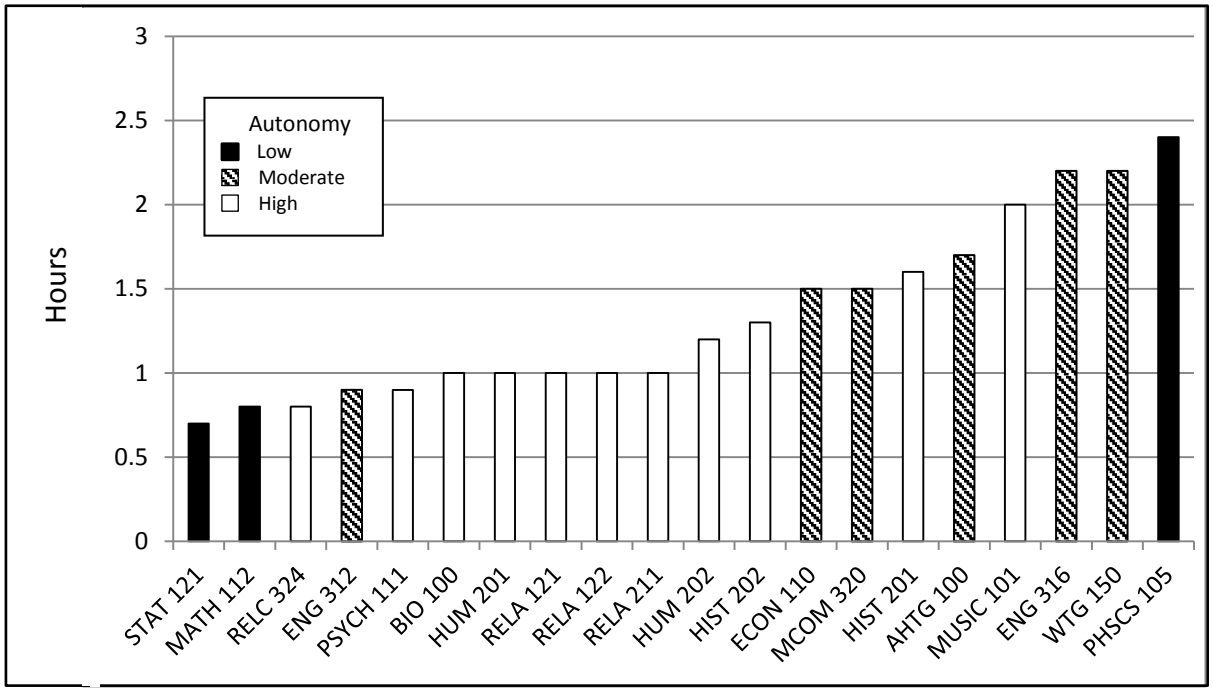

Figure 4. Term Differences in Workload Ranges among Instructors by Autonomy. This figure illustrates the degree to which outside workloads vary among instructors teaching the same course during the term. For example, students taking Stat 121, Math 112, Rel C 324, Eng 312, and Psych 111, reported spending less than an hour difference per week regardless of who the instructor was. On the opposite end of the scale, students in Wtg 150 and Psych 111 reported spending as much as two and a half hours more or less per week depending on the instructor.

Among the semester-length writing courses, there was quite a bit of variance among all of the instructors. For example, during the term, Eng 312 had considerably less variance among instructors than it did during the semester. However, that could be a reflection of there being fewer instructors teaching the course during the term.

Research Question 2: Changes Instructors Make to Term Courses

The second research question addressed in this study focused on the changes instructors reported making to their course when they taught it in a compressed time (term) format and when they made those changes. Surveys, follow-up interviews, and comparisons of semester and term syllabi were used to determine the extent to which changes were made.

Changes to content. The comments instructors made to the survey question that asked about changes in content indicated that some instructors considered "assignments" as a part of course content. When this occurred their responses were reported as answers to the question about changes in workload. None of the 36 instructors reported that they reduced course content considerably. As shown in Table 9, 22% reported that they reduced content somewhat. The remaining 78% indicated that the content was the same for both their semester and term courses.

Table 9

Survey Results: Changes to the Amount of Content

Content	Responses	Percent
Reduced considerably	0	0
Reduced somewhat	8	22
Exactly the same	28	78
Increased somewhat	0	0
Increased considerably	0	0
Total	36	100

Of the eight instructors who reduced content "considerably," seven taught courses that required a substantial amount of reading and writing (Hum 201 and 202, M Com 320, and two each from Eng 316 and Wrtg 150). One humanities instructor reported that she reduced the amount of reading only "slightly." During one interview an instructor of music appreciation reported that the content he left out consisted of incidental stories from the lives of some

composers. He explained that the omitted content was not included in exams, which he pointed out were identical for both his semester and term courses. An Eng 316 instructor dropped the unit on memo writing during the term.

A humanities instructor gave an unexpected response, stating that she had to reduce content somewhat because there were fewer days of instruction in a term. A comparison of instruction days for BYU fall, winter, spring, and summer terms was conducted to validate this claim. Using data extracted from the online BYU Academic calendar, as seen in Table 10, spring and summer terms are short one day on the Monday, Wednesday, Friday instruction schedule. This equates to two fewer hours of instruction in the term session compared to the regular semester.

Table 10

BYU Fall, Winter, Spring, Summer Instruction Days 2010 and 2011

	Fall	Winter	Spring	Summer
MWF Instruction days	42 Expected	42 Expected	20 One less than expected	20 One less than expected
TTh Instruction days	28 Expected	28 Expected	14 Expected	14 Expected

Note. Data extracted from the online BYU Academic Calendar

Changes in workload. In this study a reduction or increase in assignments, readings, quizzes, or exams between semesters and terms is considered to be a change in student workload. Survey responses from 36 instructors (see Table 11) show that 34% of instructors reduced assignments "considerably" or "somewhat." Among those who reduced assignments, 9 of the 11 taught courses that were reading and writing intensive. This finding is essentially the same as reported in the Krevtovics, et al. (2005) study where 33% of instructors surveyed reported that they made changes to assignments and assessments. During the interview phase most instructors commented that due to the recursive nature of writing, the time-compressed format did not provide adequate time between class periods for students to write and revise papers, nor did it give instructors sufficient time to give adequate feedback.

Analysis of syllabi revealed there were fewer graded assignments in one section of English 312, Eng 316, Hum 201, Phscs 105, and Rel A 121. Two instructors dropped one of two midterms, one varied assignments done in class, one eliminated "busywork" but did not give any details, and one required fewer chapter summaries of the textbook. In the physics class, term students were not required to complete the multiple-choice questions in the textbook as part of their homework. In a few courses, reductions were more subtle. For instance, several instructors who gave a weekly writing assignment during the semester maintained a weekly writing assignment during the term, which constituted a 50% reduction of those assignments.
One instructor reported that he reduced the number of assignments significantly. However, he commented that he combined assignments, so term students actually did the same work as semester students. Other significant comments came from a religion instructor and a psychology instructor, both of whom stated that they felt they had a responsibility to keep their respective

semester and term courses the same. A math instructor and a statistics instructor specifically commented that they made no changes to assignments or exams.

Table 11

Survey Results: Changes to Number of Assignments

Assignments	Responses	Percent
Reduced considerably	1	3
Reduced somewhat	11	31
Exactly the same	24	66
Increased somewhat	0	0
Increased considerably	0	0
Total	36	100

Changes in teaching methods. No one reported changing teaching methods considerably. As shown in Table 12, 72% said they made no changes at all, while 28% changed their methods "somewhat." Of the 28% (10 instructors) who reported changing their methods somewhat, four taught writing courses. In addition, one instructor each from biology, math, music, religion, psychology, and statistics, reported changing their methods somewhat. The things they changed varied widely. Most instructors gave general responses that included such things as letting discussions go longer, being "more relaxed," moving class activities around, and changing the daily "agenda" (i.e., the order of learning activities in class). For example, a math instructor used fewer examples in class. A statistics instructor consistently spent a few minutes helping students track their progress so that they would not fall behind due to the faster pace of a term. These changes were usually made as needed during class.

A biology instructor changed her teaching methods based on the seasons. When practical she took the class outside to see live examples instead of relying on media. In addition she varied assignments based on learning activities made available by third parties. For example, one winter

semester her students were able to participate in the worldwide Cornell bird count. During the term, when class size was somewhat smaller and computer labs were more available, a writing instructor held class in a computer lab so that students could immediately practice what they were learning in class. During the class, she met with students individually so that she could give them feedback on the exercises, thereby allowing them to practice what they had just been taught. She also felt that this was a good way to break up the double-length class periods.

Table 12

Survey results: Changes to Classroom Teaching Methods

Teaching Methods	Responses	Percent
Considerably	0	0
Somewhat	10	28
Not at all	26	72
Total	36	100

Research Question 3: How Changes Instructors Make Affect the Credit Hour Value of the Term Course and How Student Learning Is Affected

This research question addressed how changes instructors reported making to their course may have affected the retention of credit hour value for that course. In addition, instructors were asked to what degree student learning was positively or negatively affected by the time-compressed term.

Source of data. Instructor interviews were the primary source for answers to this question. Table 13 lists the topics that were discussed in the interviews along with the categories into which the instructors' responses fell. No important or interesting themes emerged regarding how exams and quizzes or group work affected the credit- hour value of a course. Therefore, only the effects on value due to office hours, student ages, number of students in a class, final grades, equivalency of sections within a course, and the adequacy of the time for students to

achieve deep learning, along with changes that instructors make to term courses, will be discussed.

Table 13

Categories for Interview Results Comparing Term to Semester Courses

Question Topic	**Category Codes**
Office hours	1. No change 2. Increased 50%
Student Age	1. Older 2. Similar 3. Younger 4. Younger and older (Freshmen and Seniors)
Class size	1. Smaller 2. Similar 3. Larger
Exams in class	No difference that related to term/semester
Quizzes in class	No difference that related to term/semester
Group work	No difference that related to term/semester
Autonomy instructors have in course design	1. Low (Uses same texts, assignments, assessments) 2. Moderate (Uses same texts. Assignments and assessments are similar.) 3. High (Free to select texts, create assignments, tests)
Enough time for Reflection/Deep Learning	1. Yes 2. No 3. Unsure
Grades	1. Higher 2. Similar 3. Lower 4. Higher and lower
Student Learning	1. Greater 2. Similar 3. Less
Benefits and drawbacks for students and instructors in term courses	1. Benefits of Term Courses for Students 2. Benefits of Term Courses for Instructors 3. Drawbacks of Term Courses for Students 4. Drawbacks of Term Courses for Instructors
Survey Reponses Follow Up	1. Makes no changes 2. Makes changes when needed during term

Office hours. When questioned about office hours, only one instructor *officially* changed them between the semester and the term. She did so by increasing her posted hours 50% during the term. However, during the interviews with instructors about what they did differently between their semester and term courses, all instructors indicated that they made themselves available to students beyond their posted hours when needed. When teaching during a term, several instructors reported that they came early to class and stayed later in order to help students. On the surface this may appear to be an insignificant observation. However, of the 19 instructors who were interviewed, 13 are not on the tenure track and do not have private offices. In the case of M Com 320, office space is shared among 18 instructors. Consequently, these instructors have to make special arrangements to meet privately with students, which explains why many prefer to come early to class and stay late. When privacy is needed, one instructor reported that she will find an available classroom or conference room. On the whole, any differences in office hours do not appear to negatively affect the workload value of term courses.

