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by

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**Teaching, Technology, and Time:
Perceptions of use of time by higher education faculty teaching online
courses and teaching in traditional classroom settings**

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Perceptions of use of time by higher education faculty teaching online
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by

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Dissertation

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Dedication

This work is dedicated to
my parents, David and Rita Warner, for the immeasurable love, sacrifice and unending
support they have given throughout my life journey,
to my husband, Paul, for his patience, sense of humor and encouragement throughout my
dissertation journey,
to my daughters, Catherine and Alexandra, for being a daily source of joy and inspiration,

and to the memory of Dr. Oscar G. Mink,
scholar, professor, colleague, mentor, adviser and friend.

His capacity to discover the best in people, forgive their failures, observe their
accomplishments, appreciate life, and celebrate the human condition lives on in the work
of all those whose hearts and minds he touched.

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**Teaching, Technology, and Time:
Perceptions of use of time by higher education faculty teaching online
courses and teaching in traditional classroom settings**

Susan Margaret Warner Thomason, Ph.D.

The University of Texas at Austin, 2009

Supervisors: Sherry L. Field and Diane L. Schallert

This study investigated the practices, perceptions, and time expenditures of post-secondary instructors in American institutions as they prepared for, taught, and reflected on the tasks involved in teaching a one-semester course. The participants either taught in a traditional face-to-face setting or in an all-online context. This study compares and contrasts the experiences of the participants.

Although research in the business field includes models for improving productivity, the world of education rarely looks at these subjects, especially in the context of what leads to a successful course. The few studies there have been on similar topics in education have generally failed to provide consensus on amount of time the delivery of an online course requires and on the factors that contribute to that time difference.

A clear trend in higher education is the growing use of instructional technology tools that can help instructors meet the needs of students and facilitate the teaching process. However, these changes also bring about challenges for faculty, challenges that must be examined, understood, and addressed in order to ensure the best possible learning environment for everyone involved.

This study was designed to examine faculty teaching practices and gain insight into the experiences of faculty teaching classroom-based courses and faculty teaching online or Web-based courses. A qualitative, case study approach was used to conduct an in-depth investigation that focused on the tools and methods that faculty members employ to help them optimize the time they devote to course activities. The study also revealed a set of good practices used by these faculty members. Data included semi-structured interviews, faculty profile questionnaires, and teaching journals.

Findings revealed that faculty teaching online recorded an average of one hour per week more on their courses than did faculty teaching in the classroom. There was minimal difference in time commitment between online and classroom-based faculty participants when considering factors such as gender, type of higher education institution, and experience level. Overall, perceptions of faculty workload averaged three hours more than the actual time recorded during the journaling phase of the study, with all of the face-to-face instructors perceiving that they would work more hours than they actually logged on their journals. Only half of the online instructors perceived that they would work more hours than they actually logged.

Significant issues brought to light for faculty in both delivery formats included (1) lack of adequate or sufficient preparation for teaching, (2) limited availability of faculty training, and (3) lack of sufficient time to teach. The study also revealed the variation of instructional strategies used for comparison, and a set of common good practices that apply to both online and face-to-face courses.

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CHAPTER 1: INTRODUCTION

After the artificial and complex is once institutionally established and ingrained in custom and routine, it is easier to walk in the paths that have been beaten than it is, after taking a new point of view, to work out what is practically involved in the new point of view. (Dewey, 1938, pp. 20-21)

In the early stages of distance learning courses and programs, many educators believed that the instruction received in a distance learning course was not as good as the instruction received in a classroom during face-to-face meetings with instructors (Hoskin, 2001). Because more and more people are being exposed to distance learning, that perception has changed over time but there are still many skeptics. Even within academia, there are those that appportion less quality and value to the online experience.

The first type of distance learning courses were known as “correspondence” courses in which exchange of course materials, submission of assignments, and instructor-student interaction occurred via surface mail. Communication and feedback was slow, making it time-consuming and difficult for students to progress through the courses. As new telecommunication technologies evolved and costs for these services and equipment declined, a greater number of educational institutions began to take advantage of these tools to provide greater access to education. Despite these gains in enhanced communication and interactivity, many still believe there is no replacement for

the “face-to-face” classroom experience that provides the optimum type of teaching and learning environment.

In 1999, Tom Russell from the North Carolina State University Office of Instructional Telecommunications introduced *the no significant difference phenomenon*, an annotated bibliography of comparative research about technology for distance education. It examined 355 research studies comparing the use of instructional media and classroom courses since the 1920’s and showed that no significant difference had been identified in the learning benefits of on-campus courses as compared to distance learning courses or from a particular medium (Russell, 1999).

Following the same argument, this study examines the differences in teaching distance learning courses, specifically online courses, and how these courses differ, if at all, from what is happening in the classroom.

STATEMENT OF THE PROBLEM

At the 2003 Texas Distance Learning Association conference, I sat in on a session by a renowned distance learning professor from the University of Houston-Clear Lake who had won awards for his online course design. His presentation, *Get a Life: 6 Tactics for Reducing Time Online* (Hirumi and Pettit, 2003), focused on ways faculty can lessen the time it takes to teach online or Web-based courses. His assumption was that it takes much longer to teach online than it does in a classroom because “writing” takes longer than “speaking.” During his presentation, he stated that he had revised all of his course materials to make them more robust for this type of delivery. He had extended the activities he had been using in the classroom and added additional activities to

“compensate” for the medium. He was not merely converting activities he had been using in the classroom to online delivery but also adding materials, exercises, activities, and assessments to enhance the course. Given the number of changes and additions he had made, it seems obvious that the course taught online would take more time because the classroom experience was not only different but covered less material. It is this type of distortion that often makes the novice faculty member apprehensive about teaching online. This instructor’s on-campus course sections would also take longer if he took all of the “robust” materials and activities he developed for his online students back to the classroom.

Another interesting point made by this faculty member was related to office hours. For his online courses, he established *virtual* office hours where he was available via online chat. He explained that if no students had entered the chat within 15 minutes of this *virtual* office hour start time, he logged off and went home. As he was questioned about this practice and how well it compared to regular office hours, where the instructor is required to be available to students for a given period of time, he seemed to realize that he was not giving his online students equal time. If the office hour’s *chat room* was to be available from 8:00 – 9:00 pm, an online student should be able to enter the chat anytime within that hour and get in touch with the professor, just as they would if they visited faculty office hours in a physical office.

These are just a few examples of the differences in the types of activities that go on in the classroom and those that take place online. Two issues appear to affect the time it takes to deliver distance learning courses. First, faculty seem to be providing differing

treatments of course topics for online courses than they do for classroom-based courses, with both the learning activities and the process of assessing these activities more time consuming. Second, faculty may not be proficient in the use of instructional technologies, which may lead them to struggle with the implementation process and to either spend more time dealing with the course overall or shift time from teaching to dealing with technology use. In principle, technology should facilitate the process and enable instructors to undertake activities more efficiently and therefore save some time. Technology should allow faculty to spend *less time* presenting information and more time engaging with students in practice activities. The technology should support a shift in the instructor's role from presenting information largely through lecture (as in traditional courses during face-to-face time), to providing guidance and feedback, thus allowing the instructor *more time* to interact with students.

The claim that distance learning courses “take more time” is related to a series of other issues. Among those issues are faculty course loads, class limits, financial compensation, release time, support systems, and training requirements or certifications. Ironically, there can also be a perception that online courses take *less time*. Associated with this is a concern that the quality of the learning experience has been compromised or that the learning outcomes are not the same. In their guide for teaching online groups, Hanna, Glowacki-Didka, and Conceicao-Runlee (2000) assert that it is a myth that time requirements for teachers are lower in an online environment and go on to say it is actually more time-consuming.

Often, online teaching is viewed as a quick way to get content to learners. Many teachers see it, at first, as a potential time saver. Unfortunately, though, this is not the case. As we mentioned earlier in this book, online interactive courses are open twenty-four hours a day, seven days a week. The tasks of establishing a course framework and rethinking your curriculum to adapt it to the online environment (with or without a design team) are time consuming and challenging (2000).

This is a prime example of a fallacy that perpetuates the myth that more time is needed for online teaching and misrepresents the commitment required. If a classroom-based course were accessible 24 hours a day and 7 days a week, it would require as much of the instructor's time as the course to which they refer to here. The implication is that the instructor must be online as often as possible and read postings continuously throughout the period, when in reality the number of contact hours and amount of prep time, and assessment is likely to be similar that that for a traditional course. Although the online environment does provide additional flexibility for students to interact easily over given periods of time, individual students and faculty are not continuously interacting for the full 24/7 period. Indeed, the pre-planning of such a course may only take disproportionately more time because it is new in format and requires adjustments in the way instructional activities are delivered.

In January 2005, I conducted an informal survey of faculty at the higher education institution where I worked asking, "Approximately how much time in hours per week do you spend outside of the 45 hours of class time on development, preparation, grading,

feedback, testing and assessment, meeting and interaction with students. The results can be seen in Table 1. Although not a scientific study, this data show that aside from the 45 hours of contact time, classroom-based faculty report spending approximately 4 more hours overall per week than online instructors. In my experience, this is contrary to the much of the buzz in academia about teaching online. It is also interesting to note that classroom instructors reported spending more time in all teaching-related activities but the range of responses for both delivery formats was similar for the first two instructional activities. For the third instructional activity labeled *Student Meetings (online and in-person), Interaction*, we find a higher range in hours for the online instructors by 10 hours and this, in my experience, is consistent with the perception in academia that the interaction in online courses is the most time consuming part of online instruction.

Table 1: Faculty survey responses, Austin Community College, Susan Warner, 2005

Time spent per week outside of contact hours	Classroom-Based Instructors	Online Instructors	Difference
Development Time/Preparation for Class	6.41 hours Range 1-20	4.76 hours Range 1-16	-1.65
Grading, Feedback, Testing, Assessment	5.16 hours Range 1-20	3.05 hours Range 1-20	-2.11
Student Meetings (online and in-person), Interaction	3.70 hours Range 1-10	3.45 hours Range 1-20	-.25
TOTAL	15.27	11.21	-4.01

Consider the analogy of baking yeast breads to describe the way an online course differs. The process of baking with yeast requires that the baker knead the dough and let it rise several times during the preparation process. Unlike quick breads, where the cook can simply select which ingredients to use, mix them together, and then bake the bread all in one period, the yeast bread requires the cook to come back to the recipe several times during the process to see how it is progressing. This is similar to the way an online course would progress, with the instructor coming back repeatedly to check on the progress of the students and provide feedback as necessary. In some cases this becomes a 24 hour, 7 days-per-week endeavor for some online instructors.

If we find there is a difference in time required between two ways of teaching, we should discover the source of the difference in order to help faculty maximize the use of their time and resources and provide the best possible learning experience for their students. Some of the factors that may influence this difference in time include:

- use of instructional technologies is (or is perceived to be) time-consuming
- technology proficiency levels of faculty vary
- adequate training in use of technology and course adaptation is lacking
- adequate support systems are limited or not available (i.e. technology assistance, course design, mentors, etc.)
- learning activities between formats vary
- supplemental tools and technologies in course design vary

CONCEPTUAL FRAMEWORK

The main focus of this study is to explore the differences and similarities between faculty experiences teaching in two different formats: traditional classrooms and online courses. The key factors and their relationships center on the paradigm shift from traditional education models, where instructors purvey information, to progressive, student-centered models where instructors provide resources and create experiences for students to reach their educational goals. The conceptual framework for this study is drawn from John Dewey's discussions of progressive vs. traditional education, the distributed learning model, and constructivist theories of learning.

In Education and Experience, (1938) John Dewey states that progressive education is more difficult to implement than is traditional education and that "the difficulties are aggravated and the criticisms are increased when it is supposed that the new education is somewhat easier than the old" (Dewey, 1938, p. 20). While this observation was made by Dewey more than 70 years ago, the same issues of progressive education have arisen with the advent of online education. Online courses often require progressive, student-centered methods of instruction for students to stay motivated, successfully participate, and reach their educational objectives. In early online offering, many educational institutions experienced distance learning and especially online learning as a low quality, unacceptable alternative to learning in traditional classroom settings. These early impressions were based on the perception that teaching online was *easier* than lecturing in a classroom. Although some models of design promote an online alternative in which faculty merely post information online and let students progress as in

a correspondence course, research has shown that these models have high failure and attrition rates. Distance learning courses warrant the use of interactive teaching strategies to keep students interested, focused, and on task towards successfully passing the course. The debate between faculty, administrators, and the public who believe one method is easier than the other certainly worsens the case for greater similarities than differences between these teaching methods.

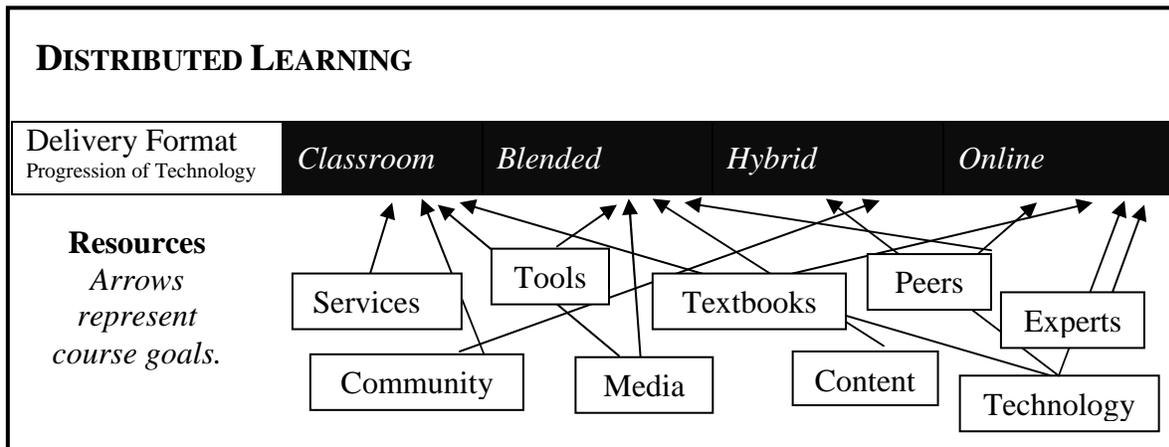
Dewey theorized that traditional education does not place the same demands on teachers as progressive education, and that, by virtue of the limitations found in the classroom environment, can dodge the responsibility of building the optimum experience for students to learn.

A primary responsibility of educators is that they not only be aware of the general principle of the shaping of actual experience by environing conditions, but that they also recognize in the concrete what surroundings are conducive to having experiences that lead to growth. Above all, they should know how to utilize the surroundings, physical and social, that exist so as to extract from them all that they have to contribute to building up experiences that are worthwhile. Traditional education did not have to face this problem; it could systematically dodge this responsibility. The school environment of desks, blackboards, a small school yard, was supposed to suffice. There was no demand that the teacher should become intimately acquainted with the conditions of the local community, physical, historical, economic, occupational, etc. in order to utilize them as educational resources. A system of education based upon the necessary connection of education with experience must, on the contrary, if faithful to its principle, take those things constantly into account. This tax upon the educator is another reason why progressive education is more difficult to carry on than was ever the traditional system. (pp. 35-36)

The concept of instructors using their physical and social surroundings and building worthwhile experiences ties closely with the instructional model of distributed learning, which is based on the idea that learning takes place through the use of a variety

of resources in different locations and not just inside the classroom. Although a classroom instructor can also employ distributed learning practices, in *What is Distributed Learning*, Bowman (1999) explained that many courses employing multiple resources “would be difficult if not impossible (to deliver) without the use of technology” (paragraph 7). Figure 1 provides a graphic representation of the distributed learning model which can be applied to any instructional delivery format.

Figure 1: The Distributed Learning Model



Bowman (1999) quotes Saltzberg and Polyson (1995) explanation that “Distributed learning is an instructional model that allows instructor, students, and content to be located in different, non-centralized locations so that instruction and learning occurs independent of time and place” (paragraph 3). Hence, distributed learning lends itself more often to descriptions teaching that include the use of technology tools. Access to resources distributed in multiple locations enable instructors

to choose from a variety of technologies and materials in order to create the best possible experiences and provide more learning options for their students.

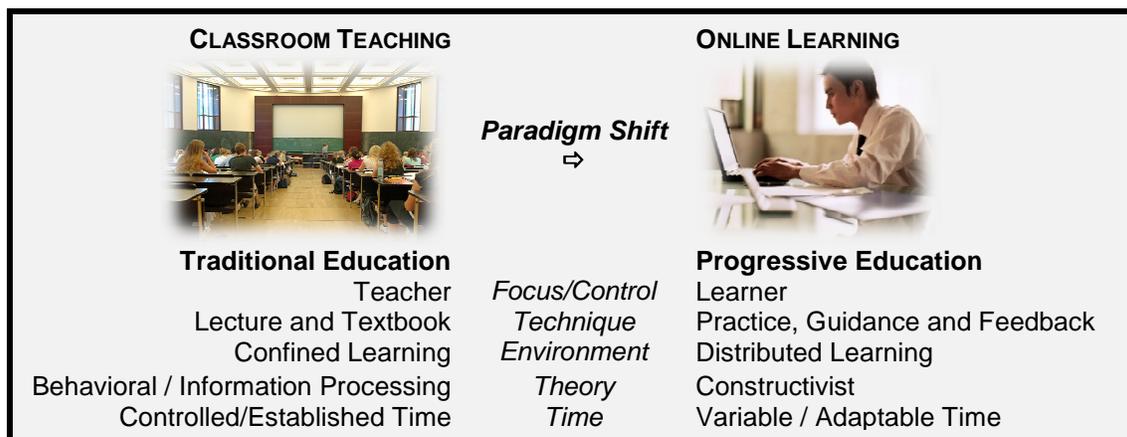
In addition to the theories of progressive education and the concept of distributed learning, a third premise of this research is the focus on the constructivist learning theories introduced by Brunner, Ausubel and Vygotsky and the principles on which their theories are based. These principles convey knowledge as constructed and created, “learning as a change in meaning constructed from experience” (Carboneel, 2004, p. 1). All three of these theorists advocated student discovery and control of learning. They emphasized instructor responsibility for structuring the learning situation by selecting from a variety of resources and presenting them through appropriate instructional activities, thereby creating experiences in which students could control their learning.

The perception of online courses being more complex and requiring greater time commitment may be because faculty members must change the instructional activities to become more student-centered and progressive in design and therefore must devote more time and resources to develop and implement them. The student-centered instructor must analyze student needs, learning styles, resources available, and, through this analysis, design the right activities for learning. For the same reasons noted by Dewey, in a physical classroom, an instructor can extemporize by relating a previous lecture or assigning a classroom activity without having to be prepared, especially a faculty member who has taught the same course a number of times for a number of years. An online instructor, on the other hand, cannot conduct an online course without prior preparation and clear expectations of what the students will have to do during their time

online. Instructional activities must be prepared before students begin that portion of the course. Faculty members in online courses cannot simply lecture and garner feedback on student comprehension in the same manner they do during a face-to-face class period. When the interaction is online, the instructor must employ a variety of tools and techniques to provide the practice, guidance, and feedback needed to help students learn and develop learning skills.

In *A Theory for eLearning*, Nichols (2003) suggested that the absence of theories for eLearning may hinder further development in the field. Distance learning has grown momentarily in the past ten years and will continue to play a key role in expansion of educational programs to provide access and flexibility to students (Li & Irby, 2008). Nichols provides support for this from Ravenscroft (2001) who asserts that, “There are few examples of academic literature specifically concerned with eLearning theory and unfortunately the use of technology in education has tended to be technology-led rather than theory led”(Nichols, 2003).

Figure 2: A Comparison of Traditional and Progressive Models of Education



The primary goal of this study is to provide a clear and comprehensive description of teaching and what it entails both in a classroom and online. To accomplish this goal, this work analyzes and compares similarities and differences between these two settings, which, based on the findings, may help to build a theory for eLearning or Online Instruction. In turn this theory may provide the basis for further research in the field, which would continue to improve the learning environment and learning experiences of students.

STATEMENT OF PURPOSE

Given the goal of transformational change in the educational arena, in particular to support faculty and students in the context of online instruction, it is critical to understand the issues that surround this alternative delivery format. In my experience, change will come when the delivery format of a course, whether online or through other instructional technologies, is valued equally with that of a classroom-based course, and support systems are seamlessly in place to allow online faculty the same teaching opportunities as faculty teaching traditional courses.

To this end, the purpose of this study is to compare the experiences of faculty teaching online courses and faculty teaching face-to-face courses. The results provide a comprehensive picture of faculty perceptions, limitations, and challenges. They also highlight the similarities and differences for each method of instruction and thereby help identify effective tools, training, resources, guidelines and support systems to implement online courses effectively. There are many more similarities between online and face-to-face courses than differences and the results from this study bring some of these

similarities to the forefront in hopes of clarifying the expectations and lessening the anxiety of teaching online.

RESEARCH QUESTIONS

The research questions that directed this study were:

1. What differences and similarities are there in faculty experiences between teaching an online course and teaching a traditional classroom-based course?
2. What differences and similarities are there in the *time commitment* made by classroom faculty and online faculty?
3. What differences and similarities are there in the *instructional activities* used by classroom faculty and online faculty?
4. How does the *concept of time* differ for faculty teaching online and in a traditional classroom?
5. What *teaching strategies* seem most effective for online courses and for traditional courses?
6. Has *experience* changed the way faculty members teach? If so, how?

SIGNIFICANCE OF THE RESEARCH

In July 2003, a press release from the Virginia Community College system stated that enrollment in distance learning courses surpassed overall enrollment growth for the entire system of 23 colleges by more than 12 percent (Stewart & Hayden). Likewise, at Austin Community College (ACC) in Austin, Texas, enrollment in distance learning courses has increased by more than three-and-a-half times in nearly 10 years beginning with 3,253 enrollments in 1998 and growing to 11,509 registrations in the Fall of 2008

(Oburn, Black, and Hastings, 1999) ((Merz, 2008). The Sloan Consortium's annual Online Learning survey reported that in the Fall of 2007, more than 3.9 million students were taking at least one online course, a 12% increase within one year. In addition, the survey showed the growth rate for the overall population of students in higher education was only 1.2 percent (Allen and Seaman, 2008). However, Fisher (2007) wrote in *Community College Times* that:

Despite the increasing number of students who participate in online learning, many academic leaders acknowledge some shortfalls related to the trend, including high costs, low retention and lack of student discipline. Also, of the academic leaders surveyed, only one in three said they believe their faculty "accepts the value and legitimacy of online education." (Fisher, 2007, para. 8)

Distance learning is not only being promoted in higher education. According to a report released by the National Center for Education Statistics, a unit of the U.S. Department of Education, students in one-third of the nation's public school districts took distance learning courses in the 2002-2003 school year and, according to the director of the U.S. Department of Education's Office of Educational Technology, the growth is expected to continue consistently with parallel that of distance learning in higher education (US Department of Education Tracks Growth in Distance Learning in K-12, 2005). In a survey of post-secondary institutions by the U. S. Department of Education's National Center for Education Statistics, Parsad and Lewis (2008) report that, during the 2006-2007 academic year, 66% of 2- and 4-year institutions offered distance education courses. Estimated enrollment was 12.2 million and 77% of these students completed

their distance education online. Table 2 shows the number of number of postsecondary institutions and the percentage of those that offered distance education courses while Table 3 shows the institutions offering distance education courses to elementary and secondary students.

Table 2: Total number of 2-year and 4-year Title IV degree-granting postsecondary institutions, and percent that offered distance education courses, by course type, institutional type, and institution size: 2006–07 (Parsad and Lewis, 2008, p. 5)

Institutional type and size	Total number of institutions	Percent offered any online, hybrid, blended online, or other distance education course	Percent offered college-level, credit-granting online/hybrid, blended online, or other distance education course			Percent offered noncredit distance education courses
			Courses at either level	Undergraduate courses	Graduate first professional courses	
All Institutions	4,200	66	65	66	60	23
Institutional Type						
Public 2-year	1,000	97	97	97	†	50
Private for-profit 2-year	500	18	16	16	†	‡
Private 4-year	600	89	88	87	82	42
Private not-for-profit 4-year	1,500	53	53	51	46	10
Private for-profit 4-year	300	70	70	70	‡	2
Size of Institution						
Less than 3,000	2,700	51	51	51	44	11
3,000 to 9,999	900	91	91	88	77	42
10,000 or more	500	97	96	93	90	53

† Not applicable. Two-year institutions do not offer graduate degrees, although they sometimes offer individual graduate courses.

‡ Reporting standards not met.

1Based on the estimated 4,160 2-year and 4-year Title IV degree-granting postsecondary institutions in the nation.

2Based on the estimated 3,890 institutions that had undergraduate programs in 2006–07.

3Based on the estimated 1,810 institutions that had graduate or first-professional programs in 2006–07.

NOTE: Data for private not-for-profit 2-year institutions are not reported in a separate category because too few private not-for-profit 2-year institutions in the sample offered distance education courses in 2006–07 to make reliable estimates (unweighted N=15, weighted N=113).

Data for these private not-for-profit 2-year institutions are included in the totals and in analyses by other institutional characteristics. Institutions may offer both undergraduate and graduate/first-professional courses. Although 2-year institutions do not offer graduate degrees, they sometimes offer individual graduate courses. Detail for the number of institutions may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Postsecondary Education Quick Information System (PEQIS), "Distance Education at Postsecondary Institutions," 2007.

Table 3: Percent of 2- and 4-year Title IV degree-granting postsecondary institutions offering distance education courses for elementary or secondary students, by course type, institutional type, and institution size: 2006–07 (Parsad and Lewis, 2008, p. 12)

Institutional type and size	Total enrollments in college-level credit-granting online, hybrid/blended online, or other distance education courses	Percent of total distance education enrollments								
		Online enrollments			Hybrid/blended online enrollments			Other distance education enrollments		
		Courses at either level	Under-graduate courses	Graduate/first-professional courses	Courses at either level	Under-graduate courses	Graduate/first-professional courses	Courses at either level	Under-graduate courses	Graduate/first-professional courses
All Institutions	12,153,000	77	63	14	12	9	3	10	8	2
Institutional type										
Public 2-year	4,844,000	80	80	†	10	10	†	9	9	†
Public not-for-profit 2-year	11,000	100 ¹	100 ¹	†	#	#	†	#	#	†
Private for-profit 2-year	72,000	96	96	†	3	3	†	#	#	†
Private 4-year	3,502,000	70	54	17	15	11	4	15	11	4
Private not-for-profit 4-year	1,854,000	74	46	28	13	8	5	13	7	6
Private for-profit 4-year	1,869,000	87	56	31	12	4	7	1	1	1
Size of Institution										
Less than 3,000	2,122,000	73	58	14	19	10	9	9	7	2
3,000 to 9,999	3,772,000	74	66	8	12	11	2	13	10	3
10,000 or more	6,259,000	81	63	17	10	8	2	10	7	2

† Not applicable. Two-year institutions do not offer graduate degrees, although they sometimes offer individual graduate courses.

Rounds to zero.

¹ Rounds to 100 percent.

NOTE: Enrollments include duplicated counts because they refer to the number of registrations. Percentages are based on the total number of enrollments in that row. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Postsecondary Education Quick Information System (PEQIS), "Distance Education at Postsecondary Institutions," 2007.

In addition to distance learning offerings by public and private schools and universities, a number of private agencies and corporations have partnered with higher education institutions to offer distance learning options for training and continuing education programs for their employees (Ewell, 2004). *Perceived* benefits such as lower travel costs, on-demand availability of resources, and flexibility have fled companies to incorporate these delivery methods to improve their bottom line. Although for some

companies the benefits of distance learning did not prevent them from going out of business or merging with larger content providers, some ventures have been and continue to be extremely successful.

Despite current growth in distance learning and anticipated future growth, a number of issues remain regarding the quality of courses and the benefits for students, faculty, and the institutions. In a 2002 National Education Association Higher Education Research Center Update, Lee and Wilner (2002) explain some concerns faculty have with distance learning.

Online classes take more faculty time than do live classrooms. Faculty members have had quality control, online communication, and time issues with distance education programs. Online education can turn into a 24-hour job for online professors. To compensate for lack of interaction, many online programs promise to respond to student emails within 24 hours, which has caused some professors to avoid distance education. (p. 2)

The expansion of distance learning programs and in particular the increase in online course being offered at many institution of higher education in the country (Parsad & Lewis, 2008, p. 5) makes it critical to look at the role of faculty members in the process of ensuring good practices, standards of quality in education, and developing adequate training. The Commission on Colleges' Southern Association of College and Schools (SACS), is "the recognized regional accrediting body in the eleven U.S. Southern states and in Latin America for those institutions of higher education that award associate, baccalaureate, master's or doctoral degrees" (About the Commission, 2008). In

June 2003, this commission adopted a policy statement on distance education that required institutions to guarantee that their courses and programs abide with the principles of accreditation.

Seasoned practitioners have generally touted the similarities rather than the differences in types of delivery to show that distance learning courses are, or should be, the same in content and quality. The McGraw-Hill Handbook of Distance Learning noted that in distance learning courses, “the intended learning outcomes are inappropriate for the medium. (Distance Learning) Programs should be organized around demonstrable learning outcomes, help the students achieve those outcomes, and assess students’ progress by reference to those outcomes” (Chute, Thompson, and Hancock, 1999, p. X) Is this not the case with traditional courses as well? If the learning outcome in a history course is for students to cite the authors of the Constitution, then it should be the same in a face-to-face or distance learning course. If the learning outcome is changed by virtue of the delivery medium, then the course itself has changed. If the students online now need to explain the relationship between the authors of the Constitution rather than merely cite them, the learning outcome is different and the instructional activities towards that outcome will change.

Claiming that online courses or distance learning courses are vastly different and are more time-consuming than traditional courses, may both turn away faculty who could benefit from the technology tools and limit opportunities for students who might gain from learning through this delivery method. These were the issues, hopes and goals with which I began this study.

CHAPTER 2: LITERATURE REVIEW

A king asked a sage to explain the Truth. In response the sage asked the king how he would convey the taste of a mango to someone who had never eaten anything sweet. No matter how hard the king tried, he could not adequately describe the flavor of the fruit, and, in frustration, he demanded of the sage "Tell me then, how would you describe it?" The sage picked up a mango and handed it to the king saying "This is very sweet. Try eating it!" (Hindu Teaching Story)

Distance education and, in particular, online instruction have become significant components of educational systems around the world. Because of the growth of these delivery modes, and the additional impact of technology use to support classroom instruction, discovering and then examining the issues that faculty face in technology-mediated instruction is an important component of future development that focuses on adequate standards of quality and supports student learning.

