

Instructional Design Collaboration: A Professional Learning and Growth Experience

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Abstract

High-quality online courses can result from collaborative instructional design and development approaches that draw upon the diverse and relevant expertise of faculty design teams. In this reflective analysis of design and pedagogical practice, the authors explore a collaborative instructional design partnership among education faculty, including the course instructors, which developed while co-designing an online graduate-level course at a Canadian University. A reflective analysis of the collaborative design process is presented using an adapted, four-fold curriculum design framework. Course instructors discuss their approaches to backward instructional design and describe the digital tools used to support collaboration. Benefits from collaborative course design, including ongoing professional dialogue and peer support, academic development of faculty, and improved course design and delivery, are described. Challenges included increased time investment for instructors and a perception of increased workload during design and implementation of the course. Overall, the collaborative design team determined that the course co-design experience resulted in

an enhanced course design with meaningful assessment rubrics, and offered a valuable professional learning and online teaching experience for the design team.

Keywords: co-design, curriculum design framework, backward design, digital tools, peer support

Introduction

Postsecondary students have been presented with a massive increase in online educational opportunities in higher education in the last decade ([Hachey, Wladis, & Conway, 2012](#)). While [Carpenter \(2010\)](#) points out that exact data on enrollment in e-learning courses in Canada is difficult to find, he suggests the United States context may offer some insights (p. 7). [Allen and Seaman \(2010\)](#) note that online enrollments have been growing at a faster rate than overall enrollment in higher education since 2003 in the U.S., and such growth is expected to continue (p. 2). A growing literature on instructional designs for online teaching and learning is available to inform and guide the development of online education. Researchers have studied collaborative instructional design practices using quality frameworks ([Chao, Sai, & Hamilton, 2010](#)), as well as successful approaches to faculty development and mentoring for online teaching ([Campbell, Schwier, & Kenny, 2007](#)). In the early days of online teaching and learning, enthusiastic and determined faculty would volunteer to experiment with new technologies and to design and deliver online courses. However, online education has moved beyond the early adopters and become more mainstream, and the new standard on many campuses is to expect all faculty members to develop and deliver high-quality online courses in their discipline as part of their regular teaching workload. Another trend is the reliance on off-campus or part-time faculty involved with development and delivery of online programs presenting challenges for team members working at a distance.

Designing, developing, and delivering effective online graduate education requires instructional design, online teaching, and technology expertise possessed by few faculty ([Oblinger & Hawkins, 2006](#)). While faculty are trained at research and hold deep expertise in their disciplines, few have received formal training in teaching or hold any experience with instructional design ([Ziegenfuss & Lawler, 2008](#)), let alone online teaching. Addressing the need for high-quality, online graduate education, and ongoing, continuous faculty development for online teaching, a collaborative course design process can bring individuals with diverse and relevant expertise, such as instructional design expertise, online teaching expertise, and research discipline expertise for the content of courses, together to design and develop quality, online graduate courses ([Chao et al., 2010](#)).

If two heads are better than one, then does it stand to reason that four or five heads are even better when designing an online course? In this paper, we describe a collaborative, instructional design approach to course design that involved several education faculty members, including two course instructors, and resulted in two new distinct but related sections of an online graduate credit course in writing educational research. Our reflective and interpretive approach to studying our collaborative instructional design experiences sought to understand and document the experience with such an approach for faculty effectiveness in graduate course design and online course delivery. Throughout the course design and teaching experience, as the design team worked together, we documented conversations and meetings, archived e-mail exchanges, reflections, and iterations of shared documents about the process, and used these for our analysis. By reflecting on both the collaborative instructional design process and subsequent collaborative teaching experiences, we synthesized both the resulting benefits and inherent challenges in a collaborative instructional design process for course development and faculty academic development.

An adapted version of [Hai-Jew's \(2010\)](#) four-fold approach to updating an online curriculum is used to frame the discussion of the instructional design process the team undertook as we designed, developed, and taught two sections of an online graduate course. The descriptive approach to documenting the collaborative course design process and the reflective analysis of our shared experiences, along with the benefits and challenges, is framed by these four considerations:

- 1) Faculty guidelines and relevant policies that affect the course redesign;
- 2) Progress or changes in the domain field that inform the course revision;
- 3) Updates in teaching and learning methodologies that are relevant;
- 4) Updates in relevant technologies that can improve the redesign process and the course experience.

