Case Studies of Implementing

Writing Courses Online in Higher Education

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ABSTRACT

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Reports of online writing courses at universities provide isolated experiences rather than multiple-case comparisons. This study uses activity theory to explore the nature of successful developments of four online writing courses in higher education. Universities desire online learning to meet strategic and accessibility needs. Faculty may lack skills and resources but administrators can provide supportive environments. Online learning risks higher dropouts and simplistic pedagogies, but effective design encourages productive interactions and ongoing course improvements. Six reported cases described online writing courses that either preserved classroom writing pedagogies, or addressed systemic dysfunctions in classroom courses. This qualitative study uses a convenience sample of four case studies recruited from online university courses in technical or professional writing in the United States and Canada. Information was collected through interviews with instructors and available personnel, course walkthroughs and artifacts. Cases were analyzed using activity theory. Cases consisted of undergraduate and graduate courses in technical or educational writing, legislative drafting, and proposal writing. The courses were ongoing activity systems constrained by professor experience and source materials, but subject to structural tensions that resulted in expanded motivations for access, achievability, and community integration. Stakeholders can recognize the impact on design from the reason the course was requested, professor independence, existing course materials, and ongoing measurement. The small sample was suitable for generating theory but not statistical generalization. Future research can explore courses in other countries and languages, writing disciplines, and institutions.

Keywords: online learning, e-learning, writing, composition, instructional design, pedagogy, activity theory, higher education, university

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Dedication

to Hiroko

whose smile is the rising sun

to my father

who taught me to question everything

to my mother

who taught me to go the extra mile

and to my brother

who showed me it could be done

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Nomenclature

Activity system: a model of human actions consisting of Subject, Instruments, Rules, Community, Division of Labour, and Motivation.

ADDIE: An acronym for a model of instructional design, comprising the following phases of creating learning materials—Analysis, Design, Development, Implementation, and Evaluation (Carliner, 2003).

Subject: the element of an activity system that describes the entity driving the activity.

Instruments: the element of an activity system that describes the tools, mental models, or ideologies used to accomplish the activity.

Community: the element of an activity system that describes the social context.

Structural tension: the stresses within or between elements of an activity system, or between activity systems.

Division of Labour: the element of an activity system that lists the entities that work with the Subject to accomplish the activity.

Motivation: the element of an activity system that describes the reason for the activity's existence and is comprised of an object to be acted on by the Subject using the Instruments, and an outcome to describe the desired results.

Rules: the element of an activity system that describes the constraints placed on the activity.

SAM: An acronym for a rapid-prototyping model of developing learning materials known as the Successive Approximation Model (Allen & Sites, 2012).

Chapter One: Introduction

Writing courses represent an important subject area for research in online course development for both professional and academic reasons. In contrast to courses that might rely on teaching and testing for correct answers using easily-graded multiple-choice, true-and-false, and short answer assessments, professional writing courses are highly practical, requiring extensive practice in creating useful definitions, instructions, reports and websites, and in editing content and design (Meloncon & Henschel, 2013). Students must also contextualize their writing by analyzing audience and purpose, and learning to work within specialized genres such as public relations, government, marketing, medicine, or the environment (Meloncon & Henschel, 2013), often developing subject-matter expertise to allow them to synthesize content from colleagues with varying backgrounds (Bloch, 2011).

Writing courses are also important for academic reasons, and universities offer writing instruction to students who do not intend to be professional communicators. For instance, universities in the United States not only offer "freshman composition" to legions of first year students (Selvaggio, 2008) but also use courses from their professional writing programs as service courses for other departments (Meloncon & Henschel, 2013). Student writers can experience intellectual development (Brockman, et al., 2011; Sommers & Saltz, 2004) by exploring multiple perspectives, questioning their ideas, conquering writing anxiety, and developing expertise and connections that inspire deeper study (Sommers & Saltz, 2004). Students who aren't pushed to synthesize what they are learning become intellectual "tourists" who trade regurgitated knowledge for grades, shrug off feedback, and avoid opportunities to connect more deeply with their studies (Sommers & Saltz, 2004). Such students may rely on learning methodologies focused on transmitting information, such as lectures, even though they receive brainwave-flattening experiences similar to television (Poh, Swenson & Picard, 2010) that give a "false sense of security" about understanding a subject because student misconceptions are never surfaced or challenged (Mazur, 2013; Berrett, 2012). Such methodologies may not adequately prepare students: expectations for graduates have shifted from knowing things to being able to do things (Barnett, 2001), access information as needed, and adapt to continuing change (Barnett, 2009), (Felder, Brent & Prince, 2011). Employers expect graduates to confront unfamiliar and ambiguous situations, consider multiple

perspectives, and create their own imperfect answers while considering potential consequences (Tsui, 2012). Writing requires students to address such needs. Faculty expect student writers to evaluate their sources, synthesize their research, adapt to disciplinary styles, and take intellectual risks (Brockman, Taylor, Kreth & Crawford, 2011).

Although writing can be idealized as a means to engage in deep learning, the history of computers and composition reflects the use of technology in more basic and supplementary approaches. In service courses, technology has been used to provide computer-aided instruction to learn spelling and grammar, prewriting prompts and advice on demand, and tools to assess style and mechanics (Palmquist, 2003). Word processors provided a more revision-friendly composition tool that attracted students into writing centres (Palmquist, 2003), until students owned their computers. Computer networks, e-mail and real-time chat with tutors allowed online writing labs (OWLs) to provide style guides and interactive tutorial services, but such approaches focused on writers as individuals creating technically-correct documents without peer review (Palmquist, 2003). In professional courses, computers have not only been used to provide technical services such as desktop publishing (Boiarsky & Dobberstein, 2003) but also ways of conducting peer review such as course management systems for collecting drafts for comment (Palmquist, 2003), network services to allow for drafting and exchanging documents then discussing issues through chat and e-mail (Breuch, 2004), and social media such as blogging for web-mediated peer-review (Novakovich & Long, 2013).

Given a history of using computers in teaching writing and the growing demand for writing instruction and online access, moving writing programs online is a logical progression for universities. However, the literature does not provide a systematic consideration of how and why writing courses in higher education are moved into online formats. Accounts of online writing programs tend to be isolated personal experiences related by instructors, designers, or researchers, often focusing on the effects of using a particular strategy on the attitudes and performance of students. They tend not to provide consistent data from multiple course implementations to allow for meaningful comparison and analysis. They also tend not to consider the differing perspectives, goals and contributions of the key personnel involved such as instructors, instructional designers, technical support, and administrators. For instance, Power (2009) highlights the difference between theoretical instructional design and the messy experience of working with sometimes-resistant, and always time-pressed faculty to transition a

variety of courses online. His book describes multiple cases as steps in his development of a design process. However, even his accounts are a single, self-reporting source from the instructional design perspective. We don't know the perspectives of the professors or others who may have supported the creation and implementation of the courses online, and we don't have a comparison of implementations of online courses in different institutions.

This study will advance the state of the literature by providing an independent, third-party account of multiple implementations of online writing courses, gathering data from the different actors involved in the implementations, and analyzing related documentary artifacts and the actual online courses. The study will use this data to compare how and why these implementations happen, given their contexts and the actors in those contexts. This study is significant because it provides empirical evidence and an external perspective on the challenges faced by the people who design online writing courses, a small body of literature that's dominated by individual experience reports.

The overall phenomenon I wish to investigate is as follows: How are undergraduate and graduate writing courses—both service courses and courses for majors—designed for presentation online? The specific research questions are as follows: Why did universities offer writing courses online? What choices were made regarding curricula, pedagogy, course structure, and student assessment? Who participated in making and implementing key decisions? How did the chosen medium affect design decisions? How did existing research on critical success factors of distance and e-learning and on the teaching of writing influence the designs of courses, if at all? What other practical issues influenced design decisions? How were designers of the courses influenced by interactions with people in other roles? How were courses implemented? How were courses assessed and adapted based on results?

In the next chapter, I situate this study within the literature about online learning and its challenges, writing pedagogies, and the teaching of writing online. In the chapters following the literature review, I describe the methodology used to conduct this study, the findings in the form of four case studies, a cross-case analysis to determine patterns among the cases, and I conclude with implications to practice and theory, the limitations of the study, and suggestions for future research.

Chapter Two: Literature Review

This chapter situates the study within the literature. Descriptions are provided of the process for searching literature and the themes found such as online learning and its use in higher education, key roles in moving courses online and related challenges, and the nature of university writing courses and the challenges of moving them online. The chapter ends by reviewing emerging issues and presenting the chosen conceptual framework for the study.

How Literature Was Selected

This section describes the process of finding and selecting relevant literature. To find literature regarding online learning, I reviewed articles assigned for classes in educational computing during my degree, articles recommended by my supervisor, and I searched EBSCO Academic Search Complete, Google Scholar, and ERIC for terms such as "online learning", "distance learning", and "distance learning effectiveness." I also made use of articles I found for online writing in higher education, as described below.

For literature regarding online writing in higher education, I examined the tables of contents of each issue of the journal *Computers and Composition*, and I searched relevant databases (EBSCO Academic Search Complete, Google Scholar, ERIC, and ProQuest Dissertations and Theses) using the following terms: "online writing course", "Interactive Composition Online (ICON)", "e-learning college or university", "e-learning implementation university", "undergraduate writing composition e-learning", "implementing e-learning in university", "online undergraduate composition" and "undergraduate online writing course." I limited my search to articles since 1998 to ensure relatively-recent results that still captured articles triggered by the rapid growth of Internet access in the late 1990s. I reviewed references in the articles I found for follow-up research.

To find literature related to engaging faculty in innovations in higher education I conducted searches related to faculty development and curriculum innovation using the following databases: Google Scholar, Academic Search Complete, ERIC, H.W. Wilson, and Proquest Theses and Dissertations. I used the following keywords: "faculty curriculum change university", "effectiveness of faculty development", "university curriculum", "professional development higher education", "faculty professional development" and "adoption of online

learning or distance education." I chose articles from the years 2001-2013 with preference for articles in the last five years that addressed university faculty.

Themes In The Literature

The following sections explore themes emerging from the literature regarding the use of online learning and writing education at universities. Themes are presented as follows: online learning and its use in higher education, key roles in moving courses online, reasons for universities moving writing courses online and reported cases, challenges arising from multidisciplinary interactions in the design team, and key challenges in online learning requiring design and technical support.

Online learning and its use in higher education. Online learning is a form of distance education prepared by an educational organization where teachers and learners are separated but communicate through networked computers (Bernard, Abrami, Lou, Borokhovski, Wade, Wozney, Wallet, Fiset & Huang, 2004). Distance education may be synchronous, where instructors and learners are connected by live communications, asynchronous, where learners work independently and communicate through means like e-mail or discussion posts, or a hybrid of both (Bernard et al., 2004). The reliance of online learning on mediated communication can inspire a focus on media choices (Anderson & Dron, 2011), but decades of comparison research show that changes in learner performance relate to changes in underlying instructional methods, and only temporarily to the novelty of a new medium (Clark, 1983). Some argue that the dynamic capabilities of different media affect learning because of the way they can present ideas (Kozma, 1994) or support certain pedagogies (Anderson & Dron, 2011). For instance, online learning offers capabilities such as reading, watching and listening, recording and playing, browsing and searching, manipulating objects, linking, annotating, combining, and sharing (Bower, 2008). Learners can access content anytime and anywhere through the Internet, or schedule live connections with instructors; instructors can link to Internet resources, and update course materials in a single place for all learners (Ally, 2008).

People choose online learning for different reasons. Students choose online classes to minimize commuting, increase scheduling flexibility, study at their own pace, and find an easy elective (Devey, 2009), often while simultaneously taking courses on campus (Devey, 2009; Guri-Rosenblit, 2005).

Administrators and faculty are driven to online teaching for different reasons. Administrators may be driven by economic, tactical and strategic concerns. From an economic perspective, universities may have been spurred into online development by government grants, but such amounts may be time limited and unable to support ongoing operations much less growth in enrolment (McCarthy & Samors, 2009). Universities may use online learning to reduce classroom time for traditional students and accommodate more students in the same number of rooms (Guri-Rosenblit, 2005). However, as online learning requires significant planning, development, technology, and support, and learners demand regular communication with instructors, it is not necessarily cheaper or less time-intensive (Guri-Rosenblit, 2005; Blakelock & Smith, 2006).

From a tactical perspective, universities may use online learning to improve the consistency and quality of instruction when providing many sections of a course with multiple instructors (Wasley, 2006). This raises concerns that online learning will result in low-capacity instructors teaching heavy loads of courses prepared by others, but a survey of 37 online writing instructors revealed many experienced and tenure-track instructors with similar or smaller class sizes than conventional courses, using a variety of technologies; only 14% (mostly at community colleges) had to teach courses created by others (Blakelock & Smith, 2006).

From a strategic perspective, universities are faced with a growing demand for online education. American universities consider online course offerings as a strategic imperative, a belief that has significantly grown in importance between 2002 and 2013 to nearly 70% (Allen & Seaman, 2014). Institutions that do not view online learning as strategic or view online offerings as less comparable, tend to be those few with no online offerings at all (Allen & Seaman, 2014). However, increases in online enrolment outstrip increases in total enrolment year over year, and the total proportion of online enrolment has grown yearly to 33.5% in 2012 (Allen & Seaman, 2014). During the last economic downturn, institutions reported a far greater increase in demand for online offerings than traditional classes (Allen & Seaman, 2010). The current interest of universities in Massive Open Online Courses (MOOCs) is similarly driven by market issues, with most academic leaders seeing MOOCs primarily as a means to increase the visibility of their institution (27.2%), as well as a way to increase student recruitment (20%), experiment in pedagogy (18%) and provide flexibility in learning (17.2%) even though only a minority (23%) believe that MOOCs will be a sustainable online offering (Allen & Seaman, 2014).

In contrast to administration, faculty efforts to move online may be motivated by different factors. A strong motivator is making a course available to a broader audience of students by providing more flexible access (Seaman, 2009; Parker, 2003). Other strong motivators are flexible working conditions, the opportunity to use technology, intellectual challenge, career development, and gaining teaching experience (Green, Alejandro & Brown, 2009). However, faculty are not homogeneous and their motivations differ. For instance, adjunct and part-time faculty reported increases in income and wanting to feel important to the university as motivators (Green, Alejandro & Brown, 2009). Faculty with five or fewer years of experience were more likely to report being motivated by personal or professional growth, although they may also face pressure from their departments to avoid online experiments until they have established their reputation and body of work for promotion and tenure (Seaman, 2009). Tenure track faculty may be less motivated to use online learning to gain experience in teaching or using technology (Green, Alejandro & Brown, 2009), and tenured faculty may be discouraged from online learning by the lack of personal connection with the university or the lack of compensation for the extra workload (Green, Alejandro & Brown, 2009). Senior faculty with twenty or more years of teaching were less likely to report being motivated to teach online by income or pedagogy (Seaman, 2009).

Faculty tended to report being dissatisfied by the lack of supportive incentives for teaching online (existing incentives are often directed at the creation of online courses rather than ongoing teaching), and the lack of supportive tenure and promotion policies (McCarthy & Samors, 2009). Although faculty may tend to report that they had not been motivated to teach online by requirements to do so, or by the potential to earn extra income (Seaman, 2009), that does not mean that they do not want extra money. Such incentives are often mentioned in the literature but are not often provided by universities (Parker, 2003) meaning faculty may desire them and complain of their absence, but teach online in spite of not having them. Faculty teach online despite many concerns, such as requiring more time to develop and teach online than face-to-face courses, (Seaman, 2009; Green, Alejandro & Brown, 2009), that student outcomes might be worse than from classroom teaching, that universities do not provide enough support (Seaman, 2009), and that intellectual property ownership of online courses may not acknowledge their development efforts (McCarthy & Samors, 2009). Faculty may avoid new approaches such as teaching online because they are focused on transmitting the ever-growing amount of content

in their discipline to their students, and on advancing their own careers through research (Cuneo et al., 2012), and they feel they lack the time necessary to offer online teaching (McQuiggan, 2012). Although course release time might benefit such instructors, administrators may find it more cost-effective to provide faculty with access to teams of designers and technical support (Parker, 2003). Other creative incentives include providing training, hardware or software, and tracking online course loads as heavier than face-to-face teaching (McCarthy & Samors, 2009).

  Key roles in moving courses online. Administration and faculty play separate but complementary roles in the movement of courses online. Although some non-university institutions may control both administrative and academic aspects centrally (Christensen & Eyring, 2011), at universities, academic freedom protects the right of faculty (subject to their governing Senates) to determine what and how they teach (Horn, 1999). Unlike corporate contexts, faculty may use academic freedom to defend their "right to develop their courses as they see fit" (Smith, 2000, p. 154) regardless of administrative strategic interests. Some faculty perceive moving courses online as a threat to that freedom because universities can undermine professorial control over courses as well as the job security that makes academic freedom meaningful (Booth & Turk, n.d.). For instance, universities may divide responsibilities for a course such as having different people create, deliver, and revise the course; they may claim ownership to a course they have built, or purchase the rights to an existing course and use contractors to deliver or revise the course according to administrative needs (Booth & Turk, n.d.). Such an approach may allow administrators to circumvent the challenges arising from trying to influence faculty into changing what is taught and the way it is taught at their institution. Faculty are most loyal to their discipline, then their department, and then to their university (Blackmore & Kandiko, 2012a). "Top-down" demands may be met with strong resistance and even lawsuits from faculty to protect their right to academic freedom (Berrett, 2013) against "external" demands for change (Blackmore & Kandiko, 2012), especially when a new approach conflicts with the academic identity they derive from their disciplines and departments in the form of what should be recognized and rewarded economically, socially, and professionally (Blackmore & Kandiko, 2012a). Although faculty have academic freedom, administrators set strategy and control resources (Jones, et al., 2001) and are influenced by industry and government through policy-driven funding and controls on tuition fees (Marsden,

2000) and grants for online initiatives (McCarthy & Samors, 2009), all of which may constrain academic freedom by changing the availability of resources for faculty to use (Jones et al., 2004).

Faculty can thus play an essential role with respect to controlling curriculum, and ensuring the quality of online programs driven by academic needs (McCarthy & Samors, 2009) while administration can play an essential role in constructing environments that encourage and support faculty efforts in moving courses online, using a combination of persuasion, incentives and penalties, training and examples, instructional design resources, and support for networks of experimenting colleagues (Blackmore & Kandiko, 2012). For instance, institutions with successful online implementations value broad planning that involves faculty, administration and necessary support roles, provides resources not only to create courses but also to sustain and support enrollment surges, and helps faculty view their efforts as investments in their careers (McCarthy & Samors, 2009). Institutions with successful online implementations describe a combination of centralized oversight of development and implementation, such as within a distance education unit that "may be responsible for issues of needs assessment, marketing, student support, registration, budget, and contract management" and may include instructional designers (McCarthy & Samors, 2009, p. 22), while technical infrastructure and support is provided by a centralized information technology unit, which also may (in rare cases) offer instructional design as well (McCarthy & Samors, 2009).

When moving courses online, faculty may need assistance because online learning is more than just making course content such as PDFs and PowerPoint presentations available for downloading; it is the use of the Internet to access materials, interact with learners and instructors, receive support, construct personal meaning, and grow personally (Ally, 2008). Online instructors are responsible not only for content but also for organizing and facilitating interaction with their course (Blythe, 2001). On the one hand, faculty can influence the online experience: whether students experience an online course as liberal education or an assembly line depends on whether professors shape online learning according to their values, or leave design and delivery decisions to others (Peterson, 2001; Stroupe, 2003). On the other hand, faculty may be influenced by their experiences teaching online, shifting the way they teach in their classrooms from teacher-centred lectures to learner-centred approaches that require learners to prepare on their own so that class time can be saved for discussion (McQuiggan, 2012). To receive help navigating the challenges of moving courses online, faculty often seek help from

instructional designers, technical support, and teaching and learning staff, as well as from contacts they make in workshops with other faculty (McCarthy & Samors, 2009). Those interactions may present challenges. For instance, developers of workshops and seminars often fail to consider the background experience, career stage, and working environment of faculty, and deliver decontextualized workshops and instruction (Wilson, 2012) instead of considering how to support faculty in implementing their new knowledge and skills within their departments (Amundsen & Wilson, 2012). Such challenges may be addressed through multi-week workshops where faculty build online courses while receiving training in-person and online, with access to online resources, face-to-face consultations with designers, stories from experienced colleagues, and opportunities to share and review their efforts with peers (deNoyelles, Cobb & Lowe, 2012). Universities may also provide personal consultations with designers and support personnel who engage in "hand-holding" during design and development to improve faculty comfort with online approaches (McCarthy & Samors, 2009). Such interactions may involve give-and-take where faculty and designers negotiate their respective priorities and constraints to create a practical solution given limited time and heightened anxiety (Power, 2009).

   Reasons for universities moving writing courses online. Given the growing importance of online learning to universities, it represented a natural progression for writing courses due to its ability to serve broader populations of students. In the United States, first-year composition classes arose from a series of societal changes in the late 19th century such as a new focus on science and efficiency, new requirements for mandatory schooling resulting in a growing pool of university applicants, and the growth of industry and its demand for skilled university graduates (Selvaggio, 2008). Universities like Harvard started testing applicants for their ability to write and, based on the poor results, created composition classes to develop their undergraduates' basic writing skills (Selvaggio, 2008). With a need to efficiently train large numbers of students, universities used a combination of graduate assistants as instructors, and "current-traditional rhetoric" as pedagogy: they taught rules of writing and evaluated students for how well they conformed to those rules, and clearly and correctly communicated ideas (Selvaggio, 2008). American institutions continue to offer first-year composition programs to students (hundreds of sections each year at larger institutions), often hosted in their English departments with options for advanced and graduate study on theory and practice (Graves, 1993). Writing programs include "freshman composition, creative writing, technical and business communication,

rhetoric, composition theory, the teaching of writing, and English as a second language" (Graves, 1993, p.76).

In contrast, Canadian universities do not require first-year composition courses, and English departments prioritize literary appreciation (Graves, 1993). Composition is considered little more than grammar and mechanics, something that students should already know (Graves, 1993). This may explain the common use of proficiency tests rather than writing instruction, and the expectation that students will learn needed skills without academic credit by using continuing education services and writing centres (Graves, 1993). Non-disciplinary, writing-across-the-curriculum courses are rare, and individual departments in arts and sciences and the professions tend to offer their own writing and communication courses (including scientific, technical and business writing) to serve practical workforce needs (Graves, 1993). In both American and Canadian contexts, composition is usually taught by part-time and temporary instructors and teaching assistants due to the lack of academic prestige and the financial advantages of using lower paid instructors to serve large numbers of students (Graves, 1993).

To cope with such large numbers of students, writing programs have often relied computers, although often in a role reflecting a mechanical view of composition in line with "current-traditional rhetoric." Computer-aided instruction started with a "Skinnerian, drill-and-practice approach" focused on spelling and mechanics (Palmquist, 2003, 396) and evolved into prewriting prompts and advice on demand, and tools to assess style and mechanics; such approaches lost favour with a pedagogical shift to teaching the process of composing rather than the correctness of language (Palmquist, 2003). Word processors provided a revision-friendly composition tool that could entice students into writing labs (Palmquist, 2003) until students owned their own computers. With the rise of computer networks, e-mail and real-time chat with tutors were considered as ways to tutor online, and spurred the development of online writing labs (OWLs); however, the use of handouts, tutorial services, and style guides again raised concerns of focusing on correctness of expression and students writing in isolation rather than in peer-reviewed, process-oriented composition (Palmquist, 2003). Course management systems such as WebCT were used to collect drafts for commenting, but their teacher-centred structure was designed to supplement lecture courses, and did not fit student-centred composition pedagogies, leading to some experimentation with electronic writing environments that included tools, forums, and on-demand instruction from text and video (Palmquist, 2003).

Moving writing programs onto an Internet-accessible platform is a natural progression for universities for a number of reasons. First, writing instructors have historically embraced technological innovations. Second, online offerings address the demands of students, the desire of faculty to provide better access to learning, and the strategic interests of administrators. Third, writing instruction, as separated from literary appreciation and emulation, tends to be devalued as skills or service courses in academic environments that prioritize and reward theory, and thus teaching approaches that allow less-senior instructors to serve large number of students are popular (Hairston, 1982). Such factors may contribute to the continued use of the 19th-century "current-traditional rhetoric" pedagogical approach in some large-scale offerings.

Pedagogy refers to "the processes and relationships of learning and teaching" (Stierer & Antoniou, 2004, p.277). If learning "implies change in understanding and a change in one's relationship to the world" (Barnett, 2004, p.248) then pedagogy supplies practices that faculty can use to trigger and shape such changes. For instance, teaching communication skills to adults may use complex approaches such as "case studies, role-play, simulation, project work, problem-based learning, [and] genre-based learning" (Littlewood, 2014, p.291). Where pedagogy is the set of techniques for teaching and learning, curriculum is what is taught: activities, content, expected results, and context (Cleveland-Innes & Emes, 2005). Curriculum is a "vehicle for effecting changes in human beings through particular kinds of encounter with knowledge" (Barnett, 2009, p.429) and addresses knowledge, action and self in different proportions based on different disciplines (Barnett, 2001). It includes both product, such as the knowledge and skills required to earn credentials, as well as process, such as the actual practices used by instructors to trigger ongoing development in learners (Kandiko & Blackmore, 2012). For example, a curriculum aimed at developing communication competence might target students' ability to use grammar and vocabulary, their awareness of discipline-specific genres, and their ability to use language within "discussions, role-plays, simulations, and … relevant genres" (Littlewood, 2014, p.299). Beyond knowledge and skills, the processes of teaching and learning may also help learners develop valued qualities such as resilience, openness, self-discipline, authenticity, respect, care, and courage (Barnett, 2009; Tough, 2011).

Choices about pedagogy and curriculum arise from curriculum philosophies and beliefs about how learning happens. Different curriculum philosophies promote different goals, such as emphasizing the transmission of culture and content, the building of skills, the exploration of

ideas, the experience of personal meaning, addressing social problems, or being a reflective practitioner (Peach, 2010). Beliefs about how learning happens may focus on transmitting content to learners, or helping learners construct their own understanding. For instance, a teaching-focused curriculum is prepared by a small number of people based on the needs of a discipline or an accreditation, and is applied to groups of learners as if they were homogeneous (Cleveland-Innes & Emes, 2005). In contrast, a learner-focused curriculum recognizes learner diversity and uses content relevant to their backgrounds, challenges them to confront diverse perspectives, and provides activities to help them integrate those perspectives (Cleveland-Innes & Emes, 2005). Learner-focused programs may provide learners with a menu of activities, assessments, and delivery formats to help them engage in personally-meaningful learning and intellectual development while meeting explicit objectives set by the university for graduation (Cleveland-Innes & Emes, 2005).

In writing instruction, "product pedagogy" or "current-traditional rhetoric" reflects a teaching-focused curriculum designed to impart knowledge and skills. The approach is criticized for defining certain types of writing, and expecting all writers to know what they want to say from the start and to choose one of those defined types (Hairston, 1982). The focus of the approach is not the composition process, but the final writing product and its style, organization and correctness (Hairston, 1982). Instruction focuses on a linear process from planning to draft to rewrite, with an emphasis on proofreading and editing that can result in learners unable to make substantive revisions to their work (Hairston, 1982). Despite criticisms of teaching structure and correctness, however, focusing only on personal expression can result in students who cannot explain, justify, or describe, skills expected by faculty and employers (Hochman, 2012). Students may also be frustrated by vague feedback that does not tell them how to improve (Hochman, 2012).

In contrast to "current-traditional rhetoric", "process pedagogy" considers writers to "find their real topics only through the act of writing", an intuitive and iterative act of discovery that is contextual to its audience and intention (Hairston, 1982, p.84). Process pedagogy requires writers to consider audience, purpose and context while writing, to conduct and receive peer reviews to revise their work, and to be assessed not only for their product but also for following process (Olson, 1999). Beyond process pedagogy, "post-process pedagogy" rejects an objectively

determined process and authoritative style in favour of encouraging a postmodern, dialogic approach (Olson, 1999).

Faculty, designers, technical support and administrators must cope with making and supporting these pedagogical and curricular choices when implementing online courses. In the past, the pressures to provide basic skills and knowledge to large numbers of students has influenced the way writing programs have been delivered and the way technology has been used to support them.

Cases of teaching writing online. The literature provides a small sampling of cases that provide in-depth descriptions of the design, development, and implementation of writing classes online. In the first group, instructors created online writing courses that attempted to preserve the character of their classroom counterparts. For instance, in 1998, North Carolina State University created an online version of their writing class for upper-year technical students using web-based instruction, individual and group writing assignments, in-person oral presentations, and electronic tools for completing exercises, collaborating, submitting assignments, and receiving feedback (Mehlenbacher, Miller, Covington & Larsen, 2000). Comparing online and conventional classes, they found no significant difference in final grades or portfolio assessments (Mehlenbacher, et. al, 2000). However, in the online version of their writing course, students sent more e-mails, all communication had to be laboriously typed, and then-current technology was cumbersome for conferences, feedback, and grading (Mehlenbacher, et. al, 2000).

The following year, Indiana University similarly targeted upper-year science and technical students with a project-based communications course using their proprietary Oncourse environment, providing modules on reading and reviewing, and disciplinary and work writing; they required peer review of assignments and regular reflection (Fitzpatrick, 2001). When students avoided in-depth changes to their drafts and missed deadlines, the instructor removed two assignments to provide more time for revision, shifted more workload into the first half of the course, and broke assignments into smaller deliverables to develop better participation habits (Fitzpatrick, 2001).

In 2000, Southeast Missouri State University developed conventional and online versions of a process-oriented, social constructivist first-year composition course (Reinheimer, 2005). Managed through their proprietary Online Instructor Suite, their web-based version offered units on observing, remembering, evaluating, and arguing, and used readings, quizzes, model essays,

draft workshops, conferences, and exercises in prewriting, style and mechanics (Reinheimer, 2005). The university addressed the high workload experienced by online instructors by implementing hardware upgrades, a new module to introduce the course to students, streamlined software that triggered fewer help requests, automation of repetitive tasks, automated grading of formative exercises, centralized assignment submissions, and limited allowable file formats (Reinheimer, 2005).

In contrast, the second three cases leveraged technology to address dysfunctions in existing conventional courses. For instance, in 2002, Texas Tech University confronted the challenge of teaching writing to thousands of undergraduates using inexperienced, ad hoc instructors whose assignments ranged from haiku to research papers, triggering frequent complaints (Wasley, 2006). Instructors resisted a common syllabus and provided inconsistent feedback (Gillis, 2003) and ineffective classes (Arrigucci, 2008). The program administrator transferred grading duties to pairs of independent, anonymous graders who reviewed assignments uploaded to the university's proprietary ICON system, and provided standardized feedback with links to remedial writing resources (Wasley, 2006). Graders could work anytime and anywhere they had Internet access (Wasley, 2006). Without grading responsibilities, instructors had more time to teach (Arrigucci, 2008), and Texas Tech was able to increase the number of writing assignments from 25 to 35 while halving passive class time and reducing grade inflation (Wasley, 2006).

In 2006, the University of Minnesota refreshed their writing courses, using WebCT Vista to provide an online social constructivist course with weekly modules, discussions, instructor conferences and peer review of five types of assignments: reflections, summaries, annotated bibliographies, literature reviews, and research papers (Rendahl, 2010). When students complained about scheduling, the coordinator replaced weekly synchronous instructor sessions with two sessions offered three times each (Rendahl, 2010).

Finally, in 2008 the writing program at the University of Texas at El Paso (UTEP) considered their high failure rate, inexperienced instructors, inconsistent grading standards and feedback, grade inflation, and long research assignments (Arrigucci, 2008). Their new course offered standardized assignments and grading, audience and genre analysis, group documentaries, and advocacy websites (Arrigucci, 2008). Instructors graded student participation and three assignments, and anonymous graders assessed the rest using online rubrics,

standardized feedback, and the comment feature in Microsoft Word (Arrigucci, 2008). When students complained about getting tougher feedback on their final drafts, UTEP graders committed to providing more feedback earlier (Arrigucci, 2008). Similar to Texas Tech University, UTEP significantly increased the number of assignments while halving passive class time and reducing grade inflation (Arrigucci, 2008). UTEP reported more dropouts in its new courses, but the courses had new content and instructors were encouraged to drop absent or failing students (Arrigucci, 2008).

Challenges arising from multidisciplinary interaction in the design team. The people involved in implementing online writing courses may come from different communities of practice. A community of practice is a self-organizing "[group] of people informally bound together by shared expertise and passion for a joint enterprise"; the group may consist of people who work independently, work in different organizations, or work within the same organization (Wenger & Snyder, 2000, p.139). Differences in knowledge, know-how, and identity complicate communication between different communities of practice, even within a single organization (Brown & Duguid, 2001). Such differences cause challenges when communities of practice must coordinate, such as when they wish to develop new solutions (Carlile, 2002) by combining different kinds of knowledge in new ways (Brown & Duguid, 2001).

Knowledge is localized around the types of problems a community typically solves; it is embedded in experiences, know-how, "technologies, methods, and rules of thumb" (Carlile, 2002). Knowledge is invested in practice, strengthened by success in its use and in the reputation that success confers on its community (Carlile, 2002). Without the "know-how" informed by practice in one community, knowledge may have little value to another community (Wenger, 2000; Brown & Duguid, 2001). Knowledge may fail to transfer between people in the same organization who belong to different communities of practice although it flows freely among members of the same community of practice spread over separate organizations (Brown & Duguid, 2001).

Different communities of practice may use different objects to represent the knowledge they use, such as numbers, sketches, and tools "that individuals create, measure or manipulate", and they may pursue different outcomes with those objects, such as a signed agreement, the development of a prototype, or a solution that meets specifications (Carlile, 2002, p.446). The differences among communities of practice in the objects they use and the outcomes they pursue

have practical consequences for coordination: the requirements accepted by one group may be hard to design, and the design created to meet requirements may be hard to produce with consistency, high quality, and reasonable cost (Carlile, 2002). Such consequences may only become apparent after a decision has been passed between groups, such as from requirements to design, or design to production, necessitating the communication of problems and consequences back to previous groups to consider required changes (Carlile, 2002). As those groups may represent different communities of practice that use different objects to pursue different outcomes, communicating problems requires some form of translation to allow for mutual understanding (Carlile, 2002). As such, negotiation among communities of practice within an organization is an important tool to coordinate work, as opposed to relying on control imposed through an institutional hierarchy (Brown & Duguid, 2001).

To increase the likelihood of productive interaction across their boundaries, the different communities of practice need to establish activities for their interaction, identify their common ground and their differences, commit to suspending judgment of each other, and develop mechanisms to translate their differing experiences and competences to make them meaningful to each other (Wenger, 2000). Such mechanisms include people, artifacts and interactions (Wenger, 2000).