There is a range of possibility for how distance education can be arranged and taught. One end of the spectrum is represented by the course development and delivery process followed by the Open University (OU) systems in many countries, such as the U.K. (<http://www.open.ac.uk/>). The OU courses tend to be heavily developed, with multiple sources of delivery, programmed instruction, and coordinating support for learning and testing. On the local level, the OUs hire what they call faculty tutors or associate lecturers to support students as they study and are tested over the pre-developed

course materials. Before an associate lecturer is hired to tutor students, the OU system has already estimated the number of hours per week that they can expect to work as associate lecturers.

The OU must be able to demonstrate compliance with the national minimum wage legislation. To do this, the OU specifies the average daily number of hours an associate lecturer is likely to spend in carrying out the duties required under the contract as an associate lecturer. The total number of hours reflects the number of months that the course is in presentation each year and the workload for the course as specified in the teaching and assessment strategy (i.e., taking into account the number of contact hours, number of students in the group, number of tutor-marked assignments). (Open University, *A Guide to the Terms We Use*, 2009)

This contrasts sharply with the situation at many American colleges and universities, where faculty often bear multiple significant responsibilities when developing an online course (Goodyear, Salmon, Spector, Steeples, and Tickner, 2001). These responsibilities can range from curriculum development, to instructional design, to supporting students using instructional technologies.

In this document, I examine faculty in higher education institutions within the United States where instructors are asked to bear the full responsibility for their teaching and course management processes rather than the type of situation that teachers and instructors encounter when they teach in systems that follow the Open University model.

Although much of the past research has focused on measuring the effectiveness of distance education programs and student perspectives, a limited number of studies look at the faculty aspect of distance learning course delivery. This chapter provides a frame of reference for distance education, online instruction, and some of the research that surrounds this educational trend.

BRIEF HISTORY OF DISTANCE LEARNING

The modern concept of distance education began with the development of the correspondence course in the 1890s (Nasseh, 1997). Some scholars trace distance education back to the end of the first century when the surviving letters of St. Paul the Apostle were circulated to his students. These letters “quickly became the standard of reference for Christian teaching” (Doniger, 1999, p. 847) and perhaps the first documented structured method for teaching through the dissemination of print materials.

A number of activities took place during the nineteenth century that laid the ground for early distance education programs. Nasseh (1997) described the development of correspondence education springing from the work of Anna Ticknor. In 1873, Ticknor created a society to encourage studies at home and provide educational opportunities for women (Nasseh, 1997, p. 3)

By the early 1890’s, a number of large state universities had entered the correspondence course market. For example, the University of Chicago enrolled 32,000 students in a home sociology course between 1893 and 1923 (MacLean, 1923). Another early adopter was Penn state University, which used Rural Free Delivery in 1892 to deliver courses to students in rural communities. Rural Free Delivery was introduced in

January 1892 by Congressman James O-Donnell through a Bill to provide free delivery of mail to rural communities (Day, et al., 2007).

With the advent of communication technologies such as the radio in the early 1900s and eventually television, the correspondence course evolved into a more entertaining format of delivery. Nasseh explains:

In the years between the World Wars (1918-1946), the federal government granted radio broadcasting licenses to 202 colleges, universities and school boards. With all the demands and popularity of instructional radio, by the year 1940 there was only one college-level credit course offered by radio and that course failed to attract any enrollments. Still, the concept of education by radio was a major reason for development of educational television by the mid 20th Century. (Nasseh, 1997, p. 2)

In the early 1950s educators began exploring the potential benefits of television as an educational tool. The Fund for Advancement of Education was established in 1951 by the Ford foundation to support experimental programs with the potential to improve education in American schools and colleges (Meaney, 1962), and educational television became one of their primary goals. Much of the funding from Ford Foundation grants was focused on small-scale experiments aimed at “extending the reach of superior teachers to a greater number of students” (Meaney, 1962, p. 5) and helped to provide release time for faculty embarking on the design and development of programming for newly established educational television stations. Meaney clarified as follows:

Most of the professors giving the television lectures had had more than twenty years of teaching experience before undertaking the telecourse. When they began the television work their only training for it was usually of the “on the job” type and their hours of involvement with television were heavy from the beginning – on the average, thirty seven hours per week devoted to preparation for the lecture, searching for and making visual materials, writing, rehearsing, producing, recording and in some cases, rerecording. (Meaney, 1962, p. 18)

In 1959, an early educational television program, *Sunrise Semester*, featured a teacher standing before a class and a camera in the rear of the classroom. This program was based in Chicago and ran well into the early 1960s (Freed, 1999). *Sunrise Semester* was too costly, became unsustainable and was ended. It did however, pave the way for the design of the first television course or “telecourse” and eventually pre-packaged telecourses on video tape for broader distribution through an effort by Coast Community College vice chancellor, Dr. Bernard Luskin to establish a telecourse business model based on licensing fees(Freed, 1999). Freed explains, “Today, about 240 consortiums of public and private educational and creative enterprises in the U.S. are producing telecourses, licensed by about a thousand colleges and universities using the material as a regular part of their degree programs” (Freed, 1999, p. 5).

Other technologies that have played a significant role in the expansion of distance learning are cable and satellite systems in the late 1970s and early 1980s, and, since the proliferation of email in the mid 1990s, the online or internet course. When I began working at the Rochester Institute of Technology (RIT) in 1993, their distance learning

programs were designed to incorporate email, videotape programs, and/or discussion forums as required by the instructor and the course objectives. RIT had students throughout the country and offered four master's degree programs as well as a bachelor's degree with seven different concentrations. The types of technologies employed allowed RIT to have one of the fastest growing distance learning programs in the country, and it was one of the few institutions that offered entire degree and certificate programs online.

Today most of the institutions of higher education in the United States as well as many K-12 schools and corporate training centers offer some type of online education. Although the original premise that distance learning courses reap great profits without compromising quality for offering institutions because of economies of scale has still not been substantiated, many institutions still look at distance education as a viable means to increase their market by reaching greater numbers of students. Other perceived benefits of distance education are the cost savings associated with facilities infrastructure. The idea that online programs will do away with the need for buildings and associated overhead such as staff, heating/cooling, parking, furniture, etc. has also not been substantiated because most of these resources are still needed and applicable to house and sustain the systems and staff that deliver and support distance education.

The programs that have been successful are those in which the programs and delivery strategies meet the true needs of distance learners. If a student wants and needs to complete a degree program or simply wants to take a course but is unable to attend a traditional class at a local university, they now have the option to search institutions

around the country and even around the globe for a course that will meet their needs, and can be completed right in their own home.

CURRENT RESEARCH

A number of studies have explored the differences in teaching traditional face-to-face courses and teaching the same course online. The body of research investigating issues involved with distance learning has increased significantly in the last 10-15 years. Yet, it has been difficult to find studies about faculty loading or compensation and time commitments in teaching, much less in distance education, and, for the studies that do exist, they only vaguely address the critical components of such issues. A 1999 faculty survey at the University of California – Los Angeles found that 67% of respondents felt regular stress as they tried to keep up with information technology and 62% felt stress due to their teaching load (McQueen, 1999). While this survey did not separate faculty into those teaching online and those in classroom instruction, so it is interesting to note that the highest stress factors for all faculty was technology use and teaching load, issues or problems that have been historically attributed to distance learning or online courses. A similar study by Hart (2005) found that women faculty reported experiencing greater stress than men, and concluded that teaching loads, among other issues, produced much more stress in women than men irrespective of the delivery format.

Several studies have explored similarities and differences between online and face-to-face courses. During the 1999-2000 academic year, Lazarus (2003) designed to measure how much time it takes to teach courses online. Although there was no direct

comparison to classroom instruction, the data showed that faculty reported taking 3-7 hours per week, a figure that is comparable to a regular live or face-to-face course teaching commitment. The study was based on three asynchronous online courses in which faculty self-monitored the amount of time they spent grading, reading, and responding to emails, as well as reading, participating, and grading online discussions. Lazarus (2003) concluded that this study “represents the beginning of this area of inquiry” and that “additional studies are needed with a variety of instructors across a variety of courses and disciplines to further pinpoint faculty time commitment” (p. 47).

Jurczyk and Pachnowski (2003) studied the perceptions of faculty regarding the effect of distance learning technologies and faculty preparation time. Faculty in this study reported they did not spend more time in preparation after the first one or two semesters, but they did need additional time during the initial semester teaching a web-based course, to transfer the course to an alternate format. The faculty members in this study however, continue to perceive that online courses required more time to teach than traditional classroom-based courses and as a result, that this affected their teaching load (Jurczyk and Pachnowski, 2003). Based on these types of discrepancies it is difficult to gauge the way in which faculty responsibilities in online and classroom-based courses differ and how these differences translate into time obligations for online instructors.

The July 2002 report *Teaching with Technology: Use of Telecommunications Technology by Postsecondary Instructional Faculty and Staff in Fall 1998* prepared by the U. S. Department of Education’s National Center for Educational Statistics (NCES) (Warburton, Chen, & Bradburn, 2002) provides data on faculty workloads related to

technology use. The report maintains that “compared with those who did not use telecommunications technologies, full- and part-time instructional faculty and staff who used email or course-specific Websites generally reported working more hours per week on average, spending more time on research activities, and spending less time on teaching activities and office hours” (Warburton, Chen, and Bradburn, 2002). Though not specific to the delivery of online courses, the use of technology in teaching may soon become the norm rather than the exception with more and more classroom instructors employing presentation software like Microsoft® PowerPoint® and course management systems like Blackboard®. Any new processes, tools or strategies will take time to assimilate into the teaching process as users gain experience. Based on the findings in the NCES study, full-time postsecondary faculty who used email or Websites spend an average of 3 hours more per week than those that did not use these technologies, whereas part-time faculty spent an average of 6.5 hours more per week than did their non-technology counterparts. Through the availability of these communication technologies, faculty members have been able to shift the time commitments from teaching and administrative duties towards research activities.

Another report, *Distance Education Instruction by Postsecondary Faculty and Staff* (Bradburn, 2002) was published in 1998 by the US Department of Education Office of Educational Research and Improvement. Bradburn described the discrepancies in workload and compensation in teaching distance education courses. The study found that the teaching loads of distance learning faculty was higher than for classroom instructors, though the “percentage of total work time spent on teaching activities was also similar for

faculty that taught distance learning classes and those who did not” (Bradburn, 2002, p. v).

A growing concern for faculty and administrators in higher education is the demand for having online courses serve increasingly larger numbers of students (Visser, 2000). In 2008, Mupinga and Maughan examined the workload of community college faculty members who were doing Web-based instruction. In framing the problem statement for this investigation, they expanded on the additional complexities that distance education places on calculating faculty workloads. They pointed out that while the American Society of University Professors’ claim that the current formula does not consider non-classroom time commitments such as supervising student work, grading, conferences, etc., it is reluctant to establish a single common formula to calculate faculty loads. The formulas for calculating teaching loads vary greatly across institutions, with different combinations of considering the number of students, the number of courses being taught, the technologies used for delivery, support systems, and incentives for faculty. Mupinga and Maughan reported that their study results were inconclusive and emphasized the need for additional exploratory research to examine practices that lead to inequalities in the time spent teaching online compared to traditional classrooms.

A study by Fish and Gill (2009) examined the way faculty valued or supported online teaching and learning models. The positive or negative experience had by faculty played a noteworthy part in these perceptions emphasizing that faculty with positive online teaching experience were more likely to value the online learning environment. One common issue of concern for all participants was the lack of training opportunities.

Another common issue of concern for all participants, was course preparation time. Fish and Gill (2009) explain:

According to one faculty member who had a previously negative online teaching experience, online teaching is “very time consuming. (It is) like writing a textbook to explain the textbook” One participant who had a more positive outlook towards online teaching stated that online instruction “takes longer to organize, construct, teach and evaluate.” A faculty member with no online teaching experience concluded the following: “It takes a great deal of instructor time in a normal instructor’s class with students. I see big problems working with students online and the time it takes for class preparation and grading, while maintaining a full teaching load and conducting research” (pp. 5-6).

In an American Journal of Distance Education editorial, Moore (2000) discussed two articles that looked at faculty workloads in online instruction, Visser (2000) and DiBiase (2000). Although the two studies used similar methods, the authors came to different conclusions regarding the time commitment required of professors who teach online. Visser found that faculty needed almost twice as much time to teach online as compared to a face-to-face course, whereas DiBiase found that less time was needed. On closer review one discovers a number of significant differences in the courses under consideration such as the technologies used, the subjects taught, and institutional support. Moore discussed the time commitment for the courses in these two studies and shared his surprise at the lack of time and effort that went into the design of the course.

For his 80-hour course, DiBiase spent no more than 100 hours on design, and Visser spent about 330 hours on his 36-credit-hour course (which I interpret to mean some 100 hours of student time). If these are, in any way, representative of what is happening generally in the development of Web-based courses, they are astoundingly contrary to all previous experience of 'best practice' in distance education. Let me illustrate by referring to an editorial in the AJDE in 1992 (vol. 6, no. 2), in which I urged everyone involved in distance education to "Take time to design." In that editorial, I cited the US Office of Personnel Management, the US Army, and the McDonnell Douglas Company in support of the assertion that design time to "contact time" might range from 300:1 to 50:1. Over the years since then, particularly when consulting on design and development of programs, I have had no reason to give up the 50:1 minimum "ballpark" ratio. In fact, this often turns out to be less, and rarely more, than is needed. So I have to ask myself "What is going on with these online courses? Have the tools for design become dramatically more efficient?" To some extent, probably they have. However, there are many other contributing explanations of the decline in the time invested in design. They include acceptance by a generation of students of frequently mediocre quality as the price of the liberation offered by institutions prepared to teach online as contrasted to previous years, when their attitude was one of "Take it or leave it. Come to campus or go without!" And, of course, many students have no better distance learning experiences with which to compare what they have today. (Moore, 2000, p. 4)

In regard to the use of instructional strategies, methods, and the accuracy of comparison of methods in traditional courses and online courses, Steinbronn and Merideth (2008) provided some insight into faculty self-selection of teaching methods and strategies, including which of these are most useful for a teaching format. In examining a static set of methods and strategies, activities usually associated with online learning, such as *email communication with instructor* and *student-to-student electronic discussions* earned higher percentages for usefulness for online courses, and activities such as *lectures* and *hand-on practicum or lab work* fared best with classroom courses. One instructional activity that was rated as equally useful for both online and face-to-face courses was *questioning and feedback to students* (Steinbronn and Merideth, 2008).

These data provided minimum utility in comparison because the usefulness of these strategies are commonly attributed to the format in which they were favored. This generates further perceptions that optimum instructional activities for a face-to-face class must be different than those used in an online environment. Clearly, questioning and feedback to students is a common and critical element in any type of quality instruction so the expectation would be that this activity ranked fairly high to begin with. Similarly technology-mediated communication would be ranked higher for online course that depend on the technology for their delivery.

Another interesting aspect of Steinbronn and Merideth's study is the faculty responses to two open-ended questions about the way they select instructional strategies when teaching online or in the classroom. Online faculty noted *technical resources* as the main criteria for their choice, while classroom-based faculty noted *experience* as their main criteria. Interestingly, of the two groups, the only one that listed *time period* was the classroom group and even in that group it was only referenced twice (Steinbronn and Merideth, 2008, p. 273). This might be explained because faculty in this study averaged 19.5 years or more of teaching experience and the time factor was likely not as much of an issue as it would have been for novice online or classroom instructors.

In a review of instructional strategies, Li and Adkins (2004) wrote about 16 myths related to online instruction in higher education. They wrote from the perspective of Li as an online instructor and Akins as a student who had participated in a completely online Master's degree program. From their coverage of the 16 myths, we see that comparisons between activities were still not adequate. Myth 1 stated that traditional courses can be

copied to online learning. Li and Adkins described the differences in the use of collaborative groups and ways in which the online version required much more time and effort from students in selecting learning practitioners their group members than was needed for the classroom version. The primary reason they gave for this difference was the lack of social interaction online. However, the standard perception of many distance learning practitioners is that the online environment breeds as much if not more social interaction at times than a face-to-face environment.

It's well known that people say and do things in cyberspace that they wouldn't ordinarily say or do in the face-to-face world. They loosen up, feel more uninhibited, and express themselves more openly. Researchers call this the *disinhibition effect*. (Suler, 2004, p. 321)

In Cooper and Bielema's (2002) investigation of online learning experiences, they reported student comments that praised the interaction with and among peers. One student described the positive aspects of online learning, stating, "The ongoing interactions among peers and instructor. Constant learning by reading everyone's opinions and points. I felt many friendships were made even though I haven't seen the faces" (p. 4). An online environment, although certainly different, can breed as many opportunities for people to engage with each other as face-to-face experiences. This is further supported by the staggering growth of Social Networking sites around the world in recent years. "Social Networking has been the global consumer phenomenon of 2008. Two-thirds of the world's Internet population visits a social network or blogging site and the sector now accounts for almost 10% of all internet time" (Burmester & Covey, 2009).

Li and Akins' (2004) Myth #11, "*online teaching is quick and easy,*" discussed the time aspect of teaching online. Their claim is that most people believe teaching online is actually easier than face-to-face instruction because of the perception that there are no limits to time and location, increasing the flexibility available to the instructor in development and delivery. Yet the faculty members' own assertions are that both students and instructors have a much greater workload in an online course – almost twice as much (p. 56). Li and Akins suggest a series of time management strategies but comment that online courses *require a lot of reading and writing* and therefore take more time. This assertion sheds light on the likelihood that the classroom course being taught by this instructor has different strategies and activities that include a great deal of reading and writing and would therefore also vary in time.

Tomei (2006) analyzed the time commitments of a faculty member in a face-to-face course and the equivalent online version. In looking at the comparison parameters, however, the activities in each course differed considerably. *Counsel and Advisement* hours, for example were held during set time periods and scheduled prior to the start of class each week. Tomei noted that many students arrived for class directly from their jobs and therefore could not meet during the set times for office hours. The online students, on the other hand, participated in the counseling and assessment hours via email with unlimited time constraints, i.e. emails did not have to be sent within a specific period of time. This issue, in addition to the fact that all online students were able to participate as opposed to the limitations experienced by students in the face-to-face sessions, where

some were limited by their work schedules, highlight the problematic nature of comparing in delivery formats and instructional activities.

Tomei's findings suggested ideal class sizes for online courses and traditional courses based on the hours calculated in the classes being compared. He found that the online course took 19 more hours to teach during the semester, or approximately 1.25 hours more per week, than the classroom version (2006, p. 339). He used these data and the number of hours in a full teaching load to determine ideal class sizes for online and face-to-face courses. He went on to claim that "for the first time, research has shown that distance education demands more of an instructor's available time than the more traditional classroom delivery method" (Tomei, 2006, p. 41). However the differences in instructional activities between the two courses, not just by format but also by purpose and outcome, indicate a fundamental difference at the basis and therefore a time difference is to be expected.

Frederickson, Reed, and Clifford (2005) examined and compared a graduate-level course taught online with a classroom version of the same course and found that student learning outcomes were similar in both courses. Some of the qualitative data collected showed that the student participants wanted clearer instructions and objectives, better explanations of topics, more interaction, and more self-checks. Although these issues were only referenced for the online course, the authors pointed out that these concerns "might equally have been leveled at the lecture-based version of the course" (p. 660). Similarly, Lewis and Abdul-Hamid (2006) concluded that the effective practices faculty members employed in online courses "are not at all unique to the environment and in

many cases are identical to those practices used in face-to-face instruction” (p. 86). A much broader perspective needs to be employed in reviewing the activities, some of which take much more time to deliver and grade than others in alternate delivery formats.

If instructors opted to think as much about teaching practice as they do about content, the model for quality course design would be a student-centered one because traditional methods of instruction could be replaced by more progressive, flexible and meaningful strategies. In much of the literature, we find that instructors do not undergo transformational change until they decide to or are required to teach online. For some, this may be a first opportunity to dissect their course and determine the best way to introduce information or provide practice for their students. Sieber (2005) made an argument about the changing roles of students and teachers from lecturers and passive receptacles to guides and partners in self-discovery. Other principles for online instruction Sieber mentions, such as *use deliberate practice and provide prompt feedback, link inquiry to issues of high interest to the learners to enhance motivation and learning, and clarify goals and one or more paths to them*, can again be attributed to any student in *any* higher education course. Do student ever turned away feedback, issues of high interest, or clarity in a course? While these types of practices are being emphasized here as critical for online instruction, they are also critical to a classroom environment and should be applied there.

Sieber (2005) addressed the issue of workload in development of online courses as follows:

Contrary to the view that online classes easily can reach the masses, online courses are labor-intensive. If the students are highly literate, capable and motivated, a class of 20 or so will be challenging but manageable. If the students cannot write understandable papers and cannot think analytically, a class of 20, if they are to be taught honestly, becomes a full-time job. Online faculty find themselves making up for 12 or 15 years of neglect by prior teachers who have failed to teach students to think critically and write effectively. (p. 339)

It is interesting to compare Sieber's claims to a classroom environment and the frequency with which faculty teaching traditional, face-to-face courses struggle with students who have writing or other deficiencies. This issue is certainly not unique to an online environment and would require additional time from any instructor in any setting or delivery format.

A special report by Goodyear, Salmon, Spector, Steeples, and Tickner (2001) summarized the outcome of a two-day workshop in which faculty explored the role and significance of online instructors. The model they developed for teacher roles in online teaching includes eight different areas of responsibility including *Researcher*, *Assessor*, *Adviser/Counselor*, *Designer*, *Technologist*, *Manager/Facilitator*, *Process Holder*, and *Content Facilitator* and can be seen represented in Figure 2.

Figure 3: Roles Involved in Online Teaching (Goodyear, Salmon, Spector, Steeples, and Tickner, 2001)



All of these roles can easily be applied to a classroom-based course, though the function of a technologist might be considered more extensive in an online course with certain variables, such as the type of technology used and the amount of support available to the instructor during the implementation or teaching phases. As more and more classroom instructors employ instructional technologies in their courses, the line between the technologist for an online class and one for a face-to-face class grows blurry.

The conversion of course material to an online environment triggers a new way of thinking for faculty and promotes learner-centered approaches. Perhaps that is one of the greatest contributions of online instruction to teaching overall, because in many cases, it

is the first time faculty look beyond the standard lecture to more creative and progressive activities and tools for student learning.

Hislop and Ellis (2006) explain that “most studies on time to teach online are survey-based or anecdotal in nature. There is little research on faculty effort based on measurement of time, as the quantitative measurement of faculty effort is a difficult task”(p. 3). They investigate several qualitative and quantitative studies, including their own research, that examine time comparisons between distance learning and face-to-face courses. More importantly, Hislop and Ellis ((2006) expound on the challenges facing future research due to the limitations in accurately measuring time commitment. Because of the limited amount of research available and mixed results in the current research on faculty time commitments and about the similarities and true differences of classroom and online courses, there was a need for a study within a framework that grounds good practices of internet-based delivery systems to optimize time.

RATIONALE FOR STUDY

The goal for this research project was to provide new insight into the faculty teaching experience and become aware of how these experiences differ between types of delivery modes of instruction. This study hopes to yield some of all of the following outcomes:

- Listing of key challenges in need of attention by academic institutions to support the appropriate development and delivery of online courses,
- Ways in which elements of online instruction may enhance the classroom experience,

- A definition of the relationship between progressive education, experience and the process of teaching online,
- A clear description of the potential for the development of new theories for online learning.
- Identification of elements that can provide students in online courses with comparable experiences to those of their classroom-based counterparts.

Through the course of this study, a description of the experiences, issues, and challenges of alternate delivery methods, particularly online instruction, will be discussed in order to clarify expectations about adequate support systems that will attract faculty to either teach online or use technology tools appropriately to enhance classroom instruction.

CHAPTER 3: RESEARCH METHODS

For a qualitative research study, sample size is important, but for completely different reasons. We're not going for a headcount; we're going for a read of the heart. (Harris, 2008)

The purpose of this study was to examine the experiences of faculty who teach in traditional classrooms and faculty who teach online courses and provide a comparative analysis of these two formats for instruction. The focus of this work was to shed light on the similarities and differences these two teaching methods encompass, and therefore help describe the particular elements that affect the time commitments of faculty.

The study used a qualitative research approach in order to better understanding of teaching as a profession in terms of the issues facing faculty as they teach in diverse settings, and the perceptions and realities of their experiences. The design followed the realist paradigm of Miles and Huberman (1984). Although a purely quantitative study can provide concrete figures and correlations between standard responses, qualitative research enables participants to respond freely and, in the case of this study, allow the researcher to delve into the meaning behind the information that was gathered to help explore why the experiences of faculty evolve the way they do. Miles and Huberman's key conceptual approach states that "why things happen is a central issue in qualitative research, they claim that qualitative methods are far better than purely quantitative ones

at identifying the specific causal relations and processes that are occurring in a particular site” (p. 744).

Over time, the design of this study evolved from a quantitative approach to one that utilizes only qualitative research methods. The motivation for this change was the need to delve into the reasons behind any variance in time commitment between the online and classroom-based faculty. It was not enough to know about differences in the amount of time spent teaching in these formats but rather that it was important to explain the similarities and differences in order to explain the broader effects on course design and delivery, as well as potential effects on training, resources, compensation, release time, faculty loading, and administrative processes that support faculty in their profession.

This chapter details the research methods employed in this study, including the research design, data collection, sampling, and analytical framework.

RESEARCH DESIGN: CASE STUDY METHOD

The *qualitative* approach used in this study was chosen to strengthen the research in several ways. Use of qualitative research techniques helped provide a more comprehensive picture of current issues facing faculty as they teach in traditional and online courses. The qualitative methods approach offers the type of rich description that may shed light on other similar challenges in the academic community. Finally, a qualitative study would provide a strong basis for understanding the nature of the classroom vs. online instruction.

This research used an exploratory instrumental multiple-case study approach to explore issues associated with the research questions presented in Chapter 1, through interactions with four online faculty members and four classroom faculty members. The exploratory nature assumes there is no obvious or specific set of results, so the design will help conclude how events occurred (Hancock and Algozzine, 2006, Yin, 2003). The multiple-case study approach allowed for analysis within each case and across all cases, to help develop a broader understanding of the similarities and differences between cases (Baxter and Jack, 2008). While considerably time consuming, the evidence from this kind of study is considered strong and reliable. According to Yin (2003) multiple-case studies can serve to forecast similar results, or different results based on predictable reasons or theory.

The instrumental element of case study design provided a context to “better understand a theoretical explanation that underpins a particular issue more than we want to understand the issue itself” (Hancock and Algozzine, 2006, p. 35). Baxter and Jack (2008) present Stakes’ (1995) suggestion from *The Art of Case Study Research*, about using the instrumental case study design to gain insight and understanding of a certain situation or phenomenon:

It provides insight into an issue or helps to refine a theory. The case is of secondary interest; it plays a supportive role, facilitating our understanding of something else. The case is often looked at in depth, its contexts scrutinized, its ordinary activities detailed, and because it helps the researcher pursue the external interest. (p. 549)

ANALYTICAL FRAMEWORK

The analytical framework for this study is based on interpretive analysis. Smith (2009) explained that inquiry involves people making sense of phenomena minimally or not well understood. He states that “access to the participants’ personal world is dependent on the researcher’s own conceptions which are required to make sense of that other personal world through a process of interpretive activity” (p. 4). This type of research comes from the thought that what we know about reality falls within the socioconstructivist paradigm inclusive of the researcher (Walsham, 1993). In this approach, the researcher role is inclusive and cannot and should not be neutral.

The data analysis for this study drew upon these processes as ways of pinpointing the issues that affect the perceived and actual time commitments of faculty members. The data analysis section of this chapter provides additional details while categories and emergent themes are described more fully in Part II of Chapter 4.

RESEARCHER BACKGROUND

In qualitative research, the researcher is central to the investigative process. Because the researcher’s history and personal experiences influence the work being undertaken, of the researcher’s background is vital to understanding the context of the data (Chiseri-Strater and Sunstein, 1997).

As the researcher, my perspectives are based on the professional experiences I have had in the field of distance learning and as a student in online and face-to-face courses. The basic assumption that guided this study, that teaching online takes more time than teaching in the classroom, was generated from my personal perspective

combined with current research and views from academics on the online vs. face-to-face debate.

I have been involved in the field of distance education in higher education settings for 15 years in various roles. I have worked as Teleconference Manager at a large public university in Virginia, as Manager of Distance Learning at a renowned private university in New York, as Director of Instructional Technology Services at a small Technical College in South Carolina, and most recently, as Director of Instructional Development at a 35,000-student community college in Texas. Despite the diversity of each institution's size and location, faculty loading and support issues remained constant everywhere I worked. My work experiences influenced the career path I selected to pursue my Master's Degree and in the early 90's, I received my M.S. in Instructional Design through the division of Career and Human Resource Development at the Rochester Institute of Technology.

My work responsibilities always focused on services to support faculty, help them improve their teaching methods, and assisting them in optimizing their use of instructional technologies. As I continued to work in this role, it became evident that the time commitment of faculty was difficult to gauge not only for online courses but for classroom-based courses as well, and this influenced a number of administrative issues, Which then affected instructional issues. For example, the lack of training in the use of an instructional activity or technology might cause the faculty member to spend more time on the logistics and mechanisms to manage the class than on the content or the feedback. The issue of instructor time commitment levels for instructors became even

more interesting for me when distance learning and more specifically online courses, came into the academic scene. The aspect of employing technologies to support instruction beyond the classroom became a priority for some schools that wanted to expand their student base. Administrators anxious to increase distance learning offerings looked to me as an expert in the field of distance learning to provide details about release time, stipend, or other incentives for faculty developing new online courses. In mid-1998, I developed a chart that included the possible time commitments faculty would need to make based on the type of course being taught, the number of sections, the number of repeat sections, and lab components. Most of my work on that chart was based on my experiences but failed to include any concrete data to support my perceptions. This was because while this was a hot topic in higher education, there was very little research on the subject for either online or classroom instruction. The broader question was always, “How much time does it take to teach a distance learning or online class?” Now, almost ten years later, the results of this study can refine the perceptions I have had.

I offer the chart in Table 4 as evidence of preconceptions that may have influenced my interpretation of the data. The table shows how four faculty load scenarios for traditional classroom-based courses might be affected by the number of courses and number of different courses being taught. Factors I believed should be used to calculate weekly time commitment for each scenario included contact hours, laboratory hours, office hours, assessment hours (testing or other forms of evaluation), teacher preparation, and variables for course differential (number of different courses

taught) and experience status (new course versus one previously taught). Courses that required development carried an additional variable I labeled “pre-delivery release” which was based on release time prior to the period when the course was taught.