Student ages. Instructors used their best judgment to estimate student ages (see Table 14). The category "New Freshmen" indicates that these students were taking a summer term course between high school graduation and the beginning of fall semester. Only 26% reported no noticeable difference in age. The ages of students did not fall neatly into the expected categories of older, similar, and younger. Twenty-one percent found that they had younger *and* older students during either one or both terms (Music 101, Psych 111, and Hum 201). The Hum 201 instructor indicated that his students were both younger and older but only during the summer term. The music instructor said that many freshmen and seniors enrolled year round—seniors, because they needed the course to graduate. Overall he reported that spring-term students were older than students in the summer term or either semester. The psychology instructor indicated that he had more seniors and students right out of high school during summer term. In addition,

he stated that among those students who were right out of high school, some were young men who were preparing to serve a mission and wanted to get some college credits before they left. One M Com instructor reported that students in her term course were in their "mid-20's," while in her semester course they were "23-ish," which was her way of saying that she felt term students were slightly older.

Because the courses on this study are University Core, it is not surprising to see younger and older as an age demographic. Students who want to complete the required courses as soon as possible take them their freshman year, while others either decide to put them off as long as possible or realize, when they are seniors, that they simply had forgotten to take these courses.

Another observation instructors made is that several see older students in the spring and younger ones in the summer. This is easily explained. Entering freshmen typically do not graduate from high school soon enough to start spring term. For those who want to get a head start, enrolling in summer term is usually their best option. On the other hand, older students who are just a few credits short of graduating find it advantageous to enroll in a spring-term course so that they don't have to wait until summer term or fall semester to complete their degree. Research indicates that older students, because of their maturity, tend to achieve better grades (Daniel, 2000). Because those taking spring-term courses tend to be slightly older and more mature than summer-term students, the demanding pace of term courses may have less of a negative effect on spring-term students than on those enrolled in summer courses.

Instructors who teach evening classes often report that many of their students are in their thirties or forties. The same is true for Saturday classes offered at the Salt Lake Center. In both cases, according to a statistics instructor who teaches evening courses at BYU and Saturday classes at the BYU Salt Lake Center, these are often students who are finishing a Bachelor of

General Studies degree or are seeking a new degree in order to have better employment opportunities.

Table 14

Differences in Student Ages between Term and Semester Course Sections

Courses	No Difference	New Freshmen	Older	New Freshmen and Older	Younger
AHTG 100	X				
BIO 100	X				
ECON 110	X				
ENGL 312			X*		
ENGL 316	X				
HUM 201				X	
HUM 202			X		
M COM 320	X				
M COM 320					X
MUS 101				X	
PSYCH 111		X			
REL A 121		X			
REL A 122		X			
REL A 211				X	
REL C 324			X		
STAT 121			X		
WRTG 150				X	
WRTG 150		X			
WRTG 150			X		
Total	5 (26%)	4 (21%)	5 (26%)	4 (21%)	1(6%)

Note. *Evening class

Class size. Course sections are set up to comply with university and department policies. Generally speaking, course sections accommodate various numbers of students based on demand, instructor availability, and number of seats available in classrooms. Another important factor is the extent to which students require extensive individualized feedback. For example, the University Core writing classes are restricted to 25 students per class. For most Core courses, instructors may teach one or multiple sections, each having anywhere from a handful to hundreds of students. Because the interview process did not thoroughly address class size for every section an instructor taught, the resulting data seen in Table 15 range from specific numbers to generalizations.

All religious education courses (Rel A 121, Rel A 122, Rel A 211, Rel C 324) are generally filled to capacity year round. However, as is the case with most University Core courses, fewer sections are offered during spring and summer terms. In the case of Rel A 121, the room capacity ranged from 60–200 during a semester, but generally did not exceed 60 during term sessions. All writing courses (Wrtg 150, M COM 320, Eng 312, Eng 316), are generally limited to 25 students year around and are usually filled during both semesters and terms. However, one Wrtg 150 instructor reported that her classes were about 15% smaller during term sessions.

Apart from the writing courses, most term classes were smaller. The American Heritage instructor who participated in the survey taught primarily at the BYU Salt Lake Center, and his day classes were smaller year round than those in Provo. He reported having the most students during his evening course in the summer. On BYU campus, the economics class has about 180 students during the semester and about 140 during a term. This represented a 28% smaller class size for a term. The Hum 201 instructor reported about 200 students in the semester and about 35 in a term. However in Hum 202, the term sections had only about 10% fewer students. Music

and psychology instructors reported that their classes averaged about 70% fewer students during a term.

Only two instructors reported having larger term classes. The biology instructor had 30–40 students during spring and summer terms, compared to 10–20 during a semester. The statistics instructor (who teaches at the Salt Lake Center on Saturdays, and in Provo during evenings) also reported having more students during a term than during a semester in both locations. He indicated that he teaches many students who are on the Bachelor of General Studies (BGS) track. These are students who completed at least 30 credit hours on campus and are now completing a bachelor's degree through the BYU Division of Continuing Education.

Table 15

Differences in Class Sizes Between Term and Semester Course Sections

Courses	Term Classes	Semester Classes	Same in term	Fewer in term	More in term	Always Full
AHTG 100*	30 spring	No answer				
BIO 100	30–40 term	10–20			X	
ECON 110	140 term	180		X		
ENGL 312	25	25	X			
ENGL 316	25	25	X			
HUM 201	30	200		X		
HUM 202	10% smaller	—		X		
M COM 320	16–20 spring	25		X		
M COM 320	19–23	26		X		
MUS 101	20–40	400		X		
PSYCH 111	60–80% fewer			X		
REL A 121	Full	Full				X
REL A 122	Full	Full				X
REL A 211	Full	Full				X
REL C 324	Full	Full				X
STAT 121*	10% more	—			X	
WRTG 150	20–25	20–25	X			
WRTG 150	16–17	19–20		X		
WRTG 150	17	17	X			
Total			**4 (22%)**	**8 (44%)**	**2 (11%)**	**4 (22%)**

Note. *Classes taught at the Salt Lake Center, not included in totals

Final grades. As shown in Table 16, 45% reported no difference in grades between semesters and terms, while 25% reported that grades were lower in the term. With two exceptions, instructor assessments of grades appeared to be an educated guess at best. Instructor responses generally were couched in language such as "grades might be a little higher during the term because there's not as much time to forget the details," and "summer class average is a bit lower—not a big difference." In the exceptional cases, both of which were telephone interviews, instructors reported actual numerical differences in grades. Specifically, one said that fall grades averaged 2.9+, winter 2.9, spring 2.8, and summer 2.8. Another instructor indicated that semester grades averaged around 3.1–3.2, while term grades averaged 2.9–3.0. Because the instructors did not indicate if they believed the differences to be important, the instructor's comments were more informative than the categories into which they fell.

An interesting disparity existed among the Wrtg 150 instructors. One observed that during the term there were "just as many, maybe even a few more than usual" who achieved higher grades, but there were fewer Bs and Cs. Students either "tried hard and turned in quality work or they didn't try at all." Another instructor did not think there was any difference. The third Wrtg 150 instructor felt that students in her term section got lower grades overall because they expected the course to be easier during a term and didn't "put as much effort into it."

The Hum 201 professor said that there were no differences, but that "surprised him." On the other hand, the Hum 202 instructor believed that grades "might be a little higher in the term." She attributed this to the fact that tests are given at two-week intervals (instead of at four-week intervals during a semester), so students didn't have as long to forget what they learned. She also believed that the grades on the papers were lower because there was not enough time for students to revise their work or time for her to give them as much feedback as she would have liked.

Table 16

Differences in Final Grades Between Semester and Term Courses Sections

Courses	No Difference	Term Overall Lower	Term Overall Higher	Spring Higher	Summer Lower	Term Both Higher and Lower
AHTG 100		X				
BIO 100	X					
ECON 110		X				
ENGL 312	X					
ENGL 316				X		
HUM 201	X					
HUM 202			X			
M COM 320	X					
M COM 320		X				
MUS 101	X					
PSYCH 111	X					
REL A 121					X	
REL A 122		X				
REL A 211	X					
REL C 324			X			
STAT 121	X					
STAT 121			X			
WRTG 150						X
WRTG 150	X					
WRTG 150		X				
Total	9 (45%)	5 (25%)	3 (15%)	1 (5%)	1 (5%)	1 (5%)

The four religion instructors had courses that fell into three different categories. The Rel A 121 course instructor believed that summer term grades were a "bit lower" than spring term, likely because of an influx of recent high school graduates. The Rel A 122 teacher first thought that the grades were "similar overall," but then recanted by adding that "maybe there was a little

drop" during the term. The Rel A 211 class instructor noticed that there were more visiting students in the term who, she believed, "tended to get lower grades." Overall, however, she thought grades remained the same. In the upper division Rel C 324 course, the instructor reported that grades "might be a little higher during the term because there was not as much time to forget the details." He went on to explain that his course content contained many facts that his students needed to master in order to do well on the exams. He also shared his belief that "students taking his term course seem more committed."

The upper-division writing courses instructors believed that grades ran the gamut. One M Com 320 instructor reported that the Marriott School requires a 3.2 class average, so she always meets that criterion. She added that in meeting the standard she usually does not have to adjust grades. An Eng 312 instructor also reported during an interview that he "shoots for a 3.2 average." He believes that there is not much difference between semester and term grades. However, he commented that in every class "the best students emerge, but the best one in one class may not be as good as the best in another, and they both could get A's." Nevertheless he claims that he "grades to a standard" and usually does not need to curve. An Eng 316 instructor believed that her spring students do better because "those who take spring classes are high achievers." However, this observation may be due to this being an upper-division course where the students are more experienced and self-select this course because they know that they do well in the compressed time frame.

An Econ 110 instructor concluded there was "slightly worse performance" overall during a term. The AHtg 100 instructor reported that beginning with the fall semester the class averages go down slightly with each successive semester and term (i.e., fall 2.9+, winter 2.9, spring 2.8, summer 2.8-). Students taking Bio 100 achieved the same grades regardless of when they took the course. Instructors of psychology, music, and statistics believed that there were no

differences. A second statistics instructor (who responded by email to this question only) reported the percentages of students who earned 60% or lower on their final exam as, “fall 12.5%, winter 13%, spring 10%, and summer 9%.” Note that lower percentages indicate a higher pass rate, which suggests that spring and summer students did better. Although she taught statistics, she made no comments as to any statistical significance of the variation in percentages. On the whole, there appears to be little difference in grades between semesters and terms.

Deep learning. This question sought to address the concerns some educators have that compressed courses do not provide adequate time for deep learning, which more often than not requires time between class sessions. In order for deep and lasting learning to take place, students need to assimilate the content, think critically about it, practice using the skills, and reflect on what and why they are learning specific things.

As seen in Table 17, of the 19 instructors who were interviewed, only 32% thought that there was adequate time for reflection and deep learning during a term. Ten percent were undecided and the remaining 58% believed the time in the term for students to achieve deep learning was insufficient. Of the 58%, a little over half of the courses were reading and writing intensive. It is interesting to note that, with one exception, instructors who taught an upper-division writing course agreed that there was not sufficient time for deep learning. However, two of the three Wrtg 150 instructors reported that the term timeframe provided adequate time for deep learning. Overall, though, most instructors believed that term courses hamper deep learning.

Table 17

Adequate Time for Deep Learning Between Term and Semester Course Sections

Courses	Yes	No	Undecided
AHTG 100			X
BIO 100		X	
ECON 110			X
ENGL 312		X	
ENGL 316		X	
HUM 201		X	
HUM 202		X	
M COM 320	X		
M COM 320		X	
MUS 101		X	
PSYCH 111		X	
REL A 121		X	
REL A 122	X		
REL A 211		X	
REL C 324	X*		
STAT 121	X*		
WRTG 150		X	
WRTG 150	X		
WRTG 150	X		
Total	6 (32%)	11 (58%)	2 (10%)

Note. *Adequate or even a little better

Equivalency between course content. The goal of this question was to learn the degree to which the autonomy instructors have in designing their courses affect the value or quality of the course. Even though the Office of General Education has learning outcomes for every University Core course, some outcomes are very general. For example, in the History of Civilization courses that are taught in several colleges, students must read one work of Shakespeare; the instructor selects which one. While departments have even more specific learning outcomes for each course, instructors may have anywhere from limited to total autonomy in how they design their course to achieve these outcomes. Table 19 shows that 47% of the instructors interviewed believe that the content and assessments for their courses are the same or similar among the instructors who teach the course; another 47% believe that there are few differences. This finding resulted in including the independent variable of autonomy in the statistical analysis.