People may act as brokers by introducing practices from one community into another (Wenger, 2000), sometimes after changing careers and communities of practice, becoming translators or "boundary spanners" (Brown & Duguid, 2001). Although originally used to describe people who translated information across the boundary between an institution and its external environment (Aldrich & Herker, 1977), "boundary spanner" has also been applied to people who communicate across boundaries within an organization, such as technical communicators who gather information from different types of professionals to produce a common communication resource such as documentation, and in the process help each of those groups of professionals understand each other's perspectives and negotiate a shared meaning (Harrison & Debs, 1988).

Artifacts called "boundary objects" allow people in different communities of practice that are pursuing different outcomes through different tasks, to cooperate without requiring a consensus (Star & Griesemer, 1989). Boundary objects arise organically from "information and work requirements as perceived locally and by groups who wish to cooperate" (Star, 2010,

p.602). The objects may be used by a community of practice for its own work while also being maintained as a more common object to communicate with other communities (Star, 2010) by building on common ground with those communities (Star & Griesemer, 1989) while allowing the communities to interpret the object for their own purposes (Star, 2010).

Effective boundary objects address syntactic, semantic, and pragmatic aspects of knowledge (Carlile, 2002). First, they provide a shared syntax or language; second, they provide members of different communities with a way to "specify and learn about their differences and dependencies"; and third, they provide a way for members of different communities to address the practical consequences of their differences by transforming their current knowledge to account for the knowledge from the other communities (Carlile, 2002, p.452).

Boundary objects include repositories such as libraries (Star & Griesemer, 1989) and databases of common references for solving problems (Carlile, 2002). "Standardized forms and methods provide a shared format for solving problems across different functional settings" such as forms that collect and categorize differing perspectives and consequences related to a problem (Carlile, 2002, p.451). Models such as sketches, prototypes, mockups, and computer simulations provide "simple or complex representations than can be observed and then used across different functional settings"; similarly, maps such as "process maps, workflow matrices, and computer simulations help clarify the dependencies between different… efforts that share resources, deliverables, and deadlines" (Carlile, 2002, p.451). Other boundary objects include "shared documents, tools, … processes, objectives, schedules" both for coordination among different communities of practice, and to signal changes in one community's practices that may require negotiation with other communities (Brown & Duguid, 2001, p.209). For instance, boundary objects may be disrupted if one community of practice alters the way it acts such that the object no longer bridges the communities (Brown & Duguid, 2001), or if administrators impose standardization; however, residual categories that do not fit into the new standards may generate new boundaries and new boundary objects (Star, 2010).

This study examines the creation of online writing courses in higher education, which may involve new combinations of knowledge from different communities of practice represented by designers, faculty, technical support, and administration. Their interactions may require boundary objects to translate their respective needs and concerns while addressing the challenges of online learning.

Key challenges in online learning requiring design and technical support. Perhaps the most serious challenge in online learning is the risk of higher dropout rates (Bernard, et al., 2004; Sapp & Simon, 2005; Lee & Choi, 2011). Students with weaker academic histories and more dropped courses (Lee & Choi, 2011) or more challenging environments such as full-time work and extra-curricular commitments (Devey, 2009) are more likely to enroll in, and drop out of, online courses. In face-to-face and online versions of the same writing course taught by the same instructors, face-to-face students excelled or passed, while online students evenly excelled, passed, or failed (Sapp & Simon, 2005). Students who drop out of online classes have weaker academic histories with fewer courses completed, less experience with course content (Lee & Choi, 2011), poor discipline without scheduled classes (Lee & Choi, 2011; Devey, 2009; Sapp & Simon, 2005), poor technical skills, a need for external motivators (Lee & Choi, 2011; Devey, 2009), underestimated course demands (Devey, 2009; Sapp & Simon, 2005), and expectations for immediate answers (Devey, 2009; Boyd, 2008). Anxious students may overreact to frustrations, and without intervention, blame others for their problems, engage in angry exchanges, and complain to administrators (Hailey, Grant-Davie & Hult, 2001).

In contrast to a classroom where an instructor and peers provide a dynamic, social experience for a student, online learning uses a computer-generated interface. Unquestioned, user interfaces and templates constrain instructors and students (Arola, 2010). Information technology support staff may promote quizzes and gradebooks and fail to highlight discussion functions (Blakelock & Smith, 2006; DePew & Lettner-Rust, 2009). Instructors may allow technology to drive pedagogy, resorting to teacher-centred approaches that view students only as their writing performances and the errors they make (DePew & Lettner-Rust, 2009). Instructors "need to be tough-minded" about their technology choices and search "for those that are interactive, problem oriented, relevant to real-world issues, and that evoke student motivation" (Chickering & Ehrmann, 1996, p.6) without imposing unnecessary access or cost burdens (DePew & Lettner-Rust, 2009).

Faculty and the people who help them have a variety of approaches to assist with implementing online learning. In general, online dropouts can be reduced with relevant, well-structured content and clear procedures and communications (Lee & Choi, 2011; Devey, 2009; Boyd, 2008), frequent interaction between students and supportive instructors (Lee & Choi, 2011; Sapp & Simon, 2005), regular prompts to engage students with course content (Lee &

Choi, 2011; Devey, 2009), frequent smaller assessments, sample assignments to set expectations (Devey, 2009), explanations of the purpose of activities, moderation of discussions, and help for students to create personal meaning (Boyd, 2008). In online environments, students and instructors rely on written communication, amplifying the importance of a supportive tone, short sentences, a common vocabulary, and clear statements of the purpose and importance of a communication and what the learner is expected to do (Ragan & White, 2001).

The extra time required to produce online courses relates to addressing such design and structuring issues (Seaman, 2009) to reduce dropout rates and promote student achievement. Meta-analyses have found little or no difference in learner performance between distance and classroom education (Allen, Mabry, Mattrey, Bourhis, Titsworth & Burrell, 2004); distance learning was sometimes better and sometimes worse; student achievement related most strongly to pedagogical approaches such as systematic instructional design, active learning with student collaboration, and opportunities to communicate interactively (Bernard et al., 2004).

Rather than allowing the choice of medium to dictate how students will learn in a course, faculty and designers should choose the most cognitively and financially efficient media that support desired instructional methods (Clark, 1994). Technologies are capable of supporting good educational practices such as increasing instructor contact and student collaboration through electronic communication, providing authoring tools to support active learning, providing systems to store, review and reflect on content, increasing time on task by allowing work from home, communicating high expectations by sharing electronic portfolios, and respecting diverse talents and preferences by providing flexible interfaces and assignments (Chickering & Ehrmann, 1996). With increasingly sophisticated communication and networking technologies, distance learning can support a range of pedagogies: cognitive-behaviourist instruction that "teaches to the test" using standardized objectives; social-constructivist designs that build knowledge with authentic activities and social interactions; and connectivist designs that encourage networks of learners and professionals to build shared resources such as archived discussions, blogs, and learning objects (Anderson & Dron, 2011). Designers should draw on all pedagogies to support course goals (Ertmer & Newby, 1993; Anderson & Dron, 2011) and satisfy budget and personnel constraints (Ertmer & Newby, 1993).

Using technology to create opportunities for interaction plays a key part in effective online course designs, but such interaction must be implemented intelligently. Interaction can

improve achievement in online learning when it engages students with course content, whether alone or in combination with other students or instructors (Bernard, Abrami, Lou, Borokhovski, Wade, Tamim, Surkes & Bethel, 2009). While superficial interactivity can motivate learners to click through videos and activities, interactions with content (including reading) can promote deeper reflections and knowledge construction (Mehlenbacher et al., 2000). However, providing opportunities for interaction does not mean it will be effective. Although online learning offers interactions with other people, allowing more students to share ideas than time-limited classes allow, and providing a less intimidating environment for shy students (Boyd, 2008), students may respond more than they initiate, read only the posts of people they value, self-censor, focus on graded assignments (Anderson, 2005), prioritize feedback from instructors (Rendahl, 2010), and default to last-minute perfunctory postings and superficial praise (Rendahl, 2010; Kiefer, 2006). Students may consider online discussion with novice peers as "busywork" if the rest of the course focuses on packaging and transmitting knowledge from experts (Stroupe, 2003). Designers must consider how to trigger meaningful interaction, such as encouraging enthusiastic peers into modeling timely and deep reflection in their posts (Rendahl, 2010; Kiefer, 2006), and using course designs that focus less on packaging authoritative content and more on encouraging students to compose posts using online genres that include personal connections, links to resources, and invitations to continue dialogue (Stroupe, 2003).

Faculty and designers will want to know whether an online course is effective in addressing these online challenges. In some cases, faculty may drive efforts to support an effective pedagogy (Mehlenbacher, Miller, Covington & Larsen, 2000); in other cases, it may be the administrator (Wasley, 2006) or the designer (Stroupe, 2003); faculty may even change their classroom approaches to reflect techniques they learn from creating online courses (McQuiggan, 2012). Course evaluations are key aspects of development models such as ADDIE (Carliner, 2003) and SAM (Allen & Sites, 2012) used by instructional designers. Based on feedback, faculty and designers can adjust the content and structure of online courses (Katz, 2008; Blythe, 2001). They can prompt students for feedback to identify what students found helpful, what areas required more samples or more explicit connections to assignments and real-world tasks, and what areas needed options to either learn more or skip over things that are already known (Katz, 2008; Blythe, 2001). Such evaluations and adaptations are necessary to ensure that online

courses meet the needs of instructors and students within a particular discipline, given its knowledge and practices.

Emerging Issues

A number of issues emerge from the literature. Moving writing courses online requires a series of decisions about pedagogies and instructional methods, how to leverage the affordances of technology to implement them effectively, and how to support the implementation, maintenance and potential enrolment growth of the program. Such decisions may be driven by different priorities depending on whether the effort is driven by faculty or administration, ranging from extending the reach of a modern pedagogical approach to a broader audience, to using traditional approaches to impose more control, consistency, and accountability on instructors and make more efficient use of resources. Decision-making also involves personnel who support the process such as content consultants, instructional designers and technical support. These personnel interact with faculty and must negotiate priorities and constraints to create a timely and practical online learning solution that addresses the key challenges in online learning such as higher dropout rates, and creating virtual environments that trigger meaningful interaction with content and among students, while respecting the experience and context of faculty and their discipline. Development efforts are iterative, adjusting not only to feedback from personnel, but also from use of the online courses. The way each institution measures its success differs based on their reasons for moving a writing course online.

These bundles of decisions, the actors who make them, and the contexts that shape them are worth further investigation. Rather than prescribing algorithms of "correct implementations", a rich, contextual exploration can help develop a toolbox of heuristics that each of the actors may draw on when contemplating, implementing or reflecting on a project to move a writing course online. Such heuristics may highlight ways of identifying and analyzing influences from the people and tools used to create courses to ensure development reflects strategic and pedagogical priorities.

Reported cases consist of journal articles, news reports, theses and dissertations. They are often written by the people who were part of the creation of the courses. Reports often examine aspects of an implementation such as the use of a particular theory or tool and the attitudes or performance of students. The reports do not offer in-depth investigations of the implementations

of multiple online writing courses, do not address multiple perspectives from people involved in creation and operation, and do not use consistent information and structure to allow for thoughtful comparative analysis of the cases.

Conceptual Framework

To properly consider the many issues emerging from the review of literature, this study requires a conceptual framework. To minimize the risk of producing misleading or misinterpreted results, researchers should identify "the system of concepts, assumptions, expectations, beliefs, and theories that supports and informs [their] research" (Maxwell, 2005, p.33). Such a framework uses literature not as an authority to defer to but as a source of ideas to identify problems and structural tensions to investigate (Maxwell, 2005). To construct the theoretical framework, the researcher should consider the existing concepts and relationships in the literature, select a paradigm that defines ways of thinking and knowing that will illuminate key issues in that literature, and choose a theory that helps guide and interpret related research (Maxwell, 2005).

One way to determine an appropriate paradigm and guiding theory is to consider my own knowledge and experiences related to the topic, review the literature and create a concept map of concepts and their relationships, then consider existing theories that relate to those concepts and help explain them (Maxwell, 2005). I considered my existing knowledge and potential biases in an identity memo (Maxwell, 2005) as set out in Appendix A, and used a concept map to consider concepts and relationships from the literature, as shown in Table 22 in Appendix B.

Not only are there different roles involved in implementing online writing instruction (such as instructional designers, faculty, administrators and technical support), but also different perspectives for researching online writing courses online in higher education. One perspective considers how organizations influence individuals to teach in new ways (or through new media) either through change management (Kandiko & Blackmore, 2012) or faculty development initiatives (Wilson, 2012), and may focus on results in student performance or satisfaction (Rendahl, 2010); another looks at the efforts of individual instructors to experiment with a course, which tends to result in individual experience reports (Mehlenbacker, et al., 2000; Reinheimer, 2005; McQuiggan, 2012). The concept map in Appendix B offers yet another perspective, illustrating a network of people, roles, resources, and decisions in a set of

interactions required to implement a specific writing course online. Such a perspective contrasts with approaches that focus on explaining instructional system development using chaos theory (Cagiltay, 2002), or measuring the acceptance of a new online writing system using diffusion theory (Gillis, 2003). The concept map suggests the need for a theoretical framework that acknowledges and explains the interactions of a group of people in different roles working together to develop an innovation in higher education: the creation and implementation of a writing course online.

To consider the multiple perspectives involved in creating online writing courses, a social constructivist paradigm was chosen for research (discussed in more detail in Appendix B). Social constructivists accept that people build their own realities based on their interactions with the world and each other, and those realities consist of the explanations people create for themselves based on their experiences (Guba & Lincoln, 1994).

To provide a theoretical context for analysis in this thesis, activity theory was chosen to provide a multidisciplinary approach for studying work and technology (Engeström, 2000). In activity theory, people learn while they are engaged in doing things, and learning is analyzed in the context of those actions (Engeström, 2001). Engeström (2000a) distinguishes activity theory from epistemologies such as objective realism, culturally-mediated constructivism, and wholly-subjective constructionism, which he says focus on individual experience and ignore the broader picture of an individual's actions within a greater social activity involving other roles played according to collective rules.

Activity theory developed in multiple phases, starting with Vygotsky's description of human activity not as mere stimulus and response, but as stimulus and response mediated by culture, and expanded by Leont'ev's analysis of individual actions as part of a broader social activity (Engeström, 2001). For instance, Leont'ev describes a hunt where beaters scare animals into the path of hunters; the actions of beaters do not feed them directly, but result in food if the overall hunt activity is successful (Engeström, 1987). As such, the unconscious operations or goal-directed actions of individuals are only short-lived aspects of greater societal activities driven by communal motives (Engeström, 2000). Activity theory was further developed to consider how entire activity systems interacted, in order to account for the differing perspectives of groups of people who play different but interacting roles, such as primary care physicians and hospital physicians who treated the same patients but in different contexts (Engeström, 2001).

Spinuzzi (2013) suggests an even broader development, where activity theory considers multiple perspectives, contexts and temporary collaborations across networks of activities, focusing more on the interactions among activities rather than the work within activities.

To analyze an activity, Engeström (2001) breaks it down into six elements or sub-divisions of the system. The Subject is the entity driving the activity, such as a person or organization and Instruments are the tools, mental models, or ideologies used by the Subject. The activity is constrained by Rules, and takes place within the Community, which is the social context, and employs the Division of Labour, or additional entities that work with the Subject to accomplish the activity. Motivation is the reason for the activity's existence and is comprised of an Object to be acted on by the Subject using the Instruments, and an Outcome to describe the desired results. I show the elements of an activity system in *Figure 1***Error! Reference source not found.**.
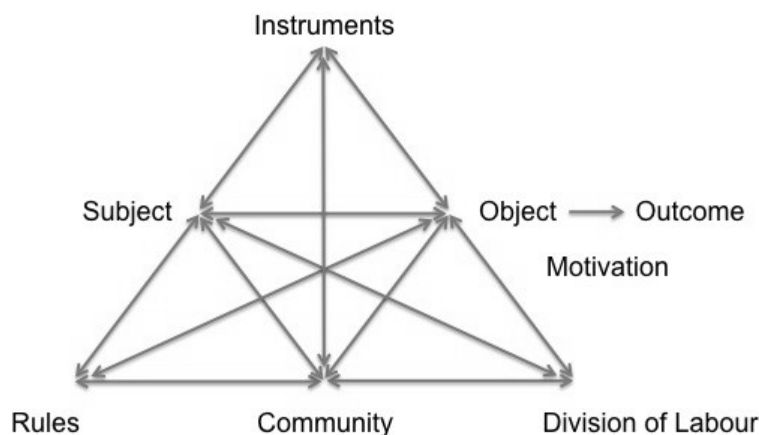
Figure 1. Activity system structure as described by Engeström (1987)

For each element, Engeström envisions a hierarchy of complexity moving from individual towards organizational and societal viewpoints (Engeström, 1987). For instance, at the lowest level, one might consider an unthinking individual Subject using habitual procedures as Instruments, to overcome some kind of resistance as an Object, to achieve an Outcome (Engeström, 1987). At a higher level, one might consider a goal-directed individual Subject, using a mental model as an Instrument, to resolve a defined problem as an Object, to achieve an Outcome (Engeström, 1987). Activity theory also considers the Community of people involved in the activity (such as Leont'ev's beaters and hunters cooperating in a hunt), the Rules governing the activity, and the Division of Labour within the community (such as beaters in a

hunt focusing on startling animals, and hunters focusing on killing the animals) (Engeström, 1987).

Engeström (2001) provides five principles of activity theory: first, analysis of a situation focuses on characterizing it as a social activity system with related artifacts. Second, the activity system encompasses the differing perspectives of the people involved within its Community and Division of Labour elements (Engeström, 2001). Third, the activity system is understood in the context of the historical development of its activities, objects and outcomes (motivations), and theoretical ideas over time (Engeström, 2001). Fourth, change and development within the activity system arise from structural tensions, or stresses, within the system (Engeström, 2001). Engeström describes four types of structural tensions: primary structural tensions occur within an element of an activity, such as tensions between individual, organizational, and societal levels within an activity's Rules; secondary structural tensions occur between elements of an activity such as tensions between its Rules and its Instruments; tertiary structural tensions occur between common forms and more culturally advanced forms of the Object and Outcome (Motivation) of the activity, and quaternary structural tensions occur between the entire activity system and its neighbouring activity systems (Engeström 1987). When structural tensions within an activity system result in a double bind or a "societally essential dilemma which cannot be resolved through separate individual actions alone – but in which joint cooperative actions can push a historically new form of activity into emergence" (Engeström, 1987), the Subjects of the system may reconceptualize their Motivation by considering a much broader perspective, a process that Engeström (2001) describes as "expansive learning" or "a collective journey through the zone of proximal development" (Engeström, 2001, p.137). The zone of proximal development is "the distance between the present everyday actions of the individuals and the historically new form of the societal activity that can be collectively generated as a solution to the double bind potentially embedded in the everyday actions" (Engeström, 1987).

Engeström (1987) describes a methodology for conducting activity theory-based research: first, explore the phenomenon of interest and its related issues, then delineate an activity system based on real people and locations. Second, analyze the activity in three phases: an object-historical analysis (how the Motivation of the activity developed over time due to secondary structural tensions); a theory-historical analysis (how the Instruments of the activity developed over time due to secondary structural tensions); and an actual empirical analysis

(examining the current activity on three levels such as operations, actions, and activity; and concepts, procedures and social discourses) while considering the previous historical and theory analyses (Engeström, 1987).

Activity theory is a valuable conceptual framework for this study because it analyzes phenomena, such as the development of online writing courses, as activity systems that evolve over time. As such, the framework allows consideration of the many issues emerging from the review of literature: the roles of faculty and administration driving the development of online writing courses, the pedagogies and technology they used, their goals for offering courses online, the personnel who supported the design and implementation of the courses, the changing needs of students and society, and the revisions to the courses over time to meet those changing needs.

Chapter Three: Methodology

This chapter explains how the study was conducted, and describes the choice of research methodology, the selection of participants, the collection of data, and the analysis of data. The chapter closes with a description of actions taken to enhance credibility and trustworthiness.

Choice of Research Methodology

Moving university writing courses online is a complex phenomenon. Faculty, shaped by previous experiences, respond to university and community needs, consider pre-existing course materials, adapt to the technologies chosen by others for presenting courses online, and interact with experts, instructional designers and technical support to develop their courses. Since courses exist over time, faculty confront ongoing pressures to adapt their course designs to address changes in university rules, community needs, and available technologies.

To conduct a rich, contextual analysis of this phenomenon, this study uses activity theory as a theoretical framework to explore how and why online writing courses are developed and adapted in higher education. Within that framework, this study uses multiple case study analysis because the phenomenon of online writing course development is too complex to create and control in an experiment, is contemporary with available interviewees, and is highly contextual and thus less appropriate for surveys which tend to concentrate on frequency distributions of known factors (Yin, 2009).

Case studies are a form of qualitative research that focuses on activities within a defined group and within a limited time period or location, such as faculty and support personnel creating an online writing course at a particular university (Creswell, 2012; MacNealy, 1997). Case studies are empirical inquiries into a "contemporary phenomenon in depth and within its real-life context" where "there will be many more variables of interest than data points" (Yin, 2009). The case study approach provides insight into particular contexts, and provides rich details to explore poorly-understood problems such as gaps in practice, and a lack of guidelines, clashes of opinion, and frustrated expectations (MacNealy, 1997) which may arise when faculty work with others to adapt to the online environment in order to meet the needs of their universities and their communities when creating online writing courses. Case studies are not informal, personal reports written by practitioners based on their memories; instead, they are planned and systematic processes that are transparent in procedure and replicable by peers (MacNealy, 1997),

a much-needed contribution to the literature to assist the growing demand for post-secondary online courses in general, and online writing courses in particular.

Each case must explore concrete situations, such as specific individuals or small groups, rather than abstract concepts (Yin 2009). In this study, each case describes the activities of a professor and support personnel who develop one online writing course at a university in North America. The writing courses are designed either for students majoring in a writing-related subject, or students who need a service course to acquire writing skills. Each case explores the problem that inspired the creation of the online course, the course that was developed, the process for developing the course, and the results, such as what worked well, what didn't work well, and feedback from learners and instructors.

Case studies may consist of an intrinsically interesting case, an illustrative case, or a collection of cases for the purposes of deriving insight and making comparisons of alternative approaches (Creswell, 2012). To address Wilson's (2012) criticisms that efforts to influence and support faculty change, such as moving writing courses online, tend to be weakened by decontextualized, one-size-fits-all solutions that ignore the nature of a faculty member's department or discipline, this study examines the detailed contexts of multiple implementations of writing courses, a strength of the in-depth approach of case studies (Yin, 2009; Creswell, 2012).

Participants

Universities offer a variety of writing courses including "freshman composition, creative writing, technical and business communication, rhetoric, composition theory, the teaching of writing, and English as a second language" (Graves, 1993, p.76). Some courses are designed for students majoring in a professional and technical writing program, while others are designed as service courses for students majoring in other disciplines. Courses may be offered at either the undergraduate or graduate levels, and may be required for students to complete a program of study, or offered as electives (optional courses chosen by students). When offered online, courses may be taught asynchronously (when students and instructors are not online at the same time), synchronously (when students and instructors are online at the same time) or in a blended version that combines both methods.

To address the research questions, the study required multiple cases that were diverse enough to provide insight into different contexts, and yet similar enough to allow for reasonable comparison across cases. As such, to qualify for the study an online writing course had to be designed for professional or technical communication for university students who were fluent in English and studying at the undergraduate or graduate level. In addition, although the course could have a limited number of optional face-to-face sessions, it must have been promoted as an online course without a regular classroom. Courses had to be offered in English as I am only fluent in that language. To ensure a sufficiently broad representation of cases while allowing the thesis to be completed in a reasonable period of time, the sample was limited to four cases.

An initial pool of candidate courses was created using purposeful sampling based on the criteria discussed above (Creswell, 2012) applied to a combination of professional contacts and Google searches. First, I reviewed contacts developed through my work as the editorial assistant for the IEEE journal *Transactions on Professional Communication* and, with the permission of the editor, contacted them for referrals. Second, I requested contacts from my thesis supervisor who is an experienced professional and academic in the field of writing. Third, I conducted Internet searches using Google with search terms such as "online writing course degree university" and "online writing syllabus" and I also searched for universities that offered online degree programs. My search included institutions in the United States, Canada, Australia, the United Kingdom and Ireland. I constructed an Excel spreadsheet listing 27 candidate institutions and the types of online writing courses they offered. To satisfy the criteria for the study, I prioritized universities that offered online writing courses outside of creative writing and journalism.

Recruitment of participants used a two-step process. In the first step, the announcement in Appendix C was sent to candidates. When a candidate responded, I followed up. To maximize the number of perspectives involved in developing and administering the courses, such as instructors, instructional designers and faculty developers, graphics and web design professionals, technical support, teaching assistants, and administrators, I asked candidates about the personnel who assisted in creating the course and asked the candidate if they could recruit these people or provide me with contact information to allow me to recruit them directly. Since I was facing an academic deadline, I needed interview participants to be available between April and June 2014. To secure institutional consent, I asked for the program coordinator or director to

sign an organizational consent as set out in Appendix C. In the second step, each individual who agreed to participate in the study was asked to sign an individual consent as set out in Appendix D. In one instance an administrator gave permission by e-mail but would not respond to repeated requests for a written consent. To move the research forward, the individual consent form in Appendix D was amended so that individuals represented that they had their organizational consent.

The project received ethics approval before any potential participant was formally contacted.

How Data Was Collected

For each case, several types of data were collected. The primary source was a series of interviews with people who participated in the design, development, and administration of the online writing course. Participants who signed an individual consent form were asked to participate in a three-part, semi-structured interview.

1. In the first part, I asked for background about the participant and his or her role in developing the course, and about the analysis, design, development, implementation, and evaluation of the course, as well as the decisions underlying those processes. I also asked participants to provide documentation, such as course syllabi (outlines) and similar materials.

2. In the second part, I asked the participant to "walk" me through the online course. For the pilot study, and for one case due to time constraints with the participant, I did my own walkthrough.

3. In the last part, I followed up on issues that were not resolved from the first two parts, typically in the form of e-mailed questions.

The interview guide is set out in Appendix E.

All interviews (except those in the pilot study, which were captured using interviewer notes) were recorded using a digital recorder while I took notes. After each interview, I transcribed the recording and sent the transcript to the participant for verification and additional comment.

In addition to the interviews, I sought other sources of data to explain background, enhance context, and confirm details, such as access to the course, the course syllabus, source

materials for course development, and articles and presentations related to the course. Although interviews were conducted for all four cases, the additional data differed among the cases.

This study focused exclusively on the perspectives of the people who designed, developed and administered the courses. As such, participants were asked to provide their observations about student evaluations and student performance. Actual student data (such as interviews, course evaluations, or grades) were not sought. Although some participants urged me to view student data, I avoided doing so in order to maintain the focus of the study.

To test this methodology, I conducted a pilot study. The pilot study supported the methodology and the data is included in this report.

How Data Were Analyzed

Data analysis was performed using activity theory analysis. Activity theory and its analytical procedure is described in the Conceptual Framework section of Chapter Two. Briefly, activity theory analyzes a phenomenon as an activity system comprised of six interacting elements or sub-divisions of the system: Subject, Instruments, Rules, Community, Division of Labour, and Motivation (Engeström, 2001). The activity system is traced over time to identify changes and how they are triggered by structural tensions within or among the elements of the system (Engeström, 1987).

I started analysis at the individual case level and used the following process:

1. Collected notes from interviews, e-mails, course walkthroughs, and documents supplied by participants.

2. Reviewed all data to become familiar with content, and noted observations in a separate researcher's notebook.

3. Compiled narrative descriptions of each case to provide readers with a background on the development of each course, and to provide a basis for further analysis. The narrative descriptions followed an identical structure using the following key elements: a description of the problem that triggered the development of the online writing course and the people involved in the process, an overview of the solution developed, the process used for developing the solution and the source materials and tools used, and the results from the development of the course, including what worked well, what didn't work well, and feedback based on learners.

4. After each case description, the case was characterized as an activity system that developed over time due to structural tensions.

5. After presenting the four cases and their activity systems, a cross-case analysis was conducted to determine which characteristics in the individual systems more broadly affected the development of online writing courses. Those common characteristics were used to generate a theory that explained the development of online writing courses at universities based on key influences over time.

Assuring Credibility and Trustworthiness

To assure the credibility and trustworthiness of the data collected, I used two primary techniques. The first is triangulation: relying on several sources of data to generate the cases. These sources included interviews with participants (multiple participants where possible), observation of a course walkthrough, direct access to the course (where permitted by the university), and reference to the course syllabus, source materials for course development, and news articles, research articles, and presentations related to the course. The second method is member-checking: providing participants with the opportunity to transcripts from their interviews, as well as drafts of the completed case descriptions.

Qualitative resarchers can contribute bias to the study. Peshkin (1998, p.17) warns that researchers who fail to systematically identify their biases risk allowing those biases to "filter, skew, shape, block, transform, construe and miscontrue" their experiences from the beginning to the end of their study. Following Peshkin's (1998) advice, a researcher's notebook was kept to record general observations as well as explore strong feelings that might be a source of bias. For example, while attending a faculty development conference about e-learning, I had very strong positive feelings about a presentation by an instructional designer who described a highly-structured approach to design and implementation. This approach agreed with my own training in instructional design and reflected my bias about an appropriate approach to designing courses.

Qualitative research can be systematic if it includes enough detail about participants, research and analysis procedures, and recorded data that other researchers can "conduct a comparable study to validate, qualify, and perhaps add to the first study" (Haswell, 2005, p.201). Although some criticize a systematic and empirical approach as a positivist and masculine attempt to reduce research to what can be measured (Driscoll, 2009), researchers need not fall

into the opposite extreme of subjective relativism. Instead, researchers can embrace skepticism, focusing on collecting and questioning evidence using a variety of methods in a manner transparent enough to allow themselves and others to question assumptions, monitor bias, and judge the reliability and validity of the results (Driscoll, 2009).

Chapter Four: Results

In this chapter I present four cases of teaching writing online in the order of their development between 1996 and 2012. The cases consist of two undergraduate and two graduate courses. Writing for the Technical Professional is an undergraduate, elective service course offered primarily asynchronously. Introduction to Legislative Drafting is a graduate, required course for a diploma program offered asynchronously. Educational Communication is an undergraduate, elective, service course, offered primarily asynchronously. Finally, Proposal Writing is a graduate, elective course for writing majors offered primarily asynchronously. To preserve confidentiality of participants, I used pseudonyms.

Case One: An Undergraduate Service Course, "Writing for the Technical Professional"

> it was much more chaotic back then. They were winging it and we were winging it… the staff were trying to figure out what to do, what to teach, and we were trying to figure out how to take what content we had, and objectives for the courses, and how to move this experience into the online environment and still make it challenging.

This case describes the development and revision of a primarily asynchronous, online undergraduate service course for technical majors called Writing for the Technical Professional. I describe this case in four parts: the problem that inspired the course, a brief overview of the solution, the process for development, and results.

The problem. Albert is a male professor in the Department of English in the College of Arts and Humanities, with 31 years of experience in university teaching, and 18 years teaching online. Prior to development, Albert had been teaching a classroom version of the service course to upper-year undergraduates in technical majors since the 1970s. Albert's university is a public institution in the southeastern United States with over 60,000 students enrolled, over 40 years of offering classes, and a large physical campus.

Demand for the new course arose in 1996 when "our university was getting into teaching online. It was … one of the first universities to do so here in the United States." A research study about online development at the university notes that the university was experiencing "rapid growth and [a] distributed student population" without the necessary classroom space.

The goal of the university, as part of its push for online learning, was to create online versions of "a wide open course … at that time they didn't want to experiment with courses that were very limited in focus or very limited in appeal" and they were also looking for "faculty who were willing to make the effort" at a time when not all faculty or administration were interested in online learning. Based on research articles about that time, the university rejected a television-style of distance learning in favour of more asynchronous but interactive web-based offerings suitable for dial-up modem access. The Writing for the Technical Professional course was a good candidate because "it's a wide open course" taught to multiple disciplines and, "I'm fairly sure they invited me to submit a course as a candidate" because "I've been teaching that particular course since the 70s."

Albert voluntarily joined a university effort in 1996 to quickly expand its offering of online courses. To prepare, Albert was required to complete the university's faculty workshop for online learning. To encourage faculty to create online versions of their courses in 1996, the university provided a faculty development course in online learning. A research article describes the evolution of the course from a 5-day workshop, where facilitators in a computer-less classroom faced faculty unfamiliar with e-mail, conferencing, and other technology, into an eight-week course that combined meetings, laboratory sessions, online learning, and instructional design consultations. The course covered asynchronous and distributed learning, designing systematically, and engaging and supporting learners. Classes included demonstrations from experts, cooperative learning and discussions, and homework assignments to develop online modules. The university also offered a $2,500 technology stipend that most used to purchase a laptop computer. "They quit doing it probably 10 years ago, but it was a way of saying, hey we will help you develop this class and here's a laptop you can use … bring it into the [workshop] classroom."

Course structure, in the version studied, had to conform to a 3-credit, 6-week undergraduate Summer semester. The original course was developed as an asynchronous offering in WebCT. The university now requires instructors to use its Canvas learning management system. In 2012, Albert had to migrate his course from WebCT/Blackboard to Canvas when Blackboard abandoned support for the older product.

The solution. Albert struggled with translating his classroom offering into an online experience that students would find "palatable."

> If this were … a face-to-face class… they would have to meet me on campus two hours a day Monday through Thursday, for six weeks. … I used to really over burden myself by trying to make the online class almost equivalent to that … but that required additional discussion prompts, that required additional assignments, and I've had to streamline that just because the students aren't used to the load.

Writing for the Technical Professional is a three-credit, six-week, primarily asynchronous online summer service course for upper-year undergraduates in technical majors. According to the syllabus, successful students should be able to "express yourself clearly and concisely in your discipline to a variety of audiences" by determining audience and adjusting style and complexity as required, learning about a technical professional through an interview, writing effective correspondence, developing effective technical instructions, creating a technical report or proposal in the student's discipline, and adopting strategies for professional development. The course is required or an elective depending on the major.

The target audience is upper-year undergraduate technical majors who have already completed introductory writing courses and are required to take an advanced course. Albert says that the academic disciplines of students taking the course has not changed much since its classroom format in the 1970s: "20 out of 30 would be computer science majors and another 5 would be science majors" with the rest coming from English, journalism, history, and political science, and, more recently, information technology.