The course differential variable was based on the number of different courses being taught and provided additional time for each different course and instructor taught in a semester. An instructor that taught four sections of the same course had no course differential because text, materials and activities would likely be very similar if not the same for all four courses. The course differential variable for an instructor teaching two sections of one course and two sections of another course would be calculated by adding an additional :15 minutes or .25 of an hour to each course.

The experience status variable would adjust for faculty that had prior experience teaching a course versus those that were teaching a course for the first time. In the chart I estimated an additional :15 minutes or :25 of an hour for courses that were new and an additional :45 or .75 of an hour for courses with a lab component. The last column labeled “pre-delivery release” was added to adjust for the development or adaptation of distance learning courses.

By changing any of the variables included on this table, I was able to estimate the number of hours an instructor’s course load might require and perhaps help determine whether additional compensation or release time was necessary.

Table 4: Faculty Loading Worksheet, Spartanburg Technical College, Susan Warner, 1998 (all data are fictional)

**Faculty Loading Worksheet
Spartanburg Technical College**

<i>instructor Name: Howie R. Yu</i>			<i>Department Name:</i>								
Course Name	Course Number	Credit Hours	Contact Hours Classroom	Contact Hours Laboratory	Office Hours	Assessment Hours	Teaching Preparation	Course Differential	Experience Status	Pre-delivery Release	TOTAL HOURS
Intro to Coll	COL 101	3	3.00	0.00	1.00	2.00	1.50	0.00	0.25		7.75
Intro to Coll	COL 101	3	3.00	0.00	1.00	2.00	1.50	0.00	0.25		7.75
Intro to Coll	COL 101	3	3.00	0.00	1.00	2.00	1.50	0.00	0.25		7.75
Intro to Coll	COL 101	3	3.00	0.00	1.00	2.00	1.50	0.00	0.25		7.75
						0.00	0.00				0.00
						0.00	0.00				0.00
TOTALS										31.00	

<i>instructor Name: Ann G. Neering</i>			<i>Department Name:</i>								
Course Name	Course Number	Credit Hours	Contact Hours Classroom	Contact Hours Laboratory	Office Hours	Assessment Hours	Teaching Preparation	Course Differential	Experience Status	Pre-delivery Release	TOTAL HOURS
Engineering	ENG 101	3	2.00	3.00	1.00	3.33	2.50	0.75	0.00		12.58
Telecomm	TEL 101	3	2.00	3.00	1.00	3.33	2.50	0.75	0.00		12.58
Lighting	LIG 101	3	2.00	3.00	1.00	3.33	2.50	0.75	0.25		12.83
Fire	FIR 101	3	2.00	3.00	1.00	3.33	2.50	0.75	0.25		12.83
											0.00
											0.00
TOTALS										50.83	

<i>instructor Name: Art E. Fakt</i>			<i>Department Name:</i>								
Course Name	Course Number	Credit Hours	Contact Hours Classroom	Contact Hours Laboratory	Office Hours	Assessment Hours	Teaching Preparation	Course Differential	Experience Status	Pre-delivery Release	TOTAL HOURS
English	ENG 101	3	3.00	0.00	1.00	2.00	1.50	0.25	0.00		7.75
Art	ART 101	3	3.00	0.00	1.00	2.00	1.50	0.25	0.25		8.00
Art	ART 101	3	3.00	0.00	1.00	2.00	1.50	0.25	0.25		8.00
English	ENG 101	3	3.00	0.00	1.00	2.00	1.50	0.25	0.00		7.75
English	ENG 101	3	3.00	0.00	1.00	2.00	1.50	0.25	0.00		7.75
						0.00	0.00				0.00
TOTALS										39.25	

<i>instructor Name: Ann A. Toemee</i>			<i>Department Name:</i>								
Course Name	Course Number	Credit Hours	Contact Hours Classroom	Contact Hours Laboratory	Office Hours	Assessment Hours	Teaching Preparation	Course Differential	Experience Status	Pre-delivery Release	TOTAL HOURS
Anatomy	ANA 101	3	3.00	0.00	1.00	2.00	1.50	0.50	0.25		8.25
Med Term	MET 101	3	3.00	0.00	1.00	2.00	1.50	0.50	0.00		8.00
Anatomy	ANA 101	3	3.00	0.00	1.00	2.00	1.50	0.50	0.25		8.25
Respiration	RES 101	3	2.00	3.00	1.00	3.33	2.50	0.50	0.75		13.08
XXX	xx 101									12.00	12.00
											0.00
TOTALS										12.00	49.58

SAMPLING

Through careful analysis of the research questions, this study was designed as a qualitative research project that, through a smaller targeted sample would enable me to have greater insight and probe more deeply into the “why” of teaching time commitments. Although some claim that in qualitative research “size doesn’t matter” (Answers Research, 2009), I was faced with the decision to determine a sample size small enough to allow for review of numerous, lengthy, text-based materials, but large enough to compare multiple cases within two separate categories.

In *Qualitative samples: unashamedly skewed*, Harris (2008) expounded on the importance of choosing the appropriate sample size. She explained that in qualitative research sample size is important to gain the diversity, breadth, and depth needed to obtain the best research dynamic. She addressed the relevance of the researcher’s background in making the determination of size, and allayed concerns about sample skew by clarifying that qualitative research samples are supposed to be purposive with specific questions addressed to specific people.

Through stratified purposive sampling, online and classroom-based instructors were represented in this research. According to Patton (1990), “Stratified purposeful sampling illustrates characteristics of particular subgroups and facilitates comparisons” (pp. 182-183). This process required that each sub-group be homogenous to allow for a more accurate and fair comparison and to enable the researcher to take advantage of “competitive views and fresh perspectives as fully as possible” (Guba & Lincoln, 1981, p. 276).

The faculty who participated in this study were either volunteers or had been identified by the distance learning or instructional support offices of the institutions they represented. Selection of faculty was coordinated with the academic departments and department chairpersons from each institution to help select the most viable participants who were using the delivery modes under study, and also to garner their support for the research project and participation of their faculty.

The faculty members were invited to participate either through in-person meetings or through electronic mail. Of the 15 instructors originally identified, a total of eight were willing and able to work within the research parameters. The group represented three different institutions and included four online faculty members and four classroom-based professors, as shown in Table 5.

Table 5: Participant Information

Professor Pseudonym	Method	Teaching Experience	Subject Area	Institution Type
Lee	F2F	18 years	Psychology	Community College
Ngozi	F2F	18 years	Ethics	Private University
Tobias	F2F	18 years	Criminal Justice	Private University
Girard	F2F	25 years	Education	Community College
Saylor	Online	28 years	Criminal Justice	Private University
Suleima	Online	5 years	Health admin.	Public University
Rita	Online	28 years	English	Community College
Olivia	Online	16 years	History	Public University

Based on the literature on qualitative data sampling and the type of information to be collected, I decided to use a sample size of eight faculty members, with four being online instructors and four teaching only classroom-based courses. Only one of the classroom instructors had had any online teaching experience.

An additional criterion for sample selection was the course topic of each faculty member. I gave ample consideration to selecting courses within a single discipline, subject area, or traditional assignment/assessment practice (i.e., an English course with graded writing assignments). My concern with this approach was that it might limit generalizability of results to other courses with different types of assignment/assessment practices such as group work, presentations, or laboratory activities. Thus, although selection of participants with respect to delivery mode was purposive, the courses they taught were from various disciplines. The eight courses used for the journal entries in this research cover seven different topics. Two instructors however, did teach the same course during the same semester at the same institution, but one taught in online format and the other in face-to-face format. I chose to treat these two instructors as a single case so that I could compare them to each other and then individually within their delivery format with the other faculty cases. Table 6 shows how the eight faculty participants were grouped in 7 cases.

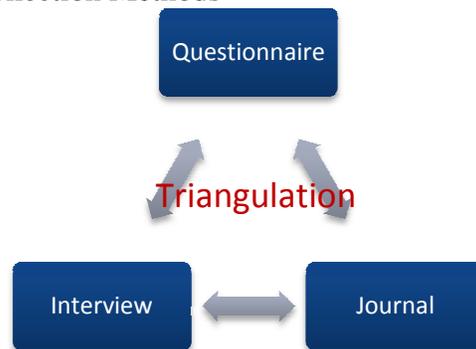
Table 6: Faculty Grouped by Case

Method	Case #	Subject Area	Institution Type
Online	1	English	Community College
F2F	2	Psychology	Community College
Online	3	Health admin.	Public University
F2F	4	Ethics	Private University
F2F	5	Education	Community College
Online	6	History	Public University
F2F Online	7 and 8	Criminal Justice	Private University

DATA COLLECTION METHODS

Having contacted my participants, I first asked them to fill out a questionnaire to collect general faculty information. I then asked them to keep a journal for one week, in which they were to note every day the instructional activities they undertook for a particular course and the related time commitments of each instructional activity they carried out. Once all of the journals had been completed, I conducted interviews with each faculty member to clarify questions from previous data collected on the questionnaires and journals, and elaborate on their teaching practices, time commitments, support systems, perceptions, and good practices in teaching. Figure 3 shows the data collection methods used that support triangulation.

Figure 4: Data Collection Methods



The questionnaire and journaling tool were developed in an online form Website so that faculty could access it easily and I could download the data for analysis. Each interview was digitally recorded, submitted to a transcription service, and then the transcript was reviewed against the original recording. I made notes as I received the data to help identify particular areas of interest covered during the interviews. Other documents that I reviewed include the course syllabi and faculty members' curriculum

vidas. Once data were collected, participants were asked to review the information to ensure accuracy of their stated opinions, comments, and reflections.

Data from the interviews of each instructor were reviewed and tagged based on (1) time-related instructional strategies and (2) general good practices in teaching, online or in the classroom. I adapted my definition of *good practice* from the one used by the International Network for Small and Medium Sized Enterprises-INSME which states that “Good practice is learning from other organizations that have developed successful projects or approaches to problems.” (Glossary, 2009) In this study, a *good practice* is defined as learning from other faculty members that have developed successful approaches to teaching.

The themes for these strategies and activities were garnered from the initial faculty questionnaire responses and then used for coding of the subsequent journals and interviews. The information for each of the classroom and online courses was compared to find similarities and differences within each course data set. An additional comparative analysis of major themes was conducted between all online course instructors, between all classroom course instructors, and between all instructors collectively.

Data were collected over the course of three semesters, from Spring 2006 to Spring 2007. Questionnaires were provided prior to the journaling phase. Journaling was scheduled to take place after the semester had begun but no later than the week before end-of-semester exams. Once all journals had been completed, interviews with each

faculty member were scheduled and conducted in the Spring 2007 semester. Faculty decided on the date, time, and location of each interview.

Table 7: Data Collection Timeline

Participant	Questionnaire	Journal	Interview
		SPRING 2006	
Lee	3/27/06	3/27/06 - 3/31/06	4/12/07
Ngozi	2/9/06	3/27/06 - 3/31/06	2/15/07
Saylor	2/10/06	3/28/06 – 3/31/06	2/20/07
Tobias	2/10/06	3/29/06 – 3/30/06	5/2/07
		FALL 2006	
Olivia	11/07/06	11/27/06 - 12/1/06	4/30/07
Suleima	11/09/06	11/13/06 - 11/17/06	2/5/07
		SPRING 2007	
Girard	4/9/07	4/23/07 - 4/28/07	5/4/07
Rita	4/9/07	4/22/07 - 4/28/07	5/7/07

Letters of introduction and request for participation were prepared and sent to participating institutions and faculty. Letters to schools included all forms required by the institutions for human subject research. The study participants were provided with an Informed Consent document that explained the purpose of the study and details about the requirements for participation. These documents were signed by each participant and returned through pre-paid mailing envelopes.

DATA SOURCES

Questionnaire

Questionnaires were used to gather information about faculty members' educational and professional background, demographic information, teaching experiences and perceptions of instructional activities, time commitments, and support systems for the delivery method they represented in this study. Respondents were asked to provide

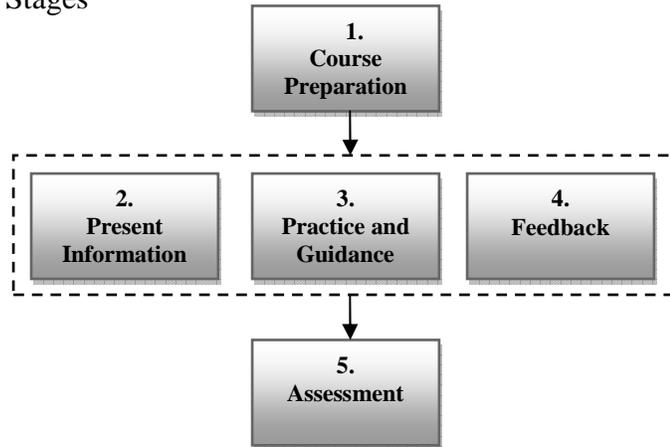
detailed information about any specialized courses or training they had received in the areas of education and technology. Because this study also looked at the experience of faculty teaching traditional courses and teaching online as a factor for comparison, the questionnaire gathered information about faculty levels of experience teaching, levels of experience with technology, and their levels of experience with online courses. Only one instructor could be considered novice, with only five years of teaching experience. For the other faculty, their experience levels ranged from more than 10 but fewer than 20 years of experience and those with more than 20 years of teaching experience.

Questionnaires were administered at the start of the semester, as soon as participants were selected and agreed to participate. While two options were made available for completing the questionnaire online or in paper form, all opted to complete it online. Questionnaire questions were purposely open-ended rather than multiple-choice or scaled in order to remove any researcher bias and to provide a free forum for faculty to share information. Faculty had the freedom to construct their answers openly and without constraints to response length.

The questionnaire included a section that asked faculty to estimate the time they perceived it took them to teach one of their courses, with specific activities and time commitments at five stages of course development. The five instructional stages included (1) Course Preparation, (2) Presenting of Information, (3) Practice and Guidance, (4) Feedback, and finally (5) Assessment. Figure 4 depicts the instructional stages and sequence starting with course preparation, then the sections specific to

teaching (presentation of information, practice and guidance, feedback), and finally assessment.

Figure 5: Instructional Stages



I read the responses and highlighted specific categories that emerged. I also developed a table to compare the activities included in online courses and those in classroom courses as a tool for revealing similarities and differences. Finally, the hours each faculty member perceived they spent teaching a course during one semester were tallied. I also used the perceived hours of time commitment for the five instructional processes to generate figures to compare with the actual hours logged in the faculty journals.

Some information collected in the questionnaire was specific to the faculty member's educational and professional background. I used this information as a basis for developing each faculty member's personal teaching story and to describe the environment of each faculty member's experiences teaching for the first time in a classroom or their first time online through a rich, descriptive narrative.

Journals

A second method of data collection used in this study was faculty journals, which yielded a descriptive list of the actual instructional activities undertaken by participating faculty and the time dedicated to each of those activities. Using journals for data gathering in this study provided accurate reflections of activities these participants undertook, the purpose for using these activities, and the related time commitments. While I had considered other options for data collection, such as administering one or more questionnaires sometime during the semester, I eliminated those options because I determined they would yield less accurate results as participants might forget what they had done at a given time or how much time they had spent on a course.

With the journal option, participating faculty selected a class they were teaching in the current semester (i.e., course number ENG-123) and a week in which to complete the journals. They provided information about the instructional activities they used during the selected week and the corresponding hours or time each activity took to use in teaching. Faculty were asked to make daily entries in their journals about the activities and corresponding times related to their selected class, with specific attention to the tasks they carried out to prepare, present, practice/guide/give feedback, and assess. The initial questionnaire had included these same course development categories to gauge perceptions of activities and times. To represent fairly the time requirements for teaching a course, faculty were asked to complete the online journals each day for seven consecutive days. A sample entry appears in Figure 6.

Figure 6: Sample Journal Entry

Course: ENG-123		Online Instructor : #15	
Date: Monday, Feb 1		Institution: #2	
<i>Time</i>	<i>Hours</i>	<i>Activity</i>	<i>Rationale</i>
7:30 am – 9:30 am	2	Prepare response to weekend online discussions by reviewing student emails postings, recent articles on current topic and writing response email message.(details)	Assessment of discussion content and participation and feedback on performance.
12 noon – 1:00 pm	1	Post new announcement and assignments for the week by Etc.	Course structure. To keep students on task.
7:00 pm – 8:00 pm	1	Research articles to serve as reference for Tuesday case studies... Etc.	Preparation for class discussion.
	4	TOTAL HOURS devoted to English 1011 on Monday, Feb 1, 2006	

Though the data gathered were not considered to be of a sensitive nature, all responses remained completely confidential and all participants and their institutions were provided with an identity code for reference purposes.

Interviews

For a deeper understanding of the perceptions and experiences that faculty members had teaching, and to expand on the information provided in the questionnaires and journal entries, I conducted a series of focused interviews. This portion of the study explored factors that selected participants perceived as having an effect on the instructional activities they chose. The interviews also explored the time commitments afforded each type of activity for given courses or segments of courses. This data provided a basis for better understanding what may cause differences or similarities in the time instructors spent teaching.

During this portion of the study, I interviewed eight faculty members using semi-structured or guided interviews (Oka, 2002) conducted at the end of the semester.

Interviews lasted from 45-75 minutes each and were digitally recorded and later transcribed. A process of member checking (Ary, Jacobs, and Razavieh, 2002) enabled faculty to review transcripts and provide further clarification or expound on their previous answers as necessary.

I coded the transcripts for common emergent themes or issues, and developed a table to present the results. I also wrote narrative descriptions about participants' concepts of time commitments to represent each faculty member's experiences in dealing with time. I gave these narrative descriptions to the interviewees who reviewed their own descriptions for accuracy.

I retained all documents, notes, email messages, and other related materials in order to generate an audit trail. As with the two previous methods of data collection, I ensured complete confidentiality for all participating faculty through the use of identifying codes for the instructors and the institutions they represented.

ANALYSIS OF THE DATA

Given the nature of qualitative research, analysis of the data was ongoing during the process of data collection. As remarked by Coffey and Atkinson (1996), "Letting data accumulate without preliminary analysis along the way is a recipe for unhappiness, if not total disaster" (p. 2). Through *constant-comparative analyses*, I was able to determine the need for adjustments in on-going methods of data collection, such as the journaling process and the interviews. This process also provided me with a outline to guide subsequent interviews and collect more specific or explanatory data from participants.

As I collected data, I converted all text to a digital format. I used word processing tools that I had readily accessible to find key words, code the responses, and extract themes related to good practices and time management in the classroom. Cognitive analysis of perceptions and self-defined good practices helped me construct the emerging categories under which I grouped these participants' instructional activities (Maxwell and Pitman, 1992, p. 765). I performed further review of the data through cross-case analysis where I looked for similarities and differences within and among the cases (Soy, 1997).

VALIDITY AND RELIABILITY

The validity/credibility and dependability/reliability of my research was supported by structural corroboration through the use of data and methods triangulation (Ary, Jacobs, and Razavieh, 2002, p. 452). The three elements of triangulation are the questionnaires, the journals, and the interviews. In addition, the audit trail of collected correspondence further supports the neutrality and objectivity of the findings of this study.

Chiseri-Strater and Sunstein (1997) discussed the concept of *intersubjectivity* to support a level of objectivity in the research process. This method of linking draws together diverse viewpoints on the same data in order to help the researcher “to interpret patterns and interrelationships among various accounts alongside the researchers' own account and to leave other interpretations open as well” (p. 57).

CHAPTER 4: RESULTS

Through stories we explain how things are, why they are, and our role and purpose. Stories are the building blocks of knowledge, the foundation of memory and learning. Stories connect us with our humanness and link past, present, and future by teaching us to anticipate the possible consequences of our actions. (McWilliams, 1997)

This chapter is divided into two sections. The first section describes each case and the second section presents a cross-case analysis. To expand further on the descriptions, cases are grouped according to the three institutions the faculty participants represent. The presentation of each case in Part I is titled with a pseudonym of the faculty participant and consists of three parts, including the participant's teaching background, the type of instructional strategies he or she employed in the course based on delivery method, and the teaching challenges and advantages he or she experience in relation to time commitments.

Each case description begins with the faculty participant's personal teaching history and addresses the person's experience, course levels taught, educational background, formal classroom training, exposure to and use of technology, and the types of influence he or she reports having as an educator. This detail provides a basis for comparing the types of teaching techniques and strategies employed and provides a more equitable basis for comparison. For example, knowing which faculty have had many

years of teaching experience and which are considered novices with only one or two years of practical experience will lead to a fairer basis for comparison.

The next section of each case description explains the type of instructional strategies that individuals employed in the course based on delivery format. Details about the variety and type of techniques are used to contrast the strategies reported for the online courses to those being used by the traditional classroom-based instructors.

The final section of each case discusses the teaching challenges and good practices in relation to the time each faculty member devotes to the course. Each case concludes with a brief summary.

The second major section of this chapter discusses the similarities and differences of faculty experiences teaching online courses and teaching in traditional classroom setting, with a focus on time commitments. I present a brief discussion of each delivery mode, the teaching strategies, and perceptions of the use of technology. The discussions are illustrated with examples from the interviews and questionnaires with each faculty participant.

Part I: The Cases

PROFESSOR RITA'S CASE

“...about a third of my students need a certain amount of hand-holding.

Often it's not about the content at all, it's just about life.”

Participant Background

Professor Rita teaches English at a local community college with approximately 35,000 students in academic transfer, workforce, continuing education, and adult education programs. Rita has an undergraduate degree in English and two master's degrees, one in Instructional Technology and another in English Education from an Ivy League University. In addition to her teaching experience in a community college, Rita has also taught at a four-year university and has K-12 teaching certification. She has been teaching college-level English as an adjunct faculty member for the past 27 years and volunteered to participate in this study as one of the online instructors. As I worked with Rita on this project, I found her to be highly motivated and one of the pioneers of technology integration at the institutions she represented.

In the early days of her teaching career as a novice classroom teacher, Rita noted that there were definitely challenges, hindrances, and benefits to the experience. She found that the preparation of materials and adoption or development of appropriate teaching strategies took a great deal of time. “Over time I realized that it took three semesters to get a given lesson ‘down.’ The first time is a trial run. Then modifications

take place. Then it is run again and hopefully the modifications are adequate.”

(Questionnaire)

In addition to the significant time requirement, she reported there were many other challenges, from classroom management to grading, when she began teaching. At that time, Rita did not have a computer so the development of course materials was a “large and time consuming task.” Even after acquiring a computer six years later, she still spent a significant amount of time to input the information and stay current with all of the technology skills that were necessary to manage or teach her course.

As a young and inexperienced instructor, Rita was fortunate always to find willing mentors in her friends, other experienced teachers, and faculty librarians. She also participated in a variety of faculty development programs, instructional technology workshops, and conferences to become better acquainted with teaching tools. Rita had the opportunity to explore the benefits of technology integration in support of her students. Through her years of experience, as well as her interest in and commitment to teaching, Rita has become an expert in online teaching and now works as an instructional designer to further support other faculty as they begin their journey into e-learning and teaching online.

Rita began teaching online in 1990, almost 10 years after starting her teaching career. She taught a class entitled “Writing with Computers” that focused on text management, editing, and graphics software. New challenges were brought to light as she pushed forward in her quest to help her students and develop her instructional technology skills.

If you include having to learn DOS and then having to learn to use a Mac and somewhere along the line erasing the computer-lab server when I didn't know what I was doing...The number of hours I have spent learning new programs, etc.... is incalculable. In a nutshell, the challenges of teaching online have been to constantly keep up with and integrate new technology. Of course, a challenge of teaching, in general, is to keep it interesting and to keep it current. When one teaches online, those challenges are doubled. One must keep up in the field and with technology. (Interview 5/7/07)

Rita stated that she feels fortunate that her discipline does not change significantly from year to year so her focus outside of technology applications is to keep the materials interesting and relevant to students. Technology and the related issues of access, cost, training, and development time, however, are always in flux and therefore created some hindrances when she began working with this new medium. Again, Rita found mentors and attended many training courses to support her technology goals.

Rita discussed that her novice classroom teaching experience and novice online teaching experience were similar. She lightheartedly shared that she brought the same incompetence to her work as a chalk-and-talk teacher at 22 years old as she did when she started teaching with a computer at the age of 28. Yet some of the lessons she gained in her early teaching practice related to planning, preparation, and structure. She referred to the development of a "bag of tricks" or repository of instructional strategies that faculty develop over time as ways to manage the class both instructionally and administratively. Her rule-of-three guideline is based on her own experience and that of fellow faculty

members, and states that any new “trick” is finally established by the third time it is used in teaching.

Yet, Professor Rita observed that significant benefits can be had from charting into unknown territory with technology integration, and specifically with teaching in an online environment. Rita acquired a new set of “life skills” based on her experience and was guided toward a new job opportunity as an instructional designer. She returned to school and completed her second Masters degree in Instructional Technology. This allowed her to combine her teaching experience, technology background, and the knowledge from her Master’s program to become a mentor and, as she put it, a teaching specialist for other faculty going through similar experiences.

Instructional Strategies

In the initial participant questionnaire, Rita self-reported on the activities she undertook to prepare and teach her current course for the semester. At the time of the study, her institution used the Blackboard® Learning Management System (LMS) to help provide a basic level of standardization to the online interface for students. Faculty members could customize their online courses by adding a wide variety of content and discussion forums to facilitate group interaction, establish work groups, maintain grades, and much more. Over the last ten years, and based on user demand, this system has been enhanced with a variety of new tools and improved functionality of existing tools.

In order to prepare for the new semester when assigned an online course she has previously taught, Rita first needs to request a new course site. Content from the previously taught course is automatically added to the new course site and then she

begins the process of revision. She must make changes to due dates and may need to update items such as page numbers, links, announcements, topic order, discussion forums, homework assignments, group assignments, and grades as applicable.

“Maintenance of an already taught course is much less time-consuming than the preparation of a new course. Preparation of a new course one has never taught in addition to putting it online would be a very large time commitment” (Questionnaire).

For the study, Rita elected to describe a specific online course she would be teaching in the upcoming semester and then explained the specific tasks she anticipated she would need to perform for each part of the course delivery process. These tasks included course preparation, presenting information, providing practice and guidance exercises, conducting testing and assessment, and offering feedback. She also estimated the time she thought it would take her to complete these tasks. The total time requirement she assumed would be required was eight hours per week. She noted that adding new material to her online course would likely add a significant amount of time to the one hour per week she listed for course preparation. Professor Rita’s responses are listed in Table 8.

Table 8: Professor Rita's Questionnaire Response to Instructional Components and Time

Prepare for Class	<ul style="list-style-type: none"> • Basic overview of current materials with modest editing (Adding new materials takes a lot more time.) 	1 hour per week
Present Information	<ul style="list-style-type: none"> • Materials already prepared 	0 hours per week
Practice and Guidance	<ul style="list-style-type: none"> • Grade papers, make comments students need to address and revise accordingly 	4 hours per week
	<ul style="list-style-type: none"> • Post to the discussion board and answer emails 	3 hours per week
Testing and Assessment	<ul style="list-style-type: none"> • Quizzes – automatically graded 	(1 hour/ one week)
	<ul style="list-style-type: none"> • Setting up online tests / final (occurs once a semester) 	(4 hours/ one week)
	<ul style="list-style-type: none"> • Grading 	
Provide Feedback	<ul style="list-style-type: none"> • Included in the reported total for Practice and Guidance 	
		8 hours per week

In the process of analyzing the interview data from my meeting with Rita, I noticed six instructional strategies or teaching techniques that could affect her time commitment to the course.

1. Grading papers online

Now that Rita was teaching online, she never printed out papers to grade. All of her students' papers were submitted online and she provided feedback and grades electronically. Although she stated this actually takes more time than the traditional way of grading by marking on a hard copy of the student's paper, the process for transferring the information back and forth from instructor to student was much easier to accomplish electronically and therefore was a good fit for the online instructor.

They have to correct the errors I mark. So, in a face-to-face class, I would hand them back a paper and we might sit down during the class and talk about it. And

because there are workdays built in where you sit down and have conferences with your students, especially because these are writing process kind of classes, they always have something to say about, I mean they have to address what you say, they just can't blow it off. (Interview 5/7/07)

Rita also brought up the issue of portability and how there is a tradeoff in being able to grade papers on the move or in different locations. On the one hand, having hard copies means carrying a bulky and possibly heavy load, with the potential risk of losing a paper and having to get another copy from the student. The portability of having electronic copies of the papers allows the instructor to grade almost anytime and anyplace.

I can remember literally, you know, I've always carried papers with me wherever I go. I mean, if you're at the beach, you can't take your laptop. When I'm out of town on the weekend, I've had lots of trouble, like at my mother-in-law's who doesn't have a computer. I've gone to the public library and you can't put a disk in and then you go to Kinko's and you have to pay. I mean,...if you just have a set of papers, you can sit in the car and grade 'em." (Interview 5/7/07)

On the other hand, portability in grading on a computer means the instructor need only to carry his or her laptop to a location with Internet access, or if they have already downloaded the paper, to a location with power for the computer. The overall logistics of receiving the paper, reviewing, annotating, grading, and returning becomes simpler though the vantage of a single tool and greater access to free wireless networks.

“Increasingly with Wi-Fi access, I can go grade papers at Java (coffee house), I know where all the free Wi-Fi places are...” (Interview 5/7/07)

2. *Electronic feedback templates for multiple users*

By the time of our interview, Rita stated she had taken advantage of her years of experience in the online classroom and gathered a set of standard student questions about her assignments. From this practice, she had put together a series of pre-scripted responses to these frequently asked questions and kept these in a file entitled “My Comments.” She used the same technique to provide feedback on student journals.

I don’t read all their journals either. I have one comment that says, you know, your journals make me laugh, your journals make me cry, it makes me realize how lucky we are to be in a world of different points of view. I give them all credit for writing their journals but I don’t read all their journals. I don’t have to.
(Interview 5/7/09)

Although this feedback was primarily geared toward the individual student, there were times when pre-prepared comments were sent to groups of students or a response to a single student question appeared to be important and/or beneficial enough to be shared with other students.

3. *Includes multimedia*

According to Rita, the flexibility in dealing with different kinds of students in a classroom-based course was greater than in an online course. Instructors can more quickly adapt what they teach to meet students’ needs and address the varying levels of knowledge and learning styles in the classroom. This is not so easily done online, she

stated. In her online classes, Rita expected her students to read and write well, be self-disciplined, and have great time-management skills, but for approximately 1/3 of students in Rita's class who did not have these competencies, performance was poor and/or eventually the student dropped out.