Each of the following sections of the paper elaborates on one of the four considerations for course design and the benefits and challenges that were experienced by the design team. Based on the design and implementation of the two courses, we conclude that the quality of the learning tasks and learner experiences, the impact on faculty and instructors' professional learning for online teaching and collaborative course design, and the satisfaction of learners point to a high-quality outcome of this collaborative, instructional design process.

Faculty Guidelines and Relevant Policies that Affect the Course Redesign

The context for the collaborative instructional design initiative described in this paper is the [Faculty of Education](#) (which was renamed the [Werklund School of Education](#) as the paper went to press) at the [University of Calgary](#), Canada. The Faculty's 2011-2016 Academic Strategic Plan calls for high-quality undergraduate and graduate education to prepare educational leaders for a connected world ([University of Calgary, 2011](#)). The Faculty offers research informed and intensive graduate programs that lead to certificates, diplomas, master's degrees, and doctoral degrees. A key academic strategic priority in the Faculty is to provide challenging, innovative, and accessible graduate programs that are responsive to emerging needs.

The [Master of Education \(M.Ed.\) Specialist](#) program is a 2-year, cohort-based and course-based degree designed to enhance professional knowledge and understanding of those who are already engaged full or part-time in educationally related professional practice and/or related professional occupations. The M.Ed. has been designed to prepare connected leaders who are competent in providing leadership for educational and professional organizations that support the learning and development of all constituents, and to develop thoughtful and reflective practitioners (Schön, 1983). By design, the M.Ed. Specialist degree is an innovative, current, and practitioner-oriented graduate program designed to create stewards of the profession (Golde & Walker, 2006; Shulman, 2004), and is firmly situated within a practitioner-scholar approach that is focused on research-informed practice ([Young, 2006](#)). A coherent program design and high-quality teaching produces M.Ed. graduates who are teacher-scholars, readers of research, and highly prepared professional practitioners who can apply knowledge and techniques to solve authentic problems of practice. The practitioner-scholar model is firmly embedded within a conceptual preparation framework based on research that indicates the optimal learning for adults, especially professionals with a rich background of experience, involves interactions between the characteristics they bring to the learning situation, the experiences in which they engage during the process, and the environments in which they learn ([Young, 2006](#)).

To realize this philosophy and model of preparation, the M.Ed. program incorporates state-of-the-art signature pedagogies and pedagogical approaches, such as inquiry-based, problem-based, and case-based learning, in situ opportunities designed to facilitate the critical application of research and theoretical knowledge, such as the collaboratories of practice, and a cohort model constructed on the principle's underlying communities of learners. Unlike many M.Ed. programs in which faculty design courses and graduate students build their programs by selecting from a variety of course offerings, the M.Ed. Specialist is a prescribed and coherent research informed course sequence that is designed to be completed within 2 years. Faculty in educational research specializations, such as Educational Leadership, Educational Technology, Curriculum and Instruction, and Languages and Diversity, have purposefully and intentionally selected and designed specialist M.Ed. programs that provide students with a systematic understanding of knowledge, and a critical awareness of current problems and/or new insights, which are informed by and are at the forefront of their academic disciplines, fields of study, and areas of professional practice ([Council of Ministers of Education, Canada, 2007](#)).

The graduate research course slated for design, entitled *Writing Educational Research*, is one of four research course requirements for all of the M.Ed. Specialist programs. The four research courses have been designed to provide an understanding of educational research in order to interpret research, use descriptive data analysis skills, data-driven decision making skills, and basic program evaluation skills, and to conduct school-based action research. The writing course engages graduate students in examining and developing the skills associated with crafting an academic paper. Graduate students are introduced to the various structures of academic papers and are provided with support in crafting and publishing their written work.