Albert noted that his current students differ from those earlier in his career, partly due to their being "millennials" with different expectations, and partly due to the university introducing guaranteed entry to students who complete a community college program since the mid 2000s. As a result, Albert can sometimes get "students who are juniors and seniors who are less well prepared." He says, "a good third or more of my undergraduates and many of my graduate students are very capable. I guess what I'm calling your attention to is the bottom two thirds."

The course is mostly asynchronous and offered through the Canvas learning management system. However, the course also has a synchronous component: at the end of the term, Albert provides individual students with the option of having a conference call to ask questions about their final assignment. Although he has used Skype and is experimenting with Cisco Jabber, which offers chat and screen sharing features in addition to video calls, most students choose to

have telephone calls. Albert ran the course alone, without teaching assistants with classes of about 30 students.

The course explores the following topics: audience, style, correspondence, document design and illustration, instructions, reports and proposals, and ethics. Readings are assigned from a physical textbook. An earlier version of the course divided the topics into modules but creating separate modules in the online course took additional time to prepare.

The course uses graded assessments. Assessments consist of 10 quizzes (10%), five discussions (20%), and three writing assignments: a technical professional interview and memo (20%), instructions and memo (25%), and a report or proposal (25%).

Open-book quizzes use the quiz function in Canvas and are only available for 24-hours with 20 minute time limits to complete them. For discussions, students are assigned to one of five groups within Canvas. For each discussion, students choose from a list of question prompts and must post a paragraph with a topic sentence and supporting material such as a quote from the readings, and must also post replies to their classmates. Writing assignments are completed by students offline using Microsoft Word and submitted to Canvas as file attachments for downloading and review by Albert against rubrics. Grades are posted within Canvas.

The course is structured to provide daily activities for students from start to end (excluding weekends). Each day lists activities for students to complete such as readings from a physical textbook, quizzes on the readings, discussions prompts, and writing assignments. Performance supports include announcements from Albert. Announcements welcome students, notify them about handouts or posted grades, remind them about upcoming deadlines, and review class performance of an activity.

Students log into the Canvas learning management system through their web browser. Canvas provides customizable menus that allow professors to display information in different ways. One main option is "Syllabus," which the professor customized to present an integrated, day-by-day list of activities and assessments. A sketch of the course interface showing the Syllabus screen appears in *Figure 2*. Other menu options include a list of assignments, a list of discussions, a list of quizzes, and a list of downloadable resources for assignments and professional development. Canvas also links to screens that aggregate information across multiple courses, such as a list of courses, assignments, grades, and a calendar.

Figure 2. Sketch of interface used for the Writing for the Technical Professional course

Facts about the course are summarized briefly in Table 1.

Table 1

Facts About the Writing for the Technical Professional Online Course

Budget	• $2,500 technology stipend for original course
Length of time needed to complete the project	• 40 hours spread over a few weeks (original version) • 20 hours to revise the course away from modules • 10 hours updating before each following semester
Skills used in the project	• Writing • instructional design
Software used	• MS Word • Adobe Acrobat • WebCT / Blackboard and then Canvas learning management systems • Skype or Cisco Jabber Video desktop conferencing
Other resources used	• Faculty development program for online learning

Process for developing the solution. Albert remembers "the experience back in the 90s was more like the Wild West" where "we were all kind of pioneers, faculty and the instructional designers."

Albert admits that his memory is limited about the early history of the course. Resources available from the university in 1996 were rapidly expanding as part of a systematic approach that research at the time described as "aggressively developing distributed learning programs" and including "significant investments in technology infrastructure, faculty and student support services, and organizational development." Albert received a $2,500 technology stipend, access to technical support staff, and a faculty development workshop described earlier as part of *The problem*. Albert says, "there were only 12-15 of us in class and that was the entire university."

> That decision to start up that support, that decision to offer that course, and that
> decision to continue to revise that course for teaching faculty, was one of the big
> factors for the recruiting of faculty to get more interested in teaching online.

Albert suggests, "the instructional designers were winging it a lot more than they are now. They have almost two decades of research behind them, which they now fully incorporate into classes." Albert does not remember the training but suggests that in developing his course, "I used approaches that made the most sense to me, and these likely overlapped with what the research at the time supported." Research about the university's online efforts notes that the original workshop was based on the experiences of pioneering faculty who had developed a web-based course for teachers who could not access required training and faced de-certification. An article written about that course provided heuristics for design, including humanizing courses, providing guides and advance organizers, using simple media to reduce technology demands on students, and adhering to conventions in page design and navigation. In addition, a research article about the original workshop indicates that it provided templates for instructors to use with the WebCT learning management system, including activity schedules, criteria for grading, and samples of work.

For his online course, Albert uses a physical textbook on technical communication, and leverages his many years of classroom experience: "When you look at the syllabus there, you'll see course descriptions, course objectives. Those objectives have pretty much been constant for 35 years." For example, "back in the 1970s it focused on correspondence and writing other types of professional documents, and here in 2014 it focuses on correspondence and writing other

types of professional documents."

Albert admits that his early course design tried to recreate the classroom work experience. His face-to-face summer classes "would have to meet me on campus two hours a day Monday through Thursday, for six weeks" or 75-minute classes twice a week in longer semesters. He starts face-to-face classes with a quiz and discussion of the readings, exercises to reinforce the readings, then discussion of the exercises. He says, "I have exercises because I don't want to talk for 75 minutes and they don't want to listen to me talk for 75 minutes." When he moved the course online:

> I used to really over burden myself by trying to make the online class almost equivalent to that in terms of the time it would take … but that required additional discussion prompts, that required additional assignments.

As a key element of his online strategy, Albert attempts to "project persona" and create community. For example, his first discussion prompts students to answer biographical questions, and he posts his own biography as an example. He uses a photo of himself in his announcements, and in correspondence with students, "I'm always polite and encouraging."

He developed three kinds of assessment for the course: quizzes, discussion posts, and writing assignments. He uses quizzes about the assigned readings because many students don't read "unless I give them detailed quizzes… it's frustrating but that's the reality." Quizzes are multiple choice and true/false implemented in the learning management system. Students are permitted to use their textbook and correct answers are shared the following day.

For discussions, Albert divides students into 5 or 6 groups to reduce the number of posts they have to read. For each discussion he developed a list of questions to choose from that ask students to apply concepts from the readings. Applications include comparing readings to their own experience, commenting on sample documents, sharing examples of a concept, suggesting improvements, and reflecting on their learning. He requires students to write "at least one detailed paragraph and quote brief support from the reading" and post two follow-ups to other students. To assist students, Albert developed guidelines and annotated examples.

For writing assignments, he developed basic requirements for display within the course and more detailed requirements as downloadable files. Students complete writing assignments offline in a word processor and submit them once for a single, summative evaluation.

Albert made a number of major changes in the online course based on attendance at an updated faculty workshop, changes in his community's demographics and university admission rules, and personal research on rubrics. Around 2005, Albert returned to the faculty development workshop: "I'm one of the few people who probably did at the time … I took the course again because the technology had changed so dramatically and, what we could do had changed." He completed development work himself with the help of a "responsive" technical support group that corresponds by e-mail, and an "open lab" workshop where he learned how to transition from the Blackboard learning management system to Canvas in 2012.

First, based on the workshop, Albert "took a more sophisticated look at how I did modules … you can just take this strict modular approach or you can step outside of that." Instead, he chose to present the entire course as a day-by-day (except weekends) list of activities for students to progress through. Most days include end-of-day deadlines for quizzes, discussions, or assignments. He found the shift from modules to a combination of calendar, weekly syllabus and announcements, saved preparation time.

Second, based on his experiences with a changing demographic in his online students, Albert reduced course requirements. He notes, "students didn't want to read a lot of material" and so, "I've had to streamline content just to make the course more palatable. I've had to simplify just to make the course more manageable for them … I don't have the rigour that I used to have in this particular class." He reduced the number of assignments from five to three "largely because, again, the students found it to be too much and they wanted an easier course." He cut technical presentations and job correspondence but added the interview to ensure that students had contact with a technical professional. He also stopped using group work for this particular online course because "it can be difficult to assess individual contributions" and "the best students … sometimes do some of the work of the weaker students."

Third, Albert changed his role as an instructor because, "I was finding that the students were falling short."

> I was concerned about how the lower two thirds weren't quite getting some things, and so I said to myself, how would, how can I make sure that they get these little minor things and that they include them?

In response, he considered the importance of helping the "bottom two-thirds" of his students maximize their achievement by not only removing assignments, but also providing more

supportive guidance. He notes, "I constantly fine-tune the assignment handouts so that they're even more clear." More importantly, "I now use rubrics extensively" because "What's most disappointing is the student who could do better and settles for the C or D and could easily get a B or an A." Rubrics not only help him measure student learning but also help students because they know, "this is what I need to do, to show what I learned." He developed rubrics for each discussion prompt and each assignment, allowing him to provided detailed feedback for students. Assignment rubrics were developed in table format and list criteria specific to the assignment as well as introduction, style and mechanics, then describe levels of achievement for those criteria and their associated scoring, and end with the total score possible for each criterion. He displays the assignment rubrics on the learning management system, and when he grades assignments in Microsoft Word, he annotates the students' work and includes a rubric.

Other than the Canvas learning management system, Albert used Microsoft Word to create content, Adobe Acrobat to create PDF files, and Skype or, more recently, Cisco Jabber Video (which offers chat and screensharing capabilities) to conduct optional end-of-term conference calls with individual students to ask questions about their final assignment. The conferences are optional "because the enrollment is too high for a writing course" and despite the instructor's desire to interact more through video, most students opt for telephone calls.

Results of the solution. "I wouldn't go back, I wouldn't just teach face-to-face. I'm happy for the way I've designed my classes, and I'm happy for the way they've worked." In this section I describe reactions to the online writing course in terms of what worked well, what didn't work well, and feedback from users of the online course such as learners and Albert.

What worked well. Several aspects of the course succeeded with students. With respect to social interactions, Albert notes, "I was able to project my persona to some degree in the online environment through very supportive and prompt responses to their e-mail" and "I was pleased about how we could have good, supportive, friendly discussions." Although he misses in-person interaction with students, "I do get to learn a great deal about each student because the shy ones are just as thorough, if not more thorough, than the more talkative ones" in discussion posts, assignments, and e-mails. "I get to know them in different ways."

What didn't work well. Albert experienced challenges related to course objectives and social interactions. With respect to the objectives, Albert notes issues arising from the turnover in students during the first week of class. In the summer term studied here, eight out of 34 students

dropped the class and were replaced by eight others on a waiting list. "My challenge for that first week was giving time for those students to make up for missed quizzes and … missed discussion posts." With respect to social interactions, Albert notes, "the biggest weakness continues to be, in my online classes, with the discussions." He says, "I've had some classes that really do it well, and I've had other classes where the students are resistant to being more interactive." However, he notes, "it's not essential that students have the most lively discussions to still achieve my course objectives." In comparison with his face-to-face classes, he admits some disappointment about his interaction with students:

> There is the frustration of not getting to know each and every student in a way that you do in a classroom. Even if there's 35 students in a face-to-face, I would get to know all of their names within the first week and I would know … what made them laugh and what didn't make them laugh, and I would know if they're listening or not listening … I would know if they're prepared or not prepared. … I miss that personal interaction. I've always missed it.

To address the missing personal interaction in future classes, he may require students to participate in video conferences.

Student-related feedback. Albert experienced challenges in evaluating course objectives based on learner feedback. Albert notes that despite "nagging reminders" online course evaluations have response rates from 20 to 30 percent. He suggests that most feedback is favourable with some students asking for more time to access quizzes. He suggests that the dropout rate during the first week of his class is offset by demand for students in the writing majors. Eight of the 34 students enrolled for his Summer semester dropped the course in the first week "because college students shop around. They looked at my class and they figured it was more work than they wanted to do this particular semester, but another eight signed up right behind them."

The activity system of the course. The Writing for the Technical Professional course is an activity system comprised of six elements (sub-divisions of the system comprising Subject, Instruments, Rules, Community, Division of Labour, and Motivation) that evolved over time (Engeström, 2001). Activity theory and its analytical procedure is described in the Conceptual Framework section of Chapter Two.

Albert had taught the course since the 1970s and the version of the course prior to going online might be described as follows: an individual instructor using rigorous, time-intensive classroom methods, to teach technical writing to multiple disciplines on the university campus. By the mid 1990s, this activity system faced a number of structural tensions (stresses within or between elements, or between activity systems, as defined in Table 2).

Table 2

Kinds of Structural Tensions in Activity Systems

Primary	**Secondary**	**Tertiary**	**Quaternary**
Tensions between levels within an element of a system	Tensions between elements of a system	Tensions between versions of a system	Tensions between neighbouring systems

A rapidly growing population conflicted with limited classroom space at the university, causing a primary structural tension within the Community (the social context for the activity). That structural tension resulted in two secondary structural tensions. First, the Community was in tension with the Motivation (the reason for the activity's existence) because the university's inability to serve its community was in tension with the motivation of the course to teach writing on campus. Second, the Subject (the entity driving the activity) was in tension with the Motivation because the university desired to address the problems in Community by becoming an online pioneer—delivering the course on campus was no longer sufficient. These structural tensions are shown in *Figure 3*.

Instruments

Tools: using rigorous, time-intensive classroom methods

Subject   Object   →   Outcome

Societal: university as determined pioneer in expanding access (geographically and academically)

Individual: individual instructor

Motivation 1: teaching technical writing to multiple disciplines on campus

Rules   Community   Division of labour

Collective (organization): university requirements for course structure

Interpersonal: course requirements, classroom rules

Societal network of communities: growing population in the State

Collective (organization): limited university capacity on campus

Primary group: instructor and students

Interpersonal: experienced instructor and upper-year undergraduate students

Figure 3. Writing for the Technical Professional activity system before 1996

The result was a tertiary structural tension that resulted in a new activity system with a new Motivation of providing online access to students. Although training is not required for classroom teaching, the new activity system introduced new Rules (the constraints placed on the activity) that required faculty who offered online courses to take training from faculty developers, new Instruments (the tools, mental models, or ideologies used to accomplish the activity) in the form of a training program to create online courses, and the WebCT learning management system to deliver the courses, and a new Division of Labour (the entities that work with the Subject to accomplish the activity) that included instructional designers to provide the training and ongoing consultation. The new system is shown in *Figure 4*.
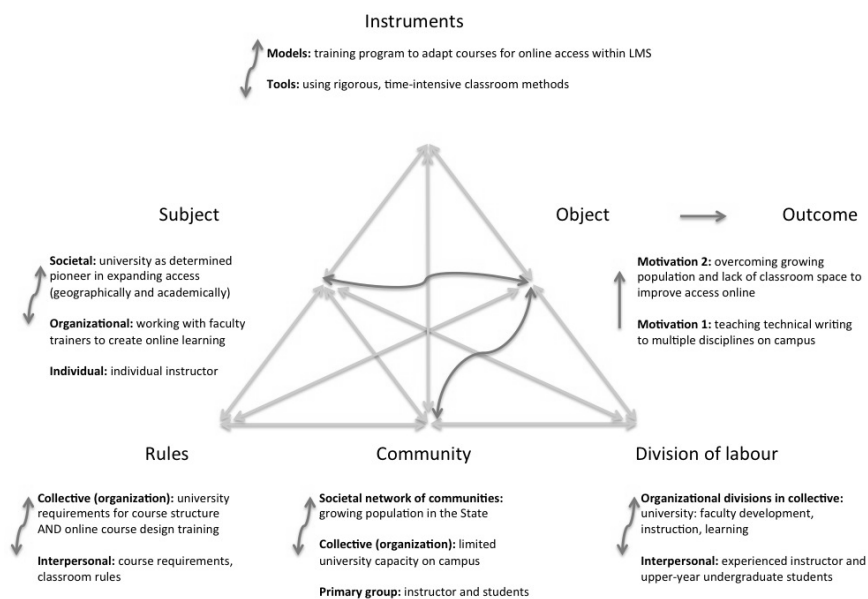
Figure 4. Writing for the Technical Professional activity system around 1996

In the mid-2000s, the course activity system faced further structural tensions. Within the Community, not only was the population growing, but that population included many "millennials", students Albert perceived as having less tolerance for "rigour" in learning, something he claims is supported by "a lot of in-depth research" he has done to support talks he has been invited to give on the topic. This caused a secondary structural tension between the Community and the Instruments, which at the time consisted of a rigorous classroom curriculum adapted for online use. At the same time, the university had changed the Rules such that students

who completed two-year degrees at certain community colleges were guaranteed admission to the university. Albert believes that some of those students were unprepared for study at the senior university level. This caused a secondary structural tension between the Rules and the Motivation of expanding accessibility through online learning. Given demographic changes in the Community, accessibility was no longer enough. These structural tensions are shown in *Figure 5*.

Instruments

Models: training program to adapt courses for online access within LMS

Tools: using rigorous, time-intensive classroom methods

Subject   Object   → Outcome

Societal: university as determined pioneer in expanding access (geographically and academically)

Organizational: working with faculty trainers to create online learning

Individual: individual instructor

Motivation 2: overcoming growing population and lack of classroom space to improve access online

Motivation 1: teaching technical writing to multiple disciplines on campus

Rules   Community   Division of labour

Societal: guaranteed admission to university for community college students

Collective (organization): university requirements for course structure AND online course design training

Interpersonal: course requirements, classroom rules

Societal network of communities: growing population in the State AND rise of millennials

Collective (organization): limited university capacity on campus

Primary group: instructor and students

Organizational divisions in collective: university: faculty development, instruction, learning

Interpersonal: experienced instructor and upper-year undergraduate students

Figure 5. Writing for the Technical Professional activity system before 2006

The result was a tertiary structural tension that resulted in a new activity system with a new Motivation of helping the "bottom two-thirds" of students in the online course. The new activity system acknowledged an expansion of the Division of Labour to include the community colleges feeding students into the university. The new activity system also incorporates revised Instruments used by Albert to achieve the new Motivation of assisting the "bottom two-thirds": the course underwent "streamlining" of required work while providing more detailed rubrics with specific scoring to guide students more explicitly, and reminders to encourage them to complete work. The most current activity system is shown in *Figure 6*.

Instruments

Ideology: simplification, clarification, structure, performance supports, projecting persona, synchronous interactions, testing/rewards

Models: training program to adapt courses for online access within LMS

Tools: using rigorous, time-intensive classroom methods

Subject

Societal: university as determined pioneer in expanding access (geographically and academically)

Organizational: working with faculty trainers to create online learning

Individual: individual instructor

Object → **Outcome**

Motivation 3: help "bottom 2/3" of students maximize achievement

Motivation 2: overcoming growing population and lack of classroom space to improve access online

Motivation 1: teaching technical writing to multiple disciplines on campus

Rules

Societal: guaranteed admission to university for community college students

Collective (organization): university requirements for course structure AND online course design training

Interpersonal: course requirements, classroom rules

Community

Societal network of communities: growing population in the State AND rise of millennials

Collective (organization): limited university capacity on campus

Primary group: instructor and students

Division of labour

Societal divisions among collectives: community colleges and universities

Organizational divisions in collective: university: faculty development, instruction, learning

Interpersonal: experienced instructor and upper-year undergraduate students

Figure 6. Writing for the Technical Professional activity system after 2006

Case Two: A Required Graduate Diploma Course, "Introduction to Legislative Drafting"

> I decided along with my co-director that it would be sufficient for our purposes at that time to simply take the original materials, which unfortunately were in WordPerfect, … and put them into PDF format in various modules and basically just put them up on the website.

This case describes the development of an asynchronous, online graduate course for a diploma program on legislative drafting called Introduction to Legislative Drafting, and the subsequent engagement of a team to explore how to revise the course. I describe this case in four parts: the problem that inspired the course, a brief overview of the solution, the process for development, and results.

The problem. This study involved three participants. Robert, the program coordinator, is a male associate professor in the Department of Legal Studies in the Faculty of Humanities and Social Sciences, with 24 years of experience in university teaching, and 20 years online. Prior to development, Robert had taught law at two other universities including an online experience in the mid-2000's. Tony, a male instructor and subject-matter expert, is a senior professional in legislative drafting and experienced trainer as well as an adjunct professor at another university

with 27 years of teaching experience. Edward is a male visual designer with experience designing visuals for hundreds of courses. Robert's university is a public institution in western Canada with over 40,000 students, over 40 years of offering classes, and a primary focus on distance education.

Demand for a course arose soon after Robert joined the university in 2008. The university had licensed a 15-year-old distance learning program in legislative drafting from an intergovernmental educational organization. Legislative drafting means the process of writing laws that are effective in a jurisdiction and conform to the jurisdiction's language and format conventions. The university administrators hoped that Robert could adapt the original materials to create an online legislative drafting diploma program. That program included the introductory course studied in this case.

With respect to the timing, Robert, who had recently joined the university, learned that after two to three years of negotiations to license the legislative drafting program form the intergovernmental organization, and get a new diploma program approved, "everybody was quite anxious to actually see the program up and running, so although there wasn't a specific deadline, it was basically as soon as possible." He required about six months to convert all of the original materials into four courses for the diploma program, including the introductory course studied in this case. Robert did not have to take any training but relied on his previous experience of teaching online. He did not receive funding beyond his salary for the initial course development.

Course structure had to conform to the university's self-study format where students can enroll individually in courses with 30 days notice, and study in renewable 6-month terms. The course faced additional design constraints based on its content and contracted instructors. First, Robert notes that the use of legal materials in the examples and assessments required very careful editing and formatting due to precise legal terminology and "very strict format in terms of numbering, lettering, paragraphing, spaces, indenting" that were "quite crucial to the meaning of the text." Second, the choice of instructors limited how many students they could serve and how much interaction they could provide because, as Robert notes, "most of them are currently fully employed as senior legislative drafters in various governments around the world, and we don't pay them that much, so it's basically kind of a … volunteer effort on their part."

For technology, the university requires courses to use its Moodle learning management system and provide required resources such as internal mail, discussion forums, a calendar, a copyright statement, and a student guide with a recommended study schedule.

In 2011, the intergovernmental organization that developed the original program wished to further its mission of accessibility by having the university create a separate, freely available "open educational resource" (OER). This case briefly considers the parallel development of the OER, primarily because the university intends to use that experience to refresh the courses in the university's diploma program. The OER was based on the same original materials, and $47,000 was allocated by the intergovernmental organization and the university. The revision of the university's courses based on the OER is expected in 2014, and the university has allocated $5,000.

The solution. Tony, one of the instructors, described the original online version of the course:

> [the coordinator] found the students and lined with them up with the instructors. As an instructor, I took the course materials as the framework for dealing with the students, and it was a pretty rigid framework, and the interaction of the students was really quite confined to a series of projects that they were supposed to do, and we were supposed to grade them on the basis of those projects.

Introduction to Legislative Drafting is a three-credit, asynchronous, required online course for post-baccalaureate students studying for a diploma in legislative drafting. According to the syllabus, successful students should be able to describe the development of legislative drafting in the Commonwealth, the processes and people involved, the objectives, practices, forms and grammar used, the types of documents, their features and conventions, proper syntax and conventions in punctuation and capitalization, and common drafting errors. Many objectives require students to research how the course relates to practices in their own city, province, or country.

The target audience is mostly working professionals. Robert says, "the students we have in these courses are virtually all lawyers and many of them are currently working in government offices." The course brochure describes applicants as those who are entering or developing a drafting career, or looking to enhance their skills, and either hold a common-law degree or have acceptable work experience.

The course is a wholly asynchronous, self-study experience offered through the Moodle learning management system. Robert operates the course with a team of instructors who respond to questions and grade assignments, with each instructor matched to one or more individual students.

The course consists of 2 modules: Back to basics, and Making the right expression. Readings are assigned from selections stored as PDFs on Moodle.

The course uses ungraded and graded assessments. Ungraded assessments consist of 20 self-assessment exercises. Graded assessments consist of five drafting projects: examining legislation (15%) and drafting legislative sentences (20%), a prohibition (10%), and a by-law (25%), and re-writing and re-structuring sample legislation (30%).

The self-assessment exercises use the Moodle quiz function, which displays a scenario and sample text for students to copy into an editing box and revise. When students submit their answer, Moodle displays the original scenario, the student's answer, and an ideal answer for the student to compare to their own. Drafting projects are completed by students offline using Microsoft Word and submitted to Moodle for downloading and review by instructors against rubrics. Grades are posted by instructors within Moodle.

The course is structured as one continuous list of resources divided in sections. The Introduction section welcomes students and provides tips. The Information and Instruction section lists links to resources such as the syllabus, grading information, study guide and suggested schedule, as well as "printer-friendly" files such as collections of course readings, exercises, and drafting projects. Other resources link to the diploma program, the graduate calendar, and help with Moodle. The Communication section provides links to discussion forums and tips for using e-mail. The Modules section lists the two modules of the course including their elements, such as a preview and readings as PDF files, and links to online exercises and drafting projects. The Audio Files section provides links to MP3 audio for an introduction to the course, and a discussion of the drafting projects. The Resource Materials section provides links to additional files related to the course such as sample laws and drafting guidelines.

Students log into the Moodle learning management system through their web browser. Moodle displays the course in one way. In a single screen, students see the entire course in one page as a list of PDF files and exercises. The "instructor view" of the page displays additional

links to files such as instructor guides and sample answers. Moodle provides navigation controls on the left. A sketch of the course interface appears in *Figure 7*.
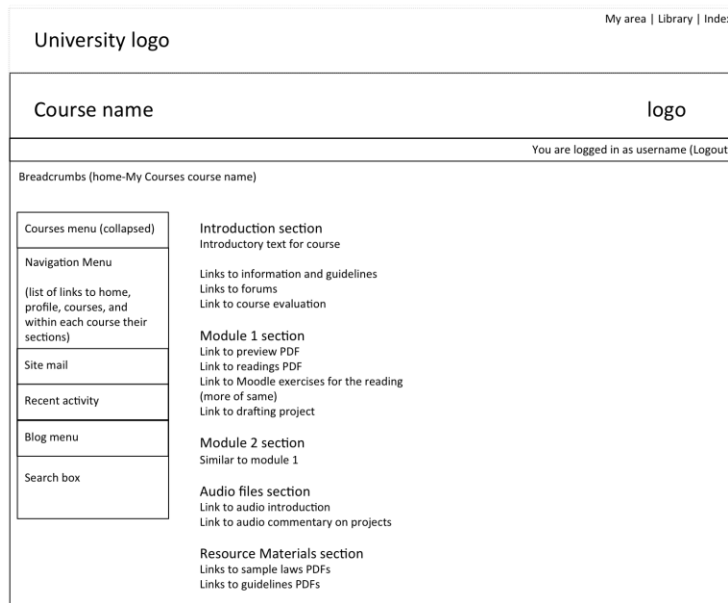
Figure 7. Sketch of original interface for the Introduction to Legislative Drafting course

Facts about the course are summarized briefly in Table 3.

Table 3

Facts About the Introduction to Legislative Drafting Online Course

Budget	• Original course – nothing beyond salary • OER $47,000 • Revision of original course based on OER $5,000
Length of time needed to complete the project	6 months for the entire diploma program
Skills used in the project	• Writing and editing • pedagogical reflection and instructional design • webpage and graphics design • project management
Software used	• WordPerfect and WordPerfect conversion software • MS Word • Moodle learning management system • Adobe Acrobat? • Software to create HTML, CSS, tables, images

Other resources used	• Existing legislative drafting course
	• Subject-matter experts (legislative drafters)
	• Skype

Process for developing the solution. Robert described the development process as an isolated experience:

> I didn't have much in the way of a team working with me … We have an editor … who took a quick look at it, primarily just to make sure that all the usual bits and pieces of our courses were there.

Robert had previously taught law online in Australia using the WebCT learning management system. When he created the initial legislative drafting course in 2008, "I had quite a bit of experience working with online learning platforms, [so] I basically took it on myself … to try to get these materials online."

Resources were limited to consultations with four senior legislative drafters who were contracted to review the content and divide it into parts, "and then basically I took … those materials in that form and put them on our website" for review by the in-house editor to ensure it included required elements.

Robert adapted an existing distance learning course in legislative drafting that had been licensed by the university to create an online diploma program. According to an article about the distance learning program, the original materials were prepared in 1993 for an intergovernmental educational organization by a professor and an instructional design firm in the United Kingdom. I examined samples of the original materials, which consisted of self-study workbooks with six modules of readings, exercises, and drafting projects, books of answers, and audio commentaries to introduce and debrief drafting projects. A sample module started with a preview and learning objectives, provided sub-divisions of content with sub-previews and sub-learning objectives, and included readings, exercises with answer boxes, and a final module review. In 2003, the original materials were updated after the intergovernmental organization engaged content experts to suggest revisions. Tony (one of the experts at the time as well as a later instructor for the university) remembers that "the most significant change was really the introduction of plain language … rather than the more traditional view that laws are only written for lawyers, people with specialized language."

A major focus for Robert was to make the existing distance learning program available for students within an accredited diploma program at his university. The original program had

been developed in the United Kingdom as a self-study resource with readings, 20-25 exercises, and four to six drafting projects per course. The structure meshed with the university's individualized study offerings where students can enroll in a course on 30 days notice. Robert notes,

> that was the pedagogical structure that came with the materials and we have not found the need to change that. … I guess we accept the philosophy that the best way to improve your writing is to practice doing it … actually applying the principles and applying the knowledge and producing legislative drafting.

When evaluating the drafting projects, Tony notes that grading feedback "is more on the detailed side of things. That's a reflection of the nature of this business and generally the expectations around people who are drafting legislation." However, he suggests, "that's moderated by starting off with exercises that aren't terribly complicated. … the theory is that the student will be developing their skills, and as they progress they are better able to manage that detail."

This case considers three main iterations of development: creation of the original university course based on existing materials from an intergovernmental organization, the creation of a separate Online Educational Resource (OER) for hosting by the intergovernmental organization, and revision of the university's course based on the OER experience.

To create the university course structure, Robert needed to complete five main tasks: review the licensed distance learning materials and consider how to use them in an online diploma program, choose the role of the instructor, develop the module structure for the course, prepare the materials for use on Moodle, and create support documents for instructors and students.

First, Robert had to review the licensed materials, which had been structured as self-study workbooks with audio introductions and debriefs. Robert engaged four senior legislative drafters "who reviewed the materials … and rearranged them somewhat so that they would fit into five courses, which comprised a graduate diploma" with the fifth course being added as "a single independent project." The introductory course studied here was allocated two modules.

Second, Robert had to choose the role of the instructor. Tony, the instructor I interviewed, notes that "it wasn't altogether clear how an instructor would fit" into the self-study design. Given the constraint of using instructors who were busy legal practitioners, Robert chose

to use instructors for evaluating the more complex drafting projects, as well as answering questions students might have about exercises. As such, the original self-evaluation materials for drafting projects were converted into materials for instructors. Tony admits that the course provided a rigid framework where instructors only interacted with students by grading their drafting assignments.

Third, Robert had to develop the module structure for the introductory course. Given the university's eagerness to start using the licensed materials, Robert retained the original instructional design. He decided with his co-director to convert the original readings and assignment instructions into PDFs and put them on Moodle in their original order.

Fourth, Robert needed to prepare the licensed materials for use on Moodle. For instance, he needed to edit the original British spelling and terminology used by the author, a "professor of legislative drafting from England." More importantly, he says "the biggest technical issue that we had to confront" was the need to convert the original materials from WordPerfect into Microsoft Word and then export the edited files into PDFs that retained proper legal formatting. Robert purchased WordPerfect software and a conversion program then "worked with the text in a limited way" to correct problems, doing the work himself because the files "are kind of complex in terms of their inter-relationships and cross-references."

Fifth, to assist instructors with supporting the course, Robert developed **"**an instructor's guide to give them the basic knowledge about the program and how it was structured and what was expected of them." The guide included a suggested template e-mail to introduce instructors and the course to students, and grading rubrics. Robert also created guides for instructors and students that explained how the course worked within the Moodle learning management system.

Robert uses two kinds of assessment: self-assessed exercises, and graded drafting assignments. The assessment design was guided by the instructional design of the existing materials, and the choice of busy legislative drafters as instructors. For exercises, of which the introductory course has 20, Robert notes:

> I guess the one thing we did kind of struggle with was the exercises, in that we basically felt we had to make the feedback in the suggested answers automatically available to students because … if they had to be supplied … by instructors, this would be too much time burden.

As a result, Robert entered the exercises and answers into Moodle using its quiz function. Students can access exercises by clicking a link on the course page within Moodle, or by clicking an embedded hyperlink within one of the PDF files of course readings. Exercises present a problem scenario and prompt students to copy and paste sample text into a text-entry box and edit it as necessary. For example, one exercise presents sample legislation and prompts students to add necessary punctuation. When students submit their answer, Moodle displays, from top to bottom, the original question, the student's answer, and a sample ideal answer that students must compare to their own. The design mimics the original course workbooks, which posed questions, offered boxes to write answers, and provided sample answers for self-evaluation.

For drafting assignments, students download requirements from the course page on Moodle. Drafting assignments include a problem scenario, relevant laws to set the context, a request for new legislation, guidance including maximum page length, and a reminder of how to submit assignments. For example, one drafting assignment describes inconsiderate activities in a town park and asks the student to draft a by-law. The assignment includes legislation governing the fictional town, and provides guidance specific to drafting effective by-laws.

Students complete drafting assignments offline in Microsoft Word and submit them via Moodle to their instructor for grading and feedback. Assignments are graded once by instructors against a rubric, and are annotated within Microsoft Word. The instructor guide includes a grading scheme that describes requirements for analysis (30%), composition (40%), style (20%), and presentation (10%). Each drafting assignment also has a suggested analysis guide that serves as a more detailed rubric, however instructors are encouraged to create their own grading template based on the supplied rubrics.

Despite the rigid structure of the course and the grading rubrics, the course supports diversity in both students and instructors. Although exercises may specify a fictional context "with the hope that those materials will resonate with the actual situation in the home jurisdiction", Tony notes that exercises also ask students to "do a little bit of research in your own jurisdiction, you know, verify what your own constitution says, verify what your own access to information legislation says, if you have any at all." Similarly, Robert notes that instructors are asked to be sensitive to diversity in assignments because students "may be operating with some slightly different conventions or approaches to drafting. … we recognize that there is not a single correct answer to a number of things across countries and jurisdictions."

For example, one rubric includes a note to instructors that students from different jurisdictions may use different "authorizing words" in their by-law. Diversity applies to instructors as well. Robert notes that instructors "obviously bring own experience and background to it" and suggests that diversity enriches the course: "for our instructors … it can be interesting to deal with students from across the globe in different jurisdictions and, by the same token, a useful learning for students to become aware of some different approaches through their instructor." Tony admits there is no formal effort to ensure consistent grading, but suggests that the university is "insuring the quality and the consistency of grading" by using highly-experienced practitioners as instructors.