The comparisons of 18 semester and term syllabi revealed that the most common changes instructors make to term courses that could affect value is a reduction in graded assignments. Among the 18 syllabi, 6 graded assignments were eliminated (30%) in the term. This finding is similar to the survey results where 31% of the instructors reported that they reduced assignments.

Table 18

Equivalency of Course Content Across Sections Taught by Different Instructors

Courses	Same	Similar	Divergent
AHTG 100		X	
BIO 100			X
ECON 110		X	
ENGL 312		X	
ENGL 316		X	
HUM 201			X
HUM 202			X
M COM 320		X	
M COM 320		X	
MUS 101			X
PSYCH 111			X
REL A 121			X
REL A 122			X
REL A 211			X
REL C 324			X
STAT 121	X		
WRTG 150		X	
WRTG 150		X	
WRTG 150		X	
Total	**1 (6%)**	**9 (47%)**	**9 (47%)**

According to the instructors interviewed, Statistics 121 stands alone in being the most consistent across all sections. Every instructor uses the same syllabus, textbook, assignments, and exams. However, individual instructors are free to employ the teaching methods they feel work best.

American Heritage and all of the writing courses in this study are similar in content across their respective sections and occasions. American Heritage instructors have more autonomy now than they did years ago. Although they all use the same textbooks, they choose which supplemental readings to use.

Writing 150, English 312 (Persuasive Writing), and 316 (Technical Writing) are taught in the English department in the School of Humanities. M Com 320 (Communication in Organizational Settings) is an written and oral communications course designed primarily for business majors and is housed in the Organizational Leadership and Strategy department within the Marriott School of Management. Each course uses a different textbook. While specific types of assignments are delineated, such as writing a "bad news" letter and a resume, instructors have the leeway to teach and assess student learning according to their own best teaching practices.

Instructors for Biology 101, Economics 110, Humanities 201 and 202, Music 101, Psychology 111, and all religion courses have the greatest autonomy in designing their courses. Biology instructors choose their own textbooks and readings, create their own assessments, and design their courses to meet the learning outcomes. Economics 110 instructors fall into two camps: those who use the same textbook and have similar assignments and exams, and one who uses his own textbook, assignments, and exams. This study excluded the instructor who uses his own textbook. Humanities 201 and 202 instructors comply with the high-level guidelines set forth for all 201 and 202 courses, but they select the specific content they want to use to achieve the specified learning outcomes. Music 101 instructors also have quite a bit of autonomy.

Because the music faculty could not agree on a standard textbook for the music course, the department has two texts instructors can use, plus each chooses supplementary readings as desired. Psychology 111 instructors also have quite a bit of autonomy in designing their courses. As evidence, one instructor cited the number of times his students complain to him that, according to students taking the course from other instructors, his assignments are much more difficult.

Lastly, religion instructors have the greatest autonomy of all. Although they all use the same textbook for their specific course (Book of Mormon, New Testament, or Doctrine and Covenants in this study), they have total freedom of what to teach and how to teach it. One Doctrine and Covenants instructor said that he could teach "Section One for the whole term, but of course I don't." A New Testament instructor reported that she was asked to submit a syllabus for the first few times she taught, but has not been asked to do so in recent years. As an interesting sidelight, Religious Education engages in peer review by encouraging instructors to sit in on one another's classes.

Value of overall student learning. This question centers on the confidence instructors have that when students have finished their course, they will have achieved the learning outcomes. There was an expectation that instructor responses might be the same for this item as for the question about reflection and deep learning. Table 19 shows that 58% of instructors felt that student learning was similar or better in their term course even though only 32% felt the time was sufficient for deep learning. Thirty-seven percent reported that overall learning was somewhat less. Not surprisingly, four of the six instructors who indicated that student learning was somewhat less in the term taught reading- and writing-intensive courses.

Table 19

Term Student Learning

Courses	Somewhat More	Similar	Somewhat Less
AHTG 100		X	
BIO 100		X	
ECON 110			X
ENGL 312			X
ENGL 316		X	
HUM 201			X
HUM 202			X
M COM 320		X	
M COM 320			X
MUS 101		X	
PSYCH 111		X	
REL A 121		X	
REL A 122			X
REL A 211		X	
REL C 324		X	
STAT 121		X	
WRTG 150	X		
WRTG 150		X	
WRTG 150			X
Total	1 (5%)	11 (58%)	7 (37%)

Benefits and drawbacks of term courses. Overall, three themes emerged from interviews with instructors about differences in semester and term courses. First, most felt that students are less "stressed out" during term courses because they are usually taking only one or two courses. The second theme centers on the findings that most classes are generally smaller (10–80%) during a term. Students and instructors benefit from smaller classes because students have better access to instructors, students are more likely to meet with instructors, and instructors can learn students' names and get to know them better. The third important theme is related to the fast pace of term courses. It works well for many students and instructors insofar as there is less review time needed at the beginning of class and the momentum in general enables learning.

Instructors who like teaching term courses reported that mid-course slumps don't last as long and fewer things can go wrong for students and themselves. On the other hand, those who do not like the fast pace believe that it is hard for students because they "burn out" before the end of the term. Similarly, new freshmen often demonstrate that they do not have sufficient attention spans to stay "tuned-in" for a double-length class period. Instructors also tire of hearing students complain about the workload.

The major concerns that instructors expressed about the compressed timeframe is that it does not provide adequate time for students to practice using critical thinking skills, to write and revise papers, to thoroughly read and comprehend assigned texts, and to recover if something "goes wrong" during the semester. Instructors also felt that they did not have enough time to give students as much feedback as they could give them in a semester. In addition, one instructor was frustrated because there was not time to delve deeper into topics of particular interest to students.

Changes instructors make to their term courses. The instructors interviewed had taught the course included in this study many times in semester and term time frames. They were past the point of thinking about the changes they made, and with the exception of one instructor who

likes to “try out new things,” they generally repeat what they have done in the past. Nevertheless, there are a variety of small changes that instructors make to their semester courses when teaching them during a term. These are summarized in Table 20. The most frequently made change centers around meeting with students outside of class. As previously reported, one instructor increases her office hours by 50%. Four others indicated that they come early or stay after class for as long as necessary to meet with individuals or groups of students.

Most of the other changes are done spontaneously, usually to break up long class sessions or to reengage students with short attention spans. Changes include adjusting the agenda for the day, varying the amount of teacher/student interaction, and modifying class discussions. Occasionally smaller assignments are dropped or due dates for reports are extended. The latter is most often the case in the music and humanities courses where concert or art exhibit attendance dates are modified to accommodate their limited availability during the term. One instructor reduces the amount of reading when papers are due. Five instructors reported that they always “stick to the schedule.”

Table 20

Changes Instructors Made to Accommodate Compressed Term Format

Changes made extempore	AHtg 100	Bio 100	Econ 111	Eng 312	Eng 316	Hum 201	Hum 202	M COM 320	M COM 320	Mus 101	Psych 111	Rel A 121	Rel A 122	Rel A 211	Rel C 324	Stat 121	Wrtg 150	Wrtg 150	Wrtg 150
None: Sticks to the schedule			X		X								X	X	X				
Meets with individual students more outside of class		X							X							X	X		
Varies in-class group work				X															X
Drops a practice paper when something else takes longer than planned																		X	
Reduces reading load just before papers are due	X																		
Adjusts discussion time						X	X												
Tries out new learning activities								X											
Adjust learning activities based on season		X																	
Adjusts concert report due dates because of limited availability during term										X									
Changes class agenda											X								
Varies amount of interaction with students during class												X							

Due to the length and relevance of instructor responses regarding the quality of student learning between term and semester courses and the efficacy of term courses on the whole, Tables 21–24 were created to summarize instructor replies. The analysis resulted in four categories:

1. Benefits for students taking a term course (See Table 21)
2. Benefits for instructors teaching a term course (See Table 22)
3. Drawbacks for students taking a term course (See Table 23)
4. Drawbacks for instructors teaching a term course (See Table 24)

Table 21

According to Instructors: Benefits of Term Courses for Students

Benefits for Students	Reported by Instructors Who Taught
Being able to do outdoor work; more diverse examples available.	Bio 100
Students take fewer courses, so they are less stressed so they can focus better.	Rel A 211 M COM 320 Wrtg 150 Wrtg 150
Classes are smaller, which gives students better access to instructors.	Stat 121
The fast pace works well for some students.	Rel A 121 Eng 316
Students don't tire of instructor.	Eng 312

Table 22

According to Instructors: Benefits of Term Courses for Instructors

Benefits for Instructors	Reported by Instructors Who Taught
Students more willing to meet with instructor.	Wrtg 150
With smaller classes can learn students' names and get to know students better.	Music 101 Rel C 324 Rel A 121
Less review to do at beginning of class because sessions are closer together.	Stat 121
Midcourse slump doesn't last as long.	Rel A 211
Feels free to try new learning activities.	M Com 320
There is always a light at the end of the tunnel.	Wrtg 150
Shorter overall time means fewer things can go wrong.	Eng 316
Students are less stressed-out because they are taking fewer courses.	Wrtg 150 M Com 320
Summer students have a "get it done" mentality, often because they need a course to graduate.	Eng 312

Table 23

According to Instructors: Drawbacks of Term Courses for Students

Drawbacks for Students	Reported by Instructors Who Taught
Stress of having to learn and synthesize content at a faster pace.	Bio 100 Eng 312 Wrtg 150
Students burn out before the term ends.	Wrtg 150
Students (especially freshmen) run out of gas before class ends.	Hum 201
Instructors do not have time to go deeper into things of interest to students.	Psych 111
Students may not get as much feedback on assignments.	Hum 201 Rel A 122
Students retain less because they don't have time to reflect, revise, and polish their writing.	Eng 312
New freshmen need more guidance and time to think, write, and revise.	Hum 201
Students need more time to learn and practice critical thinking skills.	Hum 201
New freshmen have hard time keeping focused for double-length classes—some disappear after break.	AHtg 100
Hard to keep up if something goes wrong (illness, family activities, other problems).	Eng 312
Because some small assignments are reduced, every assignment counts more.	Wrtg 150
Not enough time for thorough practice; some practice items are removed.	Math 119 Wrtg 150
Not enough time for students to "really understand."	Hum 201 Bio 100
Too much cognitive load in longer classes.	Rel A 121

Table 24

According to Instructors: Drawbacks of Term Courses for Instructors

Drawbacks for Instructors	Reported by Instructors Who Taught
Needing to choose between depth and breadth.	Stat 121
Lack of time to give as much feedback.	Rel A 122
Continuing need to remind students to keep up.	Stat 121 Psych 111
Keeping students' attention (younger students especially run out of gas with longer class periods).	Hum 201 AHtg 100
Not enough time to teach argument support.	Hum 201 M Com 320
Things that happen outside of instructor control have more impact.	Eng 316
Hearing students complain about the workload.	Hum 202
Students are more stressed out.	Eng 312
Fewer instruction days in the term schedule makes it hard to get everything in.	Music 101 Hum 202

To summarize the benefits and drawbacks of term courses, according to instructors, the major benefit for students in term courses is better access to instructors. This is reportedly the case because most classes are smaller, instructors are teaching fewer courses, students are taking fewer courses, and instructors are willing and able to meet with students before and after class.