Two sections of the 6-week writing course were offered simultaneously for M.Ed. students during the Spring 2012 semester. The majority of students enrolled in the course were from two of the M.Ed. specialization cohorts: (1) Languages and Diversity; and (2) Educational Technology. Each graduate

student cohort had an assigned academic program coordinator, who is a full-time faculty member in the discipline of study. The visionary leadership of the Associate Dean and academic program coordinators was critical in designating the writing course for collaborative design to meet the current needs of students in each specialization and in order to be adopted program wide for all master's degree programs.

The first and second authors were the instructors who were both independently invited by the third and fourth authors (their respective specialization coordinators) to collaborate in the design of the course and subsequently to teach the course during the Spring 2012 semester. The fifth author was the Associate Dean of Graduate Programs in Education at the time of this course design process, and provided the leadership and support for collaborative instructional design processes within the Faculty. The Associate Dean provided the original skeletal design that was built and extended upon in this collaborative course design process. Working with two provincial ministries, the Associate Dean had ensured that the writing component in the third learning task met ministry guidelines so that students who successfully completed the *Writing Educational Research* course met the criteria for [Teacher Qualification Service](#) standards.

An introductory meeting with the design team was arranged to discuss the overall course goals. The design team committed to establishing a collaborative working relationship and at a minimum, designing the course syllabus to reflect knowledge in each discipline. It was also agreed that online tools would be used to facilitate collaboration and meeting online since both instructors worked off-campus.

Progress or Changes in the Domain Field that Inform the Course Revision

In this section, we address [Hai-Jew's \(2010\)](#) contention that "An online course curriculum that reflects the instructor's ability to stay current with research and developments in a particular discipline, perhaps in tandem with relevant interdisciplinary knowledge, will enhance learning by ensuring that students have the most current and relevant information" ("A Four-Fold Approach for Updating an Online Curriculum," para. 6).

The course design was specifically tailored to address current disciplinary knowledge, signature pedagogies, relevant scholarly writing and the research reporting competencies required of graduate-level learners, and the required connectivity skills of master's students who were immersed in a particular discipline of study. While a common textbook was chosen, each instructor selected specific journal articles directly related to the two different fields of study as required course readings. In each section of the course, the instructors chose research articles that reflected current research problems and questions, research methods, and recommendations for practice in their specific discipline.

[Hai-Jew \(2010\)](#) argues that "New generations of online learners have learned to expect regular rollouts of newer, better, and faster levels of technological expertise. What is innovative and new in a curriculum today becomes simply the baseline expectation of new generations of learners" ("Relevant Updated Technologies," para. 2). If we accept Hai-Jew's argument as true, it stands to reason that ongoing revision of this course, along with other online courses, will become the norm. Given the pace at which educational research and educational technology advances, it is unlikely that any online course can remain static for any length of time and still be relevant and engaging to learners. In a subsequent section, the current networked technologies used by instructors for collaboration, and the task designs exploring interactive technology use by students, will be discussed.

Updates in Teaching and Learning Methodologies

In this section, we address [Hai-Jew's \(2010\)](#) contention that "Applying the latest pedagogical methods can enhance the online learning experience. Targeting curriculum for different learning needs – including different developmental phases, different primary languages, and different learning contexts (cultural, geographical, social, political, technological, and domain field) – can enhance both individual and group learning experiences" ("A Four-Fold Approach for Updating an Online Curriculum," para. 8).

Inquiry exploring the work of practitioners in designing learning opportunities is important and can inform instructional design theory and practices ([Yancher & South, 2009, p. 95](#)). Instructional design is often associated with the activities or practices of analysis, design, development, implementation, evaluation, management, and the use of media for instructional purposes ([Reiser, 2001, p. 57](#)). The instructors updated the teaching and learning methodologies using an instructional design approach known as backward design, part of the *Understanding by Design* framework. The backward design approach supports the notion that teachers are designers, and that designing learning opportunities begins with the

end in mind (Wiggins & McTighe, 2005) similar to the ideas in other frameworks, such as integrated course design (Fink, 2007) and constructive alignment (Biggs, 1996). The difference with the framework selected is that the dynamic learning experiences and instruction were designed after negotiating the acceptable evidence of performance.