In 2011, the intergovernmental organization asked the university to create an Open Educational Resource (OER) version of their original materials. Robert describes a new focus on updating the content and presentation of the materials "to make them more user friendly, more interactive and readable to students … more accessible and more useful by wider numbers of people."

Resources were far more plentiful. Robert worked with a larger team, including Tony, a senior legislative counsel and instructor for the university course, who reviewed and revised the 12-year-old content with a similarly-qualified colleague, a member of the learning design group who advised on structure, and a web designer who says he was responsible for creating charts and tables, converting Word documents into HTML, designing the "visual presentation" of the materials using CSS in Moodle, and "applying some layout graphics for the course homepage, banner and course syllabi page."

The OER project consisted of three main tasks: reviewing the converted original materials to update examples, improve consistency, and fix formatting, choosing a new structure, and placing the files into the new structure. Tony notes, "I only had a certain amount of time to complete this, and the parameters of our revision exercise were not to start from scratch and redo the whole program."

First, over 18 months, Tony and another senior legislative drafter, reviewed the original distance learning files. Using e-mail and monthly Skype meetings, they split the work, performed revisions, and reviewed each other's revisions. Email provided a valuable written record for Tony.

During revisions, Tony treated exercises and drafting assignments differently. For exercises, his revisions focused on "providing clarity with those answers … on the assumption that the students would just be doing these exercises on their own, and there would be no instructor feedback." In contrast, his revisions for the drafting assignment answers had to "take account of the potential for debate" because "I don't think that there would be uniformity amongst all the instructors about their views of what the best way is for doing things." For example, he notes that drafters in Australia embrace writing in plain language, while drafters in Africa and Asia are "somewhat resistant." Similarly, Tony notes that many students are working in drafting offices, and while the instructors hope to influence the drafting practices in students' offices, "you don't want a course that is going to put them in conflict with the way their office is telling them to do things." Tony suggests that a workable approach is to teach legislative drafting as a discipline of conventions that "can vary from one jurisdiction to another" but must be complied with in that jurisdiction.

Tony also focused on updating examples and improving consistency, relying on his teaching experience "to figure out what examples would still resonate with students and what ones wouldn't." For example, he notes that "legislative drafting is a world where there are a disproportionate number of women doing it" and yet he found that "in a lot of the examples … the men were all in the positions of authority and, you know, there were no women anywhere. So we did a fair bit of gender neutralizing throughout." He also considered the need "not to, to make things too complicated at the outset. … don't assume a great deal about your students. … you really need to think about teaching at the lower end as well as teaching at the high end." With respect to the consistency, Tony notes, "as we would go through, we would kind of discover systemic questions." For example, some of the materials were written with plain language while others were not, "and so we tried to harmonize the writing style, making it a more accessible writing style throughout." Similarly, Tony standardized the instructions for exercises, not only for consistency, but also as a model of what the course was teaching: "consistency in terminology and structure is really important in drafting legislation because variations are usually considered to indicate variations of content or meaning."

During the revision process, Tony was frustrated with formatting and conversion problems that necessitated consultations with technical support. Tony would apply formatting styles to "something like 1500 pages of text" in Microsoft Word documents, only to have the

styles disappear. Tony notes that file conversions, such as from WordPerfect to Word, were problematic because "formatting very often changes, and the formatting is critical with legislative drafting … if the indentation is all messed up, you can't really understand the legislation anymore."

Following the creation of the OER, Robert and his team began updating the university's course materials, and they are considering a similarly open format. Robert suggests they may convert the university program into "open courseware." Tony says they are considering a Wiki form of the course to allow a wider population to contribute ongoing updates. Due to the substantial changes in the course, the original audio files were abandoned.

As of the time of this case, Edward, a visual designer, had almost completed the revised version of the introductory course described here. Edward worked directly with Robert and a learning designer who suggested abandoning PDF links and instead presenting content formatted directly into web pages with navigation menus. Edward started by discussing Robert's wishes, and then reading through the existing introductory course "to understand the unique structure of the material and unique needs of the type of content." He captured his research in a document to check with Robert, and reformatted a portion of the course as an example to help Robert visualize the suggested changes and provide feedback. For the revised course, he designed a cover image that would "look good with a variety of screen and window sizes." For the content, he notes,

> Within the course, there is a variety of text sizes and display features to help make important ideas more clear, create a visual hierarchy, and guide the reader's eye around. I also like to introduce some visual variety to help the reader maintain attention and have surprises. That helps the reader remember things better, makes ideas more clear (i.e. diagrams), and reduced monotony.

Edward received source materials from Robert and Tony in Microsoft Word format. Due to the importance of legal formatting, Robert insisted that nested lists from the Word files be preserved in HTML, and that the HTML be printable from Moodle while retaining formatting. Edward solved the associated technical challenges "through some hacks in the HTML" using "some messy code." He notes that pressure from Robert to get the course updated quickly meant that "I did a lot more code than usual" since other developers were busy at the time.

Edward used Adobe Photoshop to edit images, and Adobe Illustrator to create graphics and diagrams in SVG format, which is important because they remain sharp when enlarged or displayed on high-resolution monitors. Edward worked with source materials provided in Microsoft Word and used Dreamweaver to create HTML because it "cleans up the messy parts that Word adds to the code." He tested code by pasting it into Moodle. When discussing issues over the phone with Robert and Tony, he could make changes to the code and the professors could refresh their browsers to see the changes.

Results of the solution. In this section I describe reactions to the online writing course in terms of what worked well, what didn't work well, and feedback from users of the online course such as learners and the instructional team.

What worked well. Robert and Tony noted successes related to course objectives and social interactions. With respect to the objectives, Robert notes that the conversion of the original distance learning materials into a Moodle course resulted in an acceptable university level online course completed by 100 students, with 6 students completing the entire diploma by mid-2014. He says the course has a low dropout rate ranging from 10 to 15 percent, although almost half of students require extended time to finish. Similarly, Tony describes the online course as "remarkable in terms of trying to convey the core elements of legislative drafting … on which … there's a great deal of agreement around the world" and that "there were lots of examples in these materials, that's another great strength of them, that it's not just broad principles."

With respect to social interactions, Tony valued being able to seek advice from Robert. Sometimes Robert circulated an instructor's questions amongst the whole group and asked for input, which resulted in "a collegial approach, which I think worked really well to try to figure out the best way to handle these issues." During the process of creating the OER, Tony described the team as operating "on the same wavelength" and his only conflict with a colleague related to whether legislation should use plain language words like "must" or the more traditional "shall". Through e-mail discussions and supporting documentation, they negotiated a compromise.

What didn't work well. Robert experienced challenges related to course objectives, technology and community impact. With respect to the objectives, Robert admits that the self-study design for the exercises and feedback "allows the student, if they wish, to basically avoid doing the work, avoid doing the practice and just throw something in for the purpose of getting the feedback" which "might very well detract from the pedagogical value of those exercises."

Similarly, Tony admits that his experience of students was limited to reviewing their drafting projects and excluded their answers for exercises,

> which struck me as a little bit of a weakness in the approach but on the other hand … this was not a fulltime activity for me, I had lots of other stuff to do with my main work and so just concentrating on the projects, you know, was fine with me.

However, Robert notes that most students are lawyers working in government offices, "so we expect them to be pretty responsible people, mature people, and that they will see the value of the exercises and make proper use of them."

With respect to the technology, Robert admits that "I kind of had developed a basic technical ability … from previous experience, so, I basically just used what I already knew, and didn't have, or didn't seek out, much else in terms of support." Limited technology knowledge may have impacted the course's requirement that students reflect on their studies and share them in a blog. Robert says, "I believe that most students just don't do it. But it's partly because we don't give them much encouragement or support," something he connects to his lack of knowledge about blogging in Moodle. In 2011, the process of creating an Open Educational Resource (OER) prompted other reflections on the technology used in the original university course design. Robert says, "everyone realized that the current format, which … was a bunch of PDFs on a page, was not necessarily the best from a design standpoint or a teaching standpoint." He describes plans to stop using PDFs and move to "properly structured webpages" with easier navigation, something that "looks much more professional and in accordance with what lawyers would expect to see."

With respect to the community impact, the creation of the OER also prompted the university to consider the accessibility of their diploma program, triggering thoughts that they may offer a new version as open courseware "which will be openly available on the university site."

Student-related feedback. Tony and Robert described challenges arising from the independent study format of the course when it came to course objectives and social interactions. With respect to the objectives, Tony compared the three students he had over the course of the program. His first student never completed the course. The second student, who was working in a Canadian drafting office, "worked her way through the course very diligently." The third student, "whose first language was not English, she had a lot of difficulty doing the assignments

and in managing the workload." He suggests that she may have been affected by the conservative drafting culture in the office where she worked in Asia. In addition, he suggests that she lacked the analytical skills necessary to create a law that not only communicated clearly but also dovetailed with other laws relevant to her assignments, something Tony admits is "difficult to teach." Robert notes that most questions he receives relate to working with Moodle and grading student assignments. To improve clarity about what students are required to submit, Robert has revised instructions, such as providing explicit page limits.

With respect to social interactions, Robert notes that the most common concern from instructors is "the lack of communication from the students, and sometimes the lack of work … for several months." Robert's usual response is, "to remind the instructor that the students are usually fully-employed in an office somewhere" and to suggest that the instructor contact the student and "tell them that the instructor can assist if they need some help with making progress, and just generally encourage them to start work."

The activity system of the course. The Introduction to Legislative Drafting course is an activity system comprised of six elements (sub-divisions of the system comprising Subject, Instruments, Rules, Community, Division of Labour, and Motivation) that evolved over time. The course had existed within a self-study distance learning program since 1993. The version of the course just prior to being licensed by the university might be described as follows: an individual trainer, using materials licensed by the trainer's institution from an intergovernmental organization, distributes PDF readings, exercises and assignments to self-study students, and either provides PDF answers to students or uses those answers to assess the students in order to provide training in legislative drafting. In 2008 when the university studied in this case had licensed the materials and approved an online diploma program, this activity system faced a number of structural tensions (stresses within or between elements, or between activity systems, as defined in Table 4).

Table 4

Kinds of Structural Tensions in Activity Systems

Primary	Secondary	Tertiary	Quaternary
Tensions within an element of a system	Tensions between elements of a system	Tensions between versions of a system	Tensions between neighbouring systems

Within the Instruments (the tools, mental models, or ideologies used to accomplish the activity), a change in available distance learning technology from printed materials to online

learning caused a primary structural tension. That structural tension resulted in two secondary structural tensions. First, the Instruments were in tension with the Motivation (the reason for the activity's existence) because the rise of expectations for online learning rather than CDROM distribution was in tension with the motivation of the course to be globally accessible. Second, the Subject (the entity driving the activity) was in tension with the Motivation because the university that licensed the materials wished to address the problems in the Instruments by developing an online version of the course and offering global access to students. These structural tensions are shown in *Figure 8*.

Instruments

Model: controlled-access online learning through universities (such as an LMS)

Tools: licensed CDROM of PDF readings, exercises and projects for printing and distribution to students, with PDF answers for assessment and feedback

Subject   Object   Outcome

Societal: intergovernmental educational organization that distributes the materials

Organizational: university that licenses the materials

Individual: trainer that distributes materials and manages assessment

Motivation 1: teach legislative drafting from universities using printed distance learning materials

Rules   Community   Division of labour

Collective (organization): licensing restrictions; university rules about diplomas

Societal network of communities: universities and intergovernmental organization

Collective (organization): university (trainer, students)

Primary group: trainer, students

Societal divisions among collectives: local education, non-profit global education

Organizational divisions in collective: university: training, learning

Interpersonal: trainer, students

Figure 8. Introduction to Legislative Drafting activity system before 2008

The result was a tertiary structural tension that resulted in a new activity system with a new Motivation of providing online access to students, as shown in *Figure 9*. The new activity system introduced a new Subject, a coordinator at the university who would create and operate the online version of the course, and created a new Division of Labour (the entities that work with the Subject to accomplish the activity) with the use of contract experts to advise on the course, and contract practitioner-instructors to operate the course. With the intention to serve students globally, the system also introduced new Rules (the constraints placed on the activity): the university's requirements for online course structure and use of Moodle, as well as the

requirement that grading should recognize that students and instructors may reside in different legal jurisdictions and be subject to varying legal conventions.
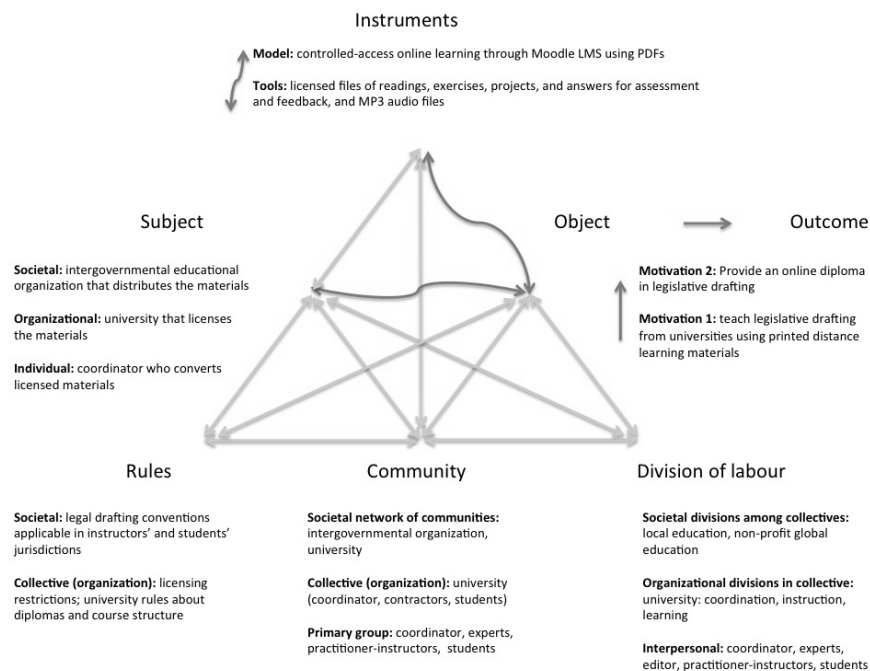
Figure 9. Introduction to Legislative Drafting activity system during course development in 2008

Around 2011, the course activity system faced further structural tensions. These structural tensions are shown in *Figure 10*. For the Instruments, the rise of an ideology of openly-available education, as open educational resources or open courseware, led to a primary structural tension with existing online course delivery restricted to registered students. For the Subject, the desire of the intergovernmental organization to make its materials openly available led to a primary structural tension with the university, which was offering a program restricted to registered students. Those primary structural tensions resulted in secondary structural tensions. First, the Instruments were in tension with the Motivation because the expectation for open learning was in tension with the motivation of the course to be offered in an online diploma program restricted to registered students. Second, the Subject was in tension with the Motivation because the intergovernmental organization wanted to expand accessibility of the course beyond registered students. Additional secondary structural tensions arose from the change in the Instruments. The Rules were in tension with the Instruments for two reasons: first, changes in society's expectations for laws written in plain language and gender-neutrality conflicted with

the existing course materials; second, students and instructors could reside in different legal jurisdictions and be subject to different conventions, necessitating flexibility in assessing answers to assignments. The Rules also were in tension with the Motivation because licensing restrictions on the course materials prevented their free distribution.

Instruments

Ideology: Free access to education in a relatable form (OER, OCW) on the Web

Model: controlled-access online learning through Moodle LMS using PDFs

Tools: licensed files of readings, exercises, projects, and answers for assessment and feedback, and MP3 audio files

OER Activity

Subject   **Object**   **Outcome**

Societal: intergovernmental educational organization that distributes the materials

Organizational: university that licenses the materials

Individual: coordinator who converts licensed materials

Motivation 2: Provide an online diploma in legislative drafting

Motivation 1: teach legislative drafting from universities using printed distance learning materials

Rules   **Community**   **Division of labour**

Societal: Gender equality, plain language movement, legal drafting conventions applicable in instructors' and students' jurisdictions

Collective (organization): licensing restrictions; university rules about diplomas and course structure

Societal network of communities: intergovernmental organization, university

Collective (organization): university (coordinator, contractors, students)

Primary group: coordinator, experts, practitioner-instructors, students

Societal divisions among collectives: local education, non-profit global education

Organizational divisions in collective: university: coordination, instruction, learning

Interpersonal: coordinator, practitioner-instructors, students

Figure 10. Introduction to Legislative Drafting activity system around 2011

The result was the development of a new, neighbouring activity system to create a freely-available, Open Educational Resource (OER) version of the original distance learning program. Within the neighbouring activity system, Robert worked with experts and designers to update the original program to be more consistent and to adhere to modern expectations for plain language, gender-neutral examples, and attractive web design. According to Robert and Tony, the resulting OER is not easy to find on the intergovernmental organization's website, but as a neighbouring activity system, the OER experience did trigger a quaternary structural tension with the present activity system.

The result was a tertiary structural tension that resulted in a new activity system with a new Motivation of providing free, relatable access to legislative drafting on the web, as shown in *Figure 11*. Within this new activity system, the university used the experience of creating an OER to update its own course materials (considering consistency, gender equality, plain

language, and varying legal jurisdictions) and to consider updating its form of delivery such as using open courseware and Wikis. The conversion effort introduced an expanded Division of Labour, which included a learning designer, and Edward, a visual designer who evaluated the revised source materials from the OER experience and helped reformat them into a revised website version of the Introduction to Legislative Drafting course. Conversion of the introductory course was almost complete at the time of this case.
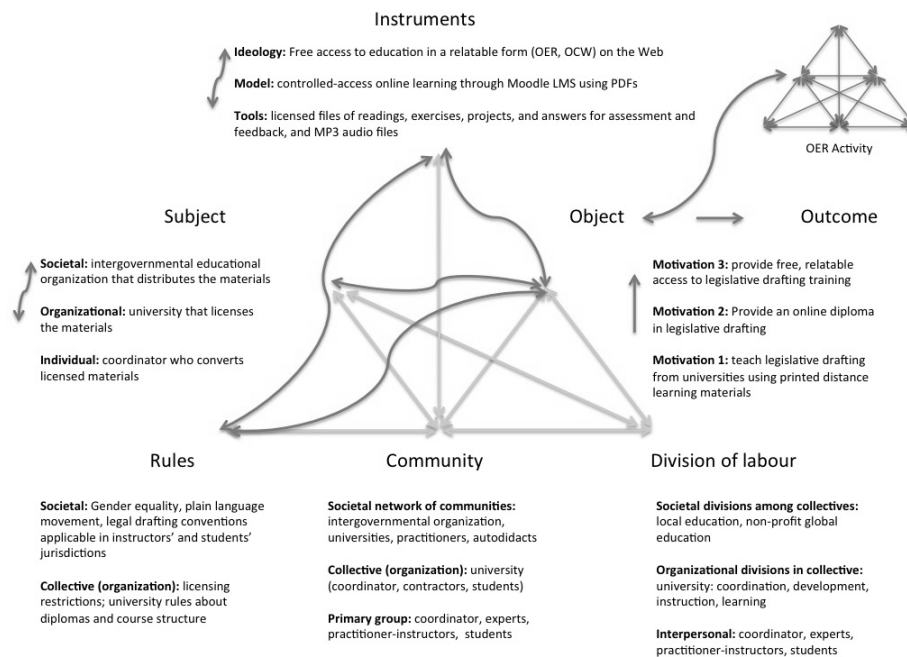
Figure 11. Introduction to Legislative Drafting activity system after completion of OER in 2014

Case Three: A General Undergraduate Elective Service Course, "Educational Communication"

> Getting students to take courses in writing is real hard. Even though it's central to academic success, it's not seen as central to the major.

This case describes the development of a primarily asynchronous, online undergraduate elective service course called Educational Communication, and explores how a subsequent instructor grappled with revising the course. I describe this case in four parts: the problem that inspired the course, a brief overview of the solution, the process for development, and results.

The problem. The developer and original instructor for the course was Lawrence, a male professor in the Department of Education in the Faculty of Arts and Science, with 20 years of

experience in university teaching, and six years teaching online. Prior to development, Lawrence had previously taught a basic classroom course in technical writing, and had developed a graduate technical writing course as an online workbook at another university. In 2013, Lawrence turned the course over to Sandra, a female instructor with eight years of experience in university teaching, and two and a half years teaching online. Lawrence and Sandra's university is a public institution in central Canada with over 40,000 students enrolled, over 40 years of offering classes, and a metropolitan campus.

Demand for the new course began around 2004 when the university's e-learning developer wished to add a writing course to its portfolio. After several years of pursuing Lawrence, he became available at the beginning of 2008 after securing tenure.

The goal of the developer was to create an online elective service course to teach writing to undergraduates. For Lawrence, the goal was to teach an educational form of technical writing.

With respect to the timing, the developer wished to offer the course during the undergraduate Summer session in 2008. Lawrence did not have to take any training but did have previous experience teaching online. The developer intended to spend about $50,000 (excluding instructor time) to be recouped by the developer through student enrolment, and temporarily subsidized by more popular courses.

Course structure had to conform to a 3-credit, 13-week semester, as well as meet the requirement for online courses for an in-person final exam worth 40%. There were no constraints on looks or branding. The developer built a course on a collection of resources: a custom course website, a discussion forum from FuseTalk, and a proprietary course management system that linked the course and the discussion forum to other resources such as an upload manager, grade book, and announcements.

In 2013, Sandra took over the course to relieve Lawrence from the teaching load. Sandra wished to adjust the course to update materials, reduce teaching assistant workload, and increase student interaction. She did not receive a budget beyond her salary to make revisions to the course, and was expected to work with the existing course structure and technology.

The solution. Denise, the instructional designer who worked with Lawrence, remembers their biggest fear was creating an online course with so much text and writing that it would be boring for students. To create something more engaging, they envisioned a different experience that integrated video lectures and feedback, online activities, and downloads.

Educational Communication is a three-credit, 13-week, primarily asynchronous elective, online service course for lower-year undergraduates. According to the syllabus, successful students should be able to develop instructional writing by defining their audience and purpose, choosing an appropriate format (definition, description, procedure, reference entry or how-to article) and using effective style, visuals, and page design.

The target audience was originally working adults who wanted an elective course that suited their schedule and connected with their jobs. However, Lawrence found that the actual audience included many on-campus undergraduates, some of whom wished to enter the early childhood education program at the university.

The course is mostly asynchronous and offered as a bespoke learning experience linked to the developer's course management system. However, the course also has a synchronous component: both the original and subsequent instructors conducted one or more synchronous sessions using Adobe Connect for orientations, answering questions, or previewing the final exam. Lawrence operated the course through a pair of teaching assistants who monitored discussion boards, answered student e-mail, and graded assignments and the final exam, with classes of about 30 students per teaching assistant.

The course consists of eight modules called lessons: an overview, definitions, descriptions, procedures, reference entries, advanced organizers and summaries, how-to articles, and giving feedback. Readings are assigned from selections stored as PDFs.

The course uses ungraded and graded assessments. Ungraded assessments consist of discovery activities and exercises to evaluate writing. Graded assessments consist of four reading comprehension questionnaires (12.5%), discussion board posts for each lesson (7.5%), four writing assignments: a definition (10%), a description (10%), a procedure (12.5%), and reference entries (7.5%); and an in-person final exam (40%).

Discovery activities are completed individually and self-assessed by watching a debriefing video. Exercises display sample text for students to classify as effective or ineffective. If they incorrectly classify the text, they receive an explanation. If they correctly classify text as ineffective, they are prompted to rewrite the text. When students submit their answer, the system displays the student's answer, and an ideal answer for the student to compare to their own.

Reading comprehension questionnaires and writing assignments are completed by students offline using Microsoft Word and uploaded to the course management system. Teaching

assistants grade questionnaires, assignments, and final exams against rubrics. They comment on assignments using Microsoft Word and return them to students by e-mail or through the course management system. Grades are posted within the course management system.

The course is structured in eight modules called lessons. Within each of the eight lessons, the course displays a menu with eight sub-sections: First things first, Discover, Learn on Your Own, Go Deeper, Prepare Yourself, Try it Out, Fly on Your Own, and Take Away. If they follow the menu order, students watch an introductory video, complete an activity, then debrief with a follow-up video. They download and study a PDF chapter from a technical communication textbook and answer reading comprehension questions in a Microsoft Word form. They watch a longer lecture video, then complete online exercises to determine the effectiveness of writing samples. At the end of each lesson, they post what they learned from the lesson on the discussion board. Finally, they prepare a writing assignment for the lesson. For each assignment (except the procedure, which must reflect a job they have held) they choose from a list of topics based on their university major. The course management system is designed to only allow uploads of reading comprehension documents and assignments during set windows of time before deadlines.

Performance supports include announcements from teaching assistants or the instructor, and instructor e-mails. Announcements and e-mails help introduce the course and provide tips or reminders.

Students taking the course use three different interfaces: a course management system, a discussion board system, and a self-contained, bespoke course website.

Students log into the proprietary course management system (CMS) through their web browser. The CMS lists each of the online courses the student has enrolled in along with announcements for the course and contact information, and a set of links. Separate links connect to the course syllabus, the discussion board, an upload page for assignments, the student's grades, and the actual course website. The discussion board, provided by FuseTalk, lists several forums such as Virtual Office Hours and General Inquiries, and separate forums specific to each lesson of the course.

Students link to the course website from the CMS. The course website provides options for viewing information in different ways, however there is no screen that presents a fully-integrated view of all of the course elements. The course structure is arranged hierarchically.

Students begin with a title screen with a course description and instructor photo. From the title screen (or any other screen), students can link to a list of assignments, a list of lessons, the discussion board, a list of resources segmented by lesson, or a weekly schedule of activities and deadlines. Each lesson has its own screen with a sub-menu listing the lesson's components. A sketch of the course interface showing the lesson screen appears in *Figure 12*. The CMS also links to other resources such as a list of courses, and guides for online learning and external exams. The screens in the course website are graphics-heavy with decorative imagery of writing tools and stained and wrinkled paper and notes.
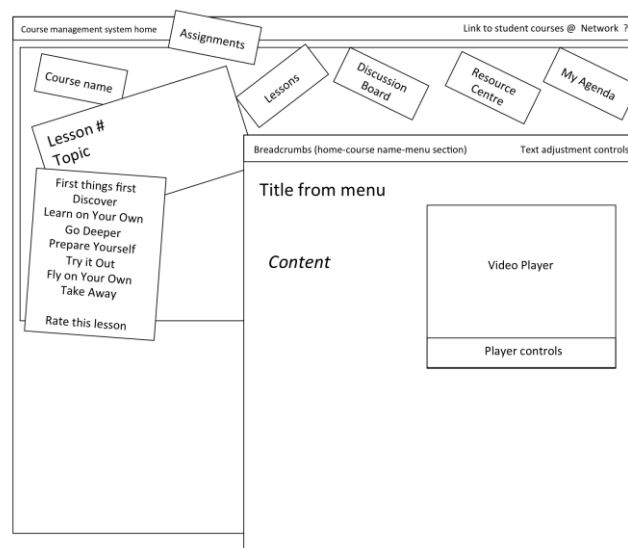
Figure 12. Sketch of lesson interface used for the Educational Communication course

Facts about the course are summarized briefly in Table 5.

Table 5

Facts About the Educational Communication Online Course

Budget	US$50,000 (excluding instructor time)
Length of time needed to complete the project	January 2008 – September 2008 (8 months)
Skills used in the project	- Writing - graphic design - web design - instructional design - project management - video editing

Software used	• MS Word
	• MS PowerPoint
	• Camtasia
	• The e-learning provider course management system

| Other resources used | • Existing classroom course materials |
| | • Video crew with lighting |

Process for developing the solution. Denise, the instructional designer, remembers development process required lots of communication and patience. "You have to follow-up, follow-up, follow-up with instructors who are busy or focused on other projects." She says she had to keep explaining why specified deadlines were important and emphasize what was depending on requested deliverables, such as students needing a lesson in the coming week. At the time the course opened to students, only two or three of the eight lessons were ready.

Lawrence had previously taught basic technical writing in classrooms, and advanced technical writing in an online workbook form at another institution. Resources available from the university in 2008 included working with a dedicated e-learning development unit. The developer is a separate entity owned by the university that develops and hosts e-learning for the university as well as on a contract basis for other parties. The developer provided access to the chief learning officer, Denise, the instructional designer and project manager, graphics and web designers, and a video crew. The developer develops courses at its own cost (averaging $50,000 excluding Lawrence's time) and recoups the costs from enrollments according to a profit-sharing arrangement with the university.

For readings, Lawrence used PDF excerpts from a technical communication textbook and a web-based training textbook. He also used materials from his previous classroom technical writing courses and his experiences co-developing an online workbook of readings and activities for an advanced graduate course. Materials included classroom PowerPoint presentations with writing exercises, planning forms and checklists for assignments, sample student assignments, and articles and quick references he'd written.

A major focus for Lawrence was to maximize engagement between students and the course materials. He wished to "break free of the lecture-then-do format" and "encourage active engagement with the materials and provide authentic and relevant assignments." Denise remembers that she and Lawrence wanted to avoid boring students with nothing but text and

writing, so they planned to use a videos, activities, and online exercises. The developer's chief learning officer wanted to ensure a manageable grading load for teaching assistants faced with 100-150 students, and yet minimize student complaints by providing timely and personalized feedback on writing assignments.

To create the course structure, Lawrence needed to complete four main tasks: review his existing course materials and consider how to use them online, choose the role of the instructor, develop the module structure for the course, and prepare the materials for use in the online course experience.

First, Lawrence needed to review the existing classroom and online workbook materials, and consider how to use them in an online course. Lawrence decided to retain lessons from his technical writing classroom course about definitions, descriptions, procedures, reference entries and how-to articles. He also kept lessons on style and common errors in writing and layout. Since the online course was offered within an Educational Department, he added a lesson on feedback. To "end on a high note", he added materials to encourage students to explore career options related to the course.

Second, Lawrence, Denise, and the chief learning officer needed to choose the role of the instructor. Lawrence intended to be the "instructor of record" but did not expect a significant teaching workload from the course. Teaching assistants were expected to manage ongoing student communications and grading.

Third, Lawrence and Denise needed to develop the module structure for the course. Inspired by his previous experiences with integrating readings and activities for an online workbook, Lawrence worked with Denise to create a consistent structure for the lessons. Denise notes that most e-learning lessons start with objectives, present study materials within slides, then provide self-assessment through multiple-choice quizzes. In contrast, Lawrence wanted to use a variety of activities to engage students, and divide lessons into creatively-named sections such as First Things First, Try it Out, and Fly on Your Own. Lawrence decided to engage students early with a pattern of a short introductory video, a simple opening activity to download, and a longer debriefing video for the activity. After the opening, students download readings, and reading comprehension questions, then return to the site to watch a longer video of narrated slides, complete an online exercise, and share "take away" points on the discussion board.

Fourth, Lawrence and designer needed to prepare the materials for use in the online course experience. The designer helped Lawrence structure, simplify and proofread his PowerPoint slides. Lawrence recorded introduction videos with a small video crew in a meeting room, and recorded narrated slides using Camtasia at home. Denise liaised with graphic and web designers to create the look of the course with its writing motifs. She also engaged persistently with Lawrence who had warned her that he'd "be last minute on everything." She says, "You can't change an instructor's life and challenges. You have to be respectful and understanding. We need to make them aware of our own limitations and constraints like deadlines." To ensure they were "on the same page", she took notes during meetings and detailed their agreements, asking Lawrence to review and approve her work "all the time." She found that informal, friendly e-mails ensured that the stress, constraints and structure of the project "never got in the way." Only two or three lessons were complete when the course launched in Summer 2008. The course management system was used to block access to unfinished lessons. Towards the end of development, Lawrence remembers trying to finish lessons each week for delivery the following Monday: "Knowing people have no lesson for the next week was a real incentive to get things done." By September, Denise was still revising assignment planning forms, fixing inconsistencies, and applying quality control to polish the course for its next offering, after which she "said goodbye" to the course and handed it over to the developer's operations section where development would be limited to minor updates until a major course "refresh" was negotiated.

Lawrence uses six kinds of assessment: self-assessed activities and exercises, as well as graded discussion posts, reading guide sheets, writing assignments, and an in-person final exam. The self-assessed activities and exercises were meant to improve interactivity by having students try something they learned in the introductory video for the lesson. For example, a discovery activity might ask students to try defining terms then compare their definitions to ones in the follow-up debriefing video. In contrast, online exercises ask students to rate whether sample writing is effective or ineffective. To avoid simplistic multiple-choice quizzes, Lawrence and Denise designed a simple decision tree: if the student incorrectly rates a passage as effective, the system explains their error and shows a fixed version. If the student correctly rates a passage as ineffective, the system prompts the student to rewrite the passage and submit it, and then displays samples of rewrites while explaining their good and bad points.

For discussion posts, lessons ask students to report the results of their discovery activities on the forum, and at the end of the lesson, post what they learned and how they might use it. Grading is based on completion.

Reading guide sheets use questions to focus students on key points in their readings. The sheets are Microsoft Word documents with questions on the side and blank answer spaces on the right. Students download and complete eight sheets, and four are randomly requested for grading. Again, grading is based on completion.

For writing assignments, Lawrence and Denise placed detailed instructions within the Fly on Your Own section of each lesson. To provide some choice for students and ease the grading load, they provided a limited set of writing topics for each assignment, and a detailed planning form and grading rubric to help students comply with requirements.

Students complete writing assignments offline in Microsoft Word and submit them via the course management system to their teaching assistant for grading and feedback. Assignments are graded once by the teaching assistant against a rubric, and may also be annotated within Microsoft Word. The rubric requires students to describe their purpose and audience, outline their assignment, write in the required format, and use appropriate grammar and style.

For the on-campus final exam, Lawrence designed two parts. In the first part, students must synthesize the course by evaluating the effectiveness of sample articles, and writing a five-page lifestyle-oriented how-to article. For the article, they receive advance notice of potential topics. Exams are graded by teaching assistants using a rubric.

Between 2011-2013, a new head teaching assistant largely managed student interactions and grading for the course. Due to his training in instructional design and participation in scholarship for teaching and learning, he looked for ways to reduce recurring student issues by helping weaker students maximize their performance in the course. He introduced asynchronous performance supports in the form of icebreaking, reminders, and ongoing, specific assignment tips in the discussion forum, and he assisted with designs of assignment templates that integrated assignment requirements with a series of prompts and self-assessment tools.

In 2013, Sandra, a new instructor, took over the course after it was made a permanent offering and enrollment doubled. Sandra had new ideas for the course but faced resource constraints and had to find workarounds.