A major benefit for some instructors is being able to immediately delve into new material at the beginning of class because less review time is needed. This is especially advantageous for the math and statistic courses. Instructors also enjoy a more relaxed atmosphere because they perceive that students are less stressed because they are taking fewer courses. The literature both supports and refutes this observation. According to Daniel (2000), students in some accelerated courses experienced stress and fatigue and were less satisfied with their achievements. In their study of semester versus compressed accounting courses, Howell and Johnson (1982) reported that among 11 characteristics studied, the only notable differences were that student stress and instructor effectiveness were higher for the compressed courses. Davies (2006) found that intensive format courses were advantageous for students due to increased motivation, commitment, and stronger relations among students. These divergent observations could be a function of the course. In Math 112 students are learning principles and rules directed at how to solve problems, whereas in writing courses students are creating original works that require research and higher-order skills such as evaluation and creativity.

In courses where there may be over 100 students in class during a semester, it is hard for instructors to learn students' names. Several instructors commented that they enjoyed their term courses more primarily because they could get to know their students better, due to smaller enrollments.

One instructor used her term course to try new things. Another teacher felt that his students did not tire of him as much during the term. Lastly, the biology instructor pointed out

that for some subjects, being outside is helpful because students can interact with the real thing and do not have to rely on media. (This is generalizable only to schools located in areas where adverse weather conditions may be prominent during the semester.)

One instructor pointed out that a great disadvantage of the term is the adverse effect on student learning when something "goes wrong," such as illness, injury, conflicts with work, a family emergency, and such. On the other hand, there is less time for something to go wrong in in a term, which she appreciated. With the exception of some instructors who teach courses with extensive reading, researching, and writing components, most feel confident that students achieve the learning outcomes equally well in semester and term courses.

Syllabi results. This analysis looked at differences between 18 pairs of semester and term syllabi selected from instructors whose courses qualified for the statistical analysis. In three cases, the instructor was not among those who had been interviewed, and in one case the instructor had not completed the survey (see Table 25). For each pair of syllabi content, readings (and other learning resources), graded assignments, quizzes, exams, and grading scales were compared.

As shown in Appendix D, graded assignments were the most frequently changed part of a term course. This correlated with the finding from the survey portion of this study. These changes ranged from dropping or reducing minor assignments to eliminating peer reviews, multiple-choice questions on homework, rough drafts, reflection papers, and student ratings. The grading scale (not included in 20% of the syllabi), along with quizzes and exams, were the least-changed items.

Table 25

Instructors Participating in Statistical Analyses Who Also Participated in Survey, Interview, or Syllabi Analyses

	Instructor Codes	Course	Survey	Interview	Syllabi
1	88	AHtg 100	Yes	Yes	Yes
2	16	Bio 100	Yes	Yes	No
3	75	Econ 110	Yes	Yes	Yes
4	97	Eng 312	Yes	No	Yes
5	103	Eng 312	Yes	Yes	Yes
6	20	Eng 316	Yes	No	Yes
7	102	Eng 316	Yes	Yes	Yes
8	52	Hum 201	Yes	Yes	Yes
9	53	Hum 202	Yes	Yes	Yes
10	64	M Com 320	Yes	Yes	Yes
11	77	M Com 320	Yes	Yes	No
12	42	Mus 101	Yes	Yes	Yes
13	51	Phscs 105	No	No	Yes
14	34	Psych 111	Yes	Yes	Yes
15	100	Rel A 121	Yes	Yes	Yes
16	21	Rel A 122	Yes	Yes	Yes
17	43	Rel A 211	Yes	Yes	Yes
18	93	Rel C 324	Yes	Yes	Yes
19	14	Stat 121	Yes	Yes	Yes
20	60	Stat 121	Yes	No	Yes
21	68	Stat 121	Yes	No	Yes
22	3	Wrtg 150	Yes	Yes	No
23	82	Wrtg 150	Yes	Yes	Yes
24	94	Wrtg 150	Yes	Yes	No

Summary. The overall findings from the surveys and syllabi reviews in this study show similar results to the study conducted by Krevtovics, et al. (2005), wherein they found that about one-third of faculty members made pedagogical adjustments to 15-week courses when taught in a compressed format. In this study, surveys indicated that roughly one-third of instructors modified their semester courses at least somewhat, and the changes they made were usually a reduction in assignments. Interviews indicated that about half of the instructors made at least minor modifications when teaching during a term. When adjustments were made, instructors reduced, modified, or eliminated assignments more than changing any other aspects of the course. Syllabi results also showed that about a third of courses were modified and, again, most of the alterations were made to assignments.

Overall about half of the instructors believe that final grades were the same between semester and term courses. A little over a quarter of instructors believed that spring term grades were higher, which may correlate with the observation that in some spring courses students were older. The literature indicates that, for a variety of reasons, older students achieve better grades (Sheldon & Durdella, & Wlodkowski, 2010).

Chapter 5: Discussion of Results

This study examined the extent to which high-enrollment University Core courses that were taught in a semester format retained their workload value when taught during a term. The questions that focused this study centered on (a) assessing differences in workload and the value of time students spent outside of class on selected University Core courses that were taught in semester and term formats at BYU; (b) changes instructors made when teaching their course in a term format; and (c) the extent to which those changes may have affected the credit-hour value of the term course.

Value Retention of Courses Based on Workloads and Value of Work

Overall it was found that term workloads were statistically lower than semester workloads. While this was not surprising, it is important to note that the hours students spent on term and semester courses overall were also lower than expected. In fact, students overall reported that they do not spend the expected two hours outside of class per hour in class. It could be said that if the core courses in this study were commodities, most are not worth their advertised value. However, the delicate balance of school economics is such that students, in general, are happy in not getting all that they paid for. On the other hand instructors, who desire good ratings, try not to overwork students while at the same time help them to achieve specified learning outcomes.

This finding is not unique to BYU. Since the 1960's expected course workloads in practically all university courses in the United States have dropped dramatically (McCormick, 2011). NSSE reports that from 2000–2010, on the average, college students spend one hour out of class for each hour in class. Some of the decline can be explained by the advent of technology which provides better access to resources online, allows for collaboration, and facilitates faster creation and revision of documents and other artifacts (McCormick, 2011).

With the exception of the biology, history, and music courses, BYU students spent somewhat more than an hour outside of class per hour in class on the high enrollment University Core courses

included in this study. In the Math 112 and Phscs 105 courses, students came close to spending the expected two hours outside of class per hour in class. Perhaps this lends credence to the belief among BYU students that these courses are harder than other courses.

College advisement centers corroborate this finding. Although Chem 105 was not included in this study because it did not have two instructors who taught both occasions, it has a reputation for being a difficult, time-consuming course. Advisors counsel freshmen not to take Math 112 and Chem 105 at the same time. The finding in this study supports that recommendation for average students when they are taking a full 15-hour workload, assuming that their other courses do not have unusually light workloads. However, an important caveat is that workload is only one indicator of course quality and student learning.

Quality of Compressed Courses

Overall most instructors believed that term courses presented some significant challenges for students and themselves. The greatest concerns were expressed by instructors whose courses were reading and writing intensive, namely Wrtg 150, Eng 312, Eng 316, M Com 320, Hum 201, and Hum 202. However, instructors of biology, music, psychology, and religion courses (Rel A 121 and Rel A 211) also believed that the term format did not work as well as the semester. Their main concern was the lack of time between classes for students to thoroughly digest the required readings and engage in other learning activities.

It is interesting to note that the statistics instructor indicated that the term format had some advantages. Because classes were held more frequently, there was less time for students to forget what they had studied and practiced. This is somewhat in contrast to findings presented by Carifio and Erikson (2007), wherein they described their perception of teaching a research methodology and statistics courses in a compressed format. They reported that learning, which requires students to develop new schemas, cannot be hurried because in part “learning complex, interrelated and

cumulative hierarchical material takes a lot of time that incorporates lots of review and connections-making to build . . . well-structured conceptual schemas" (p. 258). They go on to assert that the ideas of instructional efficiencies that are sometimes used to justify compressed courses come from the behaviorist models of instruction, which do not work well in many educational situations. While their observations are insightful, it is important to note that the contact hours for the semester course they studied consisted of 2.5 hours a week for 15 weeks, while in the compressed format there were four contact hours per week for only five weeks.

Instructor Autonomy

Despite specific course learning outcomes, departments vary a great deal in the latitude given to instructors to design their course(s). Unexpectedly, in this study it appears that departments with very specific guidelines for course creation do not necessarily have comparable workloads among the instructors during either occasion. In fact, in Religious Education, where the interviews revealed that the autonomy is greatest, the workloads among the instructors were the most similar.

From the statistical analysis, as instructor autonomy increased, workloads generally decreased, regardless of when the course was taught. Further analysis revealed that the *value of work* to student learning was not significantly different between semester and term courses, but the *value of work* by instructor *autonomy* was significantly different. This finding implies that students found greater value in the work done outside of class in courses where the instructor had greater autonomy and in many cases reduced the workload, possibly eliminating work students find to be less valuable. Another possible explanation is that instructors represented the value of the assigned homework differently when they had more choice in what that homework might be. Little research was found in the literature that discusses how the role that instructor autonomy has in course design relates to workload. The National Center for Academic Transformation (NCAT) reported the results from a set of projects that were designed to recommend ways to improve student learning while reducing

university expenses. Their researchers observed that large introductory courses, which often were taught by multiple instructors, faced the problem of course drift, where "individual instructors teach the course to suit their individual interests rather than to meet agreed-upon learning goals for students" (The National Center for Academic Transformation, 2005, para. 3). They reported that this is most often the case when many of the instructors are adjunct faculty members. A natural consequence of course drift is uneven workloads for students taking the same course from different instructors. The NCAT report states that higher education allows "individual faculty members great latitude in course development and delivery" but standardizes the "student learning experience (para. 51)." They recommend that colleges "need to do just the opposite: individualize the student learning experience and standardize faculty practice (para. 51)."

The idea of standardizing faculty practice has some serious repercussions. First, in most universities instructors of all rank, including adjunct faculty, use their unique blend of subject matter expertise, course-design skills, and teaching style to help students achieve the learning outcomes specified by their colleges. To standardize what they do in a classroom could deprive students of the richness of a university experience. For example, in this study, students could take Econ 110 from several instructors. One uses a textbook that he wrote and a set of assignments and exams that he created. (Each of the other instructors use another text book and have similar assignments and exams.) His course has a reputation for very being difficult in that few students get an A grade, but still his classes are in high demand.

To equalize the classroom experience would likely diminish the value of a university experience. The culture of most universities, especially for general education courses, is such that students can, and generally do, shop around to find a class and an instructor and course design (as seen in the syllabus) that meets their preferred learning style. Is it not possible for students to achieve the same course learning outcomes through very different course designs?

Workload Value Retention of Courses Based on Changes Instructors Make

Overall the survey results, interviews, and syllabi comparisons corroborate the fact that changes instructors make to term courses are minimal. The most frequent change made to a term course is dropping a minor assignment or two, which is likely the cause of lighter reported workloads in a term. These findings suggest that most term courses retain their workload value when compared to their semester counterparts, which should be expected given that contact hours are the same. There is, however, one major exception. Most instructors of courses that are reading and writing intensive, particularly the upper-division writing courses, reported that they usually lightened workloads a little during the term. Generally, instructors who taught these courses felt that the term format did not allow for same quality of student learning as the semester, because there was not enough time between classes for students to write, receive feedback, and revise their work. In addition, many instructors felt that they did not have sufficient time to give feedback, even though they were teaching fewer sections during the term.

Limitations

Several limitations influenced the results of this study. These included the limited number of courses that were selected, when they were scheduled, the accuracy of student-reported workload and value of that work, the completeness of the information given by instructors, and the time frame in which the study needed to be completed. Regarding scheduling, some term classes met the same number of days as during the semester, but for double the length, while others maintained a similar class length but met twice as often in a week. These differences, which may have affected some aspects of this study, were not differentiated during the interviews.

Several of the highest-enrollment classes, such as Anthropology 101, Chemistry 105, Manufacturing Engineering 201 (History of Creativity), and Physiology & Developmental Biology 220 (anatomy) could not be included in this study because they did not have two instructors who

taught the course during the semester and term. Consequently, dealing with a limited number of high-enrollment courses, though a reasonable indicator overall, may not be an accurate reflection of all University Core courses.