One way she attempted to address these deficiencies, and perhaps address a mix of learning styles, was to include visual elements, video, and audio materials in her course. Although she had the freedom and flexibility to include any type of new instructional technology or Web tools in her teaching, her courses remained fairly traditional in design, something her students seemed to appreciate given the high evaluations she tended to receive. "I get high evaluations and they say it is the best online class they've ever taken, but as to whether it's the most fun or the most interactive, probably not" (Interview 5/7/07).

4. Discussion groups

Rita used discussion groups primarily so that her students could post reactions to stories rather than for collaborative work or learning activities. Some of the activities she used to undertake, such as assigning study questions to individual students in her courses, did not seem to work as well in the online format because of students dropping the course. For this reason, most of the online work was unidirectional, and although she believed students could learn from each other in a face-to-face class, she also believed this to be less likely for an online course.

5. *Office hours*

Online instructors at the college where Rita taught are required to carry the same number of office hours that campus-based instructors keep. For each class being taught, instructors must schedule one office hour per week. Rita stated that her online students seldom visited her during scheduled office hours so she optimized her time by grading papers or responding to questions in the discussion boards during the scheduled office hours. Interestingly, her classroom-based students were also rare visitors during office hours because in most cases they would try to contact the instructor in the moments preceding the class or following it. If they came by during office hours, it would usually be unplanned because they happened to be on campus. With no other option for face-to-face time with the instructor, online students who wanted or needed to visit with Rita, did come by but were more likely to make an appointment, making it easier to plan for the meeting and gauge opportunities to complete additional work.

6. *Responding to email*

Email communication was a constant for Rita, who claimed to respond to emails as she received when online. This was convenient for her because she did spend a great deal of time on the computer and was generally logged in during her regular work hours. The weekends were usually devoted to grading papers but she also responded to the occasional email.

It's (responding) really whenever it comes in, and I would say it's less than 30 seconds per email but I mean my email's on all day and so, I'll be working on

something, and a student (via email) will say, ‘when’s this paper due?’ And I’ll write back, you know. (Interview 5/7/07)

She also maintained a group discussion area where students were able to post questions about the course or assignments. Although she told her students she would check this forum daily, she found that she checked only infrequently, relying on email on a regular basis. She had learned that students posting in the forum would likely receive a response from a fellow student before she was able to see the question and reply.

Good Practices

In the process of analyzing Rita’s interview, journal, and initial questionnaire, a set of good practices emerged. These include strategies that she believed would help students be more successful in her course and also help significantly with the management of her virtual classroom.

1. Online instructors should clarify expectations

A class should be organized and expectations clarified in such a way so that students who have the pre-requisite skills can simply move through the material. This then frees up the instructor’s time to focus on the students who need additional help.

...you want at least two thirds of your students to just be proceeding and doing fine because the ones I talk to on the phone or the ones that come in here are, ‘somebody died,’ ‘somebody got put in jail,’ ‘I’m sick,’ ‘my medicine is not working,’ ‘my panic attacks,’ ‘my car’s broken down,’ ‘my boyfriend beat me up.’ I mean, not to minimize any of these things but ... (Interview 5/7/07)

Rita explained that an online instructor must avoid relegating all of his or her students to the position of problem or special-need students due to poor design of the course infrastructure which in turn could lead each student to need individual instructions for completing the course.

2. Online instructors should get to know their students

When asked if she was able to recognize students in her online course, Rita enthusiastically agreed that she could. She stated she may sometimes get to know them by their username and email address because that is more often used in her online courses than the person's given name. In her view, discussion forums are ideal systems for social interaction. These mechanisms enable instructors and students to become acquainted and develop a social web that can motivate students to participate actively and be successful in the course. In "Facilitating Computer Conferencing," Berge (1996) explained that the social component of a course is as important as the pedagogical: "Creating a friendly, social environment in which learning is promoted is also essential for successful moderating. This suggests 'promoting human relationships, developing group cohesiveness, maintaining the group as a unit, and in other ways helping members to work together in a mutual cause,' are all critical to success of any conferencing activities" (p. 22).

3. Online instructors need to maintain structure in their courses

Based on the many positive student evaluations that Rita was receiving regularly when teaching online, she explained that in order to be considered a good online instructor, "you need a class that is straightforward where you meet the objectives, it's

interesting enough, but that every assignment follows a basic pattern” (Interview 5/7/07). Students benefit greatly from common instructional activities and structure in topics or sections of a course because they can plan for the assignments. This saves the student time because they do not have to review, re-learn, or revisit new instructions but can focus on the content of their work. Likewise, the time an instructor spends providing instructions on how to carry out the activity or assignment and grading these assignments is reduced. Rita stated it was important for students to know that the online course still has some parameters for participation.

A project undertaken at Indiana’s center for Research on Learning and Technology used the “Seven Principles of Good Practice in Undergraduate Education” by Chickering and Gamson (1978) to evaluate four online university courses. The evaluators found that online courses need “regularly-distributed deadlines encourage students to spend time on task and help students with busy schedules avoid procrastination. They also provide a context for regular contact with the instructor and peers” (Graham, Cagiltay, Lim, Craner, and Duffy, 2001, p. 13). Because Rita believed there is more flexibility in a classroom course than an online equivalent, she tried to make sure students knew what was expected relative to the due dates, participation, and submitting work.

4. Online instructors need to keep it interesting

Professor Rita wanted to keep her students motivated. She included a variety of activities in her courses to keep the class interesting and tie concepts to new methods.

I will find new short stories occasionally, and then that might warrant new study questions. And that's some additional time I'll take, or I'll hear something on NPR like "This I Believe," and I'll decide to add this into a class. So there are modification I make, but eventually it (the time) evens out to be the same.

(Interview 5/7/07)

..I try to bring in a lot of visual elements for them to help them understand. I also try to bring in current, 'cause we read short stories in the class, you know, I try to bring in things for them to relate to their own lives. (Interview 5/7/07)

This practice follows the seventh of the *Principles of good practice in undergraduate education*, and is expanded on in by Chickering and Ehrmann (1996) in *Implementing the Seven Principles: Technology as Lever*. The authors state that "Good Practice Respects Diverse Talents and Ways of Learning."

Students need opportunities to show their talents and learn in ways that work for them. Then they can be pushed to learn in new ways that do not come so easily.

(p. 3)

Summary

Rita maintained that her style of time management was dictated by the semester's schedule when papers were due. In the initial questionnaire, she suggested she spent approximately 8 hours per week managing her online course. Rita's subsequent journal activities undertaken for one week in mid-semester totaled about 9:50 hours. In her follow-up interview, she clarified that she likely spends about 10 hours a week, with about 5 hours per week devoted to grading; this was confirmed by the journal entries,

where the cumulative entries totaled 4:40 minutes (Journal). She asserted that grading was the most time-consuming aspect of the class.

I think I spend less time on grading in a face-to-face course because I can hand someone a paper and say, “You forgot your last paragraph,” or “Don’t use *I* in this paper,” or “You really have a lot of trouble with verb tenses.” And I’ve circled them, whereas if you are grading online, you have to write all that out, and you have to every time they have a verb tense problem, I put in an arrow and write *edit*. (Interview 5/7/07)

Rita had been able to adjust her online courses in such a way that the 10 hours per week that she committed to the course still enabled students to meet the course objectives and competencies. Although, in her view, some instructors try to compensate for what they believe are challenges and limitations in the online environment by increasing the number or complexity of assignments, Rita knew that the online experience for many students could be equal to or better than what they would find in a classroom. For this reason, Rita kept her courses structured, interactive, and interesting within the time limitations she had discovered served the students’ needs as well as her own. She also suggested that taking the time to automate as much of the course management as possible would yield welcome results for any faculty member willing and able to make that initial investment.

Note that the difference between 8 and 10 hours can be significant in establishing a faculty course load. It would take 40 hours a week to teach five classes if each course required approximately 8 hours, while the same 40 hours per week would be devoted to

teaching only four classes if they each took 10 hours. Rita held that the strategies she had developed over time were the key to her success as an online instructor and the success of her distance learning students.

I think the longer you teach, whatever mode you teach in, you become efficient and I think the efficiency may lose a little bit of the spark of newness, but you know, you can still be innovative. I mean I am an innovative teacher, but I'm an effective and efficient teacher and I just don't waste a lot of time.

PROFESSOR LEE'S CASE

“I get my jollies from the interaction. I know online, you can have interaction, and you can even create virtual office hours, and you can set up the cameras - still not quite the same thing. When I walk out of the classroom, I am literally on a high.”

Participant Background

At the time of my interview with him, Professor Lee had been teaching for 18 years, 16 of which had been at a community college as an adjunct instructor in the Department of Psychology. He had only ever taught face-to-face courses but took advantage of instructional and communication technology tools to support his teaching in the classroom. Lee had double majored in Psychology and Radio, Television and Film, and then gone on to get his Master's Degree in Curriculum and Instruction. He was now in a doctoral program in Instructional Technology and worked in the field of educational media and computer technology. Although Professor Lee participated in this study as a classroom instructor and had never taught online courses, he had an affinity for all things technological and jokingly professed he had become involved with technology the day after he was born. He explained how he became interested in the use of technology in teaching when he was only in the fourth grade.

I still remember being in the fourth grade the very first time I saw a videotape machine. It was a regular old videotape machine, and the fact that the camera was on, and that immediately you could see what we just recorded and play it back. I

was just enamored. I even said at that point, “This is going to revolutionize teaching forever” (Interview 4/12/07).

As with most other instructors, Lee’s early teaching experiences had included some challenges. His first course was a mandatory one for the university’s new resident assistants. He was often flooded with opinions and suggestions from the variety of stakeholders at the university, each with a vested interest in what these students were learning. Although finally having the opportunity to teach at a four-year university seemed glorious to him, he stated he felt more like a K-12 teacher being told what to do by the students’ parents. He would have much preferred the guidance to come from an academic department head or another colleague who could provide sound pedagogical advice. Lee had gained a solid understanding of educational theory and teaching practices through his graduate studies, although he had not had many opportunities to put into practice what he had learned. This was compounded by the fact that his supervisors lacked teaching experience and theoretical backgrounds.

So teaching is the one thing that everybody thinks they can do, or they can do better, or something like that. A lot of times I was getting all this input that had nothing to do with actual academics, without – and it did not have to do with pedagogy - they just kept saying, “You should do this. You should do this.” (Interview 4/12/07).

He repeated that this micromanaging during his early years as a teacher, coupled with others’ ideas on how to do things better, was not helpful to him in the classroom. As time passed, experience helped him determine any adjustments needed to improve the

course. For example, after he'd experience high levels of absenteeism in his courses, he altered his attendance policy to provide a single set of points for missing fewer than five classes, rather than awarding points for each class attended. Another adjustment was to allow his students to make up work in situations where he previously had not allowed it. He also started incorporating media in his teaching.

I always created an outline for my presentations anyway, and so the second year of teaching, I went to a garage sale and found a copy of PowerPoint. I got it for \$6.00. So I saw (that) if you create an outline – I'm creating an outline anyway, and now it flows into these slides. I was like, "Wow, cool." (Interview 4/12/07)

Professors Lee's teaching career had included a series of instructional improvements designed to make his class more interesting, engaging, and relevant for students. By finding and using tools and strategies that optimized his own resources and time, he could focus on the needs of students and help ensure their success.

Instructional Strategies

Professor Lee reported that as he prepared for a new semester, he always conducted a series of reviews. One important part of this process was to consider feedback collected from students about the assignments, textbook, class activities, policies, student panels, and other aspects of the class. He also considered the standard course evaluations required by the institution. One example where the additional information from students prompted him to make a change was related to an assignment using student panels. In his syllabus, Professor Lee noted:

Student Panels (SPs): Students will participate in a panel discussion relating to one of the 5 units. Students will present evidence either supporting or challenging a perspective. Presenters will be expected to prepare an outline and ask as well as answer questions related to the topic. Students will receive 50% of their grade from the instructor, 25% of their grade from their co-presenters, and 25% of their grade from the remainder of the class/students. (Interview, 4/12/07)

Based on the feedback he had received, Lee realized that some students were extremely uncomfortable with the thought of presenting in front of an audience and were particularly uncomfortable when the topic related to human sexuality. Professor Lee provided an option for those students to submit a paper in lieu of making a presentation, though they would only be eligible to receive half of the points for the assignment. He explained, "It gives them an option so it's not overly punitive, but it makes it clear that working with the team and working with the group is what's really desired" (Interview 4/12/07).

During this study, Lee provided a list of activities he carried out during each of the five different stages of the teaching process and then estimated the time he thought he normally spent on these activities. He assumed that the total time requirement for course preparation, presenting information, providing practice and guidance exercises, conducting testing and assessment, and offering feedback would be 20 hours per week. For several of his responses, he gave a range of time. I accounted for this by finding the average of those ranges and using the averages to calculate the total average hours he devoted to teaching this course. Professor Lee reported that two items in particular

would vary if the course were a new course. These are in the section “Prepare for Class” of Table 9, the bullets reading new publications and reviewing new media.

Table 9: Professor Lee's Questionnaire Response to Instructional Components and Time

Prepare for Class	<ul style="list-style-type: none"> • Prepare documents • Prepare lecture • Locate and cue media • Prepare questions for Student Response System (SRS) • Reading new publications • Watching new material 	9 hours
Present Information	<ul style="list-style-type: none"> • Lecture • Video or recorded audio • Questions and discussions • Deliver SRS presentation 	3 hours
Practice and Guidance	<ul style="list-style-type: none"> • Before and after class student questions • Answering emails • Answering phone calls 	1 hour
Testing and Assessment	<ul style="list-style-type: none"> • SRS question responses • Formal assessment • Monthly homework assignment 	2:30 hours
Provide Feedback	<ul style="list-style-type: none"> • Grading • Before and after class student questions* 	4:30 hours
		<i>20 hours per week</i>

In comparing this initial report of time commitment with the amount of time logged in the journal for a one-week period, we find approximately a 10 hour, or 50% difference. Some of the difference is related specifically to the periodic activities he carried out as opposed to the regular activities. For example, while testing and assessment, did not occur every week, other activities that generate feedback but are not part of the grade may take place more regularly. Journal entries showed that Professor

Lee devoted time to his class on a daily basis with activities such as checking email, preparing and selecting media, and in-class teaching time.

Professor Lee's time spent per week is significant for the delivery of a single course. Even the 9.75 hours he logged in the journal would be considered a heavy load if the instructor were teaching four or five classes. In our interview, Professor Lee mentioned some of the instructional strategies he used to help him manage time more effectively and the course as a whole. The strategies he identified are listed below:

1. Review past performance

The best way to continuously improve and refine a course, according to Professor Lee, was to examine past performance issues. This related not only to the content of the course but also to practice exercises, homework assignments, and prior to completing assessment. By ensuring that students clearly understand the material during the initial assignment or activity, an instructor can avoid the need for review material and either focus on more complex concepts or provide additional opportunities for student interaction.

A key element to this practice for Professor Lee was the use of a Student Response System (SRS) ,or "clickers" as they were known by the students. The SRS he used consisted of hand-held controls for each student that allowed them to respond to a question the instructor raised on a PowerPoint presentation slide. As the students responded, a computer registered the student responses, and presented a result summary in the form of a chart or graph, which appeared on the screen. This educational technology allowed the professor to poll students and gather response data in an open or

anonymous setting. This was particularly helpful as Professor Lee covered some sensitive material in his psychology class. This mechanism allowed students to see the collective class responses on a presentation slide at the front of the classroom.

One of the neat things is that because I use the CPS (a type of student response system) and I have a record of every test or everything that I've done with that, and I can look at response rates on things. So I can look at how students performed on each test and say, "Okay, which things did they get wrong? Which things did they miss? 30 percent of the people chose this distracter. Why did they choose that distracter?" (Interview 4/12/07)

Numerous studies at both the K-12 level and in higher education level have been conducted to gauge the benefits of using "clickers" in the classroom. A 2007 University of Wisconsin study (Kaleta and Joosten, 2007) surveyed 27 faculty members and 2684 students to determine the impact this technology had on student learning. Data collected on student grades support the idea that clickers facilitate student learning.

2. Find time-saving alternatives – Improve grading efficiency

In most instances, Professor Lee stated he only revised an activity based on the feedback he collected, but at other times he would determine the need to replace an entire activity. In one particular case, he shifted a vocabulary assignment that his students one time had completed during class to be a take-home assignment. He made this change because he thought that class time could probably be better used for interaction or feedback.

In his early days of teaching, Professor Lee went against the advice of his college professors and made all of his tests essay tests. However, after having to read numerous essays in a short period of time, he felt his “mind had turned to mush” and realized he needed to simplify his assessment practices. He compromised by using a hybrid approach that included some multiple choice questions and a section for short essays.

Another significant change in his course was to replace an article review assignment with a student panel activity. Initially, students had to find relevant articles, review them, and write about them for a class assignment

The quality of articles and the breadth of articles, and actually, the amount of time it took that I had to go through and reread all of the articles and then see if they got all the materials right from it got to be a bit much. So I finally got rid of the assignment, and used the student panel instead, because they do research with that. They are still going out, finding sources, distilling from those sources, and presenting information and yet, I don't have to go through and read 25 different articles. (Interview 4/12/07)

As these changes were planned and took place, Professor Lee was not only changing the activities in order to save time, but also attempting to improve assignments and activities to help his students' performance and increase their motivation through active learning.

3. Map out activities

When asked about his style of time management, Professor Lee referred to both managing his time during class sessions and his personal time management for course

activities outside of class time. He paced his class sessions by means of a type of agenda or plan to which he adhered fairly consistently. He reported that he might map out time segments for various presentation, quizzes or tests, viewing media, or other activities, and that he checked the clock regularly to make sure he was on schedule and could cover all or at least most of the material. One key factor that sometimes affected his ability to adhere to his agenda was the length of time a discussion might continue. For this reason, he felt it important for him to facilitate dialogue effectively and keep the group on task.

1. Be a ringmaster

For Professor Lee, keeping the group on task meant being a “ringmaster” or facilitator in the classroom. In his early days as a student, Professor Lee felt angry when the class was in the middle of a great discussion on an important topic, and the instructor would say they needed to move on. Being on the other side of the table now made him realize the importance of both fostering classroom discussions, and keeping the course moving forward in order to stay on schedule for additional material that would follow. Allowing students to have their say and then guiding the discussion into the next topic without having students feel slighted he found to be an art that required skill and mastery. Using phrases that positively reinforce the class, such as “We’ve got good points here,” “We are making a lot of headway,” or “Let me give you another take on what it is we are going to present,” made the transition smoother and easier.

4. *Learning is variable*

Professor Lee was fortunate enough to have participated in a community college education program in which he learned about pedagogical and andragogical models of

instruction. One of his favorite professors used to regularly remind Professor Lee that learning is variable: it does not all happen at once, nor does it happen to each person at the same time or at the same rate. This variable learning is compounded by the low knowledge base of most students who, despite having great life experiences to bring to the table, have distorted or limited background information for the course. He kept this in mind as he moved through the course and used this concept to provide ample learning opportunities and formats for varying student needs by considering if they would learn more and faster by viewing a video, or by seeing the information presented in a different way, or by completing an assignment that had been restructured or redesigned.

5. Offer “test correction” opportunities with feedback

Professor Lee offered students who had done poorly on a test, an opportunity that not only benefited the student but also helped him determine what factors contributed to the low score. He called these “test corrections,” which included six questions about various aspects of preparation for the test.

...(I) ask them about their study time, when they did the vocabulary, when they read the chapter, how much time they spent going out. Students are really frankly honest about this. “I partied every single night. I never read the chapter.” They’ll tell me – and it shows.

This strategy became a way for him to gauge whether the workload he was assigning might be too heavy or too light for the student and also to determine the student’s level of commitment. By answering these questions, Professor Lee felt that the

student learns as much as the instructor did about the basis for their poor grade and that they would be less likely to repeat the same mistakes.

Good Practices

The main ideas that helped Professor Lee optimize his course were based on needs of the student-centered classroom. He had improved his classroom management strategies and defined a process that incorporated good practices he had come to believe are critical in teaching a face-to-face class.

1. F2F instructors need to search for new material

The continued search for new sources is a key to keeping the material fresh so that students can remain motivated and connected to the purpose of the course. For Professor Lee, this searching included the materials he heard about as well as a wealth of ideas from colleagues, students, or co-workers. This usually meant that he was on virtual “call” during all waking hours and many things could trigger an idea.

There was really one time – and this is totally mindless Saturday, dial tuning, and not really paying attention to what I was doing. There’s this MTV Cartoon, Daria, that was a total examination of unconscious motives. It’s been one of the good pieces that I’ve used in my class. It creates the most discussion. It creates the best understanding on how unconscious motives work in people’s lives.

People have loved it. (Interview 4/12/07)

2. F2F instructors need to have a flexible calendar

The planning process is vital in developing an appropriate course calendar - a calendar that not only allows the instructor to cover the required material but also

provides students with sufficient exposure to information and opportunities to engage the material. Professor Lee's experience had helped him understand that oftentimes things beyond his control would require that he alter his course calendar. Illness and inclement weather were the most common reasons, but for Professor Lee it was also important to alter a class session for students to take advantage of hearing renowned speakers who might be in town, or to expand a class discussion by adding an activity or discussion related to a recent relevant news event.

In addition to the changes that occurred during a semester, Professor Lee was also conscious of the changes that he needed to make from one semester to the next. This applied in particular to what he observed about the students' ability to grasp the material and his ability to find new strategies, tools, and techniques to teach the material. The use of the Student Response System was a key factor in helping Professor Lee make these determinations. The data he collected on various questions pointed out areas where students needed more help or where they might not have understood the concepts at all.

3. F2F instructors should use online tools or Learning Management System

Professor Lee used a Learning Management System (LMS) called Blackboard® to supplement his class-based activities. It was surprising to him how much his students used the site, and he had gradually incorporated additional tools within the system for them to use. At first he had used Blackboard® to post test reviews. After he posted the first review, his students became anxious when it was nearly time for the next test and the second test review had not been added to the site. Eventually he started putting all course information on the site. He included his syllabus as well as other handouts that students

could refer to or print out as needed. This practice not only saved time for the students but also for him. Because he spent less time spent searching for materials, making copies, and distributing, he had more time for working with and interacting with the students.

Finally, Professor Lee had started to use the discussion area of Blackboard ® with his students. He used this tool to post questions that came up in class but that they could not take time for during class because other course material needed to be covered. The discussion forum provided an outlet for students to share their ideas and opinions without taking up class time. He also used the discussion area to post recent articles about issues that were being discussed during class, which served to extend the material that was already available and being presented. He believed that this helped students have a more well-rounded experience that kept them engaged on a regular basis rather than only once or twice a week while they sat in the classroom.

4. F2F instructors need to include multimedia

Professor Lee explained that some of the additional hours he spent on his course were due to his extensive use of multimedia. He was constantly looking for material that he could use in his course to help students make the material more relevant or meaningful to them.

Last night, Tyra Banks, on her show, did a thing on *polyamory*, which is something that we discuss (in class). So there is an hour of watching that. Well, I actually didn't watch it for the whole hour. I taped it, so I am going to have to go back and watch it again and then really see if I wanted to use a snippet or two

from that. And then if I do, I have to copy that snippet off, and then transform to digital format, and then put it on my laptop, that kind of thing. (Interview 4/12/07)

Using video in his course was the standard rather than the exception for Professor Lee. He tried to present concepts in a variety of ways and also strove to place the ideas in context to help ensure the students' understanding. He followed these types of media displays with opportunities for discussion and reflection by the students.

So last week, when we were talking about testosterone, there's this great clip from This American Life on testosterone, and I play that for them. It seems to be a very effective one, because every time I use it, I watch the males' faces and there's this nodding and smiling that occur. I watch the females' faces and there's this shock, this wide-eyed look on their faces. (Interview 4/12/07)

In addition to USING pre-produced materials, approximately two years earlier, Professor Lee had started creating his own media by using Podcasts to supplement his test reviews. The course management system he used had new features that integrated audio capture software. This made it increasingly easier and less time consuming to create a quick two-to four-minute audio file that he delivered as a Podcast. This meant the students had a written test review on the Blackboard site and an additional oral review as a supplement.

Then I do this little four-minute thing that says, "This is what I meant by that, Here is what I really want." I won't give them the answer, but I say, "When I say I want you to understand these stages of sexual response, understand that these have to go in order, and that you need to understand what they mean, and also

understand the problems that go with it, or the criticisms that go with it.” So they kind of have an idea of what to go with. (Interview 4/12/07)

One thing he found somewhat surprising was that his students’ test scores had been steadily improving. He said students really loved this added tool, even when the sound quality was average or poor due to limitations in the locations where he was able to make the recordings. The students would rather have the information in a limited form than have it delayed or unavailable because of minor technical considerations – even when they observe that he sounds like Darth Vader on the Podcast.

Summary

Professor Lee considered himself an education junkie who will never be bored teaching because of the spontaneity of what comes up in the classroom. The classroom is constantly changing and he felt that the “aha” moments, the synergy that takes place, and the dynamic interaction all combine to make the time committed to preparation worthwhile. He viewed the face-to-face format of a classroom as a way to alter his materials as often as necessary and in any way necessary to help the students reach the course objectives.

This is why I think I will never be bored teaching, because you go in sometimes, and you’re teaching what you think is your mundane, run-of-the-mill, same ole’ concept that every first year psych person is going to learn and you don’t expect much of it. That turns out to be one of the most dynamic classes ever, and people are bringing up examples from their own life, and they’re talking about it, and

they have a new take on it, and they're twisting it this way and twisting it that way. (Interview 4/12/07)

The interaction served to motivate him and his students though he saw value in the tools used for online courses. As students question and respond to each other in person, there is a definite progression that is hard to emulate in an online forum. Hybrid courses, Professor Lee explained, may represent the best of both worlds because students are not completely limited by classroom time but also have a structured in-person session to guide them and keep them moving forward with the material. He had seen the benefits of technology, but also the limitations, and emphasized that the content, design, and instruction were significantly more important than the technology.

"I'm constantly looking for that next gold nugget that I think is going to help improve instruction and help get the concept across to people."

PROFESSOR SULEIMA'S CASE

Really, I think the most significant thing I remember was there was absolutely no guidance... "You know how to do this in practice, so you must know how to teach it," was kind of the assumption; probably a poor assumption.

Participant Background

Professor Suleima's work history includes experience in training, staff development, and new program education while working in clinical settings. She had been teaching full time at a state university for approximately three years and in that time had been exposed to the world of online education. This was something she had not had an opportunity to explore during her first teaching assignment in the late 1980s because the technology and resources were limited.

She recalled some of the challenges she faced early in her teaching career, such as failing to receive any guidance on teaching methods and techniques. The assumption was that a content matter expert would clearly know how to explain what they knew to someone else, but to Professor Suleima this was a poor assumption. A health administrator by profession, she had no prior formal pedagogical training, so in those days, her teaching practice had to exist in parallel to her teacher training. She grew to rely on the experience of other faculty by reviewing their syllabi and taking any advice that would come her way. She labeled this time in her career the period of the "hit and miss" approach.

Her current perspective on faculty development was that not much had changed since her early days in teaching. New educational technologies, however, had made the

process slightly better and helped expand the type of instructional strategies she was able to employ.

I would say that the same trying process was very hit and miss, this many years later. There is still no difference in approach, like boilerplate, “Use this,” you know, just “here, you’re here to teach a class, figure it out,” that’s the same kind of training. And for the technology, another instructor (may say) “Here, I’ve used it. Let me show you how you use it.” You get three minutes to learn how to use it. So, 20 years didn’t really make a big difference is what I’m trying to say.

(Interview 2/5/07)

Not only had things remained the same in terms of instructor preparation, Professor Suleima’s questionnaire response for the challenges she faced when she first started teaching in the classroom and those that applied to her newer online teaching experience were virtually the same. She stated that for her classroom students, it was challenging to “understanding the varying levels of student knowledge,” while for her online students, she explained that the challenge was “understanding the comprehension of information from the student perspective”(Questionnaire). The key difference in these responses was that in the first case, she may have not been able to gauge student understanding because of being new to the teaching experience. In the latter case, she had difficulty determining the students’ level of understanding due to lack of physical and verbal cues in online environments. This was something that she had by then partially addressed through the application of new communication software.

For this study, Professor Suleima participated as an online instructor and, though she also teaches a face-to-face section of the same course, the data I collected came from her online class. She maintained in-person office hours and, though not required to do so, she also provided “virtual” office hours for her students. She had been able to enhance her online courses with the use of communication software like Macromedia Breeze® now known as Connect®. Macromedia Connect® allows the user to employ audio, video, chat, and presentation features to host meetings, class sessions, or workshops. For her class, Connect® sessions that included a live chat were required, and additional lectures and/or presentations were captured and posted for students to view as needed.

In the initial participant questionnaire, Professor Suleima estimated the time she devoted to her class on a weekly basis was approximately 12:30 hours. She noted that this amount of time would cover a course that she had previously taught, whereas a new course would likely require more time. Although 12:30 hours could be considered a significant time commitment, especially for someone teaching a full load of 4 or 5 classes, Professor Suleima explained that some of this was actually shared time between the online course and the equivalent face-to-face course that she taught. This enabled her in-person students to take advantage of the same tools and resources that she prepared for her online students. This, in addition to Professor Suleima’s critical planning and development process whereby she prepared nearly all of her course materials, activities, and assessments prior to the start of the course, allowed her to dedicate more time to help

those students who needed extra information or practice with the material. Table 10 provides a summary of Professor Suleima's responses.

Table 10: Professor Suleima's Questionnaire Response to Instructional Components and Time

Prepare for Class	<ul style="list-style-type: none"> • Read materials • Research internet for updated information • Revise materials • Create discussion questions 	4 hours
Present Information	<ul style="list-style-type: none"> • Post links to recorded live campus session • Post power points • Post discussion questions • Monitor and contribute to discussion board process 	2 hours
Practice and Guidance	<ul style="list-style-type: none"> • Assignments • Online live sessions <p><i>(4 hours/week, twice per semester)</i></p>	.5 hour
Testing and Assessment	<ul style="list-style-type: none"> • Develop the test content • Place in the LMS • Test process <p><i>(12-16 hours/week, twice per semester)</i></p>	1 hour 3 hours
Provide Feedback	<ul style="list-style-type: none"> • Review assignments • Discussion question responses • Group activity • Grade assignments 	6 hours per week
Total perceived hours per week		12.5

Her responses were calculated or converted to measures of hours per week in order to calculate the total estimated time she spent per week teaching her online course including preparation, presentation, practice, assessment, and feedback. Items that related to shorter periods of time, for example 4 hours per week twice a semester, or items that required more time in one or two given weeks were averaged and the weekly equivalent calculated for the Instructional Components Chart above.