Sandra's new ideas for the course included making the course more manageable for teaching assistants, and updating materials to make them clearer and more relevant, reduce handholding, and encourage more student interaction through peer review. She noted that existing materials included inconsistencies in formatting and citation instructions that caused students to "freak out". In addition, "some of the examples [the original instructor] uses are too American" such as asking students to research media outlets in Michigan, or referring to "super-sized" meals, and she suggests they could be more Canadian. To reduce student "handholding" and the workload for teaching assistants, she abandoned the detailed planning and feedback forms for assignments. She provided teaching assistants with guidelines to reduce the time they spent grading assignments, and focus their comments on the first two assignments. Sandra also abandoned the ongoing asynchronous performance supports in the discussion board, noting that she had limited discussion board experience. Instead, she provided periodic reminders through the announcement system, and continued the original instructor's practice of providing orientations and reminders through e-mails early in the semester and up to three scheduled synchronous sessions using Adobe Connect.

Despite her desire to make bigger changes such as adding peer review, resources were limited and Sandra was expected to use the existing course with few content or structure changes. She noted, "I find I'm often somewhat hampered by the technology … if I ask [the e-learning team] can we get it to do this, the first reaction is always, it's not designed to do that." She was frustrated that developer personnel took days to reply to her requests, and described their responses as, "you've got a widget, here's your widget, buh-bye." Developer personnel eventually escalated her requests to the chief learning officer who provided her with limited suggestions of what could be done, such as recording her in a new introductory video for the course.

To make progress, Sandra realized she wasn't going to get new features in the course and she changed her approach: "I have to really figure out, okay, so what's the workaround? How can we make it do this?" By suggesting possible solutions of her own and asking for input from developer personnel, she managed to introduce a limited form of peer evaluation by having students use the discussion forum to post and review assignments. Realizing the "feedback" lesson of the course had no related assignment, she changed the reference entries assignment in several ways. First, she allowed students to choose their own topic. Second, she had students

post their assignment to a new discussion forum instead of submitting it to teaching assistants. Third, when students finished the lesson on giving feedback, they downloaded a brief evaluation form and used it to evaluate one of their peer's assignments posted on the discussion forum. Students submitted their evaluation to Sandra through the course management system. Sandra reviewed both the peer evaluations and the posted assignments to assign final grades. Out of the original 7.5% assigned to reference entries, students now receive 5% for their posted reference entry and 2.5% for their peer review. The peer evaluation was summative and only seen by Sandra.

Results of the solution. In this section I describe reactions to the online writing course in terms of what worked well, what didn't work well, and feedback from users of the online course such as learners and the instructional team.

What worked well. The e-learning developer's administrator and instructional designer noted successes related to course objectives and professional growth. With respect to the objectives, the administrator considers the course "a winner." Between 2008 and Winter 2012, enrollment in the course had not recouped development costs. However, after it became a permanent listed course in the 2013, enrolment doubled. Sandra says, "students who take this course in the spirit in which it's offered … they are better writers at the end of it. But I'm not sure how many students are motivated by that versus, 'online courses are easy'."

With respect to professional growth, the instructional designer found her work with the original instructor educational: "Designers get used to some procedures, templates and structures," she says, "and then a new person comes in with something totally different and challenges everything."

What didn't work well. The instructional team experienced challenges related to course objectives, social interactions, technology and community impact. With respect to the objectives, Sandra notes that course instructions contain structural tensions about citation styles or line-spacing and "students flip out with that stuff … they freeze and they panic, and multiple e-mails ensue." She also notes that students have trouble overwriting assignments when they upload multiple files instead of combining them, and some complain about rigidity when deadlines are enforced despite warnings in the syllabus about late work. Plagiarism was mentioned by both instructors and teaching assistants. One teaching assistant noted that some students "just copied definitions right off Wikipedia" or submitted old papers written by someone else, and Sandra

described the amount of plagiarism as "appalling." Sandra introduced a limited form of peer evaluation but estimates that a third of the students who completed the course failed to participate in the peer review process.

With respect to social interactions, the head teaching assistant from 2011-2013 decided to address common student issues by increasing his asynchronous interactions with students in the main discussion forum. He introduced icebreaking, tips for success, and news items about plagiarists who lost their jobs. Before each deadline, he repeated uploading instructions and provided brief tips and common errors, and repeated them when returning assignments. He worked with the original instructor to combine separate checklists, rubrics and requirements into supportive assignment templates with question prompts and self-assessment rubrics. Over six semesters, he perceived fewer problems and better assignments. In contrast, Sandra abandoned the performance supports in the discussion forum, noting "I had never used a discussion board before this class." Similarly, she abandoned the assignment template forms because she felt "at this point it's too elaborate" for students and requires too much time from teaching assistants. She suggests, "it almost feels to me with this class that the more, the more hand-holding there is, the more that's expected and required." Instead, she continued the original instructor's practice of sending orientation e-mails in the first weeks of class, and conducting up to three synchronous Adobe Connect sessions to orient students, discuss common errors, and prepare for the final exam. About 15-20 of the 116 students attended the sessions, which were recorded then placed online. To address problems she experiences with "students not being clear, and students freaking out," she plans to use more synchronous interactions, such as virtual office hours.

With respect to the technology, each term, teaching assistants must search for links to web resources in the course that no longer work, as well as inconsistencies between the dates in the latest course syllabus prepared by Lawrence and the online course agenda prepared by the developer using the syllabus.

With respect to community impact, the original instructor admits feeling disoriented because he does not know his online students well: at final exams they recognized him from his videos, but he didn't know them; and when students requested recommendation letters to enter the university's childhood education program, he didn't feel he knew them well enough.

Student-related feedback. The e-learning administrator and instructor described challenges in evaluating course objectives based on learner feedback. The administrator notes

that online course evaluations have response rates from 10 to 20 percent, and feedback from e-mails or "rants to the discussion board" are either very positive or negative. A representative of the provost's office reported to the university Senate that overall student satisfaction with online courses tracks satisfaction with other university courses. Student satisfaction reported for the educational communication course in particular "is above average" and the overall report for the course describes one dissatisfied rating for every 3 satisfied ratings. The administrator describes the 15 to 20 percent dropout rate for the course as "a cause of alarm" and Lawrence suggests the rate is closer to 30% due to "a lot of tire-kickers who want an easy A." The e-learning administrator notes that students most commonly complain that online courses, such as this one, are more work than they expected. Without a live orientation or early assessment, he says, students may not explore the course and develop realistic expectations, and may drop out after the refund deadline.

The activity system of the course. The Educational Communication course is an activity system comprised of six elements (sub-divisions of the system comprising Subject, Instruments, Rules, Community, Division of Labour, and Motivation) that evolved over time. The course had existed as a basic technical writing classroom course that Lawrence had previously taught. The version of the course just prior to going online at the university might be described as follows: an individual instructor, using classroom methods and PowerPoints to teach undergraduate students basic technical writing on a campus. In 2008, this activity system faced a number of structural tensions (stresses within or between elements, or between activity systems, as defined in Table 6).

Table 6

Kinds of Structural Tensions in Activity Systems

Primary	Secondary	Tertiary	Quaternary
Tensions within an element of a system	Tensions between elements of a system	Tensions between versions of a system	Tensions between neighbouring systems

Within the Community (the social context for the activity), the move of Lawrence from one institution where he taught technical writing, to the university where he taught in the Education department, led to a primary structural tension: the university included an e-learning developer that wanted the Education professor to teach an online version of his course from his past as a writing instructor. Within Instruments (the tools, mental models, or ideologies used to accomplish the activity), Lawrence's experience giving both a basic classroom version of the

writing course and a more integrated advanced "online workbook" version created a primary structural tension in how a writing course should be structured. These structural tensions resulted in two secondary structural tensions. First, the Subject (the entity driving the activity) was in tension with the Motivation (the reason for the activity's existence), because Lawrence's new environment included an e-learning developer who wanted Lawrence to offer an online course. Second, the Community was in tension with the Motivation, because Lawrence's new discipline of Education required offering a "writing course" in an Educational format. These structural tensions are shown in *Figure 13*.
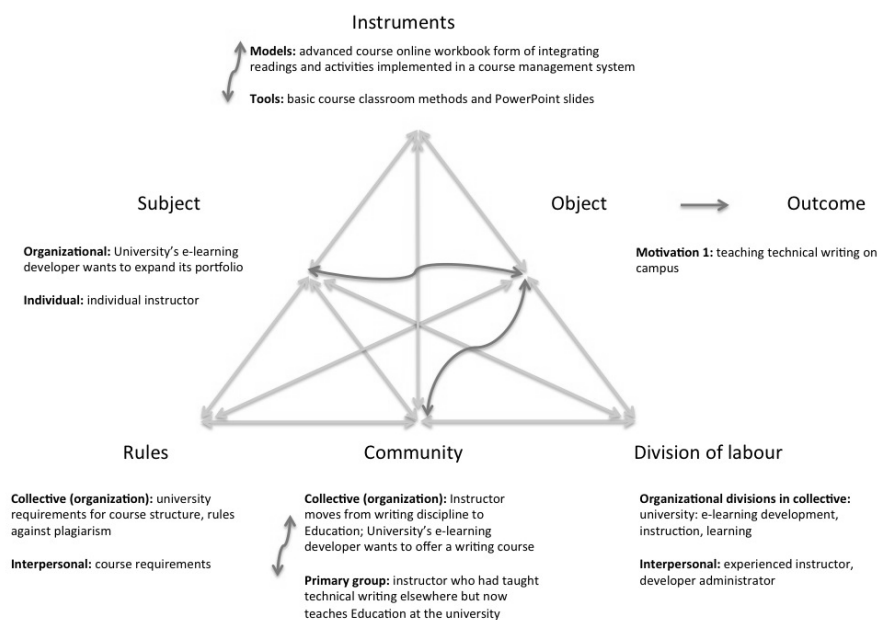
Figure 13. Educational Communication activity system around 2008

The result was a tertiary structural tension that resulted in a new activity system with a new Motivation of providing an educational form of technical writing online. The new activity system introduced a new Division of Labour (the entities that work with the Subject to accomplish the activity) including the e-learning developer administrator, an instructional designer, and web and graphics designers to create the online course, and teaching assistants to support the online course. The new system is shown in *Figure 14*.

Instruments

Models: advanced course online workbook form of integrating readings and activities implemented in a course management system

Tools: basic course classroom methods and PowerPoint slides

Subject   Object   →   Outcome

Organizational: University's e-learning developer wants to expand its portfolio

Individual: individual instructor

Motivation 2: teaching an educational form of technical writing online

Motivation 1: teaching technical writing on campus

Rules   Community   Division of labour

Collective (organization): university requirements for course structure, rules against plagiarism

Interpersonal: course requirements

Collective (organization): Instructor moves from writing discipline to Education; University's e-learning developer wants to offer a writing course

Primary group: instructor, development team, teaching assistants, students

Organizational divisions in collective: university: e-learning development, instruction, learning

Interpersonal: experienced instructor, developer administrator, instructional designer, web/graphic designer, teaching assistants, students

Figure 14. Educational Communication activity system during course development in 2008

Around 2012, the course activity system faced further structural tensions. A change in the Division of Labour led to a head teaching assistant managing operations of the course. The new teaching assistant's experiences included studying performance supports in his discipline, and studying the scholarship of teaching and learning as part of a group in the university Community. The teaching assistant's experience led to two primary structural tensions. First, within the Community, the scholarship of teaching and learning group was in tension with the current practices of the course's teaching team as reactive summative evaluators. Similarly, within the Instruments, a new ideology of helping weaker students succeed was in tension with the existing online workbook form of course. These primary structural tensions led to a secondary structural tension between the teaching assistant in the Division of Labour and the Instruments currently used. These structural tensions are shown in *Figure 15*.

Instruments

Ideology: Performance supports to help weaker students achieve

Models: advanced course online workbook form of integrating readings and activities implemented in a course management system

Tools: basic course classroom methods and PowerPoint slides

Subject

Organizational: University's e-learning developer wants to expand its portfolio

Individual: individual instructor

Object → **Outcome**

Motivation 2: teaching an educational form of technical writing online

Motivation 1: teaching technical writing on campus

Rules

Collective (organization): university requirements for course structure, rules against plagiarism

Interpersonal: course requirements

Community

Collective (organization): University's e-learning developer, graduate student teaching development course; literature on effective e-learning

Primary group: instructor, teaching assistants, students

Division of labour

Organizational divisions in collective: university: e-learning development, teaching development, instruction, learning

Interpersonal: head teaching assistant, experienced instructor, students

Figure 15. Educational Communication activity system around 2011 to 2012

The result was a tertiary structural tension that resulted in a new activity system with a new Motivation of helping weaker students achieve in the course. Within this new activity system, the Division of Labour changed with the head teaching assistant developing from a summative assessment role into a design and ongoing facilitation role. The head teaching assistant worked with Lawrence to change the Instruments by developing supportive assignment templates, and he began using icebreaking, reminders, tips, and encouraging feedback to improve overall student performance in the course. He accomplished these changes with minimal developer resources by updating four handouts, and mostly changing the way he used the discussion forum and e-mail. The new system is shown in *Figure 16*.

Instruments

Ideology: Performance supports to help weaker students achieve

Models: advanced course online workbook form of integrating readings and activities implemented in a course management system

Tools: basic course classroom methods and PowerPoint slides

Subject

Organizational: University's e-learning developer wants to expand its portfolio

Individual: individual instructor

Object — Outcome

Motivation 3: help weaker students achieve

Motivation 2: teaching an educational form of technical writing online

Motivation 1: teaching technical writing on campus

Rules

Collective (organization): university requirements for course structure, rules against plagiarism

Interpersonal: course requirements

Community

Collective (organization): University's e-learning developer, graduate student teaching development course; literature on effective e-learning

Primary group: instructor, teaching assistants, students

Division of labour

Organizational divisions in collective: university: e-learning development, teaching development, instruction, learning

Interpersonal: head teaching assistant, experienced instructor, students

Figure 16. Educational Communication activity system with performance support focus

Around 2013, the course activity system faced further structural tensions. Another change in the Division of Labour led to a new instructor taking over the course. The new instructor wanted to make changes to the course but the e-learning developer was unwilling to devote resources except for a new introductory video and minor changes, leading to primary structural tensions between the new instructor and the developer within the Community and the Division of Labour. The new instructor was unfamiliar with discussion forums and concerned about teaching assistant workloads and excessive handholding, which led to a conflict within Instruments between her new ideology and the ideology of performance supports. These primary structural tensions led to a secondary structural tension between the Division of Labour and the Instruments because the new instructor was struggling to find ways to change the online course which, not being developed in an LMS, required developer time and resources. These structural tensions are shown in *Figure 17*.

Instruments

Ideology 2: Reduce handholding and increase interaction of students with each other (and each other's work)

Ideology 1: Performance supports to help weaker students achieve

Models: advanced course online workbook form of integrating readings and activities implemented in a course management system

Subject

Organizational: University's e-learning developer wants to expand its portfolio

Individual: individual instructor

Object → **Outcome**

Motivation 3: help weaker students achieve

Motivation 2: teaching an educational form of technical writing online

Motivation 1: teaching technical writing on campus

Rules

Collective (organization): university requirements for course structure, rules against plagiarism

Interpersonal: course requirements

Community

Collective (organization): University's e-learning developer

Primary group: new instructor, teaching assistants, students

Division of labour

Organizational divisions in collective: university: e-learning development, instruction, learning
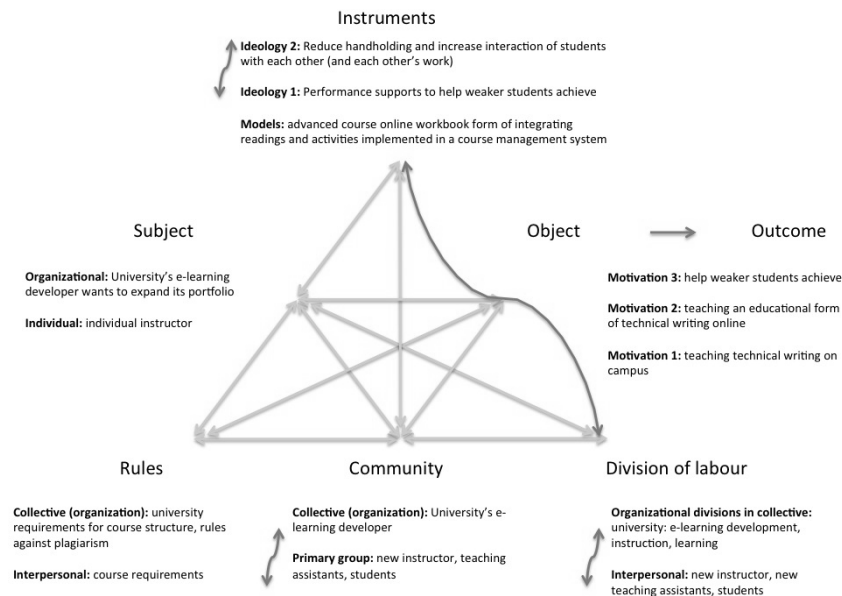
Interpersonal: new instructor, new teaching assistants, students

Figure 17. Educational Communication activity system with new instructor

The result was a tertiary structural tension that resulted in a new activity system with a new Motivation of implementing workarounds to reduce handholding and teaching assistant workload and increase interaction. Within this new activity system, the new instructor searches for ways to make the course fit her approach while minimizing developer involvement, a process she describes as developing "workarounds." As part of her approach, she changed Instruments to meet her new ideology, such as abandoning the discussion forum performance supports although she uses reminder announcements, eliminating the detailed assignment feedback forms, and implementing a limited form of peer evaluation. She also adjusted the Division of Labour for the teaching assistants by taking over the grading responsibility for the final assignment. She accomplished these changes with minimal resources required from the developer other than changing a handout, using the discussion forum for posting assignments to be peer reviewed, and producing a new introductory video for the course to introduce her to students. The new system is shown in *Figure 18*.
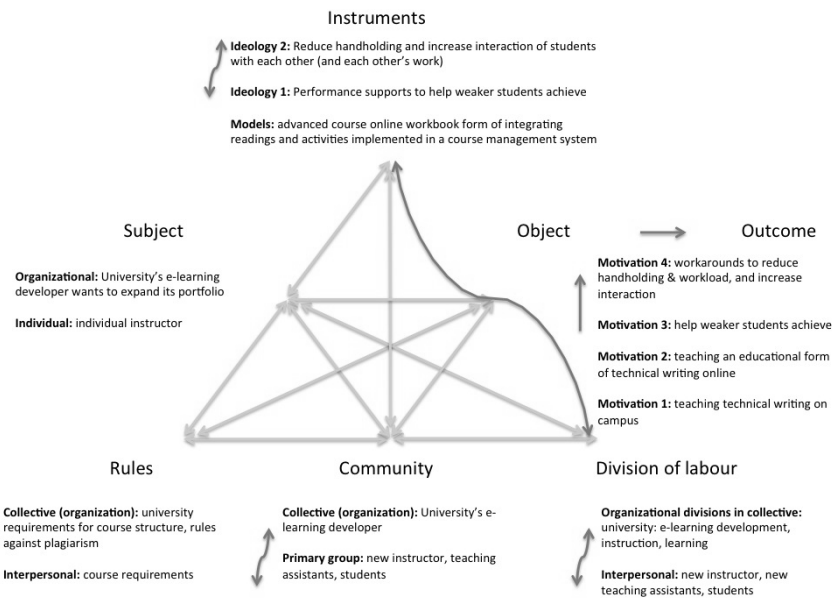
Instruments

Ideology 2: Reduce handholding and increase interaction of students with each other (and each other's work)

Ideology 1: Performance supports to help weaker students achieve

Models: advanced course online workbook form of integrating readings and activities implemented in a course management system

Subject

Organizational: University's e-learning developer wants to expand its portfolio

Individual: individual instructor

Object → **Outcome**

Motivation 4: workarounds to reduce handholding & workload, and increase interaction

Motivation 3: help weaker students achieve

Motivation 2: teaching an educational form of technical writing online

Motivation 1: teaching technical writing on campus

Rules

Collective (organization): university requirements for course structure, rules against plagiarism

Interpersonal: course requirements

Community

Collective (organization): University's e-learning developer

Primary group: new instructor, teaching assistants, students

Division of labour

Organizational divisions in collective: university: e-learning development, instruction, learning

Interpersonal: new instructor, new teaching assistants, students

Figure 18. Educational Communication activity system after changes by the new instructor

Case Four: A Graduate Elective Course for Majors, "Proposal Writing"

> I thought, okay, how can I make it interesting for myself and for the students? And you know the client idea of course is not something I came up with. There's obviously a lot of literature about it and the benefits of client-based professional writing courses.

This case describes the development of a primarily asynchronous, online graduate elective course for writing majors called Proposal Writing. I describe this case in four parts: the problem that inspired the course, a brief overview of the solution, the process for development, and results.

The problem. Charles is a male associate professor in the Department of Writing and Rhetoric in the College of Arts and Humanities, with 17 years of experience in university teaching, and 12 years teaching online. Prior to development, Charles had taught at another university. Charles' university is a public institution in the southeastern United States with over 60,000 students enrolled, over 40 years of offering classes, and a large physical campus.

The proposal writing course had previously existed at the university in both face to face and online versions. Demand for a new course arose during the Spring after Charles joined the

university in 2011. Online courses represent a major aspect of the university's offerings because, "something like 70 percent of our students take an online class":

> …our graduate students tend to be either fulltime or part-time employed … so they really benefit from the online format… the primary reason for being online is really just institutional and that of convenience for the students.

The goal of the university was to meet the needs of students who were proceeding through Charles's program in cohorts. In 2012, the cohort required a proposal writing course for the Summer term and assigned Charles to teach it.

Charles, who had recently joined the university, used 100 to 150 hours spread over the two months to develop the course, which was needed for the graduate Summer session in 2012. To prepare, Charles was required to complete the university's faculty workshop for online learning despite previous online teaching experience. Since creating and delivering the course was a regular teaching assignment, Charles did not receive funding beyond his salary.

Course structure had to conform to a 3-credit, 13-week graduate Summer semester and the university requires instructors to use its Canvas learning management system, however:

> when you teach online or face-to-face, you can make whatever changes you… think you need, so I wasn't constrained to any way of teaching it as long as I fulfilled the objectives and the goals of the course. So essentially, I designed it from the ground up.

The solution. Charles based his course design on community integration: "I wanted the students to get experience in working with the real clients, and writing proposals for real projects. So I ended up building a course around five client-based grant proposal projects."

Proposal Writing is a three-credit, 13-week, primarily asynchronous elective online course for graduate students in writing majors. According to the syllabus, successful students should be able to "gain a working understanding of a typical proposal research and writing cycle and underlying theories and methods that govern that cycle", "[work] with a professional client, produce all the necessary components of a proposal document", and "become better professional collaborators by completing peer team projects and by working with professional clients." Charles narrowed the focus to grant proposals because "trying to cover all kinds of proposals in one course is simply unrealistic. And I wanted the students to get an in-depth experience about writing one kind of proposal."

The target audience is mostly working professionals. Charles says:

> on average about 70 percent of them have either fulltime or part-time jobs in some professional capacity related to the study of writing… Not all of them but a lot of them work already as writers or editors or managers or project managers or something like that… for a lot of them I think it has the feel of a professional training exercise."

The course is mostly asynchronous and offered through the Canvas learning management system with links to YouTube videos and Google Docs. However, the course also has synchronous components: a group social meeting with real clients, either in-person over cookies and tea, or virtually via Skype, check-in conference calls mid-semester between Charles and each student team, and, optionally, in-person meetings between student teams and their clients in the community. Charles ran the course alone, without teaching assistants, with a class of 13 students.

The course consists of four modules: Identifying and describing the problem and researching and writing a needs statement, Identifying sponsors and finding a match, Letter of intent, and Full proposal. Readings are assigned from a physical textbook.

The course uses graded assessments. Assessments consist of online interactions: discussion posts about readings topics (20%), responses to classmates' posts (10%), collaborative work on documents (10%); and a proposal document project broken into sub-assignments: a need statement (5%), a pre-proposal (20%), a proposal narrative (15%), a budget (10%), and final preparation such as revision, editing, and proofreading (10%).

Most discussion posts are completed individually using the online forum on Canvas, but some posts are completed as a team to prepare students for collaborative work and build trust. For the proposal documents, students were divided into teams and each team worked collaboratively within Google Docs to draft documents and to peer-review another team's documents. After review by their peers and Charles, they submitted their documents to their clients for additional feedback. Grades are posted within Canvas.

The course is structured in four modules displayed with their elements as a list from start to end. Each module begins with a link to an introduction section that describes the module, a list of learning outcomes, and a list of individual and collaborative assignments. Modules also include discussion posts that ask for existing knowledge, prompt discussion on readings from a

physical textbook, or request reflection on what was learned. As part of discussions, students were required to respond to their classmates' posts. Charles periodically posted YouTube videos to preview upcoming assignments, and review student responses to discussion prompts. His modules included links to assignments and resources to complete assignments, such as a list of potential funding sources to investigate for the proposal, brochures supplied by clients to describe the programs that needed funding, and MP3 recordings of conference calls Charles held with student teams. To assist students with working as virtual teams and with conducting peer reviews, he provided articles and prompted discussions about good practices in those areas.

Performance supports include announcements from Charles. Announcements notify students about preview videos, preview the coming week, summarize modules, and give assignment tips.

Students log into the Canvas learning management system through their web browser. Canvas provides options for viewing information in different ways. In one screen labeled "Modules", students see a module-by-module list of activities and assessments. A sketch of the course interface showing the Modules screen appears in *Figure 19*. In other screens, listed in a menu customizable by the instructor, students can view lists of assignments, discussions, Google Docs collaborations, conferences, or assignment-related resources. Canvas also links to screens that aggregate information across multiple courses, such as a list of courses, assignments, grades, and a calendar.
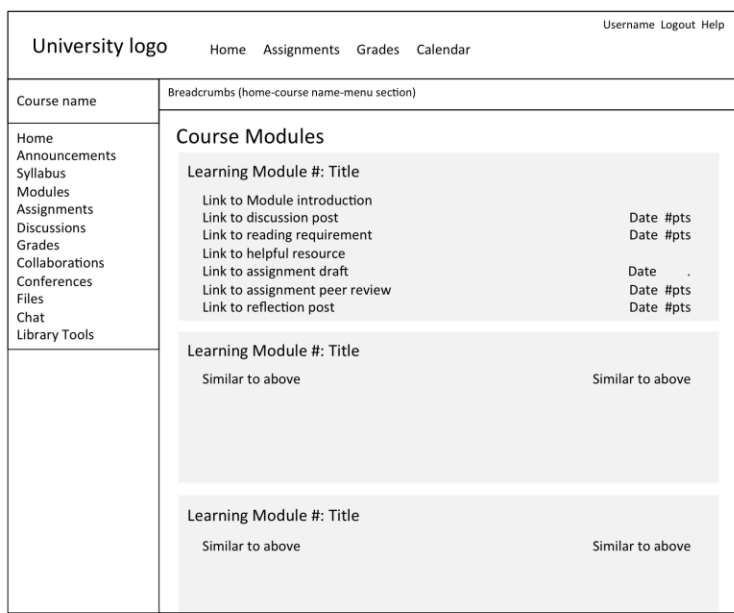
Figure 19. Sketch of interface used for the Proposal Writing course

Facts about the course are summarized briefly in Table 7.

Table 7

Facts About the Proposal Writing Online Course

Budget	Nothing beyond teaching salary
Length of time needed to complete the project	100-150 hours
Skills used in the project	- Writing - instructional design - client development and management
Software used	- MS Word - Canvas learning management system - Google Docs - Quicktime Pro on a MacBook Pro for videos
Other resources used	- Physical textbook - Real clients from a local hospital and a local city department - Free teleconferencing system - YouTube

Process for developing the solution. Charles conceived the course based on a key philosophical view from his discipline of writing and rhetoric. He described his philosophy during a talk after receiving an award for the course:

> When I teach online I'm really trying to make it a social experience for my students. So, as opposed to me delivering content to them, I'm trying to make it for them so that it feels like a social experience [with] writing as a social process, as something that is done for other people with other people, in real life contexts, in real life situations. That it's not just about filling out a format, a prescribed form and giving it to the teacher.

Charles had previously taught writing online using Blackboard. Resources available from the university in 2012 were described by Charles as "a very, very substantial support system for faculty to teach online" including assigned instructional design consultants, professional video production, and a technology knowledge base. As this was Charles's first time teaching at the university, he was required to take a blended course about teaching online. When designing the proposal-writing course, however, his interactions with his instructional designer were limited to "a couple technical questions about Canvas" and showing what he was doing to "just kind of get their approval." He noted, "I've been doing this for awhile so I kind of went it alone a little bit." Similarly, he preferred to make his own "talking head" videos on YouTube "on the fly as I see the need for them" rather than using the video production service that would require more time and preparation. He did have to learn how to use the Canvas learning management system but he preferred it to his experiences with Blackboard because Canvas offered integration with social components such as Google Docs, and "felt more intuitive."

Charles uses a physical textbook on proposal writing. Although the course had been taught by others in the past, Charles did not re-use pre-existing material. During a talk after receiving an award for the course he said:

> So, on the one hand it seems like it's a lot of work to start everything from scratch, on the other hand it felt like I was in a better position because I didn't have to convert stuff.

A major focus for Charles was to engage students in a social process. He was familiar with literature about the benefits of client-based professional writing courses, and at the time he was assigned to teach Proposal Writing,

there was sort of this coincidence—I had met a couple of people at a professional

event just prior to that who were working on various community-based grant

funded projects. And so I thought, okay, maybe I can try to connect the students

to these folks and, you know, have them learn something from me through

readings and discussions, and then … really do these projects … which would

result in some real grant applications that will be submitted to funding agencies.

Additionally, Charles wanted to use group work. Although he had previously believed

that all students should work on all aspects of the project, he now accepts that teams can divide

responsibilities such as having one person do project management and another be the primary

client contact, provided that everyone does "some writing":

I realized that in the workplace … we actually cooperate rather than collaborate.

So there's a big task, you're supposed to split it up into, you know, you do this and

I do that, kind of thing. So I'm ok with it.

Given his philosophical view, he saw his role as a facilitator or coordinator to help

students work with each other and with their clients. During a talk after receiving an award for

the course, he noted:

the real potential of online learning is not in the fact that we can deliver a bunch

of different kinds of content through fancy interfaces like Canvas. The real

potential is we can help people connect with each other, people who would

otherwise not be able to connect over distances, over professions, over

environments

To create the course structure, Charles needed to complete three main tasks: choose his

role as the instructor, secure clients and coordinate their participation, and develop the module

structure for the course.

First, Charles chose the role he would play in the course. He described both the

importance of creating social presence within the course experience, and of facilitating social

connections such as between students and clients. For example, the entire first page of his

syllabus, rather than describing the course, emphasizes the importance of communication among

students and with Charles.

Second, to secure clients and coordinate their participation, Charles met with potential

clients during the two months before the course. He arranged for an initial meeting between

clients and students to be held in a university conference room with cookies and tea. Students could use the meeting to negotiate client needs and how they would interact, such as by e-mail, phone, or in-person. Charles also arranged e-mail check-ins with clients and students every two weeks to see whether they had questions, and scheduled conference calls with each student team halfway through the project.

Third, to develop the module structure of the course, which he described as the most challenging aspect of the project during a talk after receiving an award for the course, he divided the course into four modules with each module using a cyclical design:

> each of these modules has one or two specific learning objectives. And then what I do within each module is I kind of take things full circle. I begin by asking students to think about what they know about … the topic of the module or the problem that the module poses to them … and then I take them through exercises, readings, discussions, problems, assignments, and then at the end of each module we talk about what we learned.

Charles uses two kinds of assessment: online interactions (including discussion posts and collaborative work on writing assignments), and writing assignments. For discussion posts, Charles's goal is to provide "low stakes" prompts to promote engagement and curiosity before readings and assignments, to trigger interaction by requiring students to respond to each other, and to provoke reflection at the end of the module by asking students to explain how their understanding changed and how they might use it in a project or job. For example, prior to students meeting their clients, they read a chapter on gathering information, and were prompted to identify what they needed to know, draft sample questions, and comment on their peers' questions. Although Charles believes that his graduate students are "quite adept at really engaging each other in argument, and in questioning and in conversation," he notes that

> it's important to design … problems and assignments for the discussions in a way that, that, you know, raises some genuine questions for them, raises something that they would like to talk about, not just me wanting them to summarize readings or anything like that.

He designed discussion prompts to become less detailed during the semester so that students are eventually expected to develop their own discussion ideas based on the readings: "it creates a whole new air of conversation, I think." To emphasize the social focus of his course, Charles

allocated 40 percent of the grade to interactions. He evaluated discussion posts based on a simple rubric of whether students answered the prompt question and whether they "engaged in conversation with others … or just kind of went through the motions."

For writing assignments, Charles required student teams to gather client needs for funding, research a suitable sponsor, and write a grant proposal to request funding from the sponsor according to the sponsor's guidelines and the client's input. Charles broke the proposal down into smaller group assignments: Need statement, Pre-proposal, Proposal narrative, Budget, and Preparation (including editing and proofreading). To prepare students for teamwork, Charles divided them into groups of three or four students per client, assigned them a reading on working in virtual teams, and created several low-stakes, collaborative discussion posts to help team members build trust. He used Canvas' integration with Google Docs so that each team drafted its proposal documents collaboratively, and reviewed the proposal documents of one other team collaboratively by providing annotations on their document and a summary of suggested improvements. To prepare students for peer review, he assigned them a reading on the topic and prompted them to discuss key criteria such as whether everyone posted comments, whether comments were "substantive and helpful", whether reviewers engaged the writer in conversation versus editing the draft, and whether the writer (who has the final say) critically assessed the comments and acted on them.

Charles assigned 60 percent of the course grade to the group project and provided both formative and summative assessments. Formative assessments for each draft used a descriptive, criterion-based rubric to evaluate "how rhetorically effective" the writing was. For example, the proposal narrative assignment assigned four points for clearly stating the objectives of the client's project, four points for following the sponsor's requirements, and two points for correct mechanics. The summative assessment focused on how students took into account suggestions they received on their drafts as well as whether the final proposal follows their chosen sponsor's guidelines:

> they identified sponsors for this project so they were looking at the guidelines and requirements given by the funding agency. So, for instance, the funding agency might say you're limited to five pages and you need to cover these areas— *go!* And that's kind of the thrill of their assignment.

Charles notes the importance of both "process" and "product" pedagogy in proposal writing: "revision is obviously extremely important and process is very important … none of us would sit down and just write one version of the document and send it off to a client," however

> we talk a little bit about the rhetoric of the proposal. For instance, in this case, why does it look this way? You know, you have the funding agency requirements but you also have to understand that it's based on a purpose and an audience and a context … the product has to look a certain way regardless of the process you use to get there.