In addition to these limitations, one important assumption was made, which no one participating in this study questioned: interviews were based on the assumption that semester courses were compressed to meet the term time frame, not the other way around. Another limitation could have been allowing instructors to self-select who would be interviewed. This may have eliminated those who would feel uncomfortable discussing differences between their semester and term courses.

Student ratings as a data source. During the literature review, two potential problems were raised regarding the reliability of using the student ratings. The first concern was that ratings could be influenced by other students in the class. While BYU students could have collaborated on how they rated a course, this is not likely because typically they complete the ratings individually, online, and outside of class, thus greatly reducing the likelihood of being influenced by others.

The second concern was about the reliability of BYU student ratings and the accuracy of student-reported hours. Most of the research that establishes the reliability of student ratings is based on students' assessments of instructors and their teaching methods. It seems reasonable to infer that student responses to BYU student ratings are also likely to be reliable because the questions are similar in nature to questions that assess quality of instruction. Nevertheless, a key limitation of this study is the difficulty in obtaining reliable estimates of hours students spent outside of class and how they valued those hours. Because the hours and value students reported was based on self-reported estimates and not on some more consistent and accurate measure of time, the workload and value calculations inevitably will be inaccurate to some degree. In addition, not all of the time students report spending would necessarily be equivalent quality study time. For example, reading while watching television may take longer than reading in a quiet spot. Despite the messiness of the

student-reported data, it is reasonable to conclude that the low estimates offset the high ones. A recommended first step for future research would be to accurately determine the amount of time students spent studying. Another question to consider is this: If students know what the expectations are for hours spent outside of class, and if they want their instructor to receive a good rating, are they more apt to report a number that shows that they did at least a sufficient amount of work?

Although the BYU Student Ratings instrument has not been tested for reliability and validity, its design reflects best practices in the field. Three major versions of student ratings have been used. The first was implemented around 1975, the second in 1997, and the current one in 2000. Over the years, the results have been continually analyzed and questions have been refined. The work done by AAHE (American Academics for Higher Education) and reported in *7 Principles for Good Practice in Undergraduate Education* was used to improve questions over the years.

According to an associate director at the Center for Teaching and Learning at BYU, approximately 63% of the student body completed student ratings for the years included in this study (personal communication, October 25, 2011). The university does not know on what basis students chose to complete or ignore the ratings, although some instructors insist that students comply. In this study, instructors were not asked if they required their students to complete student ratings. However, as part of the syllabi analysis, one instructor did require students to complete the ratings for his semester course but not for his term course.

Another possible limitation related to the workload estimates is that the reported number of hours spent outside of class was a class mean. Class sizes vary greatly between and within course sections. The English, Management Communication, and Writing courses had the most consistent class sizes ranging from 17–25. Other courses such as religion and music could have upwards of 400 in a class. Small class sizes with outliers would have a greater effect on the mean than large class sizes with the same number of outliers.

While the statistical analysis included 100 instructors, only 36 instructors responded to the survey, 19 were interviewed, and 18 pairs of syllabi were analyzed. While these sources combined portrayed a consistent picture, these data were not comprehensive. As is the case with most qualitative research, once completed it is easy to see where improvements could be made to investigative methods.

Fewer term instruction days. During the interview phase of this study, it came to light that that some term courses actually have one less day of instruction during either the spring or summer term. It varies according to term. Summer term has one less day of MWF instruction. This factor was not correlated with specific courses when comparing workloads and overall efficacy of term courses.

Follow-up interviews. In the course of conducting interviews, instructors occasionally made a comment that provided unexpected and insightful information. In several cases it might have been useful to go back to previous instructors and get their opinion on the same issue. For example, one writing instructor reported that during student ratings her students recommended that other students take the course during the semester and not during a term. It would have been useful to review student comments, but they were not included in the data set.

Conclusions and Recommendations

In answer to the research questions, this study found that term workloads vary from their semester counterparts in all but the math and physical science courses. While term workloads are less than semester workloads in general, both could be called "University Core lite," in that none of the courses exceeded the expected workloads of two hours outside of class per hour in class. Still, the overall workloads of the courses included in this study that were taught during a semester were slightly higher than the current national average of one hour outside of class per one hour in class. For 89% of courses, students reported doing even less work for the same course taught by the same instructor during a term.

Whether efficiencies improve during a term is not known, but on the whole many instructors make minor reductions in workload for term courses. Mostly frequently they reduce assignments and change classroom activities slightly. Workloads of math and physical science courses tend to hold their value across semester and terms and their workloads are close to what is expected. Perhaps it is because these are prerequisites to other courses that students are required to take, so instructors must ensure that students have the skills and knowledge required for success in the next course.

Time-compressed courses that are reading and writing intensive do not hold their value well when taught in a time-compressed format. This finding is supported by Martin (1998)), who found that students taking a compressed summer version of a course with extensive reading had a four-times-higher failure rate than students who took the class during the semester. Additionally, according to McLeod, Horn, and Haswell (2005), Wake Forest University does not permit writing courses to be taught in an accelerated format, nor does the University of Missouri-Columbia grant credit for writing courses taught during compressed summer session. The biggest drawback for students is insufficient time to thoroughly read, research, write, reflect, get feedback, and revise assignments between class sessions. These policies are based on the belief that there is insufficient time for students to thoroughly conduct research, write multiple drafts, get feedback, and revise work. Instructors often report that they find it difficult to give sufficient feedback in a timely manner during the compressed term. This often results in lightening the workload by dropping a lesser or preparatory assignment or two.

One instructor indicated that to save time, she gave audio feedback to her students. In addition to this being faster than providing written feedback, students found it more helpful. As a side note, another English instructor at BYU, who was not part of this study, is becoming well known for giving audio feedback. He found that it not only saves him time, but also allows him to give substantially

better feedback. Looking at how this method of feedback might help term instructors and students could also be a valuable follow-on study.

Reflecting on the role autonomy plays in course design at BYU, it may be important to reconsider the words Brigham Young spoke to Karl G. Maeser at the founding of Brigham Young Academy, "that you ought not to teach even the alphabet or the multiplication tables without the Spirit of God" (BYU, Y Facts, para.1). BYU faculty members are encouraged to follow the promptings of the Spirit in all that they do, including course design and teaching. Given the individuality of students, excellence in teaching can be achieved only by having the flexibility to change methods and even modify content based on the needs of the students. Additionally, instructors bring to their course design and classroom teaching methods their own unique styles, which may be different from other instructors' but still enable students to achieve the learning outcomes. In light of this generally acknowledged observation, the recommendation by NCAT to standardize what goes on in the classroom, if taken literally, would diminish the richness of a university education.

This study has shown that numerous confounding variables can affect the workload value of compressed courses. Determining and controlling for these variables makes irrefutable conclusions problematic. Factors to consider in future research include

- the subject matter;
- the variables of student age, readiness, and compatibility with others in the class;
- length, frequency, and time of day of class meets;
- flexibility and comfort of the physical setting;
- number of students in the class;
- instructor rank;
- how TA's, librarians, lab instructors, and testing centers are used;

- instructors' organizational skills and flexibility, along with their expertise in the subject matter, course design (including resolving the depth-over-breadth issue), teaching methods, and uses of technology;
- interest in and commitment to student learning; and
- sufficient office hours in a private location.

Given these conclusions, the following recommendations are worth consideration by departments and university administration. While some courses seem to work well in a term session, courses that require substantial research, reading, writing, and revising might best be taught in a semester format or a combined spring-summer term. In this study the recommendation would apply to the humanities and upper-division writing courses. Likely other skills-acquisition courses that require extended periods of time to complete, reflect, and revise tasks, would fall into this category as well. Most instructors expressed concerns that there was not enough time for them to give adequate feedback nor was there sufficient time for students to practice and improve their skills. In situations where courses must be taught in a compressed format, instructors should be given best-practice guidelines to help them redesign their course in ways that will help students succeed. These guidelines might include the requirement that students do not overload their schedule with additional classes. Instructors might also be encouraged to use technology such as BYU's Digital Dialog tool to improve the efficiency of their feedback to students.

On the whole this study is reminiscent of the poem, "The Blind Men and the Elephant," by John Godfrey Saxe, where six blind men of Indostan 'To learning much inclined/Who went to see the Elephant." Each made conclusions about the elephant according to his first experience with it. While each was proudly right about his specific experience, none realized how much more there was to learn. So it is with this study; with its almost innumerable variables, there remains much more to be

learned. And, in learning, to acquire the wisdom to distinguish "significant" differences from practical and important ones.

Future Research

This study investigated differences between semester and term courses by analyzing student-reported data regarding workload and value of work outside of class, surveying and interviewing instructors, and analyzing syllabi. Future researchers might consider documenting actual differences between semester and term courses by observing the same class taught by the same instructor during the semester and term. Researchers would need to design the study to overcome the observer effect.

Another recommendation is to implement a more accurate measurement of student workload**.** Perhaps a means to record hours daily or weekly could be implemented. In addition it would be useful to clarify what constitutes studying in the minds of students. For example, do students consider such activities as rehearsals, group work, service learning, and time spent reflecting as hours spent outside of class?

The findings that students found greater value in the work done outside of class and at the same time reported doing less work out of class in courses where the instructor had greater autonomy, is another area where research might be valuable. Several factors could explain this finding. First, when instructors have to fit a semester course into a term timeframe, we know that assignments are the most likely thing to be changed. Interviews indicated that instructors reduce those assignments that border on being busywork first; hence, workload decreases. However, instructors who have the most autonomy in designing their courses likely have more ownership of the content and are more prone to ensure that assignments are aligned with learning outcomes. The way in which instructors present the assigned course work may also play a factor. Homework might not be seen as busywork (valued more) if instructors express the importance of each assignment and make it clear to students how an assignment relates to the learning objective of the course. In either case, when students'

perception of the homework is important, this may affect how they report both the amount of time they spent on it and the value of the work they are expected to do. Certainly the relationship of autonomy with the value of homework merits further investigation.

Researchers Krevtovics, et al. (2005), suggest that full professors are more liberal in altering their traditional courses to fit a time-compressed format than those of a lower rank. Because this study focused on University Core courses where it is common to use adjunct, Division of Continuing Education, and visiting instructors, such an analysis was not pursued. However this line of inquiry would be useful to determine if tenure or teaching experience influences changes as research suggests.

While this study did inquire of instructors if term grades overall differed from semester grades, instructor replies for the most part were best guesses. In several research studies, the value of compressed courses when compared to regular courses is measured in grades (Austin & Gustufson (2006); Anastasi, (2007). The problem involved with some of these studies is lack of control for other confounding variables such as student age, student readiness, variations of course content, or differences between instructors. Nevertheless, future studies using grades as a dependent variable could provide valuable insights.

A factor that was reported during instructor interviews was the problem students have when something goes wrong during the term that affects class attendance. As part of a study looking at academic rigor, Gordon and Palmon (2010) recommended that in general students should be required to attend class because “attendance significantly improves academic performance” (para. 6). While this was based on a study of students in traditional-length courses, logically it is even more critical for compressed courses. Even though research suggests (Feldhaus & Fox, 2004) that students taking compressed courses are more diligent in attending class, it could be useful to investigate the effect that compressed courses has on student attendance.

Asking students their reasons for taking a term course is another line of research that could be pursued. It is commonly believed that students take term courses because they think the term course will be easier. However a variety of other reasons exists. For example, seniors who may need just one more class to graduate and cannot fit it in during their final semester are grateful to be able to take a course that requires only an extra eight weeks instead of sixteen. Students who work a substantial number of hours year round may find that being able to reduce a semester's workload by taking classes during a term helps them. In some cases, students may have a reason to take a class from a specific instructor and the only time they can work it into their schedule is during a term. It is also possible that a course may be dependent on other outside factors that make the term the best option, such as weather, availability of expertise outside of the university, or need to take advantage of resources or programs that are not available during either semester.