The existing course syllabus with common learning outcomes and expectations provided a focal point for the design team and resulted in a syllabus that could be tailored by each instructor to suit the specialized needs of graduate learners in the two different specialization cohorts. Wiggins and McTighe (2005) describe the backward design planning sequence used as the overall workflow for the team and decision making junctures: identify desired results, determine acceptable evidence, and plan learning experiences and instruction (p. 18) as shown in Figure 1.

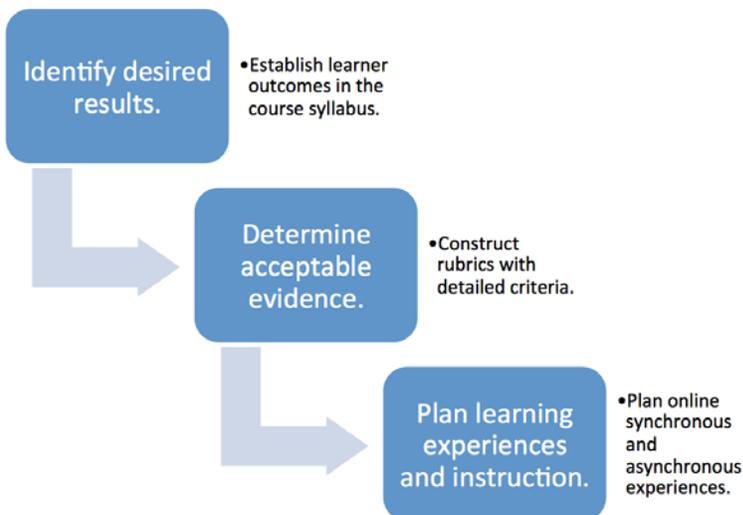


Figure 1. *Stages in the backward design process connected to the stages used by the instructors to collaboratively design an online course. (Adapted from Wiggins & McTighe, 2005, p. 18)*

The design team collaboratively reframed and updated the learning outcomes for the course, which were subsequently revisited and refined during the instructional design process. Using a backward design approach, the rubrics were co-constructed for the learning tasks based on the learning outcomes and desired results identified in the course syllabus. Reddy and Andrade (2010) identify the three essential features of an assessment rubric: evaluation criteria, quality definitions and a scoring strategy (p. 435). These three features informed rubric development. As the design team negotiated and discussed the criteria used for each rubric, the syllabus and description of the learning tasks also changed to reflect these new understandings. The rich dialogue that occurred during rubric development provoked questions about key learning outcomes and formative and summative assessment practices. The result was a comprehensive course syllabus that included the desired learning outcomes, clear expectations for each assignment, along with detailed assessment rubrics, and specific criteria for meeting the learning outcomes.

Following rubric development, the design team planned the online learning experiences and instruction described as the third stage in the backward design process. As part of the course design and delivery, the number and content for synchronous sessions as well as content and expectations for the asynchronous segments of the course were determined. The ongoing collaboration and negotiation based on each instructor's conceptions of ways of knowing and ways of doing in their discipline yielded in several iterations of the final learning outcomes and learning tasks.

Learning Outcomes

In completing the course, learners were expected to:

- 1) participate and contribute to an online scholarly community of inquiry during synchronous sessions and asynchronous discussions;
- 2) select and examine academic papers in the field and compare and contrast structures;

- 3) produce authentic, original academic or professional writing through assigned learning tasks;
- 4) provide constructive feedback to peers;
- 5) revise and resubmit writing based on feedback.

Course Learning Tasks

Designing scholarly communities of inquiry in online courses is a current trend in higher education ([Garrison, Anderson, & Archer, 2010](#)). The learning tasks in this course were designed to support students in working in collaboration with peers in a dynamic learning environment. Regular contributions to discourse and providing constructive feedback to peers was expected as part of each learning task and served to create a shared commitment to fostering a collaborative knowledge-building environment. The instructors' role was to facilitate the coursework, support students as they engaged in each learning task (Table 1), and provide students with ongoing, timely, and constructive feedback to further their learning and growth in writing educational research.