Results of the solution. In this section I describe reactions to the online writing course in terms of what worked well, what didn't work well, and feedback from users of the online course such as learners and Charles.

What worked well. Charles noted successes related to course objectives, social interactions, and community impact. With respect to the objectives, Charles admits to being nervous about trying a client-based design because, "I can't really control how this goes 100 percent" but he notes that "teaching students about this also is important … the uncertainty and the ambiguity." He was able to reduce anxiety by meeting several times with clients over coffee before the course started, and by arranging an on-campus meeting where students and clients met face-to-face over snacks, with some students attending virtually by Skype. While Charles found the course "intense" because he needed to review student drafts to ensure "some basic quality controls" before they were sent to clients, he found the course workload to be "average" overall. Charles notes that he had no dropouts even though the course was an elective. He suggests that dropout risks may be reduced because students in his program take their classes as a cohort, and that working students may take the work more seriously than full-time students "because they see it as more connected to their workplace, and what they do."

With respect to social interactions, Charles found that discussion posts were enriched because his working students reflected on actual events in their professional activities as they progressed through the course content:

> you get these really cool exchanges between these people who are really taking this class much more than … just a class, you know. And it's, it's good for the students who are sort of the traditional students who don't have experience yet to see how things actually pan out at work.

Similarly, he found that collaborations worked well as students were "pretty good at policing each other."

With respect to community impact, the course affected both the university and the broader community. The university recognized the course by awarding Charles an award for excellence in online teaching and asking him to present his course in a faculty development showcase where they presented him with a certificate, an iPad, and a free registration to a conference on online learning. Clients responded positively to the course as well. Charles says,

> they sent me nice letters at the end, and they told me everything worked out very well, and they're really happy to have had this help. And they actually submitted these, these grant proposals to the funding agencies and I think one of them actually got funded.

What didn't work well. Charles experienced challenges related to course objectives, technology, and community impact. With respect to the interactions, Charles has attempted to improve the quality of student participation in discussion posts in subsequent courses by increasing the number of points allocated to each prompt up to five points depending on the topic.

With respect to the technology, in his showcase presentation, Charles described abandoning weekly synchronous meetings using the Canvas conference tool because he found it clunky and designed more for a presentation and chat rather than a teleconference. Additionally, the conference feature at the time was unable to record calls. Charles switched to a single, one-hour call with each team half-way through the project using a free conference call service called freeconferencecalling.com that allowed call recording as MP3 files.

With respect to community impact, Charles notes several roadblocks he had to overcome to work with clients. First, the clients declined to disclose the necessary confidential information to allow students to write budgets, which necessitated removing that aspect from the assignment. More seriously, four out of five client projects were for a hospital, and the university's experiential learning department required students to take training if they were going to visit hospital property. Faced with a "500 page manual", Charles arranged for students to meet with their clients at coffee shops instead of hospital offices.

Student-related feedback. Charles shared feedback from learners about course objectives and social interactions. With respect to the objectives, Charles notes, "most of them liked the

client based aspect of it, that it was based in kind of real rhetorical situations and professional writing environments." However, three out of the 13 students wished they had studied proposals other than just grant writing. Reflecting on his subsequent teaching experiences, he says, "I now have like 5 or 6 people who have taken every single online course I have taught there so far, so I guess I did something right."

With respect to social interactions, four out of 13 students didn't like collaborative work. Charles says, "that's not surprising really. They just want to work on their own and not be dependent on anybody." He considered having teams draft a formal agreement of what each member should do, and be evaluated based on that agreement, but he's not sure whether such an approach would be "busywork" for working professionals.

The activity system of the course. The Proposal Writing course is an activity system comprised of six elements (sub-divisions of the system comprising Subject, Instruments, Rules, Community, Division of Labour, and Motivation) that evolved over time. In this case, however, Charles created the course without using existing materials. As such, the version of the course just prior to going online is presented as a potential default, and might be described as follows: an individual instructor using a textbook, discussions, exercises, and writing assignments, to teach proposal writing in an online learning management system restricted to registered students. When Charles was asked to teach the course in 2012, this default activity system faced a number of structural tensions (stresses within or between elements, or between activity systems, as defined in Table 8).

Table 8

Kinds of Structural Tensions in Activity Systems

Primary	**Secondary**	**Tertiary**	**Quaternary**
Tensions within an element of a system	Tensions between elements of a system	Tensions between versions of a system	Tensions between neighbouring systems

Since Charles was new to the university, university Rules (the constraints placed on the activity) required him to take training in online course design and consult with an instructional designer to ensure his course met "some basic guidelines." The Rules resulted in primary structural tensions within Rules and the Division of Labour (the entities that work with the Subject to accomplish the activity) between instructor autonomy and university design requirements for online courses, although Charles said he had "quite a lot of freedom" and did not mention any conflicts. Within the Community (the social context for the activity), Charles

participated in professional events where he learned about needs in his community for proposal writing to secure funding. He also engaged with pedagogical literature where he was exposed to research on service learning, effective peer review and virtual teams. These activities led to a primary structural tension within the Community between social needs and the notion of a class as an instructor and students within a university. They also led to two secondary structural tensions. First, Community was in tension with the Instruments (the tools, mental models, or ideologies used to accomplish the activity) because social needs in the Community and pedagogical concepts about serving those needs provided a new ideology of "working with people for people" rather than being constrained within a virtual classroom. Similarly, the Community was in tension with the Motivation (the reason for the activity's existence) because a virtual classroom experience alone would not satisfy the new ideology. These structural tensions are shown in *Figure 20*.
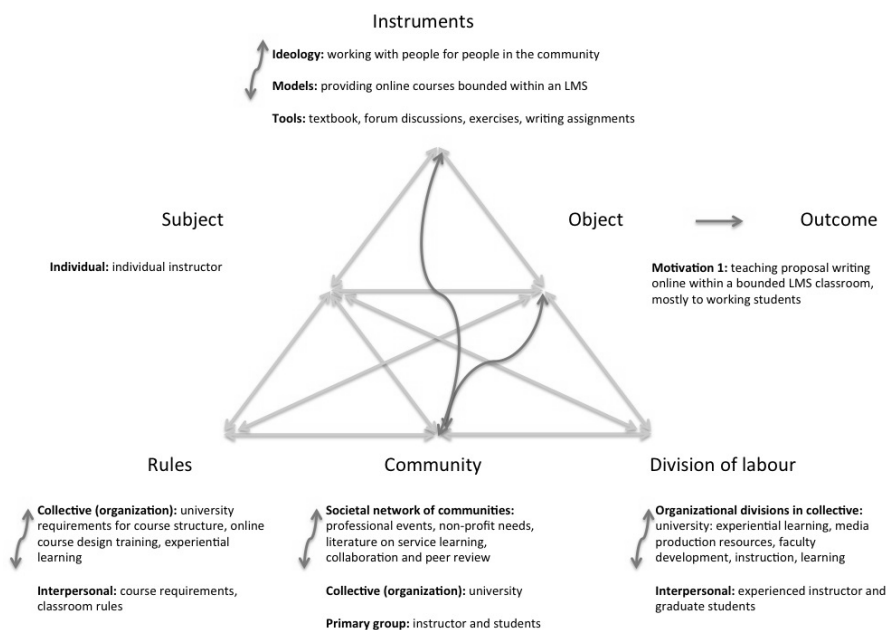
Figure 20. Proposal Writing default activity system confronted by instructor

The result was a tertiary structural tension that resulted in a new activity system with a new Motivation of connecting writers to non-profit clients to learn through serving the community using real resources, as shown in *Figure 21*. The new activity system introduced a

new Subject (the entity driving the activity) where Charles acted as a facilitator to combine learning materials, students, and clients. The new Subject required a new Division of Labour where students and clients negotiated their roles and determined client needs, and students identified sponsors. The community-based project also used new Instruments where assignments were in part developed by students and clients. In addition, client needs and sponsor guidelines created additional Rules for assignments as well as new Instruments for assessment of the final proposals. The new Instruments required tools to support group work, peer review, and client interactions, such as Google Docs, synchronous conferencing, and face-to-face meetings. Interaction with the community triggered concerns about issues of liability, however, with the university's experiential learning group imposing Rules for student training if they were to work on a client's hospital premises. Those Rules resulted in primary structural tensions within Rules and within the Division of Labour between the university concerns and Charles's autonomy. The result was a change in the Instruments such that students met with clients in coffee shops instead of in their hospital offices.
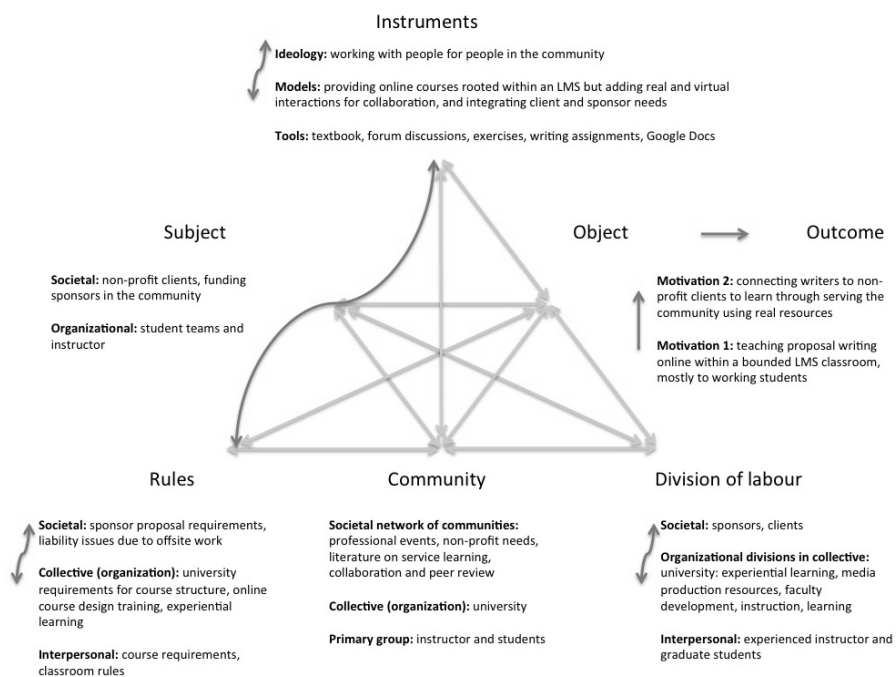
Figure 21. Proposal Writing activity system for instructor's course

Chapter Five: Cross-Case Analysis

This chapter presents an analysis of the themes that emerged across the four cases. Themes are presented using activity theory, and used to construct a model activity system for the development of online writing courses at universities. The chapter closes with answers to the research questions for the study.

Analytical Framework

The activity theory framework used to analyze data is described in detail in the How Data Were Analyzed section of Chapter Three. First, each case report in this study concludes with an activity theory analysis where the course is examined as an activity system that expanded over time. Activity theory analyzes a phenomenon as an activity system comprised of six interacting elements or sub-divisions of the system: Subject (the entity driving the activity), Instruments (the tools, mental models, or ideologies used to accomplish the activity), Rules (the constraints placed on the activity), Community (the social context for the activity), Division of Labour (the entities that work with the Subject to accomplish the activity), and Motivation (the reason for the activity's existence, comprised of an object to be acted on by the Subject using the Instruments, and an outcome to described the desired results) (Engeström, 2001, 1987). The activity system is traced over time to identify changes and how they are triggered by structural tensions within or among the elements of the system (Engeström 1987).

For ease of reference, I have reproduced the basic activity theory diagram in *Figure 22*.
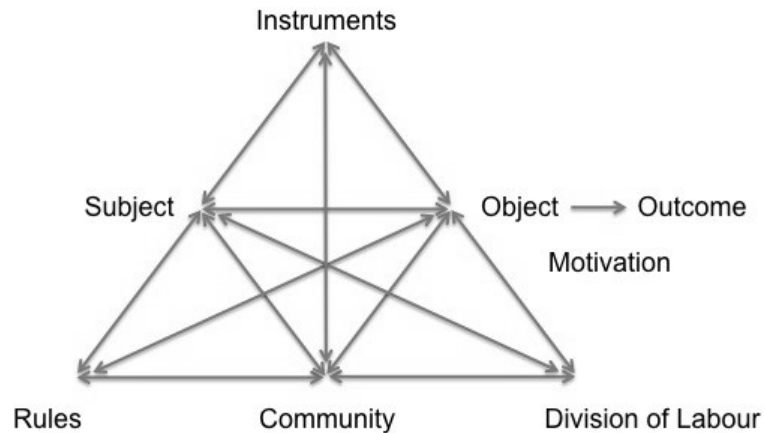
Figure 22. Activity system structure described by Engeström (1987)

A cross-case analysis was conducted to determine which characteristics in the individual systems more broadly affected the development of online writing courses. The analysis searched for patterns across the four cases and relationships among the patterns while taking note of contradictions and uniqueness. Pattern labels range from "dominant" to "notable" based on how many cases featured the pattern, as shown in Table 9. The resulting themes and relationships were used to generate a theory that explained the development of online writing courses at universities based on key influences over time.

Table 9

Pattern Labels for Cross-Case Analysis

Pattern Frequency	4	3	2
Pattern Label	Dominant	Strong	Notable

Theoretical Model Arising from the Cases

The development of online writing classes at universities can be analyzed as activity systems comprised of six elements (sub-divisions of the system comprising Subject, Instruments, Rules, Community, Division of Labour, and Motivation) that evolved over time. In the following section, I construct a model activity system that describes and explains the development of online writing courses at a university. My description of the model activity system begins with the Motivation element and progresses through the Subject, Rules, Community, Division of Labour, and Instruments elements. In each table, the cases are identified with short forms to save

space: WTP means Writing for the Technical Professional, ILD means Introduction to Legislative Drafting, EC means Educational Communication, and PW means Proposal Writing.

      Motivation of the activity system. The Motivation of the activity system is the reason for the activity's existence and has been chosen as the core concept driving the online writing course activity system. In activity theory, the Motivation drives the Subject to use Instruments on an object to accomplish an outcome. The actions of the Subject are influenced by the Rules constraining the activity, the Community providing social context for the activity, and the Division of Labour consisting of additional people assisting in accomplishing the activity. A key aspect of activity theory is that structural tensions within activity systems trigger expansions of their Motivations over time. As such, motivations not only influence the elements of the system, but are also expanded by tensions within and among those elements. Note that motivation refers to the overall motivation for the course activity and encompasses influences from the university as well as from the people who create and operate the course. For the four cases, the intended audiences (the objects of the system) and the expanding Motivations identified in the study are set out in Table 10.

Table 10

Motivations for the Online Writing Course Activity System

Case	Target audience	Pre-online motivation	Access motivation	Achievement motivation	Community motivation
1:WTP	upper-year undergraduates in technical majors	teach technical writing on campus	offer online access to overcome growing population & lack of classrooms	Struggling students leads to desire to help "bottom 2/3" maximize achievement	N/A
2:ILD	post-baccalaureate working professionals pursuing diploma in legislative drafting	teach legislative drafting through workbook on campus or distance	offer online access to diploma in legislative drafting	community organization prompts revision of language, examples, consistency, presentation	community organization prompts considering open access / Wiki style & incorporating community input

3:EC	undergraduate students seeking a writing elective	teach technical writing on campus	offer online access to an elective writing course	Struggling students leads to desire to help weaker students achieve	New instructor reduces hand-holding & workload, and increases interaction with peer review
4:PW	graduate students who are working professionals in writing	N/A (new course by a new professor)	offer online access to proposal writing, mainly for working professionals	N/A	New professor's community involvement leads to client-based design

Two dominant patterns emerged. First, the initial motivation for moving a course online was to use the online medium to broaden access to a course rather than to re-imagine its materials and pedagogy. Second, structural tensions in the activity system triggered expansions in motivations to broaden the impact of the course.

In a strong pattern, impact for the three existing courses that focused on content was broadened by revising the course to make its content more achievable by a broader range of people. For instance, Writing for the Technical Professional reduced the number of assignments, and introduced rubrics for all aspects of the course. Introduction to Legislative Drafting revised text, examples and instructions to make them easier to relate to and more consistent, and employed a friendlier webpage-style presentation. The head teaching assistant for Educational Communication introduced a series of more specific and timely tips and reminders, and a more interactive assignment template / feedback form for students than was previously used. In contrast, the instructor for Proposal Writing focused on technology as a means to connect people, rather than transmit content, and as such he narrowed the content of the course to teach only one kind of proposal in order to go more in-depth. Broadening impact in his people-oriented approach meant not only incorporating peer review and collaborative writing, but also adding community integration in the form of client-based projects that incorporated client needs and sponsor guidelines.

In a second strong pattern, motivations that reflected changes in course approaches in order to increase community integration rather than improve student achievement with content, arose from actions of people who came from outside the existing activity system, placing such people in the role of boundary spanners (people who introduce practices from one community

into another (Wenger, 2000)). For Introduction to Legislative Drafting, the intervention of an intergovernmental organization that wished to fund the development of an open educational resource version of the course to provide free access to a broader range of people led to moving the university's version of the course into a web-page design with the intention of offering it as an OER or Wiki-style that practitioners can contribute to, and non-lawyers can access in plain language they can understand. For Educational Communication, a new instructor taking over the course cut performance supports and feedback forms, and introduced workarounds to add a form of peer evaluation to the course. Peer evaluation represented a different approach because it incorporated content from students into an assignment, and incorporated their evaluation of that content into the grading process used by the instructor. For Proposal Writing, the collaborative, client-based approach arose from two boundary-spanning incidents. First, the professor was new to the university and centred his course design on his philosophy of writing being "working with people for people." Second, the professor was inspired by interactions at a professional event where he learned of the need in his community for proposal writers to help non-profit organizations.

Subjects of the activity system. The Subject of an activity system is the entity driving the activity. As with all elements in the activity system, the Subject may be examined at societal, organizational, and individual levels. For the four writing cases, the Subject encompassed the entities that drove the development of the online writing courses based on the Motivations. In this study, a university organization prompted development for a strategic reason, and an individual professor took responsibility for development. Characteristics of the organizational Subject are set out in Table 11.

Table 11

Organizational Subject of the Online Writing Course Activity System

Case	Year first offered	Institution	Source of request	Request type	Reason for request
1:WTP	1996	Southeastern US university with 60,000 students	University administration	Voluntary	Move core course online to address growing population and limited classrooms
2:ILD	2008	Western Canada university with 40,000 students	Department administration	Voluntary	Expand portfolio of online offerings by adapting a correspondence course licensed by the university

| 3:EC | 2008 | Central Canada university with 40,000 students | E-learning division administration | Voluntary | Expand portfolio of online offerings by adding a writing course |
| 4:PW | 2012 | Southeastern US university with 60,000 students | Department administration | Teaching assignment | Offer core course online to meet needs of student cohort |

Three dominant patterns emerged. All four cases (two were at the same institution) occurred at a large university with 40,000-60,000 students. In each case, administrators at the university (rather than professors) initiated the development of the online version of a course. One strong pattern emerged. In the three oldest cases, the request from administrators to create an online course was voluntary. In contrast, the request in the most recent case was a regular teaching assignment. Note that the cases from 1996 and 2012 occurred at the same university. By 2012, teaching online had become a regular assignment. With respect to the reason universities wished to move courses online, two notable patterns emerged that may constitute a dominant dichotomy: universities requested online writing courses either to meet the actual needs of a core university program based on student demand, or to expand a portfolio of offerings that could be made available to students.

Based on the request of university administrators, professors responded as the individual Subjects responsible for developing the courses, as described in Table 12.

Table 12

Individual Subjects of the Online Writing Course Activity System Characterized at the Time They First Developed the Online Course

Case	Professor	Sex	Teaching Experience	Online Teaching Experience	Responsible for course design	Relied on past experience for development
1:WTP	Albert	Male	13 years	No	Yes	No
2:ILD	Robert	Male	18 years	Yes, from elsewhere	Yes (chose to accept existing)	Yes
3:EC	Lawrence	Male	14 years	Yes, from elsewhere	Yes	Yes
4:PW	Charles	Male	15 years	Yes, from elsewhere	Yes	Yes

Three dominant patterns emerged. The individual professors responsible for course development were all male, and at the time of development, each of them was an experienced instructor with between 13-18 years experience. The professors all had ultimate responsibility for course pedagogy and design. Two strong patterns emerged: at the time of development, three

instructors had previous online teaching experience from a previous workplace, and each of them indicated that they relied on that experience to develop the online course despite other available resources. As such, the professors acted as boundary spanners, introducing to their universities approaches developed elsewhere. The fourth instructor, Albert, was a pioneer in online course development at his university and not only took mandatory initial training in 1996 but also voluntarily returned for refresher training around 2005 in response to the availability of new technologies and pedagogies. Even so, Albert indicated that his ongoing course development was driven by his own research on "millennials" and rubrics.

The reliance of professors on their own experience might explain why motivations for courses expanded in the form of amplifications of existing approaches rather than changes in pedagogy, absent interventions from outside persons.

Rules of the activity system. When Professors created the online writing courses, they were subject to an expansion of Rules (the constraints placed on the activity). For the four writing cases, the Rules encompassed structural requirements for the course and its online presentation, requirements for faculty training, the use of a particular online delivery mechanism, and requirements arising from the community impacted by the online version of the course, as set out in Table 13.

Table 13

Rules of the Online Writing Course Activity System

Case	Regular course structure required	Added structure for online required	Training required	Delivery mechanism required	Community requirements
1:WTP	Yes, 3-credit, 6 weeks	No (but likely same guidelines as Proposal Writing)	Yes, for first time offer online course at the university	Yes, LMS	Accommodate community college students guaranteed admission into 3rd or 4th year university
2:ILD	Yes, 3-credit, self-study, 6 months	No except basic administrivia like forum, calendar, copyright notice	No	Yes, LMS	Accommodate diversity in drafting among student countries, plain language, gender neutrality
3:EC	Yes, 3-credit, 13 weeks	40% in-person final exam	No	No, customized website	N/A

| 4:PW | Yes, 3-credit, 13 weeks | No except basic guidelines (avoid reliance on content + quiz) | Yes, for first time offer online course at the university | Yes, LMS | Accommodate actual client needs and sponsor requirements, experiential learning rules |

One dominant pattern emerged. All four courses were 3-credit courses that complied with their university's standard semester length. Three strong patterns emerged. First, three courses were not subject to special requirements for online structure, other than basic guidelines such as avoiding the reliance on a simplistic content-and-quiz structure, or ensuring the inclusion of common administrivia such as a copyright notice, or LMS features such as a discussion forum. In contrast, Educational Communication was subject to a university requirement that 40% of the final grade be determined by an in-person, final written exam to ensure the student registered for the class can prove they learned the material and can do the work. Second, three courses prescribed the use of the university's chosen learning management system (LMS) with menus that could be configured by the professor. In contrast, Educational Communication developed a customized course website with its own highly-decorative graphical design and unique menu structure. Third, three courses adjusted content to accommodate community requirements, such as making the course more achievable by community college students guaranteed admission to third and fourth year classes, making the course respectful of community norms such as drafting conventions, gender neutral language, and plain language explanations, and integrating actual client and sponsor requirements into course assignments.

One notable dichotomy emerged: two professors were required to take training before offering an online course at the university. Both courses were offered at the same university, but separated by 16 years. The same two courses were requested by a Subject university that wished to move core courses online to meet student needs (rather than creating an online offering to expand a portfolio).

The Rules of the activity system appeared to preserve professors' academic freedom to develop a course according to their own curricular and pedagogical values, provided they could implement their design using the required LMS. Accommodation of community requirements did trigger changes in motivation, as described earlier, but represented an amplification of the existing course approach of teaching through increasingly-refined content or increased collaboration and community integration, rather than a change in pedagogy.

Community of the activity system. The ongoing development of the courses was influenced by its surrounding social context, or Community. Community includes the classroom and the social environment beyond the classroom such as the students entering the course and their capabilities, researchers and the literature they produce, and professionals and the clients who need their services. Online writing courses respond to needs arising from the community, incorporate research from the community, and integrate community input into the course assessments as described in Table 14.

Table 14

Community Influences on the Online Writing Course Activity System

Case	Respond to community needs	Incorporate research into design	Integrate community input into assessments
1:WTP	Increasing achievement issues linked to millennials and guaranteed admissions leads to streamlining and performance supports	Required faculty training; later research on rubrics leads to adding extensive performance support	Requires students to read and respond to peer discussion posts, and grades them
2:ILD	Inter-governmental organization desire to reach non-lawyers using an OER leads to revising content and presentation	N/A	N/A
3:EC	Recurring achievement issues leads to performance supports	later TA research on teaching and learning, and performance leads to adding extensive performance support	Second instructor required students to post one assignment and grade one peer assignment
4:PW	Attending professional event leads to client-based design	Required faculty training; incorporated literature on virtual teams, peer review, client-based design into course	Students make and respond to posts and peer review all assignments; assignments based on client needs and feedback

One dominant pattern emerged. All four courses responded to community needs with changes in design. The needs and the changes varied: in a notable pattern, recurring or increasing student problems with achievement in Writing for the Technical Professional and Educational Communication led to providing extensive performance supports to assist students. The literature notes that weaker students are more likely to enroll in and experience difficulty in online courses (Lee & Choi, 2011) suggesting that expanding access to a course by placing it online may result in changes in the overall capacity of the classroom community of the course. Other community

needs related to a desire to expand the usability of the Introduction to Legislative Drafting beyond lawyers, or to have Proposal Writing meet the needs of non-profit organizations that required help in writing proposals.

Two strong patterns emerged. First, three courses explicitly incorporated research at a time when an instructor was prompted by community events to explicitly reconsider course design. For Writing for the Technical Professional, Albert conducted research on millennial students and rubrics to find a way to respond to increasing student problems with achievement. Similarly, the head teaching assistant for Educational Communication responded to recurring student problems with achievement by attending a course on teaching and learning and leveraging studies on performance improvement in order to develop ongoing performance supports. The professor for Proposal Writing developed his course from scratch, and relied on research regarding virtual teamwork, peer review, and client-based designs. In contrast, the fourth course, Introduction to Legislative Drafting, was adapted from materials designed by an instructional design firm in 1993, and the design was not changed when the course was moved online.

In a second strong pattern, three courses incorporated community input into their assessments. Both Writing for the Technical Professional and Proposal Writing required students (who were part of the classroom community) not only to post in discussion forums, but also to read and respond to classmate posts with both the posts and responses graded by the professor according to a rubric, which transformed the posts into required reading for others and assignments to be graded. Educational Communication (as revised by the second instructor) and Proposal Writing both required students to post assignments and review and evaluate peer assignments. Proposal Writing included input from the broader community by requiring students to design assignments based on real client needs and sponsor requirements, which formed criteria for grading. Although the fourth course, Legislative Drafting, included notes for instructors to be sensitive to differences in writing conventions in student jurisdictions, the course did not incorporate actual community input into the assignments.

Division of Labour of the activity system. When Professors created the online writing courses, they were subject to an expansion of the Division of Labour (the people who assist with the activity) beyond themselves. The expanded Division of Labour consisted of people working in three groups of roles: design, development, and operation.

Course design. The first set of roles relates to the design of the course, as set out in Table 15.

Table 15

Division of Labour for Design of the Online Writing Course Activity System

Case	Choice of pedagogy	Instructional design	Visual design
1:WTP	Professor	Professor Subject to mandatory training and consult with instructional designer	Professor relies on LMS
2:ILD	Professor (accepted approach of source material)	Professor (accepted the professional instructional design of the source material but used content experts to help break it into pieces)	Version 1: Professor relies on LMS Version 2: visual designer for OER
3:EC	Professor	Instructional designer working with Professor	Visual / web designer
4:PW	Professor	Professor Subject to mandatory training and consult with instructional designer	Professor relies on LMS

One dominant pattern emerged. In all cases, the professor was responsible for choosing the pedagogical approach of the course. In the case of Legislative Drafting, the professor chose to accept the existing approach of the source materials.

Two strong patterns emerged. In three cases, the professor was responsible for the instructional design of the course materials. In the fourth case, Educational Communication, the professor was the key contributor but worked with an instructional designer. In the second strong pattern, the professor was responsible for visual design of the course and relied on the learning management system (LMS) he was required to use. In the fourth case, the highly-graphical website style chosen for delivering the course led to the use of graphics and web designers. When Introduction to Legislative Drafting was revised for broader appeal and relatability, it was moved to a website design, which similarly resulted in the engagement of a separate visual designer to work with the professor.

In a notable pattern, the professors for two courses offered at the same university were required to interact with instructional designers as part of mandatory training on creating online courses, although they indicated that they tended to rely on their own expertise during actual development.

Course development. The second set of roles in online writing courses relates to the development of the course, as set out in Table 16.

Table 16

Division of Labour for Development of the Online Writing Course Activity System

Case	Content expertise	Basic content development	Populating delivery system	Project management
1:WTP	Professor	Professor	Professor who e-mailed tech support as needed	Professor
2:ILD	Experts in legislative drafting	Primary: subject matter experts Secondary: professor	Professor	Professor
3:EC	Professor	Primary: professor Secondary: instructional designer Tertiary: graphics/web designers, video crew	Instructional designer	Instructional designer
4:PW	Professor	Professor	Professor who consulted with instructional designer as needed	Professor

Four strong patterns emerged. In three cases, the professor was responsible for content expertise. In the fourth case, Legislative Drafting, the professor adapted existing source materials and consulted with outside subject matter experts. In a second strong pattern, the professor was primarily responsible for content development, although Educational Communication also engaged a video crew to record the professor's introductory lectures, and graphics/web design personnel to create the look of the course website. Again, the fourth case, Legislative Drafting, relied on content previously developed by one set of subject matter experts and revised by another. In a third strong pattern, the professor was responsible for placing content into the online delivery system. In the fourth case, Educational Communication, a highly-graphical, custom website was used and the instructional designer was responsible for placing content into the website either personally, or as a project manager directing graphics or web designers. In a fourth strong pattern, the professor was responsible for project management. Again, in the fourth case, Educational Communication, a highly-graphical, custom delivery system was used and the instructional designer was responsible for project management of contributions from the professor and graphics and web designers.

Course operation. The third set of roles in online writing courses relates to the ongoing operation of the course, such as coordination of instructors or teaching assistants used in the operation of the course, interactions with students in discussion forums or by e-mail, ongoing

development of content for student learning, and the evaluation of student assessments, as set out in Table 17.

Table 17

Division of Labour for Operation of the Online Writing Course Activity System

Case	Participant content development	Interactions with students	Evaluation of assessments	Class size per grader	Coordination
1:WTP	Students (posts that require graded responses)	Professor who "projects persona"	Professor	34	N/A
2:ILD	N/A	Instructors who are practicing lawyers	Instructors who are practicing lawyers	1-2	Professor coordinates instructors
3:EC	Version 1: N/A Version 2: students (assignments for peer review)	Primary: teaching assistants Secondary: professor / instructor	Version 1: teaching assistants Version 2: Primary: teaching assistants Secondary: students (peer review) and instructor	30	Professor / instructor coordinates teaching assistants
4:PW	Students (posts that require graded responses; assignments for peer review) Clients (needs that drive assignments, documentation)	Professor who creates "social presence"	Primary: professor Secondary: students (peer review) Tertiary: clients (comments)	13	Professor coordinates clients

Two strong patterns emerged. In three cases, participants in the course became content contributors, such as students creating discussion posts that had to be read and responded to by peers, or assignments that had to be read and peer reviewed, in both cases for grades. In a second strong pattern, in the three cases where the course relied on teams of instructors or clients, the professor played a coordination role, such as engaging and managing a team of instructors or teaching assistants, or a group of clients and answering their questions.

A pair of notable patterns emerged that may form a pair of dominant dichotomies. First, the two courses that were developed to meet a demand for core courses used the professor for interactions with students to "project persona" or create "social presence", and as the primary evaluator of student assignments. In contrast, the two courses that were developed to expand the

university's online portfolio of offerings used a separate team of instructors or teaching assistants to interact with students and evaluate student assignments, which separated the professor who developed the course from its firsthand experience.

In a third notable pattern, two courses incorporated student input into the evaluation of assessments. The revised version of Educational Communication, and Proposal Writing both incorporated student peer review of assignments. Proposal Writing went further due to its client-based design, by requiring students to receive client feedback on their proposals (although that feedback was not in the form of grading).

No clear pattern arose with respect to class sizes. Both social-interaction style and workbook styles each had a case with a large class and a small class size.

Instruments of the activity system. The Instruments of the activity system are the tools, mental models, or ideologies used by the Subject to accomplish the activity. For online writing courses, Instruments comprise a substantial area of analysis including source materials informing course design and content, social and writing assessments, and course delivery systems.

Source materials. The first set of instruments in online writing courses relates to the source materials used to create the courses and the impact on course development and the effort required to make changes to the course as shown in Table 18.

Table 18

Source Materials for Instruments and Related Development Consequences for the Online Writing Course Activity System

Case	Adapted existing course	Original course format	Primary content	Online form of course	Development Time	Effort required for changes
1:WTP	Yes	Classroom course with quizzes, discussions, exercises	Physical textbook	Daily schedule, individual quizzes, discussion posts and responses	40 hours	Revision away from modules: 20 hours Prep for each semester: 10 hours
2:ILD	Yes	Workbook self-study with readings and exercises	Licensed online readings in PDF	Modules, workbook style: individual ungraded exercises, readings to download	6 months for whole diploma program	$47,000 team revision over 18 months

| 3:EC | Yes | Classroom course with PowerPoints & exercises for content; advanced workbook course for style | Licensed online readings in PDF, lecture videos | Modules, workbook style: individual ungraded exercises, readings, comprehension questions, forum posts, lecture videos | 8 months $50,000 initial cost | Resistant to changes by new instructor; developers team reluctant to make changes |
| 4:PW | No | N/A | Physical textbook | Modules, discussion posts and responses, collaborative writing, peer review, preview videos | 100-150 hours | Created on demand for a cohort, may or may not be used again |

Three strong patterns emerged. Three courses were adapted from existing courses, while the fourth course, Proposal Writing, was created "from scratch". In a second strong pattern, three courses used modules to organize activities, while Writing for the Technical Professional originally used modules but later moved to a daily schedule of activities and deadlines. In a third strong pattern, three courses focused on individual learning, while Proposal Writing focused on social interaction, collaboration and community integration.

Notable patterns emerged that may form five dominant dichotomies. First, two courses relied on a physical textbook as the primary source of content, while two other courses relied on providing content through the course itself in the form of licensed readings offered as PDFs and ungraded exercises, and in the case of Educational Communication, lecture videos and narrated PowerPoints as well.