The limited scope of this analysis could be broadened to include more courses. In addition, as recommended by Hyun et al. (2006), future studies might try to determine if there are subject matter areas that should not be taught in time-compressed courses. For instance, a more in-depth study of the effects of time-shortened writing courses would be valuable. Also, while most of this study focused on the instructor's assessment of the efficacy of term courses, additional research assessing students' opinions of how well term courses work for them as recommended by Lee and Horsfall (2010, p. 195), would be useful. Another aspect to explore is how the completion rate of term courses compares with traditional-length courses. Research at the community college level indicates that students who enroll in time-compressed courses have a higher completion rate than those who take a traditional semester-length course (Sheldon, 2010).

A more radical line of inquiry, as suggested by Blumenstyk (2010), would be to explore moving away from credit hours and the subsequent imposed hours in class and expected-hours-outside-of-class model of higher education. Some argue that the current model is largely a measure of

time, not quality of learning. Robert Mendenhall, president of Western Governors University, suggests that a better system might be to award credits based on evidence of student learning. While it can be argued that in the current university system grades provide the evidence, moving away from seat time opens doors for alternative methods for proving competence. The current practice of allowing students to test out of some courses acknowledges that literal seat time is not an essential factor in learning. However, moving away from the credit hour might initially create more problems than it solves due to the many ways in which it is used in higher education administration.

References

Anastasi, J. S. (2007). Full-semester and abbreviated summer courses: An evaluation of student performance. *Teaching of Psychology*, *34*(1), 19–22.

Ansburg, P. I. (2001, Aug). *Students' expectations of workload and grade distribution by class difficulty*. Paper presented at the annual meeting of the American Psychological Association, San Francisco, CA.

Austin, M., & Gustafson, L. (2006). Impact of course length on student learning. *Journal of Economics and Finance Education, 5*(1), 26–36.

Babcock, P., & Marks, M. (2010). *Leisure college, USA: The decline in student study time.* Washington, DC: American Enterprise Institute. Retrieved from http://www.aei .org/article/education/higher-education/leisure-college-usa.

Benton, S. L. & Cashin, W. E. (1999). Student ratings of teaching: A summary of research and literature. *The Idea Center*, 1–22. Retrieved from http://www.theideacenter.org/sites/ default/files/idea-paper_50.pdf

Bigelow, K. (1947). Education for citizenship. *Review of Educational Research*, *17*, 258–265.

Blackburn, R., Armstrong, E., Conrad, C., Didham, J., & McKune, T. (1976). Changing practices in undergraduate education. *Carnegie Technical Report.* Retrieved from http://www.carnegiefoundation.org/publications/changing-practices-undergraduate-education

Blumenstyk, G. (2010). Beyond the credit hour: Old standards don't fit new models. *Chronicle of Higher Education*, *56*(17), 1. Retrieved from http://chronicle.com/article/News-Analysis-Thinking-Bey/63349/

Boddy, G. W. (1985), Regular vs. compressed semester: A comparison of effectiveness for teaching in higher education (Summer Session, Achievement) (January 1, 1985). *ETD collection for*

University of Nebraska-Lincoln. Paper AAI8606958. http://digitalcommons .unl.edu/dissertations/AAI8606958

Boning, K. (2007). Coherence in general education. *Journal of General Education*, *56*(1), 1–16.

Bowling, N., Ries, K., & Ivanitskaya, L. (2002, August). How effective are compressed courses? *On Target, Information for CMU Off-Campus Faculty.* Retrieved from http://cel.cmich. edu/ontarget/aug02/compressed.htm

Boyer, E. L., & Levine, A. (1981). A quest for common learning. *Change*, *13*(3), 28–35.

Brigham Young University. Graduation requirements. Retrieved from http://saas.byu.edu /registrar /graduation/requirements.php

Brigham Young University. Undergraduate catalog. Retrieved from http://saas.byu.edu/catalog/2013-2014ucat/GeneralInfo/Registration.php

Brigham Young University. Y facts. Retrieved from http://yfacts.byu.edu/Article?id=137

Brigham Young University. Daily Universe Staff. (2013, Aug 20). In case you were wondering. *Daily Universe*, p. 1.

Burton, S., & Nesbit, P. (2008). Block or traditional? An analysis of student choice of teaching format. *Journal of Management and Organization*,*14*(1), 4–19. Retrieved from http://search .proquest.com.erl.lib.byu.edu/docview/233253099.

Carifio, J., & Erikson, L. (2007). Towards a theory and view of teaching compressed and abbreviated research methodology and statistics courses. *Journal of Social Sciences*, *3*, 250–259.

Caskey, S. R. (1994). Learning outcomes in intensive courses. *Journal of Continuing Higher Education, 42*(2), 23–27.

Centra, J. A. (2003). Will teachers receive higher student evaluations by giving higher grades and less course work? *Research in Higher Education, 44*, 495–518

Daniel, E. L. (2000). A review of time-shortened courses across disciplines. *College student Journal, June 2000*, 1–11. Retrieved from http://web.a.ebscohost.com.erl.lib.byu.edu/ehost/

Davies, W. (2006). Intensive teaching formats: A review. *Issues in Educational Research*, *16*(1), 1–20. Retrieved April 30, 2011, from http://www.iier.org.au/iier16/davies.html

Davis, B.G. (1993). *Tools for Teaching.* San Francisco, CA: Jossey-Bass.

Ehrlich, T. (2003). The credit hour as a potential barrier to innovation: Lessons from innovative institutions. *New Directions for Higher Education, 2003*(122), 31–43.

Feldhaus, C. R., & Fox, P. L. (2004). Effectiveness of an ethics course delivered in traditional and non-traditional formats. *Science and Engineering Ethics*, *10*, 389–400. doi: 10.1007/s11948-004-0035-3

Ferguson, J. M., & DeFelice, A. E. (2010). Length of online course and student satisfaction, perceived learning, and academic performance. *The International Review of Research in Open and Distance Learning*, *11*(2), 4. Retrieved from http://www.irrodl.org/index.php /irrodl/article/view/772/1547

Gaff, J. G. (1991). *New life for the college curriculum*. (1st ed.). San Francisco, CA: Jossey-Bass Inc.

Gaff, J. G. (1994). *Strong Foundations: Twelve Principles for Effective General Education Programs.* Washington, DC: Association of American Colleges and Universities.

Gordon, M. E. & Palmon, O. (2010, July-Aug). Spare the rigor, spoil the learning. *Academe*, *96*(4). Retrieved from http://www.aaup.org/issue/july-august-2010

Hoonakker, P., & Carayon, P. (2009). Questionnaire survey nonresponse: A comparison of postal mail and internet surveys. *International Journal of Human-Computer Interaction*, *25*, 348-373.

Howell, W. & Johnson, L. (1982). An evaluation on the compressed-course format for instruction in accounting. *The Accounting Review, LVII*, 403–413.

Hyun, E., Kretovics, M., & Crowe, A. (2006). Curriculum characteristics of time-compressed course *[sic]* in a U.S. higher education institution. *Educational Research and Review, 1*, 29–39. Retrieved from http://www.academicjournals.org/ERR, Article Number: 09C76083276

Kops, Bill. (2009, January 1). Best practices: teaching in summer session. *The Free Library***.** Retrieved June 23, 2012 from http://www.thefreelibrary.com/Best practices: teaching in summer session

Kretovics, M., Crowe, A. & Hyun, E. (2005). A study of faculty perceptions of summer compressed course teaching. *Innovative Higher Education, 30*(1), 37–51.

Kulik, J. A. (2001). Student ratings: Validity, utility, and controversy. *New Directions for Institutional Research*, *109*(Spring), 9–25. doi: 10.1002/ir.1

Lee, N., & Horsfell, B. (2010). Accelerated learning: a study of faculty and student experiences. *Innovative Higher Education*, *35*(3), 191–202. doi: 10.1007/s/0755-010-9141-0, http://link.springer.com.erl.lib.byu.edu/journal/volumesAndIssues/10755.

Levine, A. (1978). *Handbook on undergraduate curriculum*. (1st ed., Vol. 35, p.156) San Francisco, CA: Jossey-Bass.

Lutes, L., & Davies, R. (2013). Comparing the rigor of compressed format courses to their regular semester counterparts. *Innovative Higher Education*, *38*(1), 19–29.

Lutes, L., & Osguthorpe, R. (2009). *To what extent do undergraduate students at Brigham Young University spend the expected number of hours outside of class per credit hour earned?* Unpublished manuscript, Center for Teaching and Learning, Brigham Young University, Provo, Utah.

Martin, H. (1998). Student achievement in summer session versions of traditionally semester-length courses. *Summer Academe 2*, *1997–1998*, 63–75.

McCormick, A. C. (2011). It's about time: what to make of reported declines in how much college students study. *Liberal Education*, *97*(1). Retrieved from www.aacu .org/liberaleducation/le-wi11/LEWI11_McCormick.cfm

McLeod, S., Horn, H., & Haswell, R. (2005). Accelerated classes and the writers at the bottom: A local assessment story. *College Composition and Communication*, *56*(4), 556–580. Retrieved from http:wwwjstor.org/stable/30037886

Muir, J. (1917). *My First Summer in the Sierra*. Boston and New York: Houghton Mifflin Company. Retrieved from http://www.gutenberg.org/files/32540/32540-h/32540-h.htm

National Center for Academic Transformation. (2005). *Five principles for successful course redesign*. Retrieved from http://www.thencat.org/PlanRes/R2R_PrinCR.htm

Rudolph, F. (1977). *Curriculum: A history of the American undergraduate course of study since 1636*. San Francisco, CA: Jossey-Bass.

Ruona, W. E. A. (2005). Analyzing qualitative data. In R. A. Swanson (Ed.), *Research in Organizations: Foundation and Methods of Inquiry* (pp. 223–263). San Francisco: Berrett-Koehler.

Saxe, J. G. (1816-1887) *The Blind Men and The Elephant*. Retrieved from http://www.constitution.org/col/blind_men.htm

Scott, P. A. (2003). Attributes of high-quality intensive courses. *New Directions for Adult Continuing Education*, 2003 42(*2),* 29–38.

Seamon, M. (2004). Instructional effectiveness between intensive and semester-length courses. *Teachers College Record*, *106*(4), 853–874. Retrieved from http://www.tcrecord .org.erl.lib.byu.edu/library

Shedd, J. M. (2003). Policies and practices in enforcing the credit hour. *New Directions for Higher Education, 122*, 12–30.

Sheldon, C., & Durdella, N. (2010). Success rates for students taking compressed and regular length development courses in the community college. *Community College Journal of Research and Practice*, *34*(1–2), 39–54. doi: 10.1080/10668920903385806

Shih, T., & Fan, X. (2008). Comparing response rates from web and mail surveys: A meta-analysis. *Field Methods*, 20(3), 249–271.

St. Mary's University (2012). Future students, exchange students. Retrieved from http://www .smu.ca/futurestudents/visit-exchange.html

Thornton, B., Adams, M., & Sepehri, M. (2010). The impact of students' expectations of grades and perceptions of course difficulty, workload, and pace on faculty evaluations. *Contemporary Issues in Education Research*, *3*(12), 1–3. Retrieved from journals.cluteonline.com/index.php /CIER/article/download/920/904

University of New Hampshire Faculty Senate Motion #IX-M21, *Student study hours per credit hour* (2005).

Vreven, D., & McFadden, S. (2007). An empirical assessment of cooperative groups in large, time-compressed, introductory courses. *Innovative Higher Education, 32*(2), 34–45.

Wehlburg, C. M. (2010). Integrated general education. *New Directions for Teaching and Learning*, *121* (Spring 2010), 3–11.

Wellman, J. V. (2003). Of time and the feds: The federal interest in enforcing the credit hour. *New Directions for Higher Education, 122*, 71–81.

Wellman, J. V., & Ehrlich, T. (2003). The credit hour: The tie that binds. *New Directions for Higher Education, 122*, 119–122.