Instructional Strategies

Professor Suleima drew on a variety of instructional strategies to manage her course more effectively and efficiently. She gave further details during our follow-up interview, explaining what she had learned over the years to develop and improve her time management style. The strategies she cited are given in the following subsections.

1. Single preparations for multiple courses

When asked during our interview about preparation time dedicated to her course, Professor Suleima explained that it might be difficult for her to distinguish the work she devoted only to her online course, because she taught a classroom-based and online course at the same time and therefore much of the preparation applied to both courses. Although the syllabus for each class was unique, the structure of the two offerings was very similar and the timelines ran parallel to each other.

Much of the information is similar and I try to keep the course running on the same timeframes so that I'm teaching the same subject matter in both places at the same time. But because some of the processes, the syllabus has to be different.

(Interview 2/5/07)

She employed a Content Management System (CMS) for both classes, creating a separate site for each.

2. Repurpose materials for classroom and online use

In addition to the common preparation for both courses, many of the materials Professor Suleima prepared for one class could also be used for the other. Both online and classroom students benefited from these added instructional opportunities. Professor

Suleima prepared and used the same PowerPoint presentations for both classes and posted the same materials, used similar assignments, and gave the same or very similar tests. Her course lectures were based on the PowerPoint presentations, which included notes for each slide as guides to the material. The slide notes equated to some extent to the lecture she offered to her campus course. One difference was that the online course included a discussion question added to the materials posted online as a way to measure participation, or the equivalent of student attendance in a face-to-face class. She was also able to use the same questions as prompts for discussion in class.

3. Planning and preparation up-front

A fundamental teaching strategy used by Professor Suleima was to prepare and develop her course and related materials prior to the course being delivered. For this reason, she dedicated a large section of time to course revisions, developing new materials, preparing lectures (text, audio, video or combination), and designing assessment tools before the semester began.

One thing that I do that I know sometimes is a little different than what I've talked to some other instructors with online is, I pretty much – mine is done and ready to go before the class starts, or at least, I have all the discussion questions that go with the content and I set them so that they display at the right time. But for me, I find that much easier than week by week because I would forget to post things. So, I just get it all out there and I just, kind of, check to make sure I haven't gotten off track somewhere in the meantime. (Interview 2/5/07)

4. Course scheduling

The way courses were scheduled for instructors teaching online helped to make the time commitment less demanding. Professor Suleima's institution encouraged faculty who taught an online course to teach the in-person version at the same time. This lowered the overall preparation time because of the opportunity to combine preparations for multiple offerings. Another advantage was being able to schedule courses with similar formats on the same day to lessen the travel time to campus. For Professor Suleima, this meant once she had completed her teaching duties including the office hours, she did not physically have to come to campus every day.

We have this un-official rule that I teach all my online or all my campus classes on one day. And sometimes it's, some semesters it's two days and really, as far as my boss is concerned, those are the only days I have to be here. (Interview 2/5/07)

5. Efficient style of time management

Another opportunity with double utility was the ability to integrate personal time and work time throughout the day. Professor Suleima accomplished this by literally staying connected continuously online, something she claimed made her an efficient instructor. As she worked on personal tasks, she was able to respond immediately to an email that came in or to make comments about something that was posted on the discussion forum in order to give feedback that would help guide the conversation.

My students are always commenting, "You respond to emails faster than any person I've ever known in my life." It's because I am on the computer. I may

have the television on, I may be reading, but the computer is sitting right there, so that whatever I'm doing personally is being taken care of and school kind of interrupts personal time and personal time interrupts school. (Interview 2/5/07)

She was personally motivated and dedicated to this continuous online connection because, in addition to teaching, she was also attending school herself and managed a consulting practice. This meant she was juggling the demands of all these commitments, explaining in large part why her up-front preparation was key in making possible her ability to keep up with everything she needed to do.

...most of the other faculty members will sort of have this ongoing debate about whether many of the faculty members that I work with, seem to think online takes more time. I don't because I think it's the way I do it. I just do it all at once and for me, that just works for me. (Interview 2/5/07)

Good Practices

All of the good practices mentioned by Professor Suleima dealt with technology and applications to online courses. She explained her belief in the critical nature of interaction through technology to deliver a successful online experience for students.

1. Online instructors should provide interaction

Professor Suleima's teaching style was based on interaction. She tried to create an environment where students could have an open exchange of ideas and information. Although she still used lectures to present information, she also tried to facilitate discussions about the material she presented. She explained that this open forum style was better received by students than a unidirectional lecture or presentation. A tool she

had adopted to provide greater flexibility and access to her lecture materials was a desktop videoconferencing software called Connect® by Macromedia. Professor Suleima was able to record her lectures or talking points and post them in her online course site. These were required for online students but optional for face-to-face students who wanted to review the material or perhaps had missed a class. While she received positive feedback about the online lectures and presentations, there were students who never used these materials.

2. Online instructors use current technology tools

Professor Suleima used Connect® for her class sessions as well as for her virtual office hours. Although online equivalents for office hours were not required at the institution where she worked, she believed it was important to provide this opportunity for the students in her online course. Her students did not readily take advantage of the online option except during the period of time that proceeded homework due dates or dates for a test.

Another instructional technology she used was the Learning Management System (LMS) in which she housed her course materials and tools. Although her institution had used several different LMSs, they had recently moved to an open source solution that was designed to provide greater flexibility for the institution and the instructor. The use of these tools was not a requirement for teaching, but the benefits for students far outweighed any other type of online solution that did not integrate components for collaboration and grading.

Another technology tool used by Professor Suleima was Camtasia®. Camtasia Studio is a screen video capture program in which the user defines the area of the screen or the window that is to be captured before recording begins. This program allowed her to create mini-tutorials on the use of computer applications that the students could review as often as needed.

3. Online instructor should take advantage of multimedia resources

Students had reacted very favorably to media components of Professor Suleima courses. From videotaped interviews to posting vcasts (video broadcasts) or podcasts (audio broadcasts) of class sessions, the students had not only expressed appreciation for the resources, they had also been proactive in asking for new resources when any delay occurred in posting. The advantage was that these resources served both audiences, her students in the classroom and those online.

And another thing that has been interesting is, sometimes the campus students have asked, “Can you also post those for us?” Not because they’re not there, it’s because, “I want to make sure I understood something you said” or “I want to go back before the test and listen to that again.” So I did it for the online people, but it is benefiting the campus people as well. (Interview 2/5/07)

4. Online instructors should have support for the use of technology

It is time-consuming to venture into new territory, be it in the physical classroom or the virtual one. With a finite number of hours to devote to course development prior to the start of the semester, Professor Suleima’s preferred approach, support for technology adoption and integration is important. Although she emphasized that the faculty member

must be the one who determines what technologies to use, she maintains that the institution should provide information, training, and resources to help the faculty member use the technology effectively and efficiently.

As an educator it's really up to us to do what we want to do and I like technology and I think most of it is fun and interesting to learn. So I found out about Breeze® just by hit and miss and started investigating it through the Information Technology folks. They have a wonderful two-week workshop that faculty apply for and get accepted to. So I did that last summer and that was wonderful. I learned a lot of things that we haven't done in the past. (Interview 2/5/07)

When Professor Suleima used Camtasia to prepare course materials, she was one of the early adopters and therefore had to work through the development and implementation concerns that arose. Developing a number of short information modules took much longer than usual and were completed and made available "just in time" each week as Professor Suleima had not been able to apply her standard pre-semester development process. Completing the Camtasia® modules had taken her 120 hours with no additional compensation or time off. Although she claimed this process was grueling and time-consuming, the extensive shelf-life of these materials made the cost-benefit tradeoff ration worthwhile.

IST department is knowledgeable, helpful, and forward thinking. They work with faculty to help identify and implement both technological and non-technological approaches used for effective classroom learning. (Questionnaire)

Adoption of these new technologies and some of the challenges that arose with their adoption and application echoed to some degree the challenges Professor Suleima had faced when she first started teaching a number of years ago.

Summary

During Professor Suleima's interview, it became evident that she was dedicated to her students and had been an innovator in the use of technology both for her in-class students and those that who took her classes online. She ventured into new technology areas to find the best possible tools with which to teach, even if the learning curves required that she increase her time commitment, as shown when she began to use Camtasia®. Through her experiences in academia, she had collected a set of strategies that enabled her to make the most of her time. Preparing materials up-front, preparing once for multiple class sections, and using the same or similar materials for both online and campus-based sessions taught within the same semester, were all ways in which Professor Suleima could devote the bulk of her "teaching" time towards guidance and feedback for her students.

She faced many of the same challenges that other faculty face, but the processes she had employed helped dispel claims that teaching online takes more time than teaching in a classroom.

Most of the other faculty members will have this ongoing debate about whether many of the faculty members that I work with seem to think that online takes more time. I don't, because I think it's the way I do it. I just do it all at once and for me, that works for me (Interview 2/5/07).

All of a sudden, something prompted me to think about my class and how I can use that in my class. Those are the things we sometimes don't gauge, but really, we are thinking about work. That is the difference between when you have a teacher who is dedicated and who really likes what they do -- Really love your work versus (one) who is just going in and giving a test.

PROFESSOR NGOZI'S CASE

The first time I taught my own class, the challenge was I had no guidance whatsoever, other than, "Congratulations, you have your own course. Go do everything."

Participant Background

Professor Ngozi began teaching in 1990 and, although he had had different positions at various institutions of higher education in the previous 18 years, one thing had remained constant - he had yet to teach online. He had worked as a teaching assistant, a full time instructor, and an adjunct faculty member, so he brought a broad perspective of teaching and learning to this study.

In the early part of his career as an Associate Instructor and teaching assistant, Professor Ngozi was guided by the pre-established agendas of the faculty he supported while his own role was to grade assignments and manage class discussions. The real challenges began when he was assigned his own class to teach and received neither guidance or support. In addition to feeling that he was too young to teach and being afraid he would not know the material, his lack of preparation for the teaching assignment made it difficult for him to welcome this new opportunity. He explained that he "thought teaching meant lecturing," because this was what he had experienced throughout college. However, he soon realized that the job included concerns about seemingly simple issues like selecting and ordering textbooks, grading, and office hours..

I didn't know if I needed to lecture for a half hour or to lay out the issues and then run discussion because I had never had the lecture portion. How much reading they would do? If they would do any of the reading, should they get a reading

guide? Was that pandering or talking down to them? You didn't know what they expected from that hour-long three-times-a-week class and I was given no guidance. (Interview 2/15/07)

A minimal amount of training was provided for junior faculty before the semester began. The agenda was brief, the content was trivial, and the outcome had little effect on the participants' teaching. Dr. Ngozi described these workshops as laughable, execrable, and pathetic. Fortunately he was able to obtain support through colleagues, professional organizations in his field, seminars and conferences on teaching, and mentors willing to help him as an inexperienced teacher. Occasionally he obtained inspiration by thinking back to the types of instructors he had had during his undergraduate and graduate study, keeping in mind that the generation gaps of the current university climate might influence his classroom practice.

But then the other thing was generationally they were totally different. I mean I was in grad school in the 90's and I was in college in the 80's and, you know, we didn't have cell phones to interrupt class when I was a student. (Interview 2/15/07)

It took Professor Ngozi one year before he felt comfortable enough with his teaching and was sufficiently familiar with the available resources for faculty support, such as media centers, information technology departments, and instructional staff. He understood that this trial-by-fire approach to teaching might have actually benefited him, because the minimal support meant he "got to test things pretty quickly." (Questionnaire)

Professor Ngozi stated that before the start of a new semester, he reviewed notes he had made during to guide his course planning and development. He had the habit of collecting these notes continuously as he taught to reflect points or activities that worked particularly well and those that did not. “These notes cover everything from inappropriate readings, papers that were ill-defined, discussions that were more lively than expected” (Questionnaire). These notes, written on index cards, helped show where changes were needed and facilitated the process of preparing for a new semester. They also helped him improve his courses in a more timely manner because, instead of having to think back and try to remember what went wrong and what worked well in his last class, the critical information he needs is readily at hand.

For this study, Professor Ngozi provided information about his background and experience in education, as well as his perceptions of time spent on course components and on the activities he performed to teach a course during a one-week period. On the initial questionnaire, Ngozi listed the tasks he believed would be part of teaching his course and also noted the amount of time he thought each of those activities would take on a weekly basis. The total time he perceived to be required to teach the course was 13 hours per week. This included estimates for activities that might occur only every other week or in a given number of periods over the semester. For example, the time he spent grading a test might total 8 hours, with four such tests being given during the 15-week course. To calculate the weekly time commitment, I multiplied the number of hours (8) by the number of tests (4) and divided by the number of weeks (15). The weekly time

commitment translated to two hours and thirty minutes (2:30). Table 11 provides a summary of Professor Ngozi's responses.

Table 11: Professor Ngozi's Questionnaire Response to Instructional Components and Time

Prepare for Class	<ul style="list-style-type: none"> • Read main article • Outline arguments in articles • Look for case study in the news or on campus to illustrate concepts. 	4 hours
Present Information	<ul style="list-style-type: none"> • Mini-lecture: 5-15 minute lecture interrupted by student readings of text and case study and commentary by me and by them • Inductively ask questions that elicit their responses that mirror readings followed by readings of text • Or discussion of case study followed by above • Coffee shop office hours 	5:30 hours
Practice and Guidance	(same as above)	-
Testing and Assessment*	<ul style="list-style-type: none"> • Short in-class quizzes on the syllabus policies and argument styles • Individual papers (prepared outside of class) • Group papers (prepared outside of class) • Presentations (prepared outside of class) 	3:30 hours
Provide Feedback	<ul style="list-style-type: none"> • During class discussion and mini-lecture • Email • Papers • Presentations (see above)	
Total perceived hours per week		13.00

The 13 hours per week extracted from the responses on his initial questionnaire was 2:30 hours greater than the time that he logged in his journal in a single week. The two totals are close enough that the perceived time spent teaching was a fair estimate of the actual time Professor Ngozi spends teaching.

Instructional Strategies

Over time, Professor Ngozi had developed his own instructional strategies to maximize classroom time and efficiency in order to allow himself to focus on student needs. Each of these strategies converged on strategies for how to support students and improve their ability to understand the material.

1. Use a Grading Key

Most of Professor Ngozi's assignments required students to write papers. As is true with most classes that have writing components, grading papers can be the most time-consuming aspect of the class for the instructor. In addition to needing to read a large number of papers, the instructor must make comments and corrections and eventually assign a grade. Professor Ngozi had developed a time-saving technique that was based on the use of a grading key for his papers. In addition to helping him during the grading process by minimizing the number of comments he had to write out as he reviewed the student papers, the key also removed the need to spend class time going over the students' errors. Each notation on the key included a comprehensive 8-10 line entry with an explanation linked to the error that had been made. He reviewed the papers before he began to grade them so he could determine whether any problems, errors, or themes had been missed by the students. He then developed a key document that was 3-5 pages in length and included a compilation of comments or notes about recurring errors on the papers he had received. Each comment explained the meaning of the notation he introduced so he could abbreviate or code each comment on the students' paper without having to write out the full comment each time a problem came up.

I noticed that 5 or 6 are making the same logical error, I'll do an abbreviation for it – I'll say “OLT – overlooking alternatives and over-generalizing.” I'll explain in 10 lines how that works on that paper and then after paper 6 to paper 32, when I see it again, I just write the abbreviation. And then they download the key and look for the notations that explain the errors. (Interview 2/15/07)

In grading these papers, Professor Ngozi did make a practice of including some unique comments for each student. This provided some personalization and helped students feel more connected to the material and the instructor. He also included an overall grade comment to introduce the more unique points of feedback for that particular student's paper. An “A” paper might include a statement like, “You hit it, Thank you very much. Have you considered...?” Whereas a “D” paper might have a comment such as, “You are clearly very passionate about this but...” Each of these comments led into more specific explanation of the issues or highlights he had observed in the paper.

2. Track changes

As mentioned earlier, Professor Ngozi tracked the high and low points of his course during each semester by jotting down notes on index cards. He then used these cards to improve his course the next time he taught it. This not only helped him revise his course from one semester to the next, but it also helped him design and develop his course site on the Blackboard Learning Management System.

Sometime in August, I'll sit down with all of my note cards from stuff that didn't work this semester and lay them all on the table and then go one by one changing each of those. That will probably take 8 hours. And that also includes – other

than just changing things that tanked – looking for better Web source for the classic reading from the 1880s or something like that. (Interview 2/15/07)

3. Single-stop Planning and Preparation

Professor Ngozi explained how the time to revise or “upgrade” his class was different now from the first time he converted course materials to put on the course site. Once an instructor has put the material on the site, it is simple for them to copy the content to a new course site each semester and make any necessary updates. After the initial time investment of 2-3 days, along with the use of other time-saving techniques, now allowed Professor Ngozi could upgrade his class in approximately 8 hours – something he preferred to do in a single sitting rather than spread out over time.

I just do it in one day. I’ll come in one day – I think if it’s not continuous you don’t think of the class start to finish, you think of it as piecemeal, so I’ll just do it in one day. (Interview 2/15/07)

4. Use a course management system as a depository for materials

Professor Ngozi was able to take advantage of online tools and resources for use by his students. He had a site on the college’s course management system, Blackboard, that he used only as a depository for students to retrieve copies of course handouts. Items like the syllabus, the grading rubric, the grading key, and class readings were located on his Blackboard site.

5. Routine activities used in course delivery

Professor Ngozi did not have as a specific goal to be effective in using time outside of teaching or work-related activities to find course-related resources. However,

during our interview, he noted that even at times not directly related to his course, he would have conversations or discussions with people about issues and resources that eventually became part of his course. In his daily routine, he might also come across an article, book, or website that would fit well into his course. These opportunistic times were not usually accounted for in his planning, preparation, or teaching schedule. His view was that his ability to take advantage of opportunities that were part of his daily routine broadened the pool from which he could draw resources and, in the long run, saved him time as he sought new materials for his course.

My wife is a teacher and half our dinner conversations are things that tanked or did well in class. We're just being a couple and not thinking I'm on the clock. So yeah, I guess, strictly speaking, if I had a recorder and a stop watch and I had to hit it for every time we talked about teaching that was relevant to my class at the time, it (the time commitment recorded) would probably be higher. (Interview 2/15/07)

Good Practices

This section presents some good practices Professor Ngozi had come to rely on to optimize the time he had available for teaching his course.

1. F2F instructors need support in the use of technology

A growing number of face-to-face instructors are using instructional technology tools to enhance their courses and provide greater flexibility and better accessibility to course materials and activities. The appropriate and efficient use of technology has the potential to be a significant time-saver for both faculty and students, but in order to achieve this,

adequate training is critical. Professor Ngozi was fortunate to work at an institution that offered a wide variety of training opportunities, and substantial support for putting course materials online -- to the extent that a trained staff member could take the instructor's content and develop the corresponding course website.

2. F2F instructors use technology for student benefit

Despite having technologically adept students at his university, Professor Ngozi had observed that the majority of his students were reluctant to use technology in their courses if they did not perceive it as having a specific purpose or benefit. For these students, the technology was not a priority students and provided no additional motivation. One reason for this trend, Ngozi believed, was that students had a low tolerance for technology glitches and shortcoming. Another factor appeared to be the high value they placed on their own time. Most of the students that took his class expressed more interest in face-to-face interaction and preferred to focus on that spend time with the instructor in person rather than having additional time online. Based on his students' comments, it became clear that they viewed technology as an asset if properly used. At the same time, the use of some instructional technologies can increase the time commitment for many instructors.

But then a lot of them complain about Centra and others, there were all sorts of Information Technology problems: slow lines, dial-up, small pipes. And so they're like, " You know, why do that when a cell phone will get you for five minutes?" (Interview 2/15/07)

3. F2F instructors need to build flexibility into their courses.

When asked if there were times when he took more than the anticipated time for an activity, Professor Ngozi responded, “You have got to be willing not to have in your head the fifteen-week semester” (Interview 2/15/07). He went on to point out that there are times when an opportunity to alter the course syllabus or schedule will present itself because something has come up unexpectedly that might enhance the learning experience for his students. One example was the day of September 11, 2001, when it soon became apparent that students were more interested in discussing what had happened in New York City than in preparing for their next test. Another example was the time when two of his students had their course reading materials confiscated by airport security because the title of the assigned book was “on their list.” Ngozi felt compelled to bring these topics into the class discussions because of the interest and motivation his students showed.

I ask them to bring in something and they’ll bring something in from the Wall Street Journal about people from the East dying their skin to be more white or something. And all of a sudden you have a week where you can talk about racial identity in ethics. It doesn’t really have anything to do with the syllabus but you can do a whole week on that. And sometimes that’s a terrible miss but – when it’s a hit... (Interview 2/15/07)

Another example of an instance when Professor Ngozi adapted to student needs was his process of altering a course activity or assignment that had gone awry. He described the timing and structure of his instructional activities as being based on several factors, including the collective level of understanding, background, and motivation of

students in the course. When he gives an assessment that shows that the majority of students either did not understand the content, had a limited grasp of the material, or misunderstood the points in an argument, he may need to revise the activity or come up with a new one in its place. He pointed out that avoiding action, especially in courses where each concept or competence builds on the next, can lead to student failures, drops, or withdrawals from a course.

One example he provided dealt with an activity that required his students to write two papers, one based on theory and one based on data. He spent only one class session reviewing what he called “very dense theory” and gave the students a small window of time to work through the material and write their papers. Due to the time limitations on the assignment, most of the students only used a small portion of the required material to write their papers and therefore turned in an incomplete assignment. Based on the number of failed papers, Professor Ngozi realized this activity had to be revised. Because he did not want to require students to purchase additional textbook for the course, he spent considerable time online finding other articles that would help present the material in a different way. He revised the syllabus to reflect the new material and new deadlines for the assignments. Although addressing this issue required him to devote some additional time to the course, in the current semester, it also afforded him the opportunity to plan a better structured activity, or to provide both options to his students in order to meet individualized needs.

(Based on feedback) From the first paper that didn’t go well. And now, you know, what I’ve created for them and for me is a couple of extra hours of reading

and discussion, probably a little more focused lecture per theorist instead of trying to cover all of it in one fell swoop. Dropping some of the readings, I'm probably going to have a lot more office hour visits because the grades were lower than I expected. So if I had to say what that created this week for extra work – 5 hours.

(Interview 2/15/07)

4. F2F instructors need to adapt to student needs

Professor Ngozi was keenly tuned into changes that had come about in student needs and perceptions of education as members of the millennial generation. He had seen the trends move from viewing college as an overall experience to viewing college as the means to an end, such as career. This evolution had led to seem more concerned about efficiency in the classroom and more interested in having targeted assignments and instructional strategies. They were keenly aware of any material, assignment, or activity that did not guide them toward their ultimate goal.

So I think when they said, "I won't use Centra. I won't go into the muddiest point (assignment) for free. I won't do the extra reading unless I'm sort of intrinsically interested." What we are tapping into, if this is true, is a different kind of student.

(Interview 2/15/07)

These kids are coming - the traditional students - and they're saying, "I want to get a good job. Where are we going to live?" So if you're giving me extra credit just for me, unless I've got the philosophy bug and I think the meaning is important, I'm not going to go there. I'm just not." (Interview 2/15/07)

Professor Ngozi also tried to adapt some of his course material to better match the characteristics of the students he had in his class during a particular semester. Although it would be difficult to adapt the course to each individual student, he might be able to easily accommodate some common characteristics of a certain group of students, such as those who preferred material that is more comprehensive, those who preferred more detail, and still others who wanted to review both types of information.

Summary

The university that employed Professor Ngozi had a single standard definition of teaching and learning. Providing this common ground for all faculty made it somewhat easier to focus teaching strategies on student needs. This in turn helped him achieve a certain level of teaching efficiency that helped foster student-centered learning. An activity that he had tested and that was well-targeted for a group of students, would likely require less review, fewer edits, and minimal follow-up meetings, in addition to garnering a smaller number of questions from a smaller set of confused students. This then allowed Professor Ngozi to budget more of the class time and office hours to complex, dense, or sensitive material that might take longer for the students to understand.

Although Professor Ngozi was keen on trying new things in the classroom, his students were much less interested in educational innovations. For example, Professor Ngozi saw that his students were still reluctant to use technology in their courses even though they were surrounded by communication technologies. In fact, many students were reluctant to do anything that the instructor could not explicitly tie in with course objectives or that he could clearly justify. In other words, students tended to be focused

more on the goal than on the experience. Almost in line with the premise of the Social Efficiency movement (Franklin, 1982) in education, these students wanted only what they had to have in order to progress through the curriculum and earn the degree they believed would lead to a job and help build their future.

And I don't know if this is just the perennial instructor's complaint, they don't want to hear stuff about the material anymore, they just want the credential. But if that is true – if its trending in that direction, then I can understand why, when they come into the class and you put all this stuff online, unless it is directed at the assignment and the grade – they are reluctant to participate.

When asked if he had ever thought about teaching online, Professor Ngozi calmly responded that he had. However, one of the things that had kept him from moving to an online format was the extra work and time he had heard it would take and the fact that he taught undergraduate students, who he believed were likely not to fare as well in an online class. He saw any venture in that area as a necessity more than a desire for him or his students and believed he was “safe” from having to teach online until it was demanded by the university in which he worked.

What we are tapping into is a different kind of student. I think what they are really saying is, “I’ll worry about my future.” And it trends with – it used to be 25% that say they came to college for a career and 75% said for the meaningful philosophy of life.

Now that’s switched”

PROFESSOR GIRARD'S CASE

Many times I've seen students where there are visual signals that I'm picking up in the class during the first part of the semester that this is the last place they want to be. You know, they're not tuning in. They look like they are half asleep. And then I'll get their journals and find out, whoa, wait a minute...they did get that.

Participant Background

In addition to the 25 years he had been teaching in a community college setting, Professor Girard had an additional seven-and-a-half years of experience teaching in early childhood education settings. He participated in this study as a face-to-face instructor to share his experience with time commitments in the classroom. Not unlike the other instructors interviewed, Professor Girard's introduction to teaching carried little guidance or curriculum support. He described this process as being "very open-ended and somewhat intimidating" and, though challenging, that it also provided him with the freedom to experiment with what worked for students and to learn a great deal about what did not work. (Questionnaire)

When starting out as an adjunct instructor, Professor Girard had to quickly shift gears when his department chair left on a year-long sabbatical, leaving Professor Girard appointed interim department chair in his place. Professor Girard went from teaching one course to teaching several courses, developing curriculum for new courses, and managing all the administrative work of the department. Although the department had no formal support structure in place, he was able to get some support from other faculty and

department chairs. Because he had no formal training in education, he picked up most of the theory through professional development workshops or his own exploration.

After all the years he had been working, he felt that his time commitment to teaching had remained more than a full-time work week, just as it had been when he was first given the full-time position of department chair. He periodically kept a log of the time he devoted to teaching each semester and averaged 55 to 60 hours per week, with a teaching load of four classes plus one course release to account for the administrative work of the department.

This periodic tracking of his time commitment likely helped Professor Girard make a fairly accurate prediction of the perceived amount of time he spent each week on the sample course he selected for this study. For the five instructional components of his course, the activities he listed in the initial questionnaire and their corresponding time commitments added up to nine hours and forty minutes. With a full teaching load of 5 classes (including one course release for administrative duties), he dedicated approximately 50 hours a week to teaching, with administrative duties potentially requiring an additional five to ten hours beyond the course release.

Table 12: Professor Girard's Questionnaire Response to Instructional Components and Time

Prepare for Class	<ul style="list-style-type: none"> • Review course session outline to identify and prepare materials • Create new materials, overhead slides, handouts, etc. if changes or additions are appropriate • Blackboard additions or changes 	2:30 hours
Present Information	<ul style="list-style-type: none"> • Lecture with support from overhead slides outlining key points • Learning activity requiring student participation and application of skills through speaking, writing, or group processing and reporting. • Occasionally - short educational videos • Introduction to library resources and information literacy. 	3 hours
Practice and Guidance	<ul style="list-style-type: none"> • Classroom activities provide practice in almost every session. • Provide materials online through the Blackboard site to allow students to access information that they might have missed during a session or when they were absent. • Two weekly entries in a personal learning journal where students reflect on some aspect of learning • Review those journals every three weeks and give "coaching" responses as appropriate. • Office hours whenever I notice a trend that is negatively affecting their performance. 	1:10 hours
Testing and Assessment*	<ul style="list-style-type: none"> • personal learning journal • three exams • 4-5 page paper • extended self-change project and presentation • self-assessment surveys on topics such as goal-setting, time management, reading, note taking, writing, and test preparation. 	1:30 hours
Provide Feedback	<ul style="list-style-type: none"> • Spent an extensive amount of time responding to what students have done in their learning activities during and between class sessions. • Indicated positive results and make "coaching" type comments where there was a need for further attention to be paid or action taken. 	1:30 hours
Total perceived hours per week		9:40 hours

In the questionnaire, Professor Girard observed that it had taken him several years before he felt he had reached a basic level of success in estimating the amount of time committed to the courses he was teaching, even when the work represents a revision of a course he has taught many times before.

The level of work to develop a new course is immense in my experience. I generally look for other relevant materials that might have been used in other settings or institutions, choose a textbook that looks appropriate, and then begin the arduous task of designing each session based on the objectives that I want to cover in the course. I find that this process continues long after teaching the course for the first time. (Questionnaire)

Instructional Strategies

During his interview, Professor Girard highlighted several instructional issues that affect the time it takes him to teach. Though he participated in this study as a classroom-based instructor, three of the four strategies he referenced relate to the use of technology tools.

1. Limitations of technology.

Professor Girard avoided extensive use of instructional technologies because he felt this would save him time in the classroom. His experience had been more often than not, the technical glitches that often accompanied the process of making Power Point presentations in class took up a great deal of valuable class time.

...and the number of times I've tried using technology, then on average probably more times than not there was a problem. It wasn't smooth. It wasn't consistent.

It didn't work or it didn't work well, and that's frustrating, and... Wastes time, yeah. I hate not being able to support them and getting it to work. (Interview 5/4/07)

An additional factor arose for Professor Girard when appropriate equipment and network connections were not readily available in a classroom. He explained that the time it took to reserve the media carts, pick them up, set them up, and then return them also added extra time to the process, so that he had chosen to spend time on other class needs. He also felt that the connection between the presenter and students is diminished when the lights are turned off and everyone is focused on the screen. For these reasons, Professor Girard tended to prefer using low-tech instructional tools such as overhead projectors.