Second, the two courses offering integrated readings and content provided an individual, workbook style experience, while the two others that used a physical textbook required social interaction online in the form of discussion posts and required responses to classmates, and in the case of Proposal Writing, collaborative writing and peer review as well. The online format reflected the source materials. For instance, Introduction to Legislative Drafting basically moved the existing workbook materials and structure online. For Educational Communication, the online version was an intentional combination of existing classroom materials with a workbook style from another previous course taught by the professor.

Third, the two workbook-style courses involved significant content conversion or development and required development times of 6-8 months, while the two social interaction-style courses that relied on textbooks required only 40-150 hours, with Proposal Writing created

on demand as a teaching assignment to meet the demands of a student cohort for the coming Summer.

Fourth, the two social interaction-style courses were easy for professors to update as part of their teaching duties, while the two workbook-style courses were more resistant to change. In the case of Introduction to Legislative Drafting, the revision process cost $47,000, 18 months of time and a team of people including two experts, a visual designer, and an instructional designer. In the case of Educational Communication the original development cost $50,000, and subsequently the new instructor had difficulty changing the course. Her requests were not welcomed by the development team, necessitating a resort to workarounds such as having students post assignments in discussion forums to allow peer evaluation.

Fifth, the two undergraduate courses used graded assessments to encourage students to read their materials. Writing for the Technical Professional used regular quizzes in addition to discussion posts, and Educational Communication used reading comprehension questions that students downloaded, answered, and submitted on demand. In contrast, professors for the two graduate courses either expected students to do their readings as part of the workbook experience, or to engage in broader discussions online informed by the readings.

An additional notable pattern emerged in that two courses used videos. However, Educational Communication used introductory and lecture videos that were prepared in advance with the intention of their continued use over many years, while Proposal Writing generated preview videos as the course progressed using YouTube and a laptop camera.

Social interactions. The second set of instruments in online writing courses relates to the social interactions used in the four cases. Interactions include asynchronous communication (where instructor and students are not online at the same time), synchronous communication (where instructor and students are online at the same time), student interactions with each other, and student interactions with the community for the purpose of assignments, as set out in Table 19. In addition, grading weights are included to gauge the value of the social component of the course.

Table 19

Social Interactions Used in the Online Writing Course Activity System

Case	Asynch. interactions	Synch. interactions	Student interactions	Guidance for social interaction	Grading weight for interaction	Community interaction for writing

1:WTP	Professor in LMS with photo; ongoing tips, reminders, comments on performance	Optional individual conference about final assignment (usually by phone)	Discussion posts and responses	Sample graded posts; rubric for posts & responses; professor noted weaknesses	20.0% for posts and responses	Interview technical professional and write memo
2:ILD	Instructors by e-mail; welcome, prompt to start work	N/A	N/A	N/A	0.0%	N/A
3:EC	Version 1: Professor e-mails tips Version 2: Instructor in CMS, reminders and react to problems	1-3 optional class conferences by Adobe Connect	Version 1: Forum posts but not interaction Version 2: one peer review sent to instructor	N/A	7.5% for posts	Write procedure and observe someone using it to determine fixes
4:PW	Professor in LMS with photo; ongoing tips, previews, summaries	1 required conference with each student team about project using conference call	Discussion posts and responses, collaborative writing, peer review	Rubric for posts, training on teamwork, peer review; professor noted weaknesses	40.0% for posts & collaborative interactions	Interview clients to gather needs; draft proposal & get client feedback

Four strong patterns emerged. First, in three courses the professor regularly used the announcement function of the course delivery system to communicate with students to share announcements of upcoming events, and provide tips and reminders. In a pair of notable sub-patterns that may form a dominant dichotomy, the two courses that focused on social interaction (Writing for the Technical Professional and Proposal Writing) used an instructor photo that appeared with each announcement, and provided an ongoing series of announcements throughout the course that proactively highlighted the next element in the curriculum as it was coming, and provided helpful tips. In contrast, the two workbook-style courses primarily used announcements in a different way: to initiate contact and share general tips at the start, and to announce changes or react to problems as the course progressed. Instructors for Introduction to Legislative Drafting sent a welcome e-mail to new students but weren't expected to initiate further interactions unless

students failed to deliver any work for an extended period of time. For Educational Communication, the professor initially e-mailed a welcome and some general tips, but most subsequent communications were reactions to issues that arose during the class.

In a second strong pattern, the same three courses employed synchronous conferences with students. In a notable sub-pattern, the two courses that focused on social interaction (Writing for the Technical Professional and Proposal Writing) offered sessions focused on addressing a particular individual or student team and the issues they had with a particular assignment. In contrast, the workbook-style course, Educational Communication, offered optional general conferences open to the entire class for the purposes of orientation, reviewing common errors, and exam preparation.

In a third strong pattern, three courses required discussion forum posts by students based on readings and problems arising from the readings. In a notable sub-pattern, the two courses that focused on social interaction (Writing for the Technical Professional and Proposal Writing) not only required posts but also responses to classmates' posts. In contrast, the workbook-style course, Educational Communication, did not require interaction among students.

In a fourth strong pattern, three courses required an assignment with community input. In a notable sub-pattern, the two courses that focused on social interaction (Writing for the Technical Professional and Proposal Writing) required interviews to gather perspectives from a technical professional, or a client, in order to provide content for an assignment. In contrast, the workbook-style course, Educational Communication, required students to develop a procedure first and then test how well a person was able to comply with that procedure in order to determine necessary fixes.

Two notable patterns emerged. First, the two courses that focused on social interaction and required discussion posts and follow-ups (Writing for the Technical Professional and Proposal Writing) not only graded the discussion posts according to rubrics but also commented on their concerns about the quality of students' posts they were measuring. Second, the same two courses allocated significantly more grading weight to social interactions (20% and 40%) than the other courses (0% and 7.5%).

Writing pedagogy. The third set of instruments in online writing courses relates to the writing pedagogy and assignments used. A summary of the pedagogical Instruments found for the four cases is set out in Table 20.

Table 20

Writing Pedagogy and Assessments Used by the Online Writing Course Activity System

Case	Year moved online	Adapted existing course	Individual or collaborative assignments	Required writing tool	Type of evaluation of assignments	Grading guide	Grading weight for writing
1:WTP	1996	Yes	Individual	MS Word	Single summative by professor	Rubric	70%
2:ILD	2008	Yes	Individual	MS Word	Single summative by instructor	Rubric informed by student jurisdiction	100%
3:EC	2008	Yes	Individual	MS Word	Single summative by teaching assistant	Rubric	80% (with exam)
4:PW	2012	No	Collaborative	Google Docs	Formative by peers and instructor, summative by professor	Rubric informed by client needs and sponsor rules	60%

One dominant pattern emerged. All four courses used rubrics to grade writing assignments and provide feedback to students. A notable sub-pattern emerged. For two courses, the standard rubric was subject to additional considerations from the students' context. Instructors for Introduction to Legislative Drafting were cautioned about differences in wording students might use due to differing legal conventions in their home country. The instructor for Proposal Writing considered the client needs gathered by students and the guidelines of sponsors chosen by students when evaluating assignments.

Four strong patterns emerged across the three oldest courses. First, the courses were adapted from an existing, non-online course for online presentation. Second, those courses required individually-completed assignments. Third, the assignments had to be submitted in Microsoft Word format. Fourth, the assignments were subject to a single, summative evaluation by an instructor. Individually-completed assignments subject to a single, summative evaluation against detailed rubrics represent a "product pedagogy" of teaching writing. That product approach involves significant control: the professor specifies detailed requirements in advance and grades students against their individual ability to conform to them. In contrast, Proposal Writing, the most recently-developed course, was created "from scratch" and adopted a more

social "process pedagogy" that required collaborative assignments created in the online Google Docs suite, peer review of the assignments, also in Google Docs, and both formative evaluations of drafts and summative evaluations of final versions by the professor. Key requirements for assignments were determined during the course through student interviews with clients, research on sponsor guidelines, and client feedback. As a result, the professor for Proposal Writing noted the course was a less-controlled environment, and he instituted client meetings and student conferences to compensate for the expected added anxiety.

An additional strong pattern related to the amount of weight allocated to written assignments, with three cases allocating between 60-70%.

Delivery systems. The third set of instruments in online writing courses relates to the delivery systems used to present the course online and includes the type of system used, the interface it presents to students, and who is able to use the system to develop or change content, as set out in Table 21.

Table 21

Course Delivery Instruments of the Online Writing Course Activity System

Case	Delivery system	Course interface	Interface style	User guide	Primary developer	Changes to course
1:WTP	Learning management system	Text-oriented with customizable menus	Flat including integrated view of the entire course	N/A	Professor	Professor moved from modules to daily schedule
2:ILD	Learning management system	Text-oriented with customizable menus	Flat including integrated view of the entire course	Guides to the course and the LMS for students and instructors	Professor	Professor
3:EC	Customized course experience	Highly graphical, unique custom interface	Hierarchical with no integrated view of the course	Guide to the course interface for students	Instructional designer as project manager for a team	Requires design personnel
4:PW	Learning management system	Text-oriented with customizable menus	Flat including one integrated view of the entire course	N/A	Professor	Professor used collabor-ation ability of LMS

Five strong patterns emerged across the same three courses. First, the courses were implemented in the university's learning management system. Second, the course interfaces were text-oriented without decoration, and included standardized menus customizable by the instructor. Third, the course interfaces were "flat", meaning there was at least one screen that displayed an integrated view of the entire course, and other menu choices were a single click away from each other. Fourth, the primary developer was the professor, and fifth the course could be customized by the professor without outside help. For instance, the professor for Writing for the Technical Professional moved from a modular design to a daily schedule of activities in 20 hours of work. The professor for Proposal Writing, inspired by a discussion at a recent professional event, chose to implement the ability of the LMS to integrate collaborative writing in the form of Google Docs in order to use a client-based design. In contrast, Educational Communication featured a custom, highly-graphical interface with hierarchies of menus, and required a team of designers headed by an instructional designer / project manager to create the course and make changes.

One notable pattern emerged. The two workbook-style courses, Introduction to Legislative Drafting and Educational Communication, both included student guides on how to use the course interface although one was implemented in an LMS and the other in a highly-graphical website.

Answering the Research Questions

The overall phenomenon I wished to explore was why and how undergraduate and graduate writing courses—both service courses and courses for majors—were designed for presentation online. In this section each of the specific research sub-questions is answered based on the cross-case analysis.

Research Question 1: Why did universities offer writing courses online? Overall, universities offered writing courses online in order to broaden the accessibility of the courses for students. However, the reasons for broadening accessibility differed depending on whether the course met a core need of the university, or was an addition to a portfolio of online offerings. Courses that met a core need were part of an existing degree program where the university has trouble meeting demand due to limited resources such as classroom space, or where the university has created an expectation for online availability because students are able to take

other courses in their degree program online. For instance, Writing for the Technical Professional was moved online because it was a course with broad appeal for students and the university faced a growing population of applicants and a lack of classroom space. Sixteen years later, online courses had become a key aspect of the university's offering, and Proposal Writing was offered online as a regular teaching assignment.

In contrast, courses that were additions to a portfolio did not already exist as part of a program at the university, and were adapted from courses that were developed elsewhere. Demand for these courses originated not from student demand at the university or lack of resources, but from administration adding to a portfolio of offerings. For instance, Introduction to Legislative Drafting was created by an intergovernmental organization as a correspondence course. The program materials were licensed by the university but not put online until Robert joined the institution and "basically took it on myself … to try to get these materials online." Educational Communication began as a basic technical writing classroom course taught by Lawrence when he was a writing instructor at another institution. Despite requests from the e-learning division of the university over several years, he didn't start on the project until after he'd secured tenure as an Education professor at his current university.

Research Question 2: What choices were made regarding curricula, pedagogy, course structure, and student assessment? Choices about the content, teaching methods, course structure and forms of assessment depended on whether the course was adapted from a non-online version, or was created "from scratch" to leverage the affordances of online learning. Three of the courses were adapted from existing non-online forms that informed curriculum, pedagogy and assessments for the online versions. For instance, the pedagogy for all three courses remained product-based. Students were given detailed instructions and required to individually write assignments in Microsoft Word for a single summative assessment. Albert, the professor for Writing for the Technical Professional, noted how his course objectives had remained similar since the 1970s, and that his initial course design had attempted to require as much study time online as his face-to-face students spent in the classroom. His classroom and online courses both used quizzes, discussions, exercises, and written assignments. Similarly, Robert, the professor who adapted Introduction to Legislative Drafting from an existing correspondence program, accepted the existing course design and materials and focused on moving them into an online format. He did consult with subject-matter experts for advice on

which of the existing modules from the existing program he should use in the introductory course. Finally, Lawrence, the professor for Educational Communication, adapted a basic classroom course in technical writing that he had taught at another institution. He reused the existing lessons, PowerPoint slides, exercises, checklists, and sample assignments, and even provided videos of narrated PowerPoint presentations. Since he was offering the course in an educational department, he added a lesson on giving feedback, however there was no assignment related to the lesson. He converted his assignment on how-to articles to meet the university's requirement for a final in-person exam.

In contrast, Charles, the professor for Proposal Writing, chose to create the course "from scratch" rather than adapt existing materials. He based his decisions on his philosophical view of "writing as a social process, as something that is done for other people with other people, in real life contexts, in real life situations." As such, he limited the course curriculum to one form of proposal writing, and included explicit training on virtual teamwork and peer review in order to support his pedagogy. He viewed online learning primarily as a tool for connections rather than content delivery, and as such his pedagogy implemented class discussions, collaborative writing, peer review, client feedback, and formative and summative evaluations.

Research Question 3: Who participated in making and implementing key decisions? In all cases, the key decision-maker was the professor responsible for the course, a role dominated by experienced male teachers who relied on previous experience when making decisions. The professor was responsible for choosing (or deciding to accept the existing) pedagogy, curriculum, and instructional design for the course. However, the professor was subject to a number of requirements and influences in making those decisions from administrators, instructional designers, and to some extent, content experts and web and graphics personnel.

Administrators were responsible for three key decisions that impacted course design. First, the prompt to move a writing course online came from administrators, and the reason for their request, whether to meet a core need or expand a portfolio of offerings, was related to whether a course focused on ongoing social interaction with a professor, or offered a workbook-style course. Second, administrators were responsible for requiring professors to use a particular delivery system for the course. For instance, three courses were required to use a standardized learning management system, while the fourth course received resources to construct a

customized website. Third, in two cases that occurred at the same university, administrators required professors to take training on creating and teaching online courses before they were allowed to teach online.

The role of content experts and instructional designers depended on the style of course. For courses that met a core need, the professor was the content expert, and instructional designers played a minor role. Professors for Writing for the Technical Professional and Proposal Writing were required to take mandatory training from instructional designers on developing online courses, however both professors emphasized their autonomy with Albert noting, "I used approaches that made the most sense to me, and these likely overlapped with what the research at the time supported" and Charles emphasizing, "I've been doing this for awhile so I kind of went it alone a little bit." The professors preferred to get help as they needed it, with Albert noting his appreciation of quick e-mail responses to his technical questions, and Charles describing interactions with his instructional designer as limited to "a couple technical questions about Canvas" and showing what he was doing to "just kind of get their approval." Albert voluntarily returned for refresher training 10 years after initial development of his course to learn about new technology and approaches, and noted that it helped him move away from a modular structure in order to reduce preparation time.

In contrast, workbook-style courses involved a coordinator who engaged with a subject-matter expert, and a much stronger instructional design influence. For instance, for Introduction to Legislative Drafting, Robert was a professor of legal studies but not an expert in legislative drafting. He engaged content experts to help evaluate and segment content from the source materials he adapted. Although he did not engage an instructional designer, the source materials he used (largely unchanged) had been developed by a professional instructional design firm in the United Kingdom. Similarly, the instructional designer for Educational Communication also acted as project manager for developing the course and relied on the professor as the subject-matter expert. She implemented his pedagogical choices, gathering and processed materials from him to create consistent content, liaised with web and graphics designers, and sought the professor's approval of decisions.

Research Question 4: How did the chosen medium affect design decisions? All four courses were primarily asynchronous with synchronous elements. In general, although the courses used similar tools such as learning management systems, conferencing applications, and

video production, design decisions were affected by media choices but driven more by the style of the course and the instructor's philosophy.

Three courses used a learning management system (LMS) for delivery, which provided simple text-based interfaces, and at least one integrated view of the entire course that students could navigate from top to bottom. Using an LMS allowed professors to rely on a standardized interface, make limited customizations, and build and update their courses themselves. In contrast, the e-learning development unit for Educational Communication created a highly-decorative graphical website with multiple layers of customized menus displayed in different ways. The use of a highly-graphical website meant that the course was developed by an instructional designer working with web and graphics designers and the highly-decorative result was resistant to change. The professor, his teaching assistants, and the subsequent instructor were not able to make changes themselves, and the effort required to change the website meant that the design team was not receptive to anything other than minor requests.

Three professors supplemented the LMS with separate conference tools for tele- or video conferencing with students. The two core-need courses offered individual or group calls to discuss specific projects, while one workbook-style course offered whole-class conferences for orientation, common problems, and exam preparation. Two professors used video in the courses, however, Charles, in a core-need course, chose to create short preview videos during the course by using his laptop. In contrast, Lawrence chose to create, in advance, a combination of professionally-recorded introductory videos for each lesson, as well as lengthy narrated PowerPoint lecture videos.

Course design was influenced more by philosophy than the medium chosen for delivery. For instance, a LMS may offer a range of features, but using them is the professor's choice. Albert and Charles were both aware of the social affordances of the LMS they had in common, but only Charles chose to use the ability to manage collaborative groups integrated with Google Docs. Similarly, an interface may be unchangeable without a redesign effort, but an instructor can develop workarounds. Although Educational Communication used a custom website that could not be changed without assistance from a largely-unavailable design team, a new instructor added peer review through the discussion forums.

Research Question 5: How did existing research on critical success factors of distance and e-learning and on the teaching of writing influence the designs of courses, if at

all? The literature describes a series of factors that contribute to the success of online learning and effective writing instruction. For online learning, success factors include using a variety of pedagogies to support course goals, clear structure, frequent and meaningful interactions with content, frequent and supportive interactions with the instructor, meaningful social interactions, and measurements of effectiveness that can inform adaptations of the course.

All four courses employed a mix of pedagogical approaches, although behaviourist and cognitive approaches were more common. Behaviourist approaches included quizzes, reading comprehension questions, and exercises with correct answers. Cognitive approaches included questions and discussion prompts that asked students to connect what they read to their own past experiences. In contrast to the other three courses, Proposal Writing used cognitive and social constructivist approaches. The constructivist approach incorporated collaborative projects whose requirements were driven by actual clients and sponsors, and revised according to peer feedback.

All four courses focused on providing clear structure, such as dividing the curriculum into a series of modules with assigned readings and tasks. Writing for the Technical Professional later moved to an even more structured daily schedule of activities. The three courses that used an LMS also provided simple, consistent interfaces, and at least one way to view the entire course in one screen, allowing students to easily progress through course materials and activities from top to bottom. All four courses provided checklists, rubrics, and sample work to set student expectations.

All four courses encouraged regular interaction with the content with frequent, activities, although the means varied. Three courses used regular discussion prompts based on readings. The two undergraduate courses used quizzes and reading comprehension questions, and two courses used ungraded exercises.

The role of social interaction with the instructor or among students varied amongst the courses. The two core-need courses involved regular, personable and supportive announcements from professors to preview coming activities and provide timely and specific tips, and a one-time conference with individual students or student teams to discuss questions about their final assignment. In addition, both courses encouraged student interaction by requiring students in discussions to read and follow-up with peer responses. In contrast, Educational Communication included general tips e-mailed at the beginning of the course, but other announcements were more likely to be reactions to course changes or problems reported by students. During the

period from 2011-2013, the head teaching assistant for the course employed more regular announcements of specific success criteria and common misconceptions for each assignment in the week before it was due, however that practice was discontinued by the new instructor who was not comfortable with using discussion forums. Students were required to post in the discussion forum but not to respond to each other, leading to forums filled with similar answers to the same questions. Introduction to Legislative Drafting did not involve any ongoing social interactions.

The use of measurements that could help determine the effectiveness of the course varied according to the type of course. The two core-need courses employed extensive measurements to evaluate student activities. Rubrics were used not only for written assignments, but also for grading and giving feedback on discussion posts. Based on their grading experiences, both professors commented on the quality of discussion posts and their interest in improving their depth. In addition, Proposal Writing explicitly graded students on their collaboration and peer review activities. In contrast, the two workbook-style courses included many ungraded exercises, meaning professors had no way of knowing whether students used the exercises or learned from them.

For teaching of writing, success factors depend on the pedagogical approach chosen. A product pedagogy focuses on defining a type of writing, expecting that students will plan their content based on that type and then write and polish their draft. Evaluation focuses on how well the final written assignment conforms to the defined type of writing and provides correct content and mechanics. In contrast, a process pedagogy evaluates how students develop and enhance their understanding of the purpose of their writing based on considering their audience, processing input from peer reviews, and engaging in multiple, substantive revisions. Three courses relied on product pedagogy, meaning that students were expected to conform to an ideal type of writing that was graded based on conforming to the ideal with correct grammar rather than meeting the needs of a real audience. Writing was an isolated, individual performance that received a single summative evaluation at the end. Students did not receive feedback that they could use to learn how to perform substantive revisions to their work to meet audience needs. One of the assignments for Educational Communication did incorporate some process elements. A job procedure assignment required students to test their procedure with an authentic audience

in the work setting, and then revise the procedure based on how well the test subject completed the procedure.

In contrast to the product pedagogy courses, Proposal Writing used a process pedagogy informed by the genre of proposal-writing. To support the pedagogy, the professor chose to narrow the curriculum to an in-depth exploration of a single type of proposal writing, and chose to explicitly train students on virtual teamwork and effective peer review. Students worked collaboratively for real clients, chose funding sponsors, and incorporated client needs and sponsor guidelines into their writing. They conducted peer reviews, received client feedback and formative evaluations from the professor, and performed revisions to deliver a final product. Students were graded for the quality of their participation in the process as well as for how well their assignments met actual client and sponsor requirements.

Research Question 6: What other practical issues influenced design decisions? Grading workload was a practical issue for two courses. Workbook-style courses engaged contractors to interact with students and grade assignments. In order to reduce contractor workloads, both courses used many ungraded, self-assessed exercises. Additionally, only half the sets of reading comprehension questions used in Educational Communication were collected, at random, in order to reduce workload. As a result, the professors had no idea whether students completed the exercises or all of the reading comprehension questions, or whether they were effective.

Research Question 7: How were designers of the courses influenced by interactions with people in other roles? As previously noted, professors were primarily responsible for the design of the courses and relied on their past experiences, and for three courses, professors came to the university from another institution where they had previous online teaching experience. This suggests that the primary influence in design is the professor and the previous experiences of that professor at another university. This study did not examine those previous influences.

However, creating an online course expanded the number of people who could potentially influence its design, directly through social interaction, or indirectly through instruments. The degree of that influence varied depending on the style of the course. The two core-need courses were developed and operated by professors. Although the professors were required to take training on teaching online, they tended to discount the impact of that training and emphasize their own experience and research as supplemented by help they received on

demand. For instance, Albert emphasized his own research on rubrics as the source of his revision of Writing for the Technical Professional to help the increasing number of weaker students. For Charles, the key elements influencing the design of his course were a combination of his discipline's focus on "working with people, for people", his research on virtual teams, peer review, and service learning, and a coincidental experience at a professional event where he learned of clients in his community who needed proposal writers to secure funding. Both professors noted the helpfulness of quick, e-mail correspondence with an instructional designer or technical support to resolve questions about the learning management system. In addition, the professor for Writing for the Technical Professional voluntarily attended refresher training to update himself on technology, and embraced a new way of using the learning management system that moved away from modules and the extra preparation time they required.

In contrast, the two workbook-style courses involved a stronger instructional design influence. For Introduction to Legislative Drafting, that influence was in the form of an existing course that had been rigorously developed by an instructional design firm and served, mostly unchanged, as the materials and structure of the online version of the course. For Educational Communication, the instructional designer collected and processed materials from the professor, set deadlines, and ensured consistency. Even still, the professor played a central role in ensuring a variety of activities and media, and the instructional designer noted that she learned creative new ways of designing courses based on the experience.

Research Question 8: How were courses implemented? Courses were implemented in accordance with the university's standard semester structure. Implementation depended on whether the course was required to meet a core need, or to add to a portfolio of offerings in a workbook style.

The two courses that were designed to meet a core need of the university, Writing for the Technical Professional and Proposal Writing, shared many common elements. In both cases, the professor was responsible for implementation as the content expert and the instructional designer for the course. The courses were implemented in between 40-150 hours in a learning management system, with the professors engaging assistance as needed from instructional designers or technical support to answer questions about the learning management system. The professors used a physical textbook for readings, and used the online experience to help students process that content, primarily through discussion questions that not only required responses

from students, but also follow-ups to classmates' posts (although the more behaviourist Writing for Technical Professionals included quizzes on readings, and the more social constructivist Proposal Writing included online collaborative writing). Both professors emphasized social interaction, with one describing the importance of "projecting persona" and the other the creation of "social presence" and both using rubrics to evaluate and provide feedback on students' interactions which they weighted at 20%-40% of the final grade. The professors engaged regularly with students through ongoing announcements throughout the course that previewed content and provided timely tips. They graded all three assignments themselves against rubrics (although the more behaviourist Writing for Technical Professionals included rubrics with more detailed point breakdowns, and the more social constructivist Proposal Writing included more descriptive criteria).

In contrast, the two other courses, Introduction to Legislative Drafting and Educational Communication, were designed to expand available online offerings at the university rather than meet a demand for better access to an existing course. In both cases, a coordinator was responsible for interacting with content expertise and instructional design expertise to implement the course. In one case, the coordinator was a professor of legal studies who interacted with experts in legislative drafting, and adapted source materials that had been designed by professional instructional designers. In the other case, the coordinator was an instructional designer / project manager who interacted with a professor and content expert who also provided key direction on instructional design. The courses were implemented in between 6-8 months, one in a learning management system, and the other in a custom website, with the coordinator responsible for populating the delivery system, and with the resulting course resistant to change until a future development project could be justified and funded. In the case of Educational Communication, the services of web and graphics designers were also employed to develop the website. The implementation effort involved substantial content conversion and development. Both courses used licensed readings, while Educational Communication also included lengthy lecture videos. The courses used the online experience to help students process content, primarily through ungraded individual exercises. Neither course emphasized social interaction. The Introduction to Legislative Drafting did not use it at all, and Educational Communication required individual posts to the discussion forum but not interaction among students, and did not grade posts according to rubrics or provide feedback, limiting the grading weight to 7.5% of the

final grade. The coordinators were responsible for development but not grading. In both cases, a team of contractors was used: in one case practicing lawyers, and in the other case, teaching assistants. The instructional teams graded assignments against detailed rubrics but did not engage regularly with students outside of assignment feedback, answering direct student questions, or addressing problems that arose in the course such as students not submitting any work, or students reporting broken web links, contradictions in instructions, or problems with uploading assignments.

Research Question 9: How were courses assessed and adapted based on results?
Student satisfaction provides input for assessment, but response rates can be very low, ranging from 20-30% for Writing for the Technical Professional, and from 10-20% for Educational Communication. The comments from students who do respond can represent extremes of positive and negative opinion, as noted by the administrator for Educational Communication, or represent a vocal minority, such as the few students in Proposal Writing who reported a dislike of collaborative work or focusing on a single proposal type.

While satisfaction data provides input, courses were primarily assessed based on how well they satisfied the motivation for the course at the time it was delivered. As discussed at the beginning of the cross-case analysis, structural tensions (stresses within or between elements, or between activity systems) triggered expansions in motivations over time, which led to major revisions in the courses to meet those expanded motivations.

Three of the four courses were adapted from non-online forms, and Proposal Writing had existed previously as a face to face and online course with different professors in different forms. The initial motivation was to provide the courses in an online version either to meet a core need of the university or to expand a portfolio of offerings by increasing accessibility to students. The professor for Introduction to Legislative Drafting noted satisfaction with the original version of the course because it moved the original source materials online in a format usable by students in a diploma program. Similarly, the administrator for Educational Communication, who had requested the development of the course, noted that the course was a "winner" as an online writing course in respect of meeting its learning objectives and having generally positive student satisfaction.

Structural tensions in the course activity systems triggered changes in motivations. For instance, Writing for the Technical Professional started experiencing increasing student

difficulties with achievement and dissatisfaction with the rigour of the course, something the professor attributed to an incoming "millennial" generation as well as to significant numbers of community college students newly guaranteed admission into 3rd and 4th-year university programs. For Introduction to Legislative Drafting, the burgeoning concept of openly-available education for the masses led to an intergovernmental organization inviting the university to participate in a funded side project to improve the accessibility and relatability of the course materials to appeal to a less-specialized audience. For Educational Communication, a new head teaching assistant, with experience in instructional design and scholarship of teaching and learning, came to realize that many student difficulties recurring each semester were preventable. A subsequent new instructor, whose experience focused on more interactive forms of teaching, looked for ways to enhance ongoing interaction with her students. For Proposal Writing, the professor assigned to develop the class happened to attend a professional event where he learned of non-profit organizations in the community that needed help applying for funding.

The result of these structural tensions was an expansion of the motivations for the existence of the courses to broaden achievability and community integration. For Writing for the Technical Professional, the professor changed his course to help the "bottom two-thirds" of his students succeed by cutting assignments, streamlining and clarifying his instructions, and introducing detailed rubrics for discussions and assignments. For Introduction to Legislative Drafting, the team building the openly-available version of the course sought to make it more accessible by displaying content in a navigable website rather than using PDFs, more relatable with plain language and gender-neutral examples, and more consistent in its instructions. The revisions were adopted by the university to revise its own version of the course, which was almost complete at the time of this study. The university is also considering making the course freely available as open courseware or a wiki. For Educational Communication, the head teaching assistant wished to help weaker students succeed by providing more detailed and timely reminder and tips, and converting checklists into an integrated assignment template / feedback form to help students better comply with course requirements. A new instructor taking over the course expanded the motivation further to increase interaction among students, reduce handholding, and reduce teaching assistant workload. Although she had limited development support to change the course website, she used a series of workarounds to implement peer review by using the discussion forums. She also cut the use of extensive templates and feedback forms

that she felt imposed too much work on students and teaching assistants, and employed more synchronous sessions to interact with students. For Proposal Writing, based on interactions at a professional event, the professor expanded the motivation driving the design of the course to incorporate client-based projects such that his students not only engaged in collaboratively drafting and revising their work, but also learned while serving an actual community need, with the criteria of their assignments determined in part by clients and funding sponsors.

Chapter Six: Conclusions, Limitations and Suggestions for Future Research

This chapter concludes the study with implications for faculty, designers and administrators who support the development of online writing courses at universities. In addition, broader implications are described with respect to teaching writing online. Finally, the limitations of the study are described, and suggestions are provided for future research.

Implications to Practice

This study raises a number of implications to practice for faculty, designers and administrators who support the development of online writing courses. The implications include making strategic choices, making implicit expectations explicit, using grading to set student expectations and monitor course effectiveness, challenging the influence of existing course materials, choosing supportive tools, and engaging in ongoing, positive student interactions.

Consider your reason for offering a writing course online as a strategic choice with substantial implications. This study found that online writing courses were requested by administrators to meet a core need of the university, or to add to a portfolio of options. The reason for the request had significant effects on types of interaction, amount of development time, use of contractors, and adaptability of the course. Both core needs courses in this study focused on social contact with the professor as an ongoing content expert, and were adapted by professors based on their experiences. For instance, Albert moved Writing for the Technical Professional away from modules, and implemented widespread rubrics to address increasing student issues. Charles expanded the design of Proposal Writing to focus on client-based projects based on learning of a community need at a recent professional event. In contrast, the two portfolio-workbook style courses focused on individual study, used contractors to assess students, and were highly resistant to change, necessitating a $47,000 refresh in one case, and a resort to workarounds by a new instructor in the other. Administrators and professors should consider whether the significant development resources, individual content focus, dependence on contractors, and rigidity of a portfolio-style course are strategically supportive of the latest approaches to developing student competencies in writing, or able to be adapted to incorporate emerging pedagogical approaches or meet future challenges such as changes in the capabilities of incoming student populations.

Identify your implicit assumptions about student capabilities and provide explicit guidance to help them achieve. This study found that instructors either responded to recurring student problems by making implicit expectations explicit, or incorporated such guidance from the beginning to avoid problems. Writing for the Technical Professional added explicit tips and rubrics throughout the course, including for discussion posts. Educational Communication added news stories about the consequences of plagiarism, timely and explicit tips about incorporating multiple sources and perspectives, and supportive templates to help students know exactly what was expected. Proposal Writing included explicit training on operating virtual teams and performing peer reviews, and provided students with an integrated collaborative work environment to support and monitor them. Professors should determine what unspecified knowledge, skills, and attitudes they expect their incoming students to have, particularly when they grade their students against those implicit expectations. Professors should make such expectations explicit in the form of up-front guidelines or rubrics for students. Professors should consider offering explicit discussion or training on those expectations when they relate to students performing tasks that affect their peers, such as providing discussion posts or assignments that become content for other students, or when they conduct tasks such as group work or peer review. Making expectations explicit allows professors to set expectations with students up front, and measure changes in incoming student capabilities over time that may indicate the need for further supports, either within the course or in conjunction with other forms of assistance.

Use assessment design and grading to communicate the priorities of your course and measure its ability to deliver. This study found that the core need courses not only provided guidance for how to conduct tasks in the course, such as discussion posts and responses to classmates, and collaborative writing and peer review, but also made those tasks central to the ongoing learning activities and assigned significant grading weight of 20%-40% linked to clear rubrics. In order to grade the tasks, the professors monitored student performance and were able to comment on how well students completed the tasks. Proposal Writing, for instance, integrated the Google Docs collaborative writing suite into the course which allowed the professor to monitor and grade student interactions. Although response rates to student satisfaction surveys ranged from 10-30%, professors could determine the effectiveness of activities in their courses through an explicit grading process guided by rubrics. In contrast, the two portfolio-workbook

style courses included many ungraded exercises. Educational Communication also included an entire module with no assignment, exercises that were graded for completion rather than accuracy, and assigned only 7.5% of the grade to required forum posts. Stroupe (2003) noted that students consider activities as "busywork" if they are not essential to the course design. Professors should consider using explicit rubrics and grading weights to communicate the priority of tasks in a course, to monitor the ability of those tasks to develop required competencies in students, and to observe trends in grades over time to catch changes in incoming student populations that require course adjustments. Without feedback on whether activities are completed or meet an instructional objective, professors have no way to determine whether the activities are contributing towards the course meeting its goals.