Wlodkowski, R. J. (2003). Accelerated learning in colleges and universities. *New Directions for Adult and Continuing Education*, 97, 5–15. Retrieved April 30, 2011, from http://raymondwlodkowski.com/Materials/Accelerated_Learning.pdf

Wolanin, T. R. (2003). The student credit hour: An international exploration. *New Directions for Higher Education, 122*, 99–117.

Zhao, J. G., & Gallant, D. J. (2012). Student evaluation of instruction in higher education: Exploring issues of validity and reliability. *Assessment and Evaluation in Higher Education*, *37*(2), 227–235.

Appendix A

Table A1

BYU Student Ratings Form [From studentratings.byu.edu]

BYU Student Ratings Questions

Comparing this course with other university courses you have taken, please indicate an OVERALL rating for the following:

Course: DIET 123
Instructor: Smith, John Q

Exceptionally Poor	Very Poor	Poor	Somewhat Poor	Somewhat Good	Good	Very Good	Exceptionally Good
○	○	○	○	○	○	○	○

Please respond to each of the following items regarding this course: DIET 123

I learned a great deal in this course.

Very Strongly Disagree	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree	Very Strongly Agree
○	○	○	○	○	○	○	○

Course materials and learning activities were effective in helping students learn.

Very Strongly Disagree	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree	Very Strongly Agree
○	○	○	○	○	○	○	○

This course was well organized.

Very Strongly Disagree	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree	Very Strongly Agree
○	○	○	○	○	○	○	○

Evaluations of students' work (e.g., exams, graded assignments and activities) were good measures of what students learned in the course.

Very Strongly Disagree	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree	Very Strongly Agree
○	○	○	○	○	○	○	○

Course grading procedures were fair.

Very Strongly Disagree	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree	Very Strongly Agree
○	○	○	○	○	○	○	○

This course helped me develop intellectual skills (such as critical thinking, analytical reasoning, integration of knowledge).

Very Strongly Disagree	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree	Very Strongly Agree
○	○	○	○	○	○	○	○

This course provided knowledge and experiences that helped strengthen my testimony of the Gospel of Jesus Christ.

Very Strongly Disagree	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree	Very Strongly Agree
○	○	○	○	○	○	○	○

For this course, about how many hours per week did you spend **in class**?
(e.g., 2, 2.5) _____

What percentage of the time you spent in class was valuable to your learning? _____

For this course, about how many hours per week did you spend **out of class** (doing assignments, readings, etc.)? (e.g., 4, 4.5) _____

What percentage of the time you spent out of class was valuable to your learning (as opposed to just busy work)? _____

Please respond to each of the following statements regarding this instructor: Smith, John Q

The instructor:
Showed genuine interest in students and their learning.

Very Strongly Disagree	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree	Very Strongly Agree
○	○	○	○	○	○	○	○

Provided adequate opportunities for students to get help when they needed it.

Very Strongly Disagree	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree	Very Strongly Agree
○	○	○	○	○	○	○	○

Provided opportunities for students to become actively involved in the learning process.

Very Strongly Disagree	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree	Very Strongly Agree
○	○	○	○	○	○	○	○

Provided students useful feedback on their work.

Very Strongly Disagree	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree	Very Strongly Agree
○	○	○	○	○	○	○	○

Responded respectfully to students' questions and viewpoints.

Very Strongly Disagree	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree	Very Strongly Agree
○	○	○	○	○	○	○	○

Was effective in explaining difficult concepts and ideas.

Very Strongly Disagree	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree	Very Strongly Agree
○	○	○	○	○	○	○	○

Appropriately brought Gospel insights and values into secular subjects.

Very Strongly Disagree	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree	Very Strongly Agree
○	○	○	○	○	○	○	○

Was spiritually inspiring insofar as the subject matter permitted.

Very Strongly Disagree	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree	Very Strongly Agree
○	○	○	○	○	○	○	○

This instructor and course contributed to the Mission and Aims of a BYU Education (i.e., Spiritually Strengthening, Intellectually Enlarging, Character Building, Leading to Lifelong Learning and Service.)

Very Strongly Disagree	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree	Very Strongly Agree
○	○	○	○	○	○	○	○

Please add any comments or suggestions you have about your learning experience in this course with this instructor.

Appendix B

Table B1

Workload Differences between Semester and Term by Instructor

Course	Instructor Code	Semester Workload Outside	Term Workload Outside	Minutes Difference Between Semester and Term Courses	Autonomy
A HTG 100	11	2.9	2.5	-24	Moderate
A HTG 100	57	3.4	1.9	-90	Moderate
A HTG 100	88	4.1	4.2	6	Moderate
BIO 100	16	2.1	2.1	0	High
BIO 100	41	3.0	2.6	-24	High
BIO 100	90	2.7	1.6	-96	High
ECON 110	10	4.5	2.7	-108	Moderate
ECON 110	75	5.8	4.2	-96	Moderate
ENGL 312	40	3.4	3.0	-24	Moderate
ENGL 312	62	2.9	3.9	60	Moderate
ENGL 312	97	4.5	3.0	-90	Moderate
ENGL 312	299	4.0	3.2	-48	Moderate
ENGL 312	103	5.0	3.9	-66	Moderate
ENGL 316	7	3.6	5.3	103	Moderate
ENGL 316	20	3.8	2.5	-78	Moderate
ENGL 316	47	5.0	4.5	-30	Moderate
ENGL 316	48	4.3	3.5	-48	Moderate
ENGL 316	50	3.4	3.2	-12	Moderate
ENGL 316	56	5.5	3.5	-120	Moderate
ENGL 316	65	4.0	3.1	-54	Moderate
ENGL 316	267	5.6	3.5	-126	Moderate
ENGL 316	73	5.3	3.9	-84	Moderate
ENGL 316	102	4.5	3.3	-72	Moderate
HIST 201	4	2.8	1.6	-72	High
HIST 201	211	3.4	1.3	-126	High
HIST 201	49	2.2	1.7	-30	High
HIST 201	54	3.8	2.9	-54	High
HIST 201	59	3.0	2.0	60	High
HIST 201	80	3.3	2.8	-30	High
HIST 202	1	3.4	2.9	-30	High
HIST 202	31	2.2	2.8	-36	High
HIST 202	59	3.0	1.6	-84	High
HIST 202	70	2.9	2.0	-54	High
HUM 201	17	3.2	2.5	-42	High
HUM 201	26	4.1	2.1	-120	High
HUM 201	52	3.4	3.1	-18	High
HUM 201	74	4.8	2.9	-116	High
HUM 202	24	4.3	4.0	-18	High
HUM 202	53	3.5	3.3	-12	High
HUM 202	61	3.1	2.8	-18	High
HUM 202	78	3.9	2.9	-60	High
M COM 320	29	4.9	3.9	-60	Moderate
M COM 320	33	5.0	2.9	-126	Moderate
M COM 320	45	4.2	3.0	-72	Moderate
M COM 320	63	4.7	3.5	-72	Moderate
M COM 320	64	4.1	4.3	-12	Moderate
M COM 320	69	3.5	3.3	-12	Moderate
M COM 320	77	5.1	2.8	-138	Moderate
M COM 320	81	5.0	3.7	-78	Moderate

M COM 320	87	3.5	2.4	-66	Moderate
M COM 320	101	3.7	3.6	-6	Moderate
MATH 112	66	5.5	6.7	-72	Low
MATH 112	76	7.0	7.5	-30	Low
MATH 112	92	6.9	6.8	-6	Low
MUSIC 101	12	3.2	1.4	-108	High
MUSIC 101	38	3.1	2.2	-54	High
MUSIC 101	42	2.5	1.7	-48	High
PHSCS 105	9	5.5	4.1	-84	Low
PHSCS 105	51	4.2	6.1	116	Low
PSYCH 111	23	2.7	2.5	-12	High
PSYCH 111	32	3.4	1.4	-120	High
PSYCH 111	34	5.5	3.8	-103	High
PSYCH 111	46	3.1	2.9	-12	High
PSYCH 111	79	2.7	2.9	-12	High
PSYCH 111	91	3.5	2.7	-48	High
REL A 121	21	2.9	2.5	-24	High
REL A 121	36	2.9	2.4	-30	High
REL A 121	44	2.9	2.0	-54	High
REL A 121	71	2.7	1.6	-66	High
REL A 121	98	2.7	1.8	-54	High
REL A 121	100	2.9	2.5	-24	High
REL A 122	15	2.6	1.8	-48	High
REL A 122	21	2.4	2.7	-18	High
REL A 122	86	2.4	1.7	-42	High
REL A 122	95	3.8	2.3	-90	High
REL A 122	96	2.3	1.6	-42	High
REL A 211	8	3.1	1.8	-78	High
REL A 211	22	2.8	2.4	-24	High
REL A 211	30	2.8	2.4	-24	High
REL A 211	43	2.9	2.0	-54	High
REL A 211	43	2.5	2.8	18	High
REL A 211	58	2.8	2.1	-42	High
REL C 324	5	2.0	1.8	-12	High
REL C 324	39	2.5	1.4	-66	High
REL C 324	85	2.1	1.5	-36	High
REL C 324	93	2.4	2.2	-12	High
STAT 121	13	3.4	2.8	-36	Low
STAT 121	14	4.1	3.2	-54	Low
STAT 121	25	3.6	3.0	-36	Low
STAT 121	60	4.3	3.0	-78	Low
STAT 121	68	4.2	2.6	-96	Low
STAT 121	84	3.8	2.5	-78	Low
WRTG 150	3	4.0	2.9	-66	Moderate
WRTG 150	6	2.7	2.7	0	Moderate
WRTG 150	18	3.6	2.6	-60	Moderate
WRTG 150	19	3.6	3.9	18	Moderate
WRTG 150	27	5.4	3.0	-144	Moderate
WRTG 150	28	4.0	3.2	-48	Moderate
WRTG 150	35	5.3	2.3	-120	Moderate
WRTG 150	37	4.9	2.7	-132	Moderate
WRTG 150	67	4.0	4.1	6	Moderate
WRTG 150	72	3.5	2.9	-36	Moderate
WRTG 150	82	4.0	4.5	30	Moderate
WRTG 150	83	4.7	3.1	-96	Moderate
WRTG 150	94	4.0	4.9	54	Moderate
WRTG 150	99	4.6	4.4	-12	Moderate

Note: Workloads are the mean of all semester or term courses in instances where the instructor taught more than one section.