I use overhead slides in each class session (since my handwriting is considered cruel and inhuman treatment to students). I use the Blackboard site for students to access all overhead slides, handouts, and course assignments each week. I use email to respond to students who contact me that way. (Questionnaire)

2. Use CMS as a depository for course materials.

The use of a course management system (CMS) like Blackboard had been a great help to Professor Girard. After he first began using Blackboard, it took some time before he was able to make the commitment to transfer all his course materials to a Blackboard course site. However, he indicated that he knew that the outcome would be well worth the effort required.

So during the fall semester it was massive, you know, as I was trying to translate all the things I have on slides and handouts and things and scan or do whatever you need to do to get them available on the Blackboard and then learning how to manipulate the different things so they could get to them at a certain time and so forth. So that was a lot of extra work during the fall. During the spring then I had to go in and just realign everything well, but I didn't have to do all the other things. (Interview 5/4/07)

With the small amount of experience he had using online tools, rather than complete all or most of the work prior to the start of the semester, Professor Girard worked on his site week-by-week, and this also made the process take more time.

Each subsequent time he had taught the course, the preparation process had become a little easier and less time consuming. Other than the standard changes and updates he needed to need to make the syllabus with each new offering, there were few other maintenance issues he ran into with his Blackboard site. A pleasant side-effect of this change was that it freed up his briefcase because he no longer needed to carry copies of the various handouts for students who lost them or did not come to class.

I would be carrying around in my bag, you know, three or four sessions worth of handouts for those that didn't make it because then they'll come in a week or two later and say, "Did you get that?" "I never got that." So I was hauling a lot around and still haul some around. But it made it much easier for me to say, "Well, you know, go into Blackboard and check that out and see the assignment that I made. (Interview 5/4/07)

Professor Girard expressed that Blackboard served to simplify his class and provide a time-saving mechanism for himself and for his students. While he still did not take advantage of all the features available to him and his students, he expressed satisfaction with the status quo. He focused on the use of Blackboard as a repository for materials and information that students could access at their leisure, including their grades. He had toyed with the idea of using the discussion forums but, as a novice in the field, he was somewhat skeptical of whether the benefit would be worth the investment of time he might need to spend moderating the exchanges. Despite this, Professor Girard made clear that the use of Blackboard to date had been a very positive experience.

3. Student Journals

It is often difficult to gauge a student's level of understanding without an assessment. Professor Girard had found the use of student journals to be a key element in helping him determine the needs of his students. Some tout the advantage of having students physically present so that an instructor can read their body language. However, Professor Girard noted that body language can be deceptive at times. He shared the example of a student whose body language seemed to depict boredom, indifference, and lack of motivation. Without any other tools to determine whether his assumption was valid, Professor Girard might have spent additional time trying to motivate this student, review the material, or finding other ways to present the information. However, through the student's journal entries, the instructor realized the student clearly understood the theories and concepts being presented. This affirmation of the student's comprehension helped Professor Girard move on with the next part of the course.

So that it – say introspective or introverted students who don't give out a lot of signals or those that are sending signals that would – might lead you to think they were not at all paying attention. The journal is the best method I know to kind of get a feeling beyond just that picture that I get in class, the behaviors that I get in class. (Interview 5/4/07)

4. Advance organizer through online access in Blackboard

Another time-saving activity that he had not expected was the students' use of the materials he posted on his Blackboard site as advance organizers during his classroom lectures. Students seemed to be coming to class better prepared and, because they had downloaded the lecture points and outlines from Blackboard at their convenience, they were better able to listen. Students were no longer hurriedly taking notes and asking questions that interrupted and slowed the lecture.

But I noticed they stopped taking notes and I was kind of a little concerned about that. They had already figured out "I don't need to write all this stuff." It's all there [in Blackboard], they just print it out. So they would be there. They knew in advance what the issues were, so they were getting their advance organizer and they could listen and pay attention and if they had to write something down they could. (Interview 5/4/07)

Good Practices

From professor Girard's perspective, the good practices for classroom instruction included using interaction in course, maintaining student contact, and making optimal use of support services for faculty.

1. Interaction is critical

Professor Girard's expressed that interaction was one of the most critical factors of his course, so he shied away from situations that might prevent or block interaction between the instructor and students taking the course. Interaction not only served to help students work with the materials being presented, but it also served to motivate students to participate and be successful in the course.

2. Maintaining student contact

Another key factor in Professor Girard's list of good practices in the classroom was the ability to maintain contact with students. He maintained that the apathetic attitude he observed in some students, was carried over from their high school days when many students did only enough to get by. He referred to this as the minimalist approach which he observed directly affects the way some students behave in the college classroom. Faculty may need to redirect some aspects of the instructional experience to help students acquire the basic listening and learning skills they need to succeed in college.

3. Making the most of support services and resources for faculty

At the time of the interview, a number of support sources and resources were available to faculty at Professor Girard's institution. Throughout his career, he had constantly sought out these opportunities to help him maintain his teaching skills and develop new ones. Because teaching strategies, techniques, and activities change with new developments and new research results in education, he found he was able to stay abreast through workshops, books and articles, and the use of online sources.

I spend a good number of hours each week reading materials from online sources (teaching and learning lists, etc.), relevant magazine articles, and other textbook materials that are related to learning and teaching. Professional development is another area that I spend time with on a regular basis each semester.

(Questionnaire)

Summary

Professor Girard had shifted somewhat toward adding technology tools to his courses, but still preferred the element of face-to-face interaction with his students. He was skeptical of some of the online courses currently available to students. He expressed concern at the poor design and implementation, he had observed which made these courses more like correspondence courses than anything else.

So there is probably some energy eventually for trying to do something like that.

I must confess that some of the other courses that I've heard about that faculty put online are not real impressive. And I had one student in class the other day who was talking about the class. I said, "How's that?" She said, "Oh, it's an online class." I said, "Well, how is that? What do you do?" "Well, she gives us a study guide and questions and then we watch the videos and take the tests." And that was the online course. I mean, it was like the old print-based thing where, you know, here's the text, read it, go take the test and give me the scores and then I'll teach you. I mean, that's not an online course. That's just an excuse ...

(Interview 5/4/07)

He also expressed the belief that the nature of the courses he taught lent themselves only to a classroom-based format because they required a great deal of interaction and personal connections between the students and the faculty member.

So you can do an online listserv and you can have conversations and discussion groups and things, but it is still a very different environment, and I'm not yet convinced that we can get as much across that way. (Interview 5/4/07)

He reported that he was likely to stay in the classroom but continued to explore ways in which technology could enhance his teaching or improve his use of time to optimize the instructional activities he could offer his students.

Professor Girard also expressed his concern for the difference in faculty load between online versus in-person courses and the level and amount of professional development available to faculty. He observed these were critical issues to explore in determining the time commitments of faculty members.

Some of the struggles I have are with maintaining student contact, I mean, getting students to continue coming and get them to read the textbook. So I haven't yet figured out how quite to get beyond that, but I recognize they are juggling all sorts of things in their lives and I hear about many of them. But the most difficult part is just seeing the ones that drift away or disappear and don't finish the semester.

PROFESSOR OLIVIA'S CASE

In your first year of teaching in a classroom it's a romance. And, it is everything. If you you're going to be a teacher worth your salt you have to do that. I mean, you can't do that for your whole career but at the very beginning you have to be totally absorbed in figuring it out. Because you're figuring out how to make this work, how you teach, what the students are like, etc. And, I laugh a little bit...

Participant Background

Professor Olivia started her career as a high school and middle school history teacher in the late 1980s. In the questionnaire she completed, she explained that her biggest disadvantage in that arena at the time was her age. She noted that at 22, she had little classroom experience before she began, and since the student teaching certification at the time only carried a half-day requirement, she lacked many of the practical skills that were needed in the classroom.

My undergraduate education experience did not really emphasize practical training in actual classrooms as an undergraduate, so my first year teaching was more about my learning than my students (Questionnaire).

Three years later she started graduate school and also began teaching American History Survey courses at a local state university. As Professor Olivia worked through the challenges of classroom management and student motivation, her primary support and motivation came from one of her neighbors, who had been teaching high school classes for nearly 10 years. She also felt fortunate that she was teaching in a small school with

small classes. This allowed her to try new methods, experiment, and slowly but steadily improve her classroom teaching skills.

Now, as a 20-year veteran teacher, Professor Olivia has had the opportunity to teach face-to-face classes, distance learning and hybrid classes, small classes, and even large lecture classes with up to 300 students. Her first experience using online course management resources came in 2001, when she began supplementing her face-to-face course with an online component. At that time, she also began using email to facilitate communication with students in her larger courses or connect with students who were intimidated to meet in person.

By 2005, Professor Olivia's course had been adapted and developed using the Blackboard® course management system, and she was teaching it completely online. Her move to online teaching was accelerated by Professor Olivia's need to be closer and more accessible to her special-needs son. The other motivating factor for this evolution was the way in which the use of technology and the Internet could enhance the experience for her students.

While historians think technology is a ballpoint pen, the Internet is uniquely geared to historians. It provides us with all this wealth of information and research is at our fingertips. (Interview 4/30/07)

Professor Olivia explained that one of her first objectives when teaching was to provide clear directions and organization for students taking her course online. However, she soon found that figuring out a way to connect with students through the Internet was a complicated task. She found it more difficult than she had expected because the visual

cues she had become accustomed to in the classroom did not carry over into the online environment.

In a face-to-face class, you can see almost immediately when your explanation of a concept or assignment does not register from the looks on faces. Teachers are very good at reading body language, and sometimes you can adjust to re-teach on the spot. In the virtual worlds, you often don't know that you "messed up" until after the assignment has been submitted and 75% of your class has submitted it wrong! It is a humbling experience (Questionnaire).

Professor Olivia also struggled with the unease of her own peers expressed about all matters of distance learning development and delivery. For most of her colleagues, history was not a subject that lent itself to an online delivery format, so little, if any, support or encouragement was given. She described this lack of support and understanding as a hindrance to the beginning of her online teaching experience. She felt fortunate, however, that her efforts had been recognized by her administration, and she had received assistance in the form of training from her institution's faculty and technology resource centers.

At the time of the interview, Professor Olivia was pleased with how far her experiences and interest in technology had taken her. She has been able to play a key role in her department as a mentor, a role model, an advocate, a technologist, and an innovator. She reported that she is recognized by her peers as being on the forefront of online learning.

I get a lot of professional validation and people accept that I am the expert here on this. And, so within my department, I really am the education guru. The department has a lot of scholars but who are also interested in being good teachers (Interview 4/30/07).

Her years of experience enabled her to develop a variety of instructional strategies that help her manage her course more efficiently and her time more effectively. She has also devised her own set of good practices, which she uses as standards for the successful delivery of an online course and as a mechanism to help optimize the learning that takes place in her virtual classroom.

Instructional Strategies

On the participant questionnaire, Professor Olivia listed the various activities that she generally employs in her teaching and estimated the amount of time each of these takes during a given week. According to her questionnaire, the activities listed for each of 5 categories total 9:30 hours per week for one course. For entries in which she had listed a time range, the calculation considered the average number of hours. For example, in an entry where she noted spending 2-3 hours per week on the activities, the average time of 2:30 hours per week was used in the calculation of time commitment.

Professor Olivia noted about the differences in the time needed when she teaches a new course versus a course she has already developed and taught. The two hours she listed for developing materials to present or provide information to students was 10 times greater when she was teaching a course for the first time.

The major difference is in the amount of time needed to create the syllabus and other support documents for a new class versus a class I have already been teaching (Questionnaire).

Table 13 lists the instructional activities carried out by Professor Olivia and the related time commitment for each activity.

Table 13: Professor Olivia’s Questionnaire Response to Instructional Components and Time

Prepare for Class	<ul style="list-style-type: none"> Read through the assigned secondary and primary source readings. 	1:30 hours
Present Information	<ul style="list-style-type: none"> Review and revision of discussion overview in an html format that replaces my traditional lecture and includes images, graphs, and links to online resources <p><i>(Note: In a new course, this is the most time consuming part of the preparation averaging 15-20 hours)</i></p>	2 hours
Practice and Guidance	<ul style="list-style-type: none"> Traditional study guide of discussion questions for 8 lessons Practice online multiple choice study quizzes 	2:30 hours
Testing and Assessment*	<ul style="list-style-type: none"> Develop exams (essay and multiple choice), 3 each semester 	1 hour
Provide Feedback	<ul style="list-style-type: none"> Email Class Announcements Automated responses to study quizzes 	2:30 hours
Total perceived hours per week		9:30 hours

Professor Olivia carried out certain instructional activities on specific days or weeks during the semester. These activities were not necessarily spread evenly across all 15 weeks. For the purpose of this study, the equivalent weekly commitment was the sum total of hours for a category such as testing and assessment, practice and guidance, etc.

During the follow-up interview, Professor Olivia provided further details about the instructional strategies she used for her online classes. These strategies are given in the following sections:

1. Maximize use of discussion forums

When Professor Olivia felt that the response to questions students asked by email would benefit all students, she moved the question and her response to the discussion forum. This also helped reduce the number of emails she received and as well as the number she needed to respond to -- students could simply go to the forum to see whether their question had already been asked and addressed by the instructor. To avoid having responses distributed across a variety of locations, making it difficult for students to find answers, the discussion forum became an ideal way to consolidate and simplify responses to students.

We used Blackboard for years and years and the fact that we embed all these kinds of questions means you have got to go to one page, go into another page and then you have to add a thread. I know that four steps is nothing to some, but for some of these students it's just not fast enough. It's all about fast (Interview 4/30/07).

Professor Olivia preferred to have her discussion forum include responses to both procedural and content questions because she felt this both provided a more relaxed environment for students and better resembled the environment a student might find in a classroom. She also allowed other students to respond to questions and often referred back to what had been posted on the forum. Her goal in doing this was to help students

change their habits from asking a question that others had already asked to checking the forum first.

2. Timely response to Email

Professor Olivia explained that in almost all cases, she responds to student email as soon as she receives the message, with the exception of weekends or when students ask complicated questions that require more thought.

If they set me up with a very complicated question then I think, “Okay, I need to think about a response.” And, if I need to think about it, I may send a response like, “Hey, give me a little bit of time here. I got your message and I’ll get back to you.” (Interview 4/30/07)

She had developed the habit of waiting before responding when a student said something or wrote in a way that would make her upset or angry. She wanted time for reflection and careful wordsmithing. Over time she had found that immediate responses to student email improved the overall experience for them. However, she did include a statement or disclaimer in her Syllabus that gave her a window of 72 hours to respond to email or discussion board questions.

3. Ensure course is detailed and organized

Professor Olivia designed her online course with what she called a hard-core science approach. It was detailed and structured. The course provided a great deal of specific instructions and information about the schedule, assignments, tests, and activities, which was also a great help to her students with disabilities.

I think that comes back to my entire philosophy of education, which is based on the idea that everybody has special needs. Everybody has unique ways of learning (Interview 4/30/07).

For this reason, she generally had received fewer questions from students who readily found answers on the course Blackboard site and little if any adaptations had to be made to her course for students with special needs.

Professor Olivia's syllabus included detailed information about student expectations, tips for success, ideas for preparing to learn, a software checklist, and her own Instructor Guarantees about communication.

I will read my email and/or discussion board daily during the first six weeks of the semester, but will not necessarily post messages or send out mail daily (Olivia's Syllabus, Fall 2006).

Another component of her syllabus was an alert for students who are new to online learning.

If you are uncomfortable with doing work online then you should seriously consider dropping this course. This course will require that you spend a substantial amount of time online retrieving information and completing assignments (Olivia's Syllabus, Fall 2006).

4. Set limits on time devoted to course

Professor Olivia included a good deal of structure in her course for the benefit of students. In addition, she had developed a strict schedule for her own work and personal time. Because she taught online and worked from home, she found it to be critical to set

aside specific times to support her class. On regular weekdays, she divided her work time into a morning period and a late afternoon period. She explained that her earlier work period was scheduled from 7:00 am to 11:00 am while the latter period was scheduled from 3:00 – 7:00 pm, with the hours between 11:00 am and 3:00 pm reserved as personal time. Her students were more likely to contact her during the early morning hours or later in the day after most businesses ended the workday at 5:00 pm. Splitting her time like this not only allowed her to meet her students' needs but also helped her be more disciplined in the use of her time tending to the “virtual” classroom.

I also give myself freedom to stop at 11:00 am unless there's something really pressing, really pushing me. Like I don't have a test ready and I have to give it tomorrow. You know, I'll stop at 11:00 am, and then you have to have that discipline to because when I first started and I was first developing, I was such a workaholic. I would go from 7:00 am to 7:00 pm. And do that for four days straight and be dead (tired)... (Interview 4/30/07).

Professor Olivia stated she believed that teaching online could also become a time-consuming effort for teachers who did not have well-designed courses. And even with well-designed courses, teachers must overcome a number of other challenges, such as technology proficiency, selecting and implementing appropriate instructional strategies, and maintaining a personal connection with students.

5. Start Small

Professor Olivia attributed another part of her success to the way she had started the process of teaching online. By starting small, she had been able to test individual

activities and resources for her course and learn about the technologies available to her from her institution.

Because I started small, I mean, the first thing I did wasn't trying to do an online class. It was...let me see if I can get students to do research online, let me see if I can get them to make Web pages. And, so, I did that. I taught my class like I always teach it but instead of giving a traditional writing assignment, I said to my students, "Hey, let's do a web class" (Interview 4/30/07).

After implementing this activity in her face-to-face classes, Professor Olivia found that her students were more motivated and enjoyed technology-based assignments such as WebQuests. A WebQuests is an "inquiry-oriented activity in which some or all of the information that learners interact with comes from resources on the internet" (Dodge, 1997). Subsequently, her department chair asked her to attend a demonstration of the course management system, Blackboard®. She was so impressed by the capabilities and ease of use of this technology tool that she soon began to move more and more of her course content and activities to this platform, eventually developing a complete online class.

I tell people [colleagues] when they start, we are going to incorporate technology. Do one thing, then do two things, then do three things. And, then, it is the journey, not the destination. And if you try to jump the fence and go all the way to where I am right now, then you will go screaming (Interview 4/30/07)

6. Single Preparation for multiple classes

Another time-saving technique used by Professor Olivia was to consolidate preparation for multiple offerings of the same course, or even different courses. By employing strategies to keep deadlines the same for all classes as well as using the same instructional activities and even the same syllabus edited for course specific information such as the textbooks and readings, she designed her courses to serve students in multiple settings.

I put them all on the same course site, I don't differentiate them or between them. If you looked at my class, very little would be different. So I try to have all the same deadlines. So that even though I'm teaching two survey classes, two different subjects, the certain sort of mechanics of it all fall on the same day (Interview 4/30/07).

7. Help students define learning styles

Early in the semester, Professor Olivia usually was able to determine which students were independent and which ones needed more direct contact or support. The number of questions and types of questions helped guide this differentiation that allowed her to funnel her time commitments for student help more appropriately.

Most of the people who post either content or a procedure question in my class, I would classify them as extremely field dependent and people who need to make contact in order for information to be validated. I think my most successful ones are those field independent ones. Those that can function so, without a support system and a very minimal contact with your professor (Interview 4/30/07).

By encouraging students to define learning styles, Professor Olivia hoped students could better determine and eliminate the barriers to their process of learning to be successful in a college course. She had, at times, used learning style tests or personality tests as bonus activities towards this end.

Then I have two articles about learning styles getting them to understand how they learn so that, I've just got so many questions of students over the years either email or face-to-face, saying, "I don't know what I'm doing wrong. How can I do this better? Can you give me some tips?..." (Interview 4/30/07).

Good Practices

Professor Olivia had developed the good practices she applied to her courses over many years of teaching experience. These practices apply not only to online courses but to the face-to face class as well, and could help any instructor establish an ongoing plan for improving their courses over time.

1. Encourage Group Collaboration

Professor Olivia's teaching methods are based on constructivism and the benefits of collaboration, not only between students but also between faculty colleagues. She described students as being increasingly socially dependent and socially motivated, so had decided it made sense to introduce more collaboration in the classroom. She described a time when she watched her young son and his friends play a video game together and attempt to help each other try to win the game. She had found that this same attitude could carry over into her classroom.

They have this because of video games. And I'm not knocking video games but because of the video games, they have this do-over attitude. Do I get a mulligan? Do I get to do it again? They also have a sense of more cooperation and a less competitive attitude (Interview 4/30/07).

She also addressed the traditional mindset that collaboration is construed as cheating and that the current generation of college students has a different view. She encouraged her students to create groups and meet face-to-face if possible. Collaboration had become a more pervasive way for everyone to learn from each other by providing additional resources and building a community of learners.

2. Design with special needs in mind

Professor Olivia explained that the extensive organization and detailed instructions she used in her course benefited not only students with special needs but also traditional students.

I purposely create my class for people with learning disabilities and who want to have organized structure (Interview 4/30/07)

Professor Olivia saw that students who needed more help could easily find extensive information and instructions, whereas those who did not could proceed with class assignments. She had also found that her special needs students were more open and likely to ask for help in her online courses. She hypothesized that may be because the anxiety or shyness they might feel in a traditional, face-to-face class is easier to overcome in an online class where they experience a certain level of perceived anonymity.

3. Survey students on their approaches to the course

Professor Olivia's attention to time commitments extended to her students. She had developed a survey to find out how much time students thought they spent on coursework and how this might relate to their struggles or success in her courses.

In the past, the question was really open-ended like, "What could you have done different?" and 90% of the people say, "I should have spent more time preparing for the material," "I should have started reading earlier," sort of thing (Interview 4/30/07).

This type of survey or data-gathering strategy served the students and herself as the faculty member. For the students, it was a way to become aware of and address problems they had self-identified early on in the course. It was also valuable to her as the instructor as a diagnostic for how clear, relevant, and useful the information she included in her course actually was to students, as well as a way for students to take on the personal responsibility of addressing their own shortcomings in the course.

4. Work with peers to improve your course

Because of her background in online instruction and her experience using a variety of instructional technologies, Professor Olivia had worked with other faculty members to help them establish their online courses or add online components to traditional courses. She found this aspect of collaboration as important with her peers as it was among her students. She explained this could be seen as a time-saving mechanism as well because she and her fellow faculty members could learn from each other, rather

than each having to experiment with every aspect of course design and development. She shared an example of a colleague with whom she had worked:

I have this really good friend that has developed two classes, an advanced class and a graduate class. We have this sort of cooperative thing, creating this class to help prepare graduate assistants. But I'm also trying to help her move into more constructivist teaching, trying to get her out of that old model. And it's just been absolutely wonderful. Every semester she improves a little bit. (Interview 4/30/07)

5. *Update course regularly*

Updating her course on a regular basis exempted Professor Olivia from having to make broad or extensive revisions to her courses. At the end of each semester, she surveyed her courses, looked through the lessons and tests, and tried to determine what types of changes or modifications needed to be made. Doing this at the end of the semester kept these details fresh in her mind.

In the midst of all this other stuff, I'm going to be going, okay, you know that they really don't understand Alexander Hamilton's grand design, how am I going to redo this? How am I going to represent this to them so that it starts to make more sense? Because, you know, I have fifty percent of the people that just didn't get it. And, so I try to do it topically that way. And then I learn more about it. And so, for years and years I went so fast with the War of 1812 I could give you whiplash because as a survey teacher you have to play on your strengths. (Interview 4/30/07)

Summary

Professor Olivia was aware that the time commitment for a classroom-based course and an online course were more similar than different. She noted that a new experience would always require more time for adjustment, like her introduction to teaching online or her novice days in the classroom.

Not only was I figuring out preparation, but I was figuring out kids, students, and I was young. And, so, I had no life experience and I was very argumentative, which is a good thing because then you always see the possibility. (Interview 4/30/07)

She also noted that she sought a balance between the constant drive to improve her course and the limits she had established for dedicating time to her work.

I don't know if it is my perfectionism or what, but I really have got to stop chasing books and I have to stop reinventing the wheel, but, I do that a lot of the time. I think that sometimes that eats up more time than it really needs to. So it's kind of borderline. Yeah, that's a good thing to revise, but at a certain point you have to stop doing that, you have to stop tinkering with stuff. (Interview 4/30/07)

The distance learning experience had been rewarding professionally and a critical aspect of her personal life. Professor Olivia had the flexibility to make decisions regarding where to spend her time so she could balance her work life and her family life. It was clear that her early novice teaching experiences in a traditional classroom with high school students and online teaching college-level courses were of great benefit to her.

She joked that, “hell would be being a first year teacher for eternity” (Interview 4/30/07) and we both agreed that would be a fortunate impossibility.

In the past the question is really open-ended like “What could you have done differently?” and 90% of the people say, “I should have spent more time preparing for the material. I should have started reading earlier.” That is just the nature of college students, procrastination, procrastination, procrastination.

PROFESSORS SAYLOR AND TOBIAS' CASE

With in-class I'm better able to reflect in practice. Online I have to reflect on practice because it is after the fact. In class I can actually get a sense of what's working and what is not working, you know, dull eyes and that kind of no response. I'm always looking at ways of enhancing. – Professor Tobias

Participant Background

This case provided a comparison of two faculty members from the same institution, teaching the same course during the same semester, but in two distinct formats. Professor Tobias had taught adult students for 18 years. He began teaching as an adjunct instructor and as his interest in teaching grew, he decided to pursue a doctorate in adult education. When interviewed, he was a full-time faculty member at a private university and participated in this study as a classroom-based instructor. Professor Saylor had 28 years of teaching experience and a PhD in human resource development. For this study he recorded his experiences teaching an online version of the same course being taught by Professor Tobias. Both professors had experience in classroom and face-to-face instruction, they both had PhDs in education, and they both relished the opportunity to reflect on their teaching practices to find ways of improving the learning environment for their students.

Professor Tobias felt that teaching just came naturally to him and this inherent drive prompted him to pursue his doctorate in adult education. He had already received some training in the use of instructional technologies as well as in the pedagogy

associated with online tools. His years of experience, coupled with his doctoral studies and love of teaching adult students, molded his teaching style.

I made the decision to make my avocation my vocation and went into the doctorate program. So I started learning a lot about what we covered and how we were taught. I picked up on my experiences too about what I liked and what I didn't like. I'm realizing that I have my learning preferences. I am a social constructivist so I just love having class interactions because then we learn from each other (Tobias Interview 5/2/07).

Professor Saylor started teaching online during the development of a large-scale, state-mandated training program that he helped implement. He explained the differences between the design of that program years ago, mostly self-paced with text-based materials, and the online classes he teaches today, which are highly interactive and have a structured schedule. He was also faced with the demands of a target student population that worked odd shifts and needed greater flexibility in format and course delivery, so the move towards online courses was both internally and professionally motivated.

In his most recent role, Professor Saylor was a technology proponent and served as chair of a campus technology committee that focused on planning and supporting the use of instructional technologies and distance learning. He also had training in the use of new technologies that had enabled him to enhance his online course with a learning management system, podcasts, and recorded video lectures. When Professor Saylor first began his online course conversion projects, he was provided with release time. Eventually the compensation model for course development was changed to a grant or

stipend award model and faculty at his institution began to voluntarily take on the responsibility of developing materials and converting courses to an online format. At this point, and the institution began to establish parameters for course loads and class limits to support the development and delivery of online courses.

While past experiences helped these faculty members refine their teaching methods for both in-class and online instruction, each has continued to favor one method over the other. Professor Tobias candidly stated he preferred teaching in a classroom over teaching online because he was able get to know his students better.

I get to know you as a person in addition to as a student. I get to know how you think, I get to know how you act. I can see kind of what you like and what you don't like. I can also get a judgment from the classroom as to what activities seem to be more enjoyable. Each class is different, different chemistry, different mix of learning purposes (Tobias Interview 5/2/07).

He explained that the classroom experience allowed him to better reflect on his teaching practices and therefore supported ongoing improvement of a course while he was teaching it. He credited the interactivity of his face-to-face courses with providing a vehicle for helping him determine what worked and what didn't work in the classroom.

Like Professor Tobias, Professor Saylor also liked to reflect while teaching. During his interview explained how he had done this in his online course. He used tools such as weekly quizzes to help him gauge whether students understood the material and were moving in the right direction. He also checked and followed online discussions on a

daily basis and provided comments or ideas as needed to guide and keep the discussions on track.

The main difference, I may see something that, maybe a discussion question that didn't really work very well or one that did. So I would keep those out that didn't work well. The quizzes will include things that came up in the discussion, so they'll change a little bit; but they'll be some of the same questions, if the questions seem to work (Saylor Interview, 2/20/07).

For the study, Professors Saylor and Tobias selected the same course and taught during the same semester. During the initial participant questionnaire, each listed the instructional activities they expected to employ and estimated the number of hours they perceived it would take for each part of the course delivery process, starting with course preparation and ending with assessment.

For Professor Tobias who taught face-to-face, the perceived number of hours was 9, and for Professor Saylor's online version, the perceived number of hours was more than double, at 22:30. Professor Saylor noted that if his course was being taught for the first time, he would need additional preparation time. As shown in Tables 14 as a summary and in listed in Table 15, Professor Saylor reports almost twice as many activities to teach his online course as Professor Tobias thought he would use for his face-to-face version. In particular, though some of the activities Professor Saylor listed were unique to the online aspect of his course, such as discussion threads, posting materials, and recording lectures, the other activities he listed are applicable to any course in any format. While Professor Tobias listed six activities for his face-to-face class,

Professor Saylor had listed almost twice as many that he expected he would carry out in a face-to-face class he might be teaching.

Table 14: Tobias and Saylor Questionnaire Comparison

	Tobias F2F	Saylor Online
Unique to Online	0	7
Unique to Classroom	2	0
Serves both formats	4	11
TOTAL Activities	6	18
Number of Hours	9:00	22:30
Hours per Activity	1:30	1:15

The data collected via the initial questionnaires were based on the faculty members' perceptions so by leaving the question open-ended, each instructor may have given a more precise assessment of their activities and related time. Because Professor Saylor listed three times as many activities, this helps explain why the online course was perceived as taking many more hours than the face-to-face version. Through calculating the time spent per activity listed, the average difference per activity was only 0:15 minutes more for each activity in the face-to-face course.