Recognize the powerful influence of past experience and existing materials and use social interaction to trigger new approaches. This study found that professors were responsible for the design and development of online writing courses, and relied on their past experiences, often developed at a previous institution, to inform their approach. Despite mandatory training in two cases, professors emphasized their autonomy and their appreciation for on-demand assistance with specific questions. Further, professors tended to adapt existing courses for online use, preserving the existing curriculum and pedagogical approaches such as "product pedagogy" although it has been criticized in the literature. When faced with challenges, professors tended to amplify their existing approach such as further refining content and instructions, or adding more people to an already-collaborative course. Changes in the approach of a course were triggered by outsiders, such as an intergovernmental organization triggering the move of the Introduction to Legislative Drafting towards an open courseware or wiki format, or a new instructor for Educational Communication incorporating peer review into a workbook-style course. Administrators were responsible for requesting online versions of courses from professors. They should consider making requests based on the pedagogical approaches of professors rather than based on whether course content already exists. Proposal Writing, for instance, was not only created "from scratch" on demand, but also won an award for its client-based approach. Professors should consider the development of an online writing course not simply as a process of changing its medium of delivery, but as an opportunity to identify their pedagogical approaches and compare them to current literature in the field. What seemed acceptable in the past, such as a product-focused pedagogy, may not only impose a significant

workload for grading purposes but also no longer be considered ideal by current pedagogical research. Both professors and administrators should consider engaging with external perspectives to trigger innovation. Engagement includes interacting with external organizations and attending professional events to trigger thinking about supporting and engaging real-world needs, or enlisting new members on the instructional team from different disciplines or institutions to trigger thinking about revised pedagogy, the effectiveness of course activities, and even potential workarounds to try with the existing course.

Choose tools that support rapid, cost-effective, and ongoing development. This study found that the choice of tools had a significant impact on the ability of the professor to develop, implement and revise content, the need for outside help with additional planning, time, and funding, and the usability of the course interface. The courses that used a learning management system provided the professor with complete control over course development and revision, did not require outside resources or coordination of personnel, and provided a standardized interface. Similarly, the use of a laptop webcam and YouTube allowed a professor to develop short videos as he needed them. In contrast, the customized website of Educational Communication and its associated professional introductory videos (and the website for the revised version of Introduction to Legislative Drafting) required extensive planning, months of development, and the use of a team of people and associated funding. The Educational Communication website and videos were highly resistant to change, and require the use of a development team to make alterations if such work can be approved and resourced. Administrators and professors should consider using learning management systems and on-demand resources such as YouTube to allow professors to retain control over course development, and flexibility for ongoing adaptation, while saving considerable development time and resources.

Consider employing ongoing, student-focused interaction rather than periodic, problem-focused interaction. This study found that core need courses provided student-focused interaction in the form of ongoing announcements that engaged students with reminders and tips about upcoming activities, and synchronous conferences with individuals or student teams to discuss their specific assignments. In contrast, portfolio-workbook style courses provided course-focused interaction. Educational Communication provided a welcome and general tips at the beginning of the course, but announcements tended to be reactions to problems reported by

students or issues expected due to changes from the expected schedule, and synchronous conferences were general, optional events for the entire class to discuss orientation, common problems, or exam preparation. Professors should consider employing ongoing interactions with students, to "project persona" and develop "social presence." Ongoing interactions represent a positive and supportive forward-looking tone from the professor rather than pressured reactions to student complaints, and student-focused conferences represent opportunities for students to focus on discussing their personal work.

Implications to Theory

In this section, the findings of the study are related to the literature in the form of implications to research and theory on the design of online writing courses at universities. Implications focus on strategic decision-making, academic freedom, adaptations of existing materials, boundary spanning, and measurement practices.

The reason for offering a course online shaped many of the decisions that determined its design. In this study, university administrators requested the development of each course based on a motivation: courses were either core need courses that students required to complete an existing program and that involved ongoing engagement with a professor as an expert and facilitator, or portfolio courses that added a new online offering and focused on packaging content that was managed by contractors. This difference in motivation and its effects on course design support and extend the literature on the use of online learning in higher education. For instance, although the courses employed tools such as learning management systems (LMS), websites, video, and conferencing tools that offered important affordances (Kozma, 1994; Bower, 2008), the teaching methods used in the course determined how those tools were used (Clark, 1983) whether for individual study focused on ungraded exercises, or ongoing interaction with peers and the instructor, and those methods depended on whether the course was offered as a core need course, or a portfolio-workbook course. Similarly, although none of the four cases were motivated by efforts to improve teaching by imposing online standardization and control (Wasley, 2006), the impact of portfolio-workbook style courses, regardless of whether they used a LMS or a custom website, was a rigidity of content and structure that controlled the ability of contractors to adapt the course based on their experiences, due in part to the costs of developing or changing content (Guri-Rosenblit, 2005; Blakelock &

Smith, 2006). Each of the professors in this study had significant teaching experience at the time of development, and most had previous online experience, meaning they didn't need to be convinced to move online (Seaman, 2009) and they didn't need to teach online to develop additional experience with teaching or technology (Green, Alejandro & Brown, 2009) which may explain why they did not receive additional compensation to develop the courses (Parker, 2003). Although broadening access to courses was a key motivator for offering them online (Seaman, 2009; Parker, 2003), the unanswered question raised by this study is, broadened access to what: content or a content expert and facilitator? When investigating an online writing course, researchers should identify the underlying motivation for offering the course online, and consider how many design decisions for the course relate to that motivation rather than discrete, informed choices of the designer.

In exercising their academic freedom, faculty relied on their own experience rather than fully exploiting supports provided by administration. In this study, courses were voluntarily developed by professors with experience in online teaching. Although administration provided supports such as instructional designers, production facilities, and training, professors tended to adapt existing courses, rely on their own experiences, and use supports as needed to further their own ideas. This division of responsibility by faculty and administration supports and extends the literature on academic freedom and administrative support of faculty development. Professors exercised academic freedom in design (Horn, 1996). Although portfolio-workbook style courses did result in tightly-controlled materials taught by contractors (Booth & Turk, n.d.), the courses were additions to university offerings and not replacements of existing courses designed to limit academic freedom of professors. Administrators made strategic decisions and controlled resources (Jones, et al., 2001) but their strategy related to whether they requested core need or portfolio courses, and while they provided resources such as training and instructional design (Blackmore & Kandiko, 2012) professors preferred to rely on their own experiences and ask for support as needed. Professors were responsible for designing the courses and their interactions (Blythe, 2001) and the methods they chose reflected the courses they adapted. They had the freedom to design courses that provided "liberal education" (Peterson, 2001; Stroupe, 2003) but workbook-style courses were more behaviourist in design. Most faculty sought assistance from instructional designers (McCarthy & Samors, 2009) but on their own terms, such as getting answers to specific questions to help them use tools such as a LMS rather than through

extensive consultations (Power, 2009) or through training (deNoyelles, Cobb & Lowe, 2012). When investigating faculty development and support for developing online writing courses, researchers should consider how professors impact their own academic freedom and that of others through isolation during the design process, and through designs of portfolio-style courses that resist change from contractors or subsequent instructors.

When creating an online course, most faculty adapted existing courses with older pedagogies, concentrating their research and revisions on improving results rather than alternative pedagogies. In this study, three out of four professors required students to individually write assignments for a single summative grading by a professor against detailed criteria. Changes made to the courses focused on reducing assignments or refining instructions and feedback. This pedagogical choice supports and extends the literature on writing pedagogies. These courses employed current-traditional rhetoric (Hairston, 1982) using detailed feedback to help students improve structure and correctness (Hochman, 2012) and the two portfolio-style courses were taught by part-time and temporary instructors, something the literature attributes to low academic prestige of this style of course (Graves, 1993; Hairston, 1982). In contrast to that literature, however, the two core need courses employed highly-experienced professors from English, and Writing and Rhetoric departments. Most of the courses employed computers for fairly basic tasks such as writing prompts (for discussions) and exercises rather than supporting collaboration or peer review (Palmquist, 2003), and those courses focused on curriculum rather than pedagogy. In contrast, a fourth course trimmed the curriculum to teach only one kind of proposal writing, and focused resources on collaborative writing, a client-based design, and training on teamwork and peer review to implement process pedagogy (Hairston, 1982; Olson, 1999) and develop student qualities that supported the pedagogy (Barnett, 2009; Tough, 2011). Researchers should consider how visible "pedagogy" is to writing professors to determine why professors continue to adapt courses using current-traditional rhetoric, and focus on improving the results from the much-criticized approach.

Professors acted as boundary spanners across institutions and writing disciplines, and tools such as existing courses and learning management systems acted as boundary objects between professors and instructional designers. In this study, three courses were developed by professors who were new to the university and relied on previous online teaching experience that they brought from elsewhere. In one case, that experience influenced a designer

to try more creative approaches, and in the other case, that experience was presented at a faculty showcase when the professor won an award for online teaching excellence. Professor contact with instructional designers occurred through tools. In one case, a professor adapted an existing course that had been professionally instructionally designed. In another case, a professor provided a pre-existing course to communicate his needs to an instructional designer who was conducting development. In two other cases, professors who were otherwise independent, consulted with instructional designers about their courses by asking questions about the learning management system they were using. These interactions support and extend the literature on boundary spanners and boundary objects. Instructional designers and professors, and even professors from different backgrounds, had differences in knowledge and know-how that could complicate communication (Brown & Duguid, 2001). Professors bringing their experience-based expertise from previous institutions were brokers introducing practices into their new institution as boundary spanners (Brown & Duguid, 2001). Although most courses were developed individually, professors interacted with instructional designers through existing course materials, or through questions about the use of a learning management system (LMS). Course materials and the LMS acted as models, shared documents, or standardized forms that represented boundary objects to facilitate communication (Carlile, 2002; Star & Griesemer, 1989). Researchers should consider the boundary-spanning role of incoming professors on online course design. Similarly, they should consider the role of existing courses and learning management systems as boundary objects that contribute to communication between highly-independent professors and instructional designers.

Definition and measurement are important techniques to help faculty determine the effectiveness of their approaches. In this study, three out of four courses adapted existing courses and pedagogies when moving online and employed a variety of techniques to promote interaction with content and provide social interaction and tips. However, the courses differed in their use of measurement to determine the effectiveness of their specific implementations of those techniques. Portfolio-workbook style courses included many ungraded exercises, and one course included an entire module without an assignment. In the core needs courses, professors either initially developed or later added extensive rubrics to explicitly define expectations for each activity for themselves and students, and measure students' ability to achieve the expectations and the course's ability to support that achievement. These approaches support and

extend the literature on critical success factors for online learning. The literature warns that online learning attracts students with weaker academic histories and incurs high dropout risks (Lee & Choi, 2011; Devey, 2009; Sapp & Simon, 2005) which can be exacerbated when pedagogy is subsumed to simplistic technology choices (Blakelock & Smith, 2006; DePew & Lettner-Rust, 2009). However, professors in this study adapted existing courses, such that the existing pedagogy circumscribed their technological choices (Clark, 1994). For instance, workbook-style courses did not encourage student discussion or collaboration, despite technological capacity. Courses did employ suggested techniques from the literature, focusing on clear and structured content (Lee & Choi, 2011; Devey, 2009; Boyd, 2008) and frequent smaller assessments (Devey, 2009) however the choice to ease contractor workload by not grading many of the assessments combined with low response rates to student satisfaction surveys (Katz, 2008; Blythe, 2001) meant that professors had no way of knowing whether their specific implementations of assessments and social interactions had the desired impact. Further, without explicit measurements, courses risked communicating to students that certain activities were not important for their success (Stroupe, 2003). These findings confirm the importance of measurement for evaluating course design (Carliner, 2003). Researchers should consider the impact of workload concerns and the choice of to use contractors to support courses, when decisions are made about implementing or forgoing grading of activities.

Limitations

This study was affected by a number of limitations. First, as the study was qualitative with a small sample, the results are informative for the purpose of generating theory, but are not statistically generalizable (Yin, 2009). Second, I had a personal relationship to the course Educational Communication because I served as head teaching assistant for six terms. I tried to focus the discussion on issues that occurred before or after I worked with the course, but I did add my perspective. Third, two of the courses I studied were from the same institution. Fourth, I limited the study to courses on professional and technical writing, which allowed me to study undergraduate and graduate courses, and required and elective courses, but excluded other kinds of writing such as creative writing and journalism. Fifth, the courses I studied assumed that students had university-level writing proficiency in English and did not specifically address needs of second language speakers. Sixth, I used a convenience sample and could only study

courses whose faculty were available during my interview period. Three additional instructors expressed interest in participating, but would not be available until later. Seventh, because this study focused on the perspective of the instructors and the people who supported them in moving their courses online, data about student performance was limited to perspectives provided by the participants based on their course evaluations and personal experiences with student performance in the course. Because of this limited focus, I neither sought out direct student feedback on the courses nor evaluated student performance.

Suggestions for Future Research

This study suggests a number of directions for future research. In order to determine whether this study's model activity system for ongoing development of online writing courses applies more broadly, future research could expand the scope of investigation. For instance, cases could explore courses teaching the same subjects but in other countries and other languages. Cases could also explore other kinds of writing taught online such as journalism, creative writing, public relations, second language learning, and freshman composition. The courses explored in this study were offered at public universities. Future cases could explore whether public or private community colleges, or private universities employ a similar activity system. This study focused on higher education but two of the courses resembled professional training programs. Future cases could also explore private professional training programs to determine whether they employ a similar activity system.

This study anticipated team development of online writing courses but discovered the central role of professors as the "subject" of the activity system who relied on previous online experience developed elsewhere. Future cases could more deeply explore the past experiences of professors at other institutions in past versions of the activity system of teaching writing online, and their role as boundary spanners introducing their experiences into a new activity system at a new institution. Research could also examine the role of gender, and career stage on course design and implementation because the professors in this study were all male with over ten years of teaching experience.

This study also highlighted the important role of tools in the activity system in the form of existing courses that were adapted by professors, and course delivery systems that either supported or constrained ongoing adaptations of the activity system. Future cases could more

closely examine the difference between activity systems that adapt courses and those that create courses from scratch, or compare activity systems that teach the same topic using different delivery systems. Cases could also explore pedagogical techniques used in activity systems more specifically by exploring the wording, frequency and timing of performance supports and how they evolved over time based on experience.

This study explored online courses that involved different kinds of student groupings in the community of the activity system: individual study, regular classes, and cohort classes. Future cases could more deeply explore the role of class style on course design, social interactions within the course, and dropout rates.

Finally, future research could also use this study to inform the development of quantitative instruments for the purpose of surveying a much broader population of writing courses and producing quantitative results capable of generalization.

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Appendix A

Identity Memo

My work experience primarily lies in the private sector where I have performed service roles. Those roles include journalism, business law, business analysis, instructional design and writing, and, in the university context, faculty development. These roles required or largely relied on using specialized professional training as a service to people in other disciplines, on a project-by-project basis. My work was a form of collecting data from one group, and translating that data into something useful to another group. As a journalist, I collected data and created stories to entertain and inform an audience. As a lawyer, I collected data and created contracts to describe and manage relationships. As a business analyst, I collected data and created requirements, use cases, and testing procedures for engineering. As a learning content writer, I collected data from subject-matter experts and created scenarios and choices to educate learners.

In each case, I collected data, applied professional judgment, and produced a solution. That solution was subject to multiple iterations with sources, editors, clients, management, engineering, and subject-matter experts. Conflicts arose due to competing goals, rewards, interpretations, and approaches. For example, in contract law there is a tension between entrepreneurs or salespeople desperate to "get the deal done" and the lawyers they use to negotiate for them who want to maximize clarity and minimize risk by asking many questions and making document revisions.

The primary requirement in the private sector is to produce a result acceptable to clients, whether that is an article, a signed contract, or a learning program for sale. Regardless of conflicts, interacting with others had to produce some form of acceptable result or I would not receive further business. Stories had to be delivered, deals had to be closed, money had to be made, and problems had to be resolved.

I have since come to understand that I have often engaged in "boundary spanning" activity: creating "boundary objects" that bridge differences between different practices. The most obvious is contract drafting and negotiation. The requirements, use cases and test cases I developed for engineering were similarly useful objects. Templates I created or co-created to help students in a writing class, and graduate students in a teaching class, were similarly useful

objects to establish language, forms, and methodology to help them bridge the gap between their current conceptions and where they needed to be.

I suppose I have spent my life in boundary-spanning roles creating boundary objects to help diverse communities communicate and solve problems.

Based on those experiences, I am primarily interested in the interactions of professionals with differing skillsets to define, refine and resolve problems in the context of accomplishing discrete, useful projects. I am interested in the nature and process of their interactions, their conflicts and how they resolve them, the innovation and insights that arise from their solutions, and their ongoing adaptations to each other due to increasing understanding of their mutual context, awareness of unintended consequences, and their changing circumstances. I am interested in how they spanned their boundaries. Other examples of my experiences in this area relate to studies and practice in mediation and conflict management.

In that sense, I have a pragmatic focus. I am not exploring issues of gender, politics or power, or grand theories of sociology or psychology. I am most interested in what people do, the know-how they employ and adapt in practice to solve problems.

In respect of writing, I have no formal training although I have taken extra-curricular classes out of my own interest. My passion has been creative writing although I have written for journalism including stories and how-to articles, for legal purposes including contracts and persuasion, for information purposes including requirements and use-case writing, and for academic purposes including peer-reviewed articles.

In the roles involved in creating online courses, I am most familiar with instructional design. For instructional design, I have received training during my Master's program in educational technology. My program focuses on structuring information, primarily for the purposes of corporate training. My experiences in faculty development revealed fundamental differences in approach between instructional design and teaching and learning support: differences between education and training, fuzzy outcomes and clear objectives with aligned assessments, top-down enforcement of structure and bottom-up influencing of independent intellectuals.

In respect of online writing classes specifically, I was a teaching assistant managing an elective online writing class for undergraduates for six terms. The design of the course reflected current-traditional rhetoric. My experience as a teaching assistant evolved with my studies in

faculty development related to teaching and learning, and I tried a variety of innovations to help my students overcome misconceptions and improve academic performance.

Appendix B

Building My Conceptual Framework

I considered my existing knowledge and potential biases in an identity memo (Maxwell, 2005) as set out in Appendix A. My memo highlighted a pattern of employing professional skills within a discrete project to transform information from one disciplinary group for use by another through the medium of writing. Next, I considered the literature reviewed in the literature review, and created a map of the concepts and relationships I found, as depicted in *Figure 23*. The map illustrates the complex, highly-contextual nature of implementing online writing courses in higher education. We can see multiple roles guided by different goals, that are interacting to make decisions, control resources, and offer support, while using defined processes to accomplish steps, and feedback loops to assess progress and implement revisions.
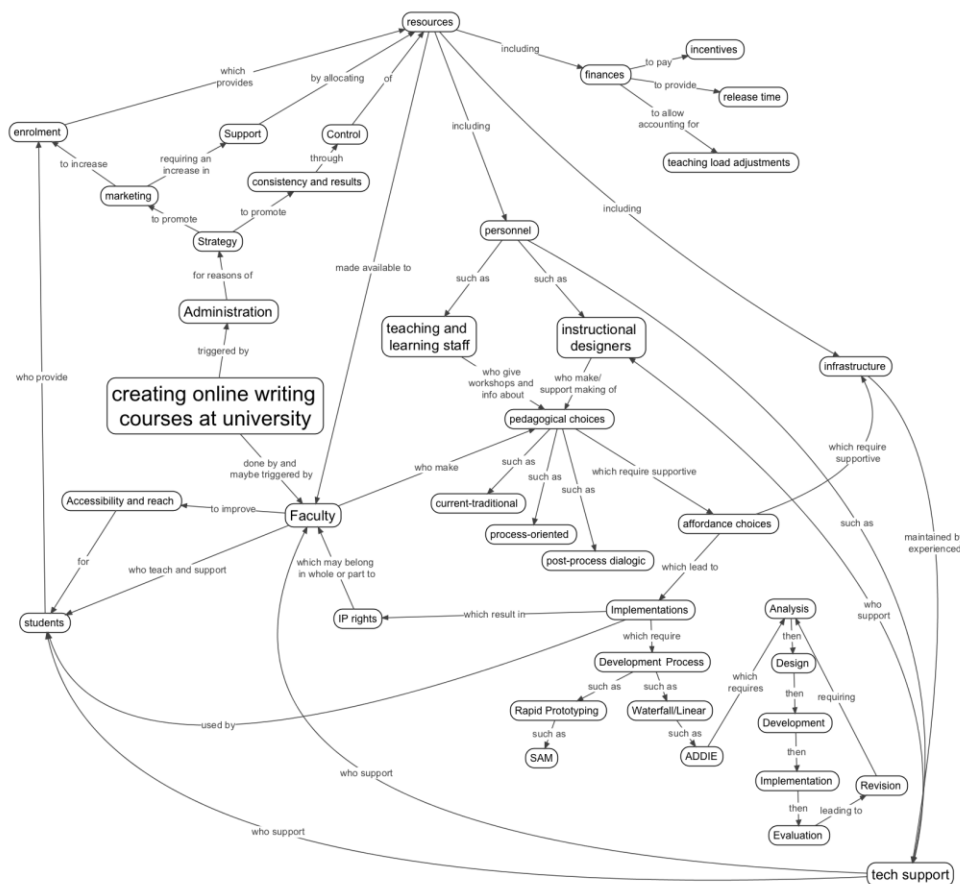

Figure 23. Concept map of relationships found in the literature

As can be seen from the literature, the implementation of online writing courses in higher education is a relatively recent phenomenon involving rich contexts and groups of people from different disciplines. It not only involves instructional designers, whose perspective I am somewhat familiar with, but also faculty, administrators, and technical support who may have conflicting goals, responsibilities, and habits. Those conflicting goals, responsibilities and habits define their respective worldviews, which may create challenges when they interact.

Research paradigm. Worldviews or paradigms define what individuals believe exists and what can be known about it (Guba & Lincoln, 1994), and my own paradigm necessarily shapes and constrains the way I conduct my research and how it will be judged (Kuhn, 1996). For instance, positivists and post-positivists search for objective, context-free knowledge they can generalize to explain and control the world (Guba & Lincoln, 1994). It may be tempting to approach educational research like a controlled medical experiment with the aim of creating a database of best practice cures (Slavin, 2002), but even rigorous quantitative measures can mis-explain results, such as attributing the performance of learners to easily-measured student-to-staff ratios, when a qualitative approach reveals learners were more affected by how much time their supervisors gossiped with each other (Ericksen & Guttierez, 2002). In contrast to the notion of an objective reality, social constructivists accept that people build their own realities based on their interactions with the world and each other, and those realities consist of the explanations people create for themselves based on their experiences (Guba & Lincoln, 1994). The aim of constructivists is not to impose an objective explanation on everyone, but to improve understanding within their own worldview and of competing worldviews (Guba & Lincoln, 1994).

In the table below, I adapt Guba & Lincoln's (1994) discussion of the four paradigms of research into contrasting statements.

Table 22

Paradigms of Research Adapted from Guba & Lincoln (1994)

Paradigm	Investigator	Aims	Context	Methods
In positivism	an objective, disinterested scientist	who wishes to better explain, predict and control	collects context-free, generalizable knowledge from an objective, knowable reality	by posing hypotheses, and using rigorous and objective quantitative methods to verify those hypotheses to create facts or laws

In post-positivism	a disinterested scientist who strives for objectivity	who wishes to better explain, predict and control	pursues context-free generalizable knowledge of an objective, partially-knowable reality	by posing hypotheses, and using rigorous and objective quantitative methods supplemented with qualitative methods and multiple sources, to attempt to falsify hypotheses, and accepts tested but non-falsified hypotheses as probable facts or laws
In critical theory	a subjective, transformative advocate and activist	who wishes to confront ignorance and misapprehension through critique and transformation	works within a "reality" that appears real but was shaped by history (politics, culture, economics, ethnicity, and gender)	by entering into historically-situated dialectic intercourse with research subjects that stimulates change of the "reality"
In constructivism	a subjective passionate participant and facilitator	who wishes to create a more informed and sophisticated subjective reality and a better awareness of competing realities	works within one of many evolving, subjective realities (that may be more or less informed or sophisticated) created from the local, specific, social experiences of the people who share that reality	by interacting with research subjects through rational discussion and interpretation to create findings that are trustworthy (credible, transferable, dependable, confirmable) and authentic (fair, and improving a personal concept of reality as well as the understanding of alternate concepts of reality, and empowering action)

Based on my personal experiences, and my examination of the literature as shown in *Figure 23*, I determined that moving writing courses online in higher education involved an innovative, project-based situation where people from different professional disciplines would have to communicate and resolve differences to accomplish a specified goal of a usable, online course. To that end, I chose social constructivism as the research philosophy for this thesis. I wish to better understand the essential social aspects of my target participants that explain the nature of their interactions to implement online writing courses and how they resolved conflicts and adapted to challenges relating to such issues as pedagogy, curriculum, development process, and technology.

Theoretical framework. Having chosen a social constructivist paradigm, I must also choose a guiding theoretical framework. Educational technology encompasses a number of research fields such as instructional design to collect data from subject-matter experts, assess learning needs, and develop structured content (Carliner, 2003), performance analysis and improvement to consider the effects of resources, environment and motivation (Stolovitch &

Keeps, 2004), psychological explanations of knowing and learning to inform pedagogy (Driscoll, 2005), the choice of technological affordances to support training, learning and performance (Bower, 2008), and engaging in tasks and process (such as ADDIE or SAM) to produce a practical solution (Allen & Sites, 2012; Carliner, 2003) with other people. The implementation of online writing instruction in universities involves all of these areas, requiring the choice of a theory and framework that allows for a rich, contextual exploration of issues from multiple viewpoints. Based on that requirement, I decided to choose my theory from sociology.

Appendix C

Organizational Recruitment Letter

[DATE]

Dear [NAME]

RE: Request for participation in study on the development of online writing courses in higher education

I am studying the development of online writing courses in higher education, and would like permission to contact people in your organization for my study.

As a Masters student in Educational Technology, I am conducting a qualitative study to examine how online writing courses are implemented from the points of view of each team member who participated in analysis, design, development, implementation and evaluation. I plan to study one online writing course from each of several institutions.

Participation means participating in interviews, sharing documents related to design and implementation, providing a tour of the online course, and allowing access to the course for further analysis. All notes and findings will be shared with participants to allow them to review and comment.

I would be excited to hear from you sometime before [FIRST DEADLINE]. If I don't hear before then, I will follow-up for your decision.

Kind regards,

David William Price

Graduate Student

Concordia University (Montreal)

dwprice@gmail.com

[REDACTED PHONE NUMBER]

Form of Organizational Consent

ORGANIZATIONAL CONSENT
TO PARTICIPATE IN "COMPARISON OF ONLINE WRITING COURSES IN HIGHER EDUCATION"

I understand that I have been asked to participate in a research project being conducted by David William Price of the Department of Education of Concordia University ([REDACTED PHONE NUMBER], dwprice@gmail.com) under the supervision of Saul Carliner of the Department of Education of Concordia University (514-848-2424, Ext. 2038, saul.carliner@concordia.ca).

A. PURPOSE

I have been informed that the purpose of the research is as follows: to investigate why and how universities analyze, design, develop, implement and evaluate online writing courses.

B. PROCEDURES

- I understand that the research will most likely be conducted via telecommunication link and that participants can participate from our own location
- I understand that participants will be asked questions about the analysis, design, development, implementation, evaluation and support phases of online writing courses, and asked to share documents, images, access to their online course, and other items related to those phases
- I understand that participants will have the opportunity to review the notes from their interviews
- I understand that the time required may be several hours including time for interviews, reviewing (if they wish) the notes from their interviews, and answering any follow-up questions
- I understand that participants' identities will be known to the researcher and his supervisor and may, at their option, be removed from the final report or publication **by indicating on their consent forms or e-mailing David at** dwprice@gmail.com **when they receive his interview notes for their review**

C. RISKS AND BENEFITS

- I understand that no risks are anticipated with participation in this research
- I understand that the benefits of participating in this research include developing a better understanding of how and why universities implement online writing courses

D. CONDITIONS OF PARTICIPATION

- I understand that **participation is voluntary and** I am free to withdraw my organization's consent and discontinue our participation at anytime without negative consequences.
- I understand that my organization's participation in this study is NON-CONFIDENTIAL (i.e., its identity will be revealed in study results) unless I request otherwise **by indicating below**
- I understand that the data from this study may be published.

I HAVE CAREFULLY STUDIED THE ABOVE AND UNDERSTAND THIS AGREEMENT. I FREELY CONSENT AND VOLUNTARILY AGREE TO PARTICIPATE IN THIS STUDY.

I WISH MY ORGANIZATION'S IDENTITY TO BE CONFIDENTIAL: _____ (initial for confidentiality)

NAME (please print)   _____

TITLE (please print)   _____

SIGNATURE   _____
If at any time you have questions about the proposed research, please contact the study's Principal Investigator, David William Price of the Department of Education of Concordia University ([REDACTED PHONE NUMBER], dwprice@gmail.com) or Saul Carliner of the Department of Education of Concordia University (514-848-2424, Ext. 2038, saul.carliner@concordia.ca).
If at any time you have questions about your rights as a research participant, please contact the Research Ethics and Compliance Advisor, Concordia University, 514.848.2424 ex. 7481
ethics@alcor.concordia.ca

Appendix D

Individual Recruitment Letter

[DATE]

Dear [NAME]

RE: Request for participation in study on the development of online writing courses in higher education

I received your name from [REFERRING MANAGER OR COLLEAGUE]

I am studying the development of online writing courses in higher education, and would like to interview you for my study.

I am a Masters student in Educational Technology completing my thesis. I have secured approval for this study from [PERSON WHO GAVE ORGANIZATIONAL CONSENT]. I am requesting your participation in a qualitative study to examine how your course was implemented through phases of analysis, design, development, implementation and evaluation. I plan to study one online writing course from each of several institutions.

Participation means participating in interviews, sharing documents related to implementations, providing a tour of the online course, and allowing access to the course for further analysis. All notes and findings will be shared with you to allow you to review and comment.

I would be excited to hear from you sometime before [FIRST DEADLINE]. If I don't hear before then, I will follow-up for your decision.

Kind regards,

David William Price

Graduate Student

Concordia University (Montreal)

dwprice@gmail.com

[REDACTED PHONE NUMBER]

Form of Individual Consent

INDIVIDUAL CONSENT
TO PARTICIPATE IN "COMPARISON OF ONLINE WRITING COURSES IN HIGHER EDUCATION"

I understand that I have been asked to participate in a research project being conducted by David William Price of the Department of Education of Concordia University ([REDACTED PHONE NUMBER], dwprice@gmail.com) under the supervision of Saul Carliner of the Department of Education of Concordia University (514-848-2424, Ext. 2038, saul.carliner@concordia.ca).

A. PURPOSE

I have been informed that the purpose of the research is as follows: to investigate why and how universities analyze, design, develop, implement and evaluate online writing courses.

B. PROCEDURES

- I understand that the research will most likely be conducted via telecommunication link and that I can participate from my own location
- I understand that as a participant I will be asked questions about the analysis, design, development, implementation, evaluation and support phases of online writing courses, and I will be asked to share documents, images and other items related to those phases
- I understand that I will have the opportunity to review the notes from interviews
- I understand that the time required may be several hours including time for interviews, reviewing (if I wish) the notes from my interview, and answering any follow-up questions
- I understand that my identity will be known to the researcher and his supervisor and may, at my option, be removed from the final report or publication **by indicating below or e-mailing David at dwprice@gmail.com when I receive his interview notes for my review**

C. RISKS AND BENEFITS

- I understand that no risks are anticipated with my participation in this research
- I understand that the benefits of participating in this research include developing a better understanding of how and why universities implement online writing courses

D. CONDITIONS OF PARTICIPATION

- I understand that I must have the permission of my institution to participate (and by signing below I indicate that I have that permission)
- I understand that **participation is voluntary and** I am free to withdraw my consent and discontinue my participation at anytime without negative consequences.
- I understand that my participation in this study is NON-CONFIDENTIAL (i.e., my identity will be revealed in study results) unless I request otherwise
- I understand that the data from this study may be published.

I HAVE CAREFULLY STUDIED THE ABOVE AND UNDERSTAND THIS AGREEMENT. I FREELY CONSENT AND VOLUNTARILY AGREE TO PARTICIPATE IN THIS STUDY.

I WISH MY IDENTITY TO BE CONFIDENTIAL: _____ (initial for confidentiality)

NAME (please print)   _____

SIGNATURE   _____
If at any time you have questions about the proposed research, please contact the study's Principal
Investigator, David William Price of the Department of Education of Concordia University
([REDACTED PHONE NUMBER], dwprice@gmail.com) or Saul Carliner of the Department of
Education of Concordia University (514-848-2424, Ext. 2038, saul.carliner@concordia.ca).

If at any time you have questions about your rights as a research participant, please contact the Research
Ethics and Compliance Advisor, Concordia University, 514.848.2424 ex. 7481
ethics@alcor.concordia.ca

Appendix E

Interview Protocol For Individual Case Studies

I will use the following questions to generally guide my interviews of participants for each case. The questions are adapted from a template prepared by Saul Carliner for the purposes of reviewing case study articles submitted to the IEEE journal *Transactions on Professional Communication*.

1. What was the Problem triggering the effort?
    a. What triggered the project and who drove it?
    b. What were the major constraints in design and development?
    c. What were the budget limits?
    d. What were the schedule limits?
    e. How much time did it take to complete? What were the phases?
    f. What were applicable regulations?
    g. What were presentation and template requirements?
2. What was the end Solution developed?
    a. What was the purpose?
    b. Who was the intended audience?
    c. What design process was used?
    d. How were issues of pedagogy, curriculum and assessment addressed?
    e. What is the solution, start-to-end?
    f. What illustrations and examples exist?
3. What skills, tools and resources were used?
4. What was the process for developing solution?
    a. Who worked on the project and what were their roles?
    b. How did the team communicate?
    c. How did the team make decisions?
    d. What were major areas of disagreement, misconception, or misunderstanding? How were they resolved?

    e. What documents, templates, diagrams, computer files, or other items were used for communication, decision-making, and problem-solving?

    f. What were the key milestones?

    g. What were the key deliverables?

    h. What activities were required to make deliverables?

    i. What were the issues and decisions in making the deliverables?

    j. What were the reactions to the deliverables by stakeholders, and what re-work was required?

    k. What were the perspectives of each stakeholder/player on major decisions and reactions?

5. What were the results of the solution?

    a. What worked well?

    b. What didn't work well?

    c. What was the feedback from users?

    d. What usability, performance or assessment data (for learners and the course) exists?

    e. What web metrics exist?

    f. What Return on Investment (ROI) and other financial evaluations exist?

6. What surprised you most during this process?

7. What have I missed?

8. Who else should I speak with?