Appendix C

Table C1
Interview Results Summary

Course	Student Age	Students in Class (Number)	Final Grades	Equivalency to Other Sections of this Course	Adequate Time for Reflection/Deep Learning	Changes to Term Course
AHTG 100	Freshmen in summer, other students expect summer course to be easier	About 30 in Spring More students in evening during summer &fewer in the day	Fall highest , 2.9+ Winter 2.9 Spring 2.8 Summer 2.8- Department expects a 2.8 average.	All have to read the required texts. Instructors get to choose additional readings. There was (4 years ago) a list they could choose from but now instructors get to pick the readings they think are most important. Has quite a bit of latitude compared to years ago.	Doesn't like to use TAs; believes that students pay for an expert and should get one. Things are tight in term, but students are taking fewer courses, usually 1-2, sometimes 3. Adjusts readings downward when papers are due. Doesn't know about differences in deep learning between semester and term.	Adjusts readings when papers are due
BIO 100	Quite a few students who had recently graduated from High School taking summer classes.	Spring and summer were much bigger classes—had 30-40 students. In the winter/ fall semesters I had 10–20.	I think that the grades were the same. Spring /summer may have been a little lower but there were more students. I did notice that more people dropped the class spring/summer.	I tried to make them all the same but with biology things change with the seasons so one or two assignments would change based on the season. Spring and summer was awesome because there is so much diversity. In the fall we would focus a little more on plants and in the winter we would participate in the worldwide Cornell bird count.	I taught once a week (normally Thursdays) for 2.5 hours. Spring and summer I would teach twice a week (Tuesday/Thursdays).Although, I think students still put things off until the last day. In spring/summer students were always a little flustered.	Stays longer after class Takes advantage of seasons
ECON 110	No difference	140 term, 180 semester	Slightly worse overall performance.	Dr. Kearl uses his own textbook. All other Professors use the same textbook. There is a generally consistent sequence of how topics are presented. Assignments and assessments vary by instructors.	They could have used more time between classes. Spring term performance was typically worse than fall or winter. However, given the self-selection and the changing composition of visiting students, I do not think it would be appropriate to assign causation to the relationship without a more rigorous analysis.	Sticks to the schedule
ENGL 312	Students older in evening term class; they need class to graduate	Always has 25	Not much difference for complex reasons. Grades to a standard and usually does not need to curve. Shoots for a 3.2 average.	Autonomy given instructors. Lesson plans are personal, but in semester he has time to focus on publishing and producing scholarly writing. There are types of work students need to do, but instructor has a lot of autonomy.	Doing it in half the elapsed time hinders the revision process. Students spend most of their time writing. Assignments come close together so the revision process gets cheated. They do the same research and writing. They don't have enough time if they are taking three or more classes.	Does more group work too break up block
ENGL 316	No age diff in spring but are highly motivated	Always has 25	Spring term students do better; they are the high achievers.	Instructors have to teach certain things but have autonomy to teach/implement any way they want.	Not enough time in semester or term to improve writing very much. She spends time teaching the uses of the various genres of technical writing and grammar rules –that doesn't take a lot of reflection.	Sticks to the schedule

Course	Student Age	Students in Class (Number)	Final Grades	Equivalency to Other Sections of this Course	Adequate Time for Reflection/Deep Learning	Changes During Term Course
HUM 201	Spring 1 Summer more married, some new freshmen, in summer.	Semester 200 seats and 40–50. Term up to 40–50 more likely around 30–35.	No differences, but that surprised him.	Instructors have more latitude now than they used to. GE used to regulate but they have backed off. He is given guidelines for periods to cover.	No, term session doesn't allow enough time for deep learning and reflection.	Adjusts length of discussions on the fly
HUM 202	Older, slightly	Term about 10% smaller	Grades may be a little higher in the term because they have two weeks of class, test, 2 weeks class, test, 2 weeks more than the final. They don't have as long to forget. Grades on paper are not as good as during semester because not enough time to revise and not as much time to give the individual feedback that she gives in personal consultation.	She has lots of latitude—follows GE guidelines, but they are very high level such as "read one important writer from the 19th century; read a work of Shakespeare, do 10–12 pages of writing."	Definitely not. Teaches on T&Th semester and term. Students complain even though they know coming in that it will be rough. There is a lot of literature to read. Basically have to read two weeks reading in one week—sometime 5 days to read, then two days until next class. Does reorganize readings to maintain a better balance between the 5-2 schedule. One problem is the first day of class in semester she can give intro to the class and how the class works then assign reading for the next class. In term format she can't do that because the "second" day comes at the same time as the first day. So students can't come to class with the reading done.	Adjusts length of discussions on the fly
M COM 320	No difference	Semester 25, Spring 16-20	Marriott School says the course should have a 3.2 average—she meets that.	They all teach the same things but can do it in any order.	Yes, because they could focus more on this course because they weren't taking as many classes. They just got the job done—no complaints. Met twice as long two days a week. There is a lot of interactivity in class so no need to change teaching methods.	Spends more time with student/s before after class
M COM 320	Semester 20ish, Spring 23ish. More men in spring.	25 is max but has 26-27 in semester; 19-23 in term	Term grades are lower because there is not time to revise; Semester 3.1–3.2 Term 2.9.–3.0	All have same number of graded assignments, same textbook, same quizzes and final. Instructors can change assignment details,	No; not enough time to improve writing skills--especially developing argument and logic skills (how to state case and provide evidence). BYU and most colleges (even WRTG 150) do not teach grammar. M COM 320 has grammar tests; takes a lot of time.	Tries out new things in term

Course	Student Age	Students in Class (Number)	Final Grades	Equivalency to Other Sections of this Course	Adequate Time for Reflection/Deep Learning	Changes During Term Course
MUS 101	Freshmen and seniors needing to graduate; Spring older	400 semester; 18–130 evening semester; 20–40 Spring	No differences; 50 % will get an A or A-.	Lots of autonomy. Department tried to get instructors to all use same book, but instructors could not agree on one, so either of two can be used.	No. With double the homework there is no way they process it completely, but students don't feel that way. He constantly changes little things to improve how course can enrich lives. Term makes him wonder how much students absorb.	Adjusts activities outside of class based on availability of concerts in term
PSYCH 111	New freshmen, visiting students, future missionaries summer.	60-80% fewer in term	No significant difference—intuitively; not calculated	Each instructor teaches the course the way they want. There is a committee, but they have no authority to mandate how a class is taught.	Not enough time for deep learning/reflection during term. He gets feedback that course is too rushed.	Adjusts agenda for daily class
REL A 121	Freshmen	60-204 semester, 60 term	Summer class average a bit lower—not a big difference. Spring term grades were higher when Learning Suite came out.	Great autonomy— "that's the beauty in Religious Education and a danger."	Students have to digest content more quickly. They don't have as much "time to settle the content into their real life." That's a disadvantage. Students do a weekly reflection paper.	Varies amount of interaction with students during class
REL A 122	New freshmen in summer	Full class	Same grades overall—maybe a little drop. May differ for students who take time to play during a term.	Instructor has total control of content, not text though. Department does peer review. Exams are objective, term students do a little better.	Time not is a factor.	Sticks to the schedule
REL A 211	New freshmen & visiting students, in summer. Spring students more mature & dedicated	Morning classes fill first, afternoon slightly smaller	No noticeable differences. Visiting students may tend to have lower grades. Rel Ed has a recommended mean but she has never had to adjust grades.	Lots of autonomy. When first teaching had to submit syllabi yearly to office, but not any longer. New instructors are given a mentor and are encouraged to attend one another's classes.	Students get tired fast in the second hour so he takes a 5 min break—but can't keep it to 5 min—so tried letting out 5 min early and running class straight through.	Sticks to the schedule
REL C 324	Wrap around freshmen in spring	All classes full	Grades might be a little higher in term because less time to forget details. Lots of facts are taught in the class. Students taking term courses seem more committed . . . chose not to take the summer off. Exams are objective, term students do a little better.	He does D&C sections 1–76. No one tells them what to teach and instructors do take different approaches.	Doesn't do a lot of deep learning or writing and revising. If anything the shorter time between classes was beneficial because they would remember more—has greater continuity because can teach larger chunks at a time—especially for evening classes where they meet twice a week instead of once a week. Students don't have as much time to forget things.	Sticks to the schedule

Course	Student Age	Students in Class (Number)	Final Grades	Equivalency to Other Sections of this Course	Adequate Time for Reflection/Deep Learning	Changes During Term Course
STAT 121	30-40 at SLC, BGS,	15 SLC, 50 BYU	No difference (off the top of his head)	Yes. Workload is the same. Same quizzes, tests, assignments across all Stat 121 classes.	Better retention when class meets more than once a week.	Sticks to the schedule
STAT 121	*NOTE: On the survey, this instructor did not agree to be interviewed, but did respond to an email requesting an answer to the question about student learning.*		Semester/Term number and percent of students who got 60% or less in their final exam WTR 2012: 2074, 13% SP 2012: 305 , 10% SUM 2012: 213, 9% FALL 2012: 1864, 12.5%	See note in column 2.	See note in column 2.	See note in column 2.
WRTG 150	older, slightly	17 all terms	Oh, I don't know if I can remember. I think that there were just as many A's—maybe even a few more than usual, but there were fewer B's and C's. Students both tried hard and turned in quality work, or they didn't try at all. There wasn't a lot of middle ground.	I felt that I had a lot of freedom to structure my class**,** so I don't think all classes are the same. Some instructors do not dedicate out-of-class time for one-on-one help. Some use written tests. Some don't do the same assignments. Most classes taught by graduate students are the same because we are more structured in what we teach—there are a lot of shared lesson plans etc. But although the outcomes are the same, the teachers are definitely different. Students who failed another instructor's class excelled in mine.	Yes, because I structured class time in a way that allowed them to begin drafting so they could go home and revise.	No reply
WRTG 150	Semester have freshmen; term older & returned missionaries	16-17 term, 19-20 semester	Term students might get a little lower grade but maybe students who choose to take a spring class expect it to be easier and don't put as much effort into it.	Has quite a bit of autonomy. Can choose own texts. She works with the Service Center and has students write about the projects they do as part of their research essay. She finds that there is a difference in quality between semester projects and term projects.	It's tricky. Semester students have more time to think, write, and revise—but often students just wait until the last minute to do the assignment anyway. Student ratings recommend that others take the class in semester. With writing you need some down time to let ideas germinate.	Does more group work too break up block
WRTG 150	Semester--almost all freshmen; few more older students in term; lots older in evening.	Always between 20–25.	Yes, they were comparable.	Hard to just double the content and teach it in a double-length class. Can't just do two classes in twice the amount of time. They do three major papers and a multimedia project. College wants to keep Wrtg 150 uniform in what the students do—use the same rubric across all classes. The program does not have standard exams.	Students had enough time but the pressure was on her to grade and give meaningful feedback in less time. She gave feedback via audio. She did write comments on their papers and for summative would type out comments. Students really liked the audio feedback.	Meets with individual students more outside of class

Appendix D

Table D1
Syllabi Results Summary

Course	Content	Readings and such	Graded Assignments	Quizzes	Exams	Grading Scale	Textbooks
AHTG 100	Different subject 1 day (6%)	Different 1 day	Same but some worth different point values	Same	Same	Same	Same
ECON 110	Same	Same	Same	None	Same	Not given	Same
ENG 312	Varies 15–20%	Same	Two fewer (cover letter and resume)	Same	Same but worth 50% of points	Not given	Same
ENG 312	Same	Same	Same	None*	Same	1 point difference between A and A-	Not given
ENG 316	Same	Same	Same# but 5 of 17 had different topics; No peer review in term	Spring, yes Winter, no	Same	Same	Same
ENG 316	Same	Same	Same	Same	None	Changed from percent to points	Same
HUM 201	Same	Same	1 fewer rough drafts	Same	Midterms: 1 term 2 semester	Not given	Same
HUM 202	Same	Same	Same	Same	Same	Same	Same
M COM 320	Same	Same	Same	Same	Same	Not given	Same
MUS 101	Same	Same	Required Student Ratings in semester; not in term	Same	Same	Same	Same
PHSCS 105	Same	Same	Term students not required to do multiple choice homework	None	Same	Same	Same
PSYCH 111	Same	Same	Same*	Same	Same	Same	Same
REL A 121	Same	Reading for project rose from 30 to 40 pages	50% fewer weekly reflections	Same	Same	Same	Same
REL A 122	Same	Same	Same	Same	Same	Same	Same
REL A 211	Same	Same	Same	Same	Same	Same	Same
REL C 324	Same	Spring, new supplemental reading	Same	Same	Same	Same	Same
STAT 121	Same	Same	Same	Same	Same	Same	Same
STAT 121	Same	Same	Same	Same	Same	Same	Same
STAT 121	Same	Same	Same	Same	Same	Same	Same
WRTG 150	Varies 15%	Same	Same	Same	Same	Same	3 out of 4 same
TOTALS	17 Same 85% 3, 5–15% Difference 15%	17 Same 85% 3 Difference 15%	13 Same 65% 3 Minor differences 15% 4 Major differences 20%	19 Same 80% 3 None 15% 1 Difference 5%	19 Same 95% 1 Difference 5%	20 Same (75%) 4 Not given (20% 1 Can't tell (5%)	19 Same (95%) 1 Not given (5%)