Table 15: Professor Saylor and Professor Tobias Questionnaire Response to Instructional Components and Time

	Tobias - F2F	F2F Hours	Saylor - Online	Online Hours
Prepare for Class	<ul style="list-style-type: none"> Review Book Review Course Guide 	2:30 hours	<ul style="list-style-type: none"> Develop Syllabus Review Assignments Add discussion questions <i>Work with support staff on any technical issues</i> Read old and new materials Identify appropriate materials 	5 hours
Present Information	<ul style="list-style-type: none"> Sketch out some outline notes 	Included above	<ul style="list-style-type: none"> <i>Record presentations (if new)</i> <i>Post current materials</i> 	2:30 hour
Practice and Guidance	<ul style="list-style-type: none"> In-class activities 	3 contact hours	<ul style="list-style-type: none"> <i>Read and respond to discussion threads</i> 	8 hours
Testing and Assessment*	<ul style="list-style-type: none"> Assignments for each class 	3:30 hours	<ul style="list-style-type: none"> Review test questions Write questions <i>Post tests</i> Grade questions <i>Grade discussion threads</i> 	5 hours
Provide Feedback	<ul style="list-style-type: none"> Per evaluation of assignment 	Included above	<ul style="list-style-type: none"> Make comments on written work using Microsoft ® Word track changes. <i>Respond to questions in discussion threads</i> Respond to emails. 	2 hours
		9 <i>hours per week</i>		22:30 <i>hours per week</i>

Professor Saylor agreed that teaching online forces instructors to rethink a course and plan in much greater detail than when teaching face-to-face. Professor Tobias said that online courses have helped him “discover other forms of assignments that could be transferrable to an in-class situation” (Tobias Questionnaire). For both instructors, teaching online offers benefits and insight into their own teaching practices and had opened avenues for new student-centered teaching strategies.

When Professors Saylor and Tobias teach on-campus courses, they both use a Learning Management System. They reported this tool helps them save time and provides a centralized location for them to post information for students, such as grades, articles, and important links. Table 16 shows the time-related strategies each instructor referenced during our interviews. The strategies for each format are listed as they relate to particular instructional activities. In most cases both instructors referenced a strategy that related to a particular instructional activity and some strategies were actually the same such as reflection on teaching to adapt courses, using Blackboard, and student influence on revisions.

Table 16: Time Saving Instructional Strategies Used (Tobias Interview 5/2/07, Saylor Interview 2/20/07) – Part I

Activities: Topics	Tobias - classroom	Saylor - online
Preparation	I try to prepare prior to the class. I might want to do that a day or two beforehand. But I will do a quick review prior to the class just to familiarize myself with the material. The more thorough analysis of the material and structuring how I want to present it or (develop) course activity is done usually before the day of the class.	The first time takes a lot more time, because if you are going to record a lecture or something you have to do that in advance. They put them on the streaming server. First time teaching takes a lot more time, depending on the technology you use.
Lectures	A small percentage of my course is mini lecture. Because sometimes you have to provide some foundational knowledge and insight to build from or work from.	I have a sort of bias against lectures and find other ways in discussion or small group work or critical thinking that involves the student more.
Adapting Courses	For either online or in class, I'm always looking at ways of enhancing. In class I'd be able to sense what's working, what's not working. You know, dull eyes and that kind of no response.	I may see something, maybe a discussion question that didn't work very well or one that did. So I would keep those out or keep in the ones that worked.
Student Influence on Revisions	I look at those. I take them seriously. And I appreciate the fact that students look at it from what could be improved but also provide you feedback as to what worked well for them.	I certainly pay attention to student feedback.
Schedule	I'm not working on a class every day of the week 'cause I'm juggling a number of classes and also some other things in addition to that.	I check every day, you know, the discussion questions and will interject my ideas sometimes, depending on how it's going. If someone is saying something erroneous I'll try to correct that.
Grades	I don't post grades in my class. For the face-to-face class because I'm giving them back their assignments so they have the grade. Of course I have the grade book for the online.	You know, the grade book I use, and the students don't bug you about, "What's my grade?"

Table 16: Time Saving Instructional Strategies Used (Tobias Interview 5/2/07, Saylor Interview 2/20/07) – Part II

Activities: Topics	Tobias - classroom	Saylor - online
Group Discussions	Usually on discussion board I'll allow them to just kinda' go with it. I have two pages of guidelines and it explains what's expected of them. I try to stay in an outlying role because I'm dealing with adults and I want to see where it's going.	Depending on the size of the class, I will divide them into subgroups. One thing I found is if you get too many in a group, the thread of the discussion gets confusing.
Most Time Consuming Activities	The in-class instruction. The in-class facilitation. It's the class interaction, facilitating class or making changes that are needed as things come up.	Trying to figure out what activities might be used to bring out what the objectives are. I mean it is always easy to prepare a lecture and tell them, but I like to make sure they get it.
Structure	I attempt to try to enhance the clarification and transparency. It's more in terms of making sure that the explanation and the details of the activities are clarified.	One of the things I found with online learning is it needs to be structured so that they do something every week. Otherwise they'll wait until the end.
Student Questions	I have a policy in my classes and online also that if they email me with anything I will get back with them within 24 hours. At the same they have the responsibility to email me. They have to get back to me within 24 hours.	There's one of the older faculty here that tipped me to have a discussion board for general kind of questions. Coffee shop – so I try to encourage people to ask questions there rather than email me.
Assessment and Testing	I teach adults so I don't give tests or quizzes. That is a lower level of the cognitive domain. I use more interactive means such as group projects.	I generally give a short little quiz every week to make sure they're on top of the readings. So most of the time I don't really use an end of course exam.
LMS/Blackboard	So, I use Blackboard for all my classes.	I use Blackboard for all the classes.

Online and Face-to-Face Comparisons

Professors Saylor and Tobias have both taught online and face-to-face courses and, while each participated in this study with a focus on a specific delivery format, they both shared their thoughts on the differences between teaching online and face-to-face. Table 17 shows specific comments from the two faculty participants. To help understand how comments like these can be misinterpreted and lead to misunderstandings about delivery formats, I added the opposing related statement that might be assumed. These appear in red italicized lettering.

Table 17: Reporting Opinions about Teaching Online and Face-to-face

Online	Classroom/F2F
Online is not as easy	<i>(therefore F2F teaching is easier than online)</i>
Online takes more time	<i>(therefore F2F teaching takes less time than teaching online)</i>
When online you are interacting with students more than just one time.	<i>(therefore when F2F you are interacting with students only once (while in class))</i>
Learning activities different online than what is available in class	<i>(therefore learning activities are different for face-to-face classes than what is used online)</i>
Online you can post articles in Blackboard	For F2F courses you copy and bind articles.
Online needs to be structures so they do something every week otherwise they will procrastinate.	<i>(therefore F2F courses are more flexible and can be adapted as needed during the teaching period)</i>
Attempt to enhance syllabus for clarification and transparency when teaching online.	<i>(therefore greater flexibility in syllabus design and content for F2F – can be less detailed and changed more easily)</i>
Use of discussion board	<i>(therefore discussions held only in the classroom)</i>
Online makes it easier to organize by putting materials on Web or LMS	More difficult to organize stacks of paper for distribution in a F2F class.
When teaching online, students benefit from added time you invest in preparation up front	<i>(therefore when teaching F2F, students benefit from more spontaneous activities)</i>
Students need to be prepared and versed in use of technology used for course delivery.	<i>(therefore unless BB/LMS employed, students do not need to learn how to use additional technologies)</i>
Online faculty need support for technology use	<i>(therefore Classroom faculty do not need support for technology use)</i>

These comments that focused on a specific delivery method, mostly online, but could apply to both types of delivery modes. For example, an instructor could interact with students a single time in both F2F and online courses. Or, if both are using a LMS or other tools for interaction, each class could have the instructor and students interacting on more than one occasion. Also, by nature, face-to-face courses have a structure that includes weekly meetings so the idea that for an online course an instructor needs to have weekly activities only mirrors what happens with the classroom-based design.

One significant difference is the management of course materials and ways to provide that content to students. Organizing paper copies of materials may not necessarily be less time consuming than organizing materials to post online, but the end result of having materials linked from a Website in lieu of them being stored in files in a drawer is a vast time savings in course revision and in distribution of materials to students.

The lines between the use of classroom technology and distance learning technology are also becoming increasingly blurred. More classroom instructors are taking advantage of online tools such as course management systems, email, podcasts, and more. This means that both faculty and students need to have some basic technology skills or at least the willingness to learn how to use them. Technology support is also a critical factor to both types of end users.

Summary

This comparison of the courses taught by Professor Tobias and Professor Saylor highlights the similarities and differences of the two delivery formats we are exploring.

It also provides a window into teaching activities used by both types of instructors and highlights the fact that time differences correlate to the number of instructional activities used by an instructor. In general, the more activities a faculty member uses, the greater the time that will be required to carry them out. In order to develop parallel instructional activities for both formats, instructors need to focus on more progressive instructional design methods and steer away from traditional activities, that is, those generally perceived as being only for the classroom and the activities we perceive can only be used in an online course. Growing levels of experience move faculty members closer and closer to the optimum use of their time in the virtual and physical classroom. As Professor Saylor stated during our interview, “The first time you teach it, it definitely takes a whole bunch more time. And then it is generally even.” (Saylor Interview 2/20/07)

I'm worried about some because they are adult students coming back to school and this is the first class they've taken in several years. And so, you try to comfort them and they're worried about the technology and all that stuff. There is a certain amount of hand-holding. – Professor Saylor

Part II : Cross-Case Comparison

In comparing the seven cases represented in this study, I looked at the differences in data for online and classroom-based faculty. I also compared logged versus perceived hours, that is the number of hours a faculty member actually logged during the week they were journaling and the number of hours they had reported during the preliminary questionnaire. Tables summarize the interpretive, perceived, and brief explanatory comments to discuss the results, as well as any notes regarding calculating the hours spent.

COMPARISON OF ACTIVITIES FROM INITIAL QUESTIONNAIRE DATA

In this section I explore the instructional activities participants reported on the initial questionnaire as being part of their personal process during each teaching phase. During the analysis I reviewed each statement in order to identify key words that would provide the basis for cross-case comparison. In some instances I had to do some more detailed examination and also chose to include follow-up questions during the interviews in order to zero in on the appropriate phase for each activity. Once each instructional activity had been assigned to the proper teaching phase, I grouped together activities that had similar underlying intentions or goals. For example, “read materials to prepare,” “read articles and online journals,” and “review documents and resources” would be considered to be similar types of activities when they were being conducted during the “Preparation Phase” of the teaching process. The generic equivalents or consolidated phrases are listed as the labels of the rows of Tables 18-22, and what is depicted are how face-to-face and online instructors enacted these instructional activities.

Table 18: Reported Activities on Questionnaire Entries by Delivery Format - Prepare for Class

	Face-to-Face/Classroom	Online
Prepare for Class	Read	
	<ul style="list-style-type: none"> • Reading new publications • Read main article 	<ul style="list-style-type: none"> • Read materials • Read through the assigned secondary and primary source readings.
	Review / Revise	
	<ul style="list-style-type: none"> • Review course session outline to identify and prepare materials • Watching new material • Content Management System (CMS) additions or changes 	<ul style="list-style-type: none"> • Basic overview of current materials with modest editing • Revise materials
	Research	
	<ul style="list-style-type: none"> • Look for case study in the news or on campus to illustrate concepts. 	<ul style="list-style-type: none"> • Research internet for updated information
Develop/Prepare		
<ul style="list-style-type: none"> • Prepare documents • Prepare lecture • Prepare questions for Student Response System (SRS) • Create new materials, overhead slides, handouts, etc. if changes or additions are appropriate • Outline arguments in articles • Locate and cue media 	<ul style="list-style-type: none"> • Create discussion questions 	

Table 18 shows that both classroom and online instructors reported at least one activity in each of the four emergent categories including read, review/revise, research, and develop/prepare. In the ‘develop/prepare’ category we also notice that the face-to-face instructors report more activities than those that were teaching online.

Table 19: Reported Activities on Questionnaire Entries by Delivery Format - Present Information

Present Information	Face-to-Face/Classroom	Online
	Lecture	
	<ul style="list-style-type: none"> • Lecture • Mini-lecture: 5-15 minute lecture interrupted by student readings of text and case study and commentary by me and by them • Lecture with support from overhead slides outlining key points • Introduction to library resources and information literacy. • Deliver Student Response System presentation 	<ul style="list-style-type: none"> • Review and revision of discussion overview in an html format that replaces my traditional lecture and includes images, graphs, and links to online resources • Materials already prepared • Post links to recorded live campus session • Post power points
Media		
	<ul style="list-style-type: none"> • Video or recorded audio • Occasionally - short educational videos 	
Discussions		
	<ul style="list-style-type: none"> • Questions and discussions • Inductively ask questions that elicit their responses that mirror readings followed by readings of text • Or discussion of case study followed by above • Learning activity requiring student participation and application of skills through speaking, writing, or group processing and reporting. 	<ul style="list-style-type: none"> • Post discussion questions • Monitor and contribute to discussion board process

In Table 19 we begin to see a difference between what is reported by classroom versus online instructors. Although faculty using both delivery methods included activities

under the emergent categories *lecture* and *instruction*, the *media* category only the classroom-based faculty reported activities.

Table 20: Reported Activities on Questionnaire Entries by Delivery Format - Practice and Guidance

	Face-to-Face/Classroom	Online
	Student Questions	
Practice and Guidance	<ul style="list-style-type: none"> • Before and after class student questions • Answering emails • Answering phone calls 	<ul style="list-style-type: none"> • Online live sessions • Post to the discussion board • Answer emails
	Activities/Assignments	
	<ul style="list-style-type: none"> • Two weekly entries in a personal learning journal where students reflect on some aspect of learning. I review those journals every three weeks and give “coaching” responses as appropriate. 	<ul style="list-style-type: none"> • Assignments • Grade papers, make comments students need to address and revise accordingly • Practice online multiple choice study quizzes
	Other	
	<ul style="list-style-type: none"> • Classroom activities provide practice in almost every session. 	
	<ul style="list-style-type: none"> • Provide materials online through the Blackboard site to allow students to access information that they might have missed during a session or when they were absent. 	
<ul style="list-style-type: none"> • Office hours whenever I notice a trend that is negatively affecting their performance. 		
		Traditional study guide of discussion questions for 8 lessons

Table 21: eported Activities on Questionnaire Entries by Delivery Format - Testing and Assessment

	Face-to-Face/Classroom	Online
Testing and Assessment	General Assignments	
	<ul style="list-style-type: none"> • Student Response System question responses • Monthly homework assignment • Presentations (prepared outside of class) • personal learning journal • extended self-change project and presentation • self-assessment surveys on topics such as goal-setting, time management, reading, note taking, writing, and test preparation. 	None
	Papers	
	<ul style="list-style-type: none"> • 4-5 page paper • Group papers (prepared outside of class) • Individual papers (prepared outside of class) 	None
Exams, Tests and Quizzes		
<ul style="list-style-type: none"> • three exams • Short in-class quizzes on the syllabus policies and argument styles 	<ul style="list-style-type: none"> • Setting up online tests / final (occurs once a semester) • Quizzes – automatically graded • Develop the test content • Test process (12-16 hours/week) • Develop exams (essay and multiple choice), 3 each semester. 	

Table 22: Reported Activities on Questionnaire Entries by Delivery Format - Provide Feedback

	Face-to-Face/Classroom	Online
Provide Feedback	Grading and Comments	
	<ul style="list-style-type: none"> • Grading • Papers • I spend an extensive amount of time responding to what students have done in their learning activities during and between class sessions. • I indicate positive results and make “coaching” type comments where I see a need for further attention to be paid or action taken. 	<ul style="list-style-type: none"> • Review assignments • Grade assignments • Automated responses to study quizzes
	Email Feedback	
	<ul style="list-style-type: none"> • Email 	<ul style="list-style-type: none"> • Email
	QandA Discussion	
	<ul style="list-style-type: none"> • During class discussion 	<ul style="list-style-type: none"> • Discussion question responses
	Other	
	<ul style="list-style-type: none"> • Before and after class student questions • Presentations • Mini-lecture 	<ul style="list-style-type: none"> • Class Announcements • Group activity

TIME LOG

In this section I explore the amount of time related to course specific activities that participants logged in their journals during a selected week in the semester. Each participating faculty member completed an online form each day for a period of seven days. All times were converted to minutes and then divided by 60 to obtain the number of hours spent per week.

Other characteristics such as subject area, type of institution, and years of experience were collected from the initial questionnaire , which had been administered prior to the week in which journals were kept. In addition, part of the initial questionnaire asked faculty to list the instructional activities they would normally undertake in a given week while teaching and the perceived time commitment associated with each of the activities. Table 29 compares the original perceived times and the actual times logged in the journals.

Table 23 compares faculty time commitments broken down by teaching method. The table lists each participant's pseudonym, teaching format, gender, years of experience teaching in higher education, area of specialization, type of institution, minutes logged in journal for the selected week, and the calculated equivalent in hours. The table is divided into two sections to ease comparison between the mean hours per week spent by online faculty to the mean hours per week spent by face-to-face or classroom-based instructors. The range in the times shows the difference between the lowest and highest times reported for that group.

Table 23: Comparison of Faculty Time Commitment by Teaching Method from Journal Entries

Professor	Format	Gender	Higher Ed Experience	Subject Area	Institution Type	Minutes/Week	Hrs/Wk	Range
Lee	F2F	Male	18 years	Psychology	Community College	585	9:45	2:35
Ngozi	F2F	Male	18 years	Ethics	Private University	635	10:35	
Girard	F2F	Male	25 years	Education	Community College	545	9:05	
Tobias	F2F	Male	18 years	Criminal Justice	Private University	480	8:00	
Total Minutes and hours						2245	37.25	
F2F Mean							9:21	
Rita	Online	Female	28 years	English	Community College	570	9:30	6:55
Suleima	Online	Female	5 years	Health admin.	Public University	330	5:30	
Olivia	Online	Female	16 years	History	Public University	844	14:04	
Saylor	Online	Male	28 years	Criminal Justice	Private University	745	12:25	
Total Minutes and hours						2489	41:29	
Online Mean							10:22	

The find the total hours each teaching format group spent in one week, I found the sum of the total minutes for each group and divided by 60 minutes. To find the mean for each group, this number was then divided by 4, the number of participants in each group. Results show that online faculty spent about one hour more per week on their classes than did the face-to-face instructors. In comparing the time ranges for each group, there is a

two hour and thirty minute range for the face-to-face instructors, while the time range for the online instructors is nearly seven hours.

To get a sense of the significance of these numbers, I compared the results from this study to those reported by Cavanaugh (2005). In a study of time spent in teaching online versus face-to-face, Cavanaugh (2005) found that one instructor spent 93 hours more on an online course than on his equivalent classroom-based course. The results are summarized in Table 24.

Table 24: Time Spent in Hours, Attributed Per Student (Cavanaugh, 2005)

Time Spent (Hrs.) Attributed Per Student		
Activity	Online	In-Class
Preparation	4	0
Teaching	68	0
Office Hours	14	2
Final Tasks	2	0
Total	88	2
Per Student	6.77	.71

Cavanaugh ignored several factors in his study. First, this was a case study of a single course taught in two formats. The study used different instructional activities as the basis for comparison. Table 24 attributes no time to course preparation, teaching, or final tasks for the in-classroom course. This implies that the classroom-based course required no preparation or instruction. For example, if the instructor in Cavanaugh’s study had met with his students in-class during a typical 15-week semester, those 45 contact hours should be listed as teaching time. The instructor must have expended some preparation time in generating a syllabus, as well as on grading. If these elements were

truly absent, then this raises questions about the quality of the in-class version of this course.

Although the instructor in Cavanaugh's (2005) attempted to make the two courses as similar as possible, the online course had 10 quizzes, a midterm, and a final, whereas the classroom course had two tests and a final. That alone provided the instructor with an additional 9 assessments to grade for online students. This is particularly significant because several of the instructors in the current study explained that grading was one of the most time-consuming aspects of teaching, even though others have reported communication to be the most time-consuming part of teaching an online course, (Lazarus, 2003).

Returning to Table 23 and the current study, the 61 minute difference between the online faculty and the classroom faculty mean time spent on the course may be attributed to technology experience and proficiency or the time factored in for initial conversion of materials to an online format. The range may be a more significant indicator in this case because the time range for the classroom participants was relatively small at 2.35 hours, whereas the time range for the online faculty was nearly 7 hours. One of the online instructors spent as much as 12:25 hours in a given week while another spent only 5.5 hours, or the lowest total average for any of the instructors. This instructor also had the fewest years of teaching experience. However, the data in this study provide no basis for investigating the relationship between those two variables. Certainly the type of technology used as well as the instructional strategies would affect these numbers considerably, as might the timing during the semester when the journal was kept.

Table 25: Comparison of Faculty Time Commitment by Gender from Journal Entries

Professor	Format	Gender	Higher Ed Experience	Subject Area	Institution Type	Minutes/Week	Hrs/Wk	Range
Rita	Online	Female	28 years	English	Community College	570	9:30	8:34
Suleima	Online	Female	5 years	Health admin.	Public University	330	5:30	
Olivia	Online	Female	16 years	History	Public University	844	14:04	
Total Minutes and Hours						1744	29:04	
Female Mean						581	9:41	
Lee	F2F	Male	18 years	Psychology	Community College	585	9:45	4:25
Ngozi	F2F	Male	18 years	Ethics	Private University	635	10:35	
Girard	F2F	Male	25 years	Education	Community College	545	9:05	
Tobias	F2F	Male	18 years	Criminal Justice	Private University	480	8:00	
Saylor	Online	Male	28 years	Criminal Justice	Private University	745	12:25	
Total Minutes and Hours						2990	49:50	
Male Mean						598	9:58	

Table 25 contains the same participant information listed in Table 23 but grouped by gender. The table is divided to allow easy comparison of the mean hours per week spent by male faculty and the mean hours per week spent by female faculty. Results indicated that the male participants spent seventeen minutes more on average than did their female counterparts, not an important difference in time. The time range for the female participants was almost twice that of the male faculty members, which is

attributed to the fact that the lowest score of 5:30 hours and the highest score of 14:04 hours were both in the group of female faculty members.

Table 26: Comparison of Faculty Time Commitment by Experience

Professor	Format	Gender	Higher Ed Experience	Subject Area	Institution Type	Minutes/Week	Hrs/Wk
Suleima	Online	Female	5 years	Health admin.	Public University	330	5:30
Total Minutes and Hours 1-10 Years Mean						330	5:30
Olivia	Online	Female	16 years	History	Public University	844	14:04
Lee	F2F	Male	18 years	Psychology	Community College	585	9:45
Ngozi	F2F	Male	18 years	Ethics	Private University	635	10:35
Tobias	F2F	Male	18 years	Criminal Justice	Private University	480	8:00
Total Minutes and Hours						2544	42:24
11-20 Years Mean							10:36
Girard	F2F	Male	25 years	Education	Community College	545	9:05
Rita	Online	Female	28 years	English	Community College	570	9:30
Saylor	Online	Male	28 years	Criminal Justice	Private University	745	12:25
Total Minutes and Hours						1860	31:00
21-30 Years Mean							10:20

Table 26 rearranges the data for this study based on years of teaching experience. Three groups emerged. The leaser experienced group had one person with 5 years of experience. The second group included faculty, with 11 to 20 years of experience, while

the last group included those individuals who had 21-30 years of experience. There was only a 16-minute difference between means for the 11-20 year group and the 21-30 year group. The person with the least experience had spent approximately 5 fewer hours than either of the other two groups, but with only one person in the group, it is possible that this is an anomaly.

Table 27: Comparison of Faculty Time Commitment by ascending Subject Area and Hours per Week

Professor	Format	Gender	HE Experience	Subject Area	Institution Type	Minutes/Week	Hrs/Wk	Difference
Suleima	Online	Female	5 years	Health Administration	Public University	330	5:30	
Tobias	F2F	Male	18 years	Criminal Justice	Private University	480	8:00	2:30 hours
Girard	F2F	Male	25 years	Education	Community College	545	9:05	1:05 hours
Rita	Online	Female	28 years	English	Community College	570	9:30	0:25 hours
Lee	F2F	Male	18 years	Psychology	Community College	585	9:45	0:15 hours
Ngozi	F2F	Male	18 years	Ethics	Private University	635	10:35	0:50 hours
Saylor	Online	Male	28 years	Criminal Justice	Private University	745	12:25	1:50 hours
Olivia	Online	Female	16 years	History	Public University	844	14:04	1:39 hours
Total Minutes and Hours						4734	78:54	
Overall Mean						592	9:52	

Table 27 looks at the time commitment of faculty by subject area sorted by hours per week. To determine if subject area and related instructional strategies had an effect on the participants' reported time, we would have required additional information

about assignments, activities and the number of students in the course. There is insufficient information in this table and gathered from other data to establish any relationship between subject area and time.

The overall mean for the eight participating faculty is 9:52 hours per week. An average of nearly 10 hours per week devoted to a single course would mean that a full course load for an instructor would be four college courses. This table also shows that the least amount of time spent in one week for a participant was 5:30 hours in an online Health Administration course, while the most amount of time spent was 14:04 hours for an online History course. The range for this group of faculty is approximately 8:30 hours and the median is 9:38 hours. This table also provides the difference in hours between each participant and the participant with the next higher number of hours. It is interesting to note that the difference between participants at the ends of the range is greater than the difference between participants in the center.

Table 28: Comparison of Faculty Time Commitment by Institution Type

Professor	Format	Gender	Higher Ed Experience	Subject Area	Institution Type	Minutes Week	Hrs/ Wk
Rita	Online	Female	28 years	English	Community College	570	9:30
Lee	F2F	Male	18 years	Psychology	Community College	585	9:45
Girard	F2F	Male	25 years	Education	Community College	545	9:05
Total Minutes and Hours						1700	
Community College Mean						567	9:27
Ngozi	F2F	Male	18 years	Ethics	Private University	635	10:35
Tobias	F2F	Male	18 years	Criminal Justice	Private University	480	8:00
Saylor	Online	Male	28 years	Criminal Justice	Private University	745	12:25
Total Minutes and Hours						1860	
Private University Mean						620	10:20
Suleima	Online	Female	5 years	Health admin.	Public University	330	5:30
Olivia	Online	Female	16 years	History	Public University	844	14:04
Total Minutes and Hours						1175	19:35
Public University Mean						588	9:48

Table 28 presents the data grouped by type of institution. The three types of institutions represented were Community College, Private University, and Public University.

The faculty participants from a private universities averaged 32 minutes more per week than those from public universities, while those from public universities generally spent 21 more minutes on a course per week than those in a community college. The time spent by faculty from the private universities was 53 minutes greater per week than in a community college.

Traditionally the cost of tuition for private education is higher than the cost of tuition at a public university, and community colleges maintain the lowest higher education costs. Although I did not gather information about the variable of cost, the relationships between time spent and generally accepted cost differences is interesting, and would require further study.

Table 29: Comparison of Faculty Time Commitment Perceived and Actual

Professor	Format	Higher Ed Experience	Institution Type	Actual (Journal) Hours/Wk	Perceived (Questionnaire) Hours/Wk	Change	
Lee	F2F	18 years	Community College	9:45	20:00	-10:15	Less
Saylor	Online	28 years	Private University	12:25	22:30	-10:00	Less
Suleima	Online	5 years	Public University	5:30	12:30	-7:00	Less
Ngozi	F2F	18 years	Private University	10:35	13:00	-2:25	Less
Tobias	F2F	18 years	Private University	8:00	9:00	-1:00	Less
Girard	F2F	25 years	Community College	9:05	9:40	-0:35	Less
Rita	Online	28 years	Community College	9:30	8:00	1:30	More
Olivia	Online	16 years	Public University	14:04	9:30	4:34	More
Hours per week average				9:52	13:00		

Table 28 compares information collected from faculty participants during the initial questionnaire and from their journals. On the initial questionnaire, faculty members were asked to list the instructional activities and corresponding time for each activity during a week of teaching. The journals were designed to collect a list of actual activities and time spent on those activities by participating faculty members during a particular week during the semester. In Table 29, times listed as “perceived” are based on the questionnaire input and times listed as “actual” are based on the journal entries.

Six out of the eight faculty members logged less time in their journals than the amount of time they had perceived they would spend. The differences ranged from 0:35 minutes more perceived than actual to over 10 hours more perceived than actual. The remaining two faculty members logged in more time in their journals than the amount of time they perceived was being spent on a weekly basis. The times ranged from one hour and thirty minutes more up to four hours and four minutes more actual time versus perceived time.

It is noteworthy that more than 50% of faculty members perceived their time commitments would be greater than the actual hours they logged. However, it is common to read that faculty report online courses taking more time to teach than face-to-face courses or than expected. The differences in perceived versus actual time would need further examination to explain and a should include a review of the actual strategies used.

INSTRUCTIONAL STRATEGIES

Table 30 summarizes time saving teaching strategies described by the faculty members in this study during the interviews. The table is split into two columns to divide the strategies mentioned by the online instructors and those mentioned by the face-to-face instructors. The strategies are further split into general categories in the teaching process, including course preparation, course management, communication, testing and assessment, and evaluation or course improvement.

As I grouped these strategies into the five categories, it was interesting to note that the online instructors tended to provide more detail about strategies that fell under preparation and communication, whereas the face-to-face instructors listed more items under course management and course improvement. Face-to-face instructors made no communication references, whereas online instructors made no course evaluation or improvement references. The testing and assessment category included the same number of items for both delivery formats. For both formats, instructors mentioned that addressing students' learning styles improved grading efficiency.

Course preparation and communication are two of the most critical challenges of teaching online because of the play a key role in clarifying the expectations of instructors for students. References to the extensive amount of time it takes to teach online are often based on either adapting a course to the online format or preparing the course for delivery. It is also widely remarked by novice online instructors or those that have never taught online that communication in an online course takes much more time because faculty need to respond to a large volume of email messages and monitor lengthy discussion forums. These challenges help explain why the online instructors in this study would have focused on time-saving strategies in these categories. The lack of online faculty responses on the course evaluation and improvement category may be because the online faculty members had focused on the previous two categories. This may also be thanks to the wealth of course history that is documented in an online course. With most, if not all interactions, activities, materials, and resources listed, linked, or included in the online course, instructors have ample information to help them revise and improve their

courses. In a face-to-face class, it is less likely that an instructor would have this information easily available unless they specifically planned for it as did the faculty members in this study.

Online faculty are usually encouraged to conduct the bulk of their course preparation before the course begins, so much of the course management is already thought through and built into the course materials. Face-to-face instructors are growing more involved with technology and the use of course management systems for their traditional classrooms. This may prompt more of the face-to-face instructors to discover that online course management strategies can help save time for their context as well.

Table 30: Instructional Strategies Identified by Faculty to Optimize Time, Categorized by Teaching Method and Categories of Course Components (Part 1)

Face-to-Face Instructors	Online Instructors
Course Preparation	
Single-stop Planning and Preparation (for online and F2F)	Ensure course is detailed and organized
Map out activities or set an agenda with time key	Use single preparations for multiple courses
	Conduct planning and preparation up-front Repurpose materials for classroom and online use
	Use single preparation for multiple classes
	Course scheduling benefits <ul style="list-style-type: none"> – teach online and face-to-face versions during same semester – teach like formats on same day to minimize travel
	Start small
Course Management	
Maximize the benefit or routine activities used in course delivery	Set limits on time devoted to course
Use a course management system as a depository for materials	Optimize use of Office Hours to complete additional work when not meeting with students
Establish an advanced organizer through online access in BB	
Recognized the limitations of technology and potential for technology glitches – be prepared	
Be a ringmaster and employ good facilitation skills	
Communication	
	Maximize use of discussion forums
	Ensure timely response to Email
	Responding to email as it is received.
	Electronic feedback templates for multiple users
	Establish an efficient style of time management – continuous online connection for prompt student response
	Use discussion groups as a database to post student responses

Table 30: Instructional Strategies Identified by Faculty to Optimize Time, Categorized by Teaching Method and Categories of Course Components (Part II)

Face-to-Face Instructors	Online Instructors
Testing and Assessment	
Find time-saving alternatives – Improve grading efficiency such as moving from essay questions to group activity, etc.	Help students define learning styles for self-help strategies
Learning is variable address multiple learning styles	Grading papers online – electronic grading avoids hard copies and increases grading efficiency
Streamline grading by use a Grading Key - grade notations	Include multimedia - Use visual elements to address learning styles
Evaluation/Improvement	
Review past performance on student assessments	
Continuously track changes or adaptations you make to your course during the semester for ongoing improvement	
Use student journal to get feedback and adapt course as necessary	
Offer “test correction” opportunities with feedback from student on learning practices or techniques	

GOOD PRACTICES

During this study, faculty participants discussed some of the good practices they have employed in their teaching over time. Good practices refer to processes or methods, validated and accepted as key ways to generate optimum results. In the educational community, there has been a growing need by institutions to maintain and improve distance education courses for students. To this end, a number of organizations have adopted guidelines that serve as good practices in higher education, including the American Council on Education, Western Commission for Higher Education, and the Accrediting commission for Community, the Junior Colleges Western Association of

Schools and Colleges, (Berg, 2001) and the Southern Association of Colleges and Schools.

Table 31 presents the references faculty members made about good practices during my interviews with them. Seven out of twelve of these references overlapped for the online and face-to-face instructors. Although the remaining references for best practices were shared only by instructors in one of the two formats, all of the ideas could be employed in either format. Two examples are clarifying expectations and encouraging group collaboration, as discussed below.

O'Brien, Millis, and Cohen (2008) described how the overall learner-centered approach to writing a syllabus includes *clarifying expectations* for students. This was mentioned by one of the online faculty in this study, though not by the face-to-face instructors. However, this practice would apply to both delivery formats, though in an online course it would be particularly beneficial in helping students decide whether to stay in the course or drop. This is especially true if the instructor's expectations did not match their own learning goals and level of motivation to be successful. This good practice is also a critical component of instructional design and parallels course outcomes and objectives that are the starting point of well-developed and successful instruction.

Encouraging group collaboration is a practice that crosses both formats. Research shows that students report greater satisfaction and retain information longer when working in small collaborative groups (Davis, 1993). The classroom version can be adapted to an online environment through the use of discussion forums, work groups, listserves, wikis, or other communication and social networking tools.

The instructional activities designed around students working with their peers and also the use of student surveys to get input on their preferred approaches to a course, are both great ways of getting feedback to improve course design and are not limited to online applicability.

Table 31: Comparison of Good Practices Used by Faculty, Interview Data Categorized by Teaching Format

Common Themes	Face-to-Face	Online
Updating courses regularly	Search for new material	Keep it interesting, update course regularly
Using technology tools to manager course	Use online tools or LMS, use technology for student benefit	Use current technology tools
Use multimedia	Include multimedia	Take advantage of multimedia resources
Take advantage of support services and resources	Support in the use of technology, make the most of support services and resources for faculty	Support for the use of technology
Adapt course to student needs – make them learner centered.	Adapt to student needs	Design with special needs in mind
Include interactivity	Interaction is critical	Provide interaction
Build community with Students	Maintaining student contact	Get to know your students
<i>Opposing Views</i>		
<i>Course structure flexible or constant</i>	Have flexible calendar/build flexibility to take advantage of opportunities	Maintain structure in your course
<i>Themes Unique to Format</i>		
		Clarify expectations
		Work with peers to improve your course
		Survey students on their approaches to the course
		Encourage group collaboration between students

SUMMARY

This chapter presented the interpretive findings of my study for the perceived time commitments provided on the initial Questionnaire, and the actual hours logged in on the weekly journals. The chapter concludes with data from the in-person interviews about the teaching strategies and good practices faculty members employed.

CHAPTER 5: DISCUSSION AND IMPLICATIONS

Time management is a foolish idea -- you don't manage time. Have you ever mismanaged five minutes and come up with six? Or four-and-a-half? Time just is. Our actions are what we manage, during time. (Allen D. , 2008)

In this chapter, I discuss the major findings and the implications they have for practice and future research. The first section discusses the main findings in light of the literature. The next section explores implications of the study in terms of research and practice. In closing, the last section includes suggestions for further research.

DISCUSSION

This study was designed to identify differences and similarities in faculty experiences teaching online and in traditional classrooms, and in particular to explore the time commitment of faculty in each delivery format. Findings in this study support previous research outcomes from Sieber (2005), that instructors' efficiency improves with experience, and Tomei (2006), who found that online courses took approximately 1:15 hours of additional time per week.

The similarities and differences between classroom-based courses and online courses, the concept of time, good practices, and faculty experience are discussed in this chapter to address the research questions. The research questions that directed this study were:

1. What differences and similarities are there in faculty experiences between teaching an online course and teaching a traditional classroom-based course?

2. What differences and similarities are there in the *time commitment* made by classroom faculty and online faculty?
3. What differences and similarities are there in the *instructional activities* used by classroom faculty and online faculty?
4. How does the *concept of time* differ for faculty teaching online and in a traditional classroom?
5. What *teaching strategies* seem most effective for online courses and for traditional courses?
6. Has *experience* changed the way faculty members teach? If so, how?

Similarities between online and traditional classroom-based courses

The most prominent issue for *all* faculty participants in this study was the lack of support during their early teaching experience. When asked in the initial questionnaire to write about the highlights of their first teaching job with respect to challenges, hindrances, support mechanisms and benefits, respondents made reference to the minimal preparation and training they had received. Participant comments relating to preparation for teaching are listed in Table 32.

Table 32: Participant comments on preparation for teaching – Participant Questionnaires and Interviews 2006-2007.

Category	Comment
Challenge:	I was afraid I didn't know the material and was too young to teach. I was given no prep at all (short of two afternoons) about how to teach. I thought teaching meant lecturing, since that was what I had experienced in college.
Hindrance:	In that situation I was not given much guidance or curriculum support, so it was a very open-ended and somewhat intimidating challenge.
Hindrance:	Young grad students are also not given time or support by many research faculty about how to teach.
Hindrance:	The lack of classroom experience prior to my first year put me behind the curve. I earned my teaching certificate in the last year where student teaching was a half day requirement. My undergraduate education experience did not really emphasize practical training in actual classrooms as an undergraduate so my first year teaching was more about my learning than my students.
Support mechanism:	My next door neighbor taught 11 th and 12 th grade English and she had been teaching for about 10 years. Her experiences and support were the primary reason I didn't pick up and run at Christmas time!
Support mechanism:	Mostly friends going through the same thing I was.
Benefits:	Learning how to do it, from scratch. As a trial by fire. My first class may have felt the pain but I got to test things pretty quickly on my own because I had little other support.

With the reported lack of preparation, most faculty members in this study stated the support they received during their novice years of teaching came from peers or mentors. Similarly, Fish and Gill (2009) found that only 30% of faculty respondents in their study felt they had received enough training to teach online and that they were “learning to teach online from other faculty, using trial-and-error or other informal methods” (p. 6), much like the respondents in this study.

The need for timely and appropriate training continues to be a critical issue in higher education for both classroom and online instructors. Although each of the online faculty in this study reported an availability of staff and facilities to support online course development and technology implementation, the pedagogical considerations were often overlooked. Training materials for faculty should clearly explain the similarities between online and classroom-based courses so development and delivery of such courses does not seem like such an arduous task.

Training should also clarify and simplify the way faculty select instructional strategies and technology tools to maximize student learning within the constraint of time. Table 15 repeated below as Table 33, compares the activities used by Professors Saylor and Tobias from case number 7 of this study. The online instructor, professor Saylor, spent 250% more time (9:00 hours versus 22:30 hours) than professor Tobias who taught face-to-face. Another point of comparison is the hours spent per activity reported. On average, the online instructor spent 15 minutes less on each activity than the classroom instructor did, but Professor Saylor's work included three times more activities than did his colleague's.

Table 33: Seventh case study comparison of Professors Saylor and Tobias' teaching time.

	Tobias F2F	Saylor Online
Unique to Online	0	7
Unique to Classroom	2	0
Serves both formats	4	11
TOTAL Activities	6	18
Number of Hours	9:00	22:30
Hours per Activity	1:30	1:15

Given that instructors have a finite number of hours in which to teach and help students master the material, they must be practical. Faculty who can estimate workloads based on the teaching strategies they use and the application of online learning tools and strategies, will be better able design their course to optimize available time. Distance learning programs will likely continue to expand to meet the need for flexible anytime, anywhere courses. We also see the growth of hybrid and blended course providing an avenue for institutions of higher education in order to mix the best from each format. The fully distance programs want to come back to the classroom to meet the needs of students that want a more direct instructional approach. The classroom-based instructors are using more and more technology tools in their courses as well. All four of the face-to-face faculty in this study reported using a Course Management System, online grade books, and email to help deliver their courses, though in the past these instructional technology tools were attributed only to online course delivery.

Differences between online and traditional courses

This study also had the goal of considering the differences between the two delivery formats to explore whether there was a relationship between the types of instructional activities included in the course and the amount of time being spent by the

instructor. The in-person interviews yielded a series of themes for the activities that instructors perceived they would be likely to use. Within these 16 categories that emerged, (1) *media use*, (2) *general assignments* and (3) *papers* were only referenced by classroom instructors, never by online faculty. All other emergent categories, as listed in Table 34, were referenced at least once by both online and classroom-based faculty.

Table 34: Emergent Themes mentioned by both online and face-to-face faculty. From the initial faculty questionnaire.

Prepare for Class	Present Information	Practice and Guidance	Testing and Assessment	Provide Feedback
<ul style="list-style-type: none"> ▪ Read ▪ Review/Revise ▪ Research ▪ Develop/Prepare 	<ul style="list-style-type: none"> ▪ Lecture ▪ Discussion 	<ul style="list-style-type: none"> ▪ Student Questions ▪ Activities and Assignments 	<ul style="list-style-type: none"> ▪ Exams, Tests and Quizzes 	<ul style="list-style-type: none"> ▪ Grading and Comments ▪ Email Feedback ▪ QandA Discussions

Table 34 shows that many of the same activities are still being used in both online and face-to-face courses. These activities might be applied differently but they affect each delivery format in similar ways. The reference about use of *media* by the face-to-face instructor was related to classroom technology such as a projector and laptop and likely the reason no online faculty members thought it was relevant. The *general assignments* and *papers* themes were also only reference by the face-to-face faculty, likely because in online courses these activities are interspersed among the other phases of course development.

Another notable difference that surfaced during the interview stage of this study, was the type of instructional strategies that related to each delivery format. Both online

and face-to-face instructors referenced instructional activities that dealt with *course preparation* but the online faculty made reference to that activity more often than their classroom-based colleagues. Under *course management*, the opposite was true. Classroom faculty referenced strategies more often than did the online faculty. And, although the *testing and assessment* phase had the same number of responses from the collective study group, the *Communication* category was only referenced by online faculty and under *evaluation and improvement*, strategies were only mentioned by face-to-face instructors.

The findings for the “communication” phase of course delivery are in line with research that shows discussion forums, email, and other communication tools take up the bulk of time in online courses. Whereas classroom faculty members usually interact with

. Although several faculty members had, over time, improved in managing their workloads, each instance time management was mentioned in the data, the context related to expending an extensive amount of time. These comments came from the face-to-face faculty members.

- The time spent on this is always more than planned or allotted.
- I spend a good number of hours each week reading materials from online sources.

Always seems like too much to cover and not enough time. students during class or office hours, online faculty perceive they need to be accessible 24 hours-a-day, seven days-a-week, through online communications tools (Shi, Bonk, and Magjuka, 2006). This is an additional point to consider in developing of training for faculty as novice classroom or online instructors.

Concept of Time

- Another research question considered how the concept of time might differ for faculty teaching online and those in a traditional classroom. References to “time” came up in both the classroom faculty and online faculty responses in the initial questionnaire and during the interviews
- Having to reserve the cart and haul it from the closet each time I want to do something using these tools is a hassle that I don’t choose to take on very often.
- It certainly has taken me many, many hours of time to develop my Blackboard skills, for example.

The online faculty members made the following observations:

- Need administrative support in terms of funding, time to develop and marketing.
- The recording and streaming video creation process is grueling and time consuming.
- The initial development needs to be funded at equal to teaching the course. Very time consuming.
- There was a great deal of overhead in getting the (online) tests to work correctly for my classes

The time considerations for face-to-face classes are rarely questioned yet the findings indicated that the classroom-based instructors had as much of a problem managing time or finding enough time to teach their courses as online instructors. Questions about the optimum use of time combined with the best strategies for helping students meet course objectives are generally common. The findings in this study

emphasize how overwhelmed faculty have been by the demands on their time from teaching loads and from personal issues. A series of good practices that can help with these considerations emerged from the interviews conducted in this study

Good Practices

In looking at good practices and their application to delivery formats, more than half of the practices mentioned applied to both face-to-face and online teaching.

1. Updating courses regularly
2. Using technology tools to manage course
3. Use multimedia
4. Take advantage of support services and resources
5. Adapt course to student needs – make them learner-centered.
6. Include interactivity
7. Build community with students

Five additional good practices were suggested by the online faculty, referencing five additional ideas. A good practice that was only cited by a face-to-face instructor was to build flexibility into the course in order to take advantage of unforeseen opportunities such as outside speakers or special events. Some level of flexibility would benefit any course so instructor and students can favorably respond to unforeseen circumstances.

The additional good practices proposed by the online instructors included:

1. Maintaining structure
2. Clarifying expectations
3. Working with peers (for support)
4. Get student feedback to improve course

5. Encourage group collaboration

Throughout through my personal and work experiences in distance learning for the past several years, these additional good practices seem to be general to education, although they were reported in this study by instructors teaching in online courses.

Affect of Experience

A final research question we explored was whether *experience* changed the way faculty members teach. Based on the data collected through the journals specific to time commitments, this question can be answered in two ways. Looking at the difference between the participant with 1-10 years of experience and the remaining seven faculty members with more than 15 years of experience, those with more years of experience did spend more time teaching. But a single respondent in the 1-10 year experience range does not provide sufficient evidence to support that experience changes the way people teach or time instructors devote to teaching. On the other hand, there was a small 16-minute difference between those with 16-18 years of experience and those with 25-28 years which means there was little, if any effect on the time commitment of the two groups.

The richer descriptions from faculty during the interview process yielded a better understanding of the changes that an instructor undergoes during the evolution of their teaching profession. Professors Rita and Olivia, for example, were able to draw on their teaching experience to help train and inform others. Professor Rita is now an instructional designer as well as an adjunct faculty member, while Professor Olivia is an “unofficial” guru of technology in her department.

Respondents referenced a number of teaching strategies and good practices listed in their cases and collected in Chapter 4, Part II, that were developed over time and through experience in the classroom as well as online. These tools become a way to improve their courses and increase their teaching efficiency.

CONCLUSIONS

This study sought to determine whether teaching online took more time than teaching in a traditional, face-to-face classroom and to explore faculty perceptions of the two delivery formats. Results are significant in several respects.

There was a difference of barely over one hour (1:01) more in time spent teaching per week by the online faculty versus the classroom-based faculty members. This would equate to an additional 15 hours per semester for an online faculty member. However, while some of the instructional activities used in each format were similar, the instructional activities being undertaken in online courses were not equivalent in design or outcome to the ones being used in the classroom. The additional time for the online faculty could be attributed to these issues.

The similarities in the courses and especially the application of technology in the traditional classroom courses should be used to drive training for new faculty. It should also be designed to promote online instruction as a standard additional tool or strategy to for the teaching practice rather than a separate or completely different way of teaching. In lieu of using delivery format as a way to determine workloads, perhaps a better way of measuring the true faculty teaching loads would be to gather data on outcome and time

requirements of specific instructional activities, and then allow faculty to choose from those activities to compose their course design.

Dewey (1938) highlighted the relationship between progressive education, experience, and the process of teaching online as discussed in the introduction. A number of the references Dewey makes about progressive education and experience relate directly to the discussion of online learning that exists today in academia.

The process is a slow and arduous one. It is a matter of growth, and there are many obstacles which tend to obstruct growth and deflect it into wrong lines. (p. 21)

It is, accordingly, a much more difficult task to work out the kinds of materials, of methods and social relationships that are appropriate to the new education than is the case with traditional education. (p. 19)

To discover what is really simple and to act upon the discovery is an increasingly difficult task. After the artificial and complex is once institutionally established and ingrained in custom and routing, it is easier to walk in the paths that have been beaten than it is, after taking a new point of view, to work out what is practically involved in the new point of view. (pp. 21-21)

The online instruction of today fits into the mould of progressive education of yesterday as espoused by Dewey. The challenges he addressed in these brief quotes can be directly applied to the fears that today's faculty express about teaching online. And yet Dewey was talking about instructional practice in the classroom. The principles of his educational framework are consistent with those who advocate student-centered

instruction that requires a different way of thinking and approach to teaching. It is this difference, the change from the traditional to the progressive, that should be the focus of the online learning inquiry and not necessarily the technology that is used.

In considering the results of this study, institutions of higher education can begin to more accurately identify the issues that affect faculty workloads for both online and face-to-face instructors and address them appropriately. Instructional design models can be developed that are standard for course delivery, but customizable by virtue of the instructional strategies and delivery formats that instructors select. By continuing to identify the activities that affect faculty workloads, tools or methods that help us to more accurately gauge time commitments of these activities will be extremely beneficial.

FUTURE RESEARCH

The findings of this study encourage further research in the field of distance learning, online courses, and faculty workloads. Although the qualitative case-study methods provided a rich description of faculty participant teaching experiences, additional studies conducted over longer periods of time or with a larger number of participants would provide an even greater understanding of issues surrounding the teaching profession. Quantitative studies with larger samples might yield more generalizable information about faculty loads and time required for specific instructional activities.

The small sample size and short duration of the journaling phase in this study created some limitations for results to be generalized for faculty in other institutions or teaching other subjects. I had initially hoped that faculty would be able to complete

journals during three different weeks of the semester but, ironically, that was more than many were willing to commit because of time constraints. The possibility of offering a small stipend or other incentive might alleviate this issue, but it might also generate questions about the legitimacy of the responses.

Another aspect of this study that generates the possibility of further research is the disproportionate number of novice faculty in the sample. All faculty members in my study with the exception of one, had more than 15 years of experience. The one instructor with less experience had only been teaching for five years. It is difficult to attribute the difference in her 5+ -hour and the remaining instructors' 10+ hours to her novice status, though it is interesting to note. A longitudinal study would also address this issue by following a faculty member through several years of online teaching experience and measuring changes in workload.

Future studies could also be enhanced with additional data collection methods such as classroom observation and experiential comparison of teaching strategies or pre- and post-interviews in lieu of a single interview, to find changes in perception during the semester when faculty are focused on measuring their teaching time. Also, given the mention of absence of adequate preparation and support in early teaching experiences was mentioned by all faculty, an investigation of the effect faculty development programs and training have on teaching and time commitments would be valuable.

Current research on faculty workload in online classes is still inconclusive and particularly difficult to compare because the research on faculty time commitments in face-to-face classes is minimal. The debate about less or more time in conventional

settings or online can also be furthered by closer examination of student outcomes and their relationships to faculty workloads to find if the amount of time being committed is proportional to student success. The breadth of related factors and extensive evaluation of teaching strategies in this study that warrant review, indicate that there is a significant need for additional research. As the growth in distance learning course offerings continues, it is imperative that educational institutions understand the complex nature of teaching and online education.

APPENDICES

- A. Participant Questionnaire Sample for Classroom Instructors
- B. Participant Questionnaire Sample for Online Instructors
- C. Participant Journal Sample
- D. Faculty Interview Guide

APPENDIX A: PARTICIPANT QUESTIONNAIRE SAMPLE FOR CLASSROOM INSTRUCTORS



A study in teaching and technology:

A comparative study of faculty experiences teaching online courses and teaching in a traditional classroom setting.

Name

Email

Institution

1. Please list all degrees certificates and other training you have had. *If you prefer, you can upload a copy of your vitae or resume below.*

A large, empty rectangular text area with a light gray border. It has small navigation icons (up, down, left, right arrows) in the corners, indicating it is a scrollable text field.

Select file to upload:

General questions about teaching

2. How long have you been teaching in a classroom/face-to-face? What levels (i.e. high school, undergraduate, etc.)

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3. Think back to your first teaching job. Can you share some highlights of that experience? What were the:

a. Challenges

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b. Hindrances

An empty rectangular text box with a light gray background and a thin black border. It features a scroll bar on the right side and navigation arrows (back, forward, and search) at the bottom.

c. Support Mechanisms

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d. Benefits

An empty rectangular text box with a light gray background and a thin black border. It features a scroll bar on the right side and navigation arrows (back, forward, and search) at the bottom.

e. Other comments:

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4. Before the semester begins, what do you do to prepare for a course you have previously taught?

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5. How does this level of preparation differ from that of a new course or one that you have never taught before?

6. How do you prepare for and address issues for students with special needs?

Course-specific questions

7. Select a classroom-based course you are currently teaching to report on in this study. Provide the course name and number in the space below.

This is also the course you will report on during your weekly journals later in the semester.

Provide the dates your Spring 2006 Semester course **begins** and **ends**.

What is the format of this course?

- I am teaching this course in a classroom / face-to-face
- I am teaching this course completely online
- I am teaching this course as a hybrid (partially online partially in a classroom)
- Other

8. **What are the learning outcomes or competencies for this course. (i.e. student will list nine reasons for conducting a needs assessment, student will participate as member of a team, student will interpret and communicate information.) *If you prefer, you can upload a copy of your syllabus below.***

9. 

Upload your syllabus here.

9. Please provide information about the following instructional components in your course.

	What are the typical activities you undertake in this classroom-based course to:	Estimate how much time (on average) you would spend on these activities in a given week.
Prepare for class		
Present information		
Provide practice and guidance		

Conduct testing and assessment

Provide feedback

10. Which instructional technologies or tools do you use in this course, if any? (i.e. streaming audio/video, animations, Power Point, blogs, etc.)

11. Are there any other comments you would like to share about your teaching experience in relation to

your course?

Administrative Issues

Technical Support Issues

Curricular Issues

Funding

Other?

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12. I welcome any additional comments, suggestions, or feedback.

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Thank you for participating in this study and taking the time to complete this questionnaire.

APPENDIX B: PARTICIPANT QUESTIONNAIRE SAMPLE FOR ONLINE INSTRUCTORS



A study in teaching and technology:

A comparative study of faculty experiences teaching online courses and teaching in a traditional classroom setting.

Name

Email

Institution

1. Please list all degrees certificates and other training you have had. *If you prefer, you can upload a copy of your vitae or resume below.*

Select file to upload:

General questions about teaching

2. How long have you been teaching in a classroom/face-to-face? What levels (i.e. high school, undergraduate, etc.)

3. Think back to your first teaching job. Can you share some highlights of that experience? What were the:

a. Challenges

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b. Hindrances

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c. Support Mechanisms

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d. Benefits

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e. Other comments:

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General questions about teaching online

3. When did you start teaching online or in another distance learning format? What levels did you teach?

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5. Think back to your first time teaching online. Can you provide some highlights of that experience? What were the:

a. Challenges

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b. Hindrances

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c. Support Mechanisms

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d. Benefits

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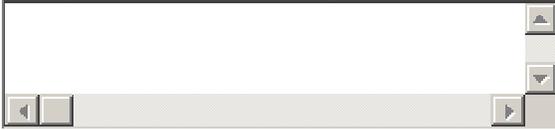
e. Other Comments:

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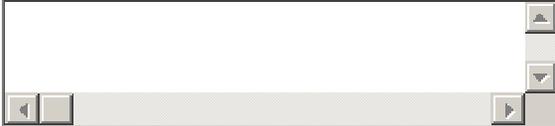
5. Before the semester begins, what do you do to prepare for an online course you have previously taught in that format?

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7. How does this level of preparation differ from that of a new online course or one that you have never taught before in any format?



8. How do you prepare for and address issues for students with special needs?



Course-specific questions

9. Select an online course you are currently teaching to report on in this study. Provide the course name and number in the space below. *This is also the course you will report on during your weekly journals later in the semester.*



Provide the dates your Spring 2006 Semester course **begins** and **ends**.



What is your delivery format?

- I am teaching this course in a classroom / face-to-face
- I am teaching this course completely online
- I am teaching this course as a hybrid (partially online partially in a classroom)
- Other

10. What are the learning outcomes or competencies for this course. (i.e. student will list nine reasons for conducting a needs assessment, student will participate as member of a team, student will interpret and communicate information.) *If you prefer, you can upload a copy of your syllabus below.*



Upload your syllabus here.



11. Please provide information about the following instructional components in your online course.

	What are the typical activities you undertake in this online course to:	Estimate how much time (on average) you would spend on these activities in a given week.
Prepare for class		
Present information		
Provide practice and guidance		
Conduct testing and assessment		
Provide feedback		

12. Which instructional technologies or tools do you use in this course? (i.e. streaming audio/video, animations, Power Point, blogs, etc.)

13. Are there any other comments you would like to share about your teaching experience in relation to

your online Course?

Administrative Issues



Technical Support Issues



Curricular Issues



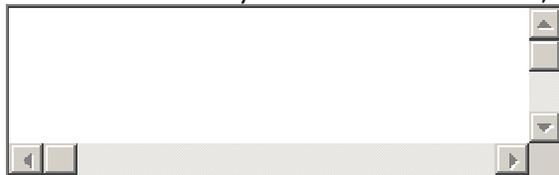
Funding



Other?



13. I welcome any additional comments, suggestions, or feedback.



Thank you for participating in this study and taking the time to complete this questionnaire.

APPENDIX C: PARTICIPANT JOURNAL SAMPLE



A study in teaching and technology:
*A comparative study of faculty experiences teaching online courses
and teaching in a traditional classroom setting.*

Faculty Teaching Journal

Institution Code

Instructor Code

Delivery Format

Classroom Online

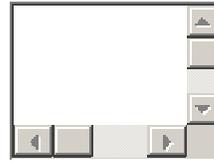
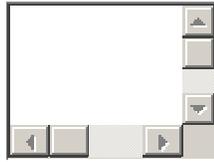
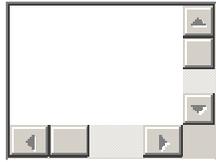
Please list the instructional/teaching activities you carried out today and corresponding time commitment for the course listed above. You can list from 1 to 12 activities for a given day. Instructors teaching face-to-face or classroom courses should also list the time spent in the classroom. If more than 12 activities were undertaken, please note this in the comments section at the end of the form.

A sample entry can be viewed by selecting the question mark icon here.

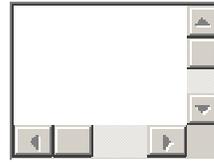
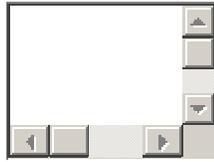
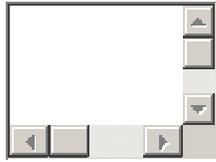


	Hours (i.e. 9am-12pm)	Description of Activity	Purpose of Activity
Activity 1			

Activity 11



Activity 12



Comments:

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Submit

APPENDIX D: FACULTY INTERVIEW GUIDE

Date _____
Time _____
Classroom _____

Interviewee Identification No. _____
Instruction Type _____ Online _____

Faculty Interview Guide

This guide was designed for interviews to be conducted after the initial survey and journal submission have been made by participants.

Good morning/afternoon. I am Susan Thomason

This interview is being conducted to get your input on the issues surrounding your teaching experience and in particular the question of time commitment. I am especially interested in any problems you have faced or are aware of and recommendations you have.

If it is okay with you, I will be tape recording our conversation. The purpose of this is so that I can get all the details but at the same time be able to carry on an attentive conversation with you. I assure you that all your comments will remain confidential. I will be compiling a report which will contain all of your comments without any references to individuals. If you agree to this interview and the tape recording, please sign this consent form.

Questions may cover some of these issues:

- Style of time management
- Teaching style
- Philosophy of teaching
- Barriers you encounter in teaching and where do they come from
- Support you encounter in teaching and where does it come from
- What types of concerns have you had or heard regarding faculty loading
- What other problems are you aware of
- Is there any other information about your teaching practices or related issues that you think would be useful for me to know?

Thank you for taking the time to meet with me.

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VITA

Susan Margaret Warner Thomason was born in Quito, Ecuador. She lived in various countries of Latin American and Asia and attended the Jakarta International School in Jakarta, Indonesia, graduating in 1983. In 1984 she entered Virginia Wesleyan College (VWC) in Norfolk, Virginia and received a B.A. degree in International Studies in 1988. She worked as a Teleconference Coordinator at Old Dominion University (ODU) and in 1993 moved to Rochester, New York to take a job as Marketing Coordinator for Distance Learning and then Distance Learning Manager at the Rochester Institute of Technology (RIT). In 1996 she received her M.S. Degree in Instructional Technology from RIT. The following year she accepted a new position as the Manager of Distance Learning at Spartanburg Technical College (STC) in South Carolina, and the following year became the Director of Instructional Technology Services there. In 1998 she began her doctoral coursework in Curriculum and Instruction at Clemson University. In September of 2000, she moved to Austin, Texas for a job at Austin Community College as Director of Technology Training, which has since evolved into a position as the Director of Instructional Development Services overseeing the Instructional Design, Multimedia Development, Video Production, and Curriculum Development areas of the college. In 2001 she transferred to the University of Texas to finish her doctoral coursework.

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This dissertation was typed by Susan Margaret Warner Thomason