Table 1. *The three learning tasks in the course*

No.	Description of Learning Task	Proportion of Final Grade	Grouping for Task
1	Participation in and contribution to online scholarly community	30%	Individual
2	Foundational writing assignment: Abstract/conference poster/presentation	30%	Individual or Group
3	Major writing assignment: Journal article/academic conference paper	40%	Individual

In the first task, graduate students were required to participate and contribute to an online scholarly community of inquiry informed by the principles of dynamic knowledge building as a shared pursuit (Scardamalia & Bereiter, 2006; Zhang, 2012). As [Anderson \(2008\)](#) points out, members of a learning community can support and challenge one another, "leading to effective and relevant knowledge construction" (p. 51). The instructors provided general feedback to each group and individual feedback to each student throughout the course to help students recognize how to strengthen their contributions to discussions. The rubric for the first learning task was adapted from a rubric previously field-tested in another graduate-level course, so very little time was needed to modify the first rubric.

In the second learning task, students developed an abstract and conference poster along with a class presentation. Many students extended their work on the second learning task to the final learning task where students were required to develop an original article manuscript or academic conference paper suitable for submission to either an academic journal for consideration for publication or to an academic conference. The assessment rubrics for the second and final learning task were collaboratively constructed by the design team using the learning outcomes as the primary source in developing the specific criteria, quality definitions and scoring strategy for the rubrics.

Updates in Relevant Technologies That Can Improve the Redesign Process and the Course Experience

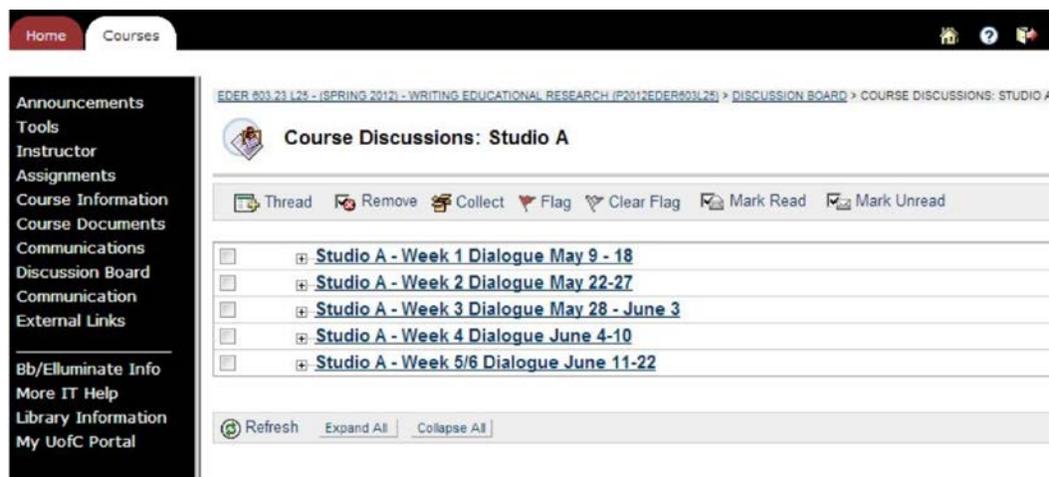
We will now elaborate upon the technologies used for instructor collaboration and student interactivity. We build and extend upon [Hai-Jew's \(2010\)](#) contention that "the use of the latest relevant technologies for lecture capture, synchronous interactivity, simulations, student interactivity and intercommunications, student group work, research, design, and other learning activities can all improve the learner experience" ("A Four-Fold Approach for Updating an Online Curriculum," para. 8).

Technologies for Instructor Collaboration

Collaboration was foundational to the instructional design process for the off-campus instructors and a variety of networked technologies supported online collaboration as shown in Table 2. E-mail was primarily used for short messages, questions, and to arrange meetings. [Skype](#), a free audio and video communication tool, was used to meet virtually to discuss and consolidate ideas, and to refine the instructional design. The instructors shared desktops when building the course components in the Blackboard learning management system (Figure 2) and used [Dropbox](#), a free, cloud-based file-sharing service, to collaboratively develop and share course files, such as the syllabus and assessment rubrics.

Table 2. *Technologies used to enable instructor collaboration*

Tool	Purpose
E-mail	Instructor communications
Skype	Instructor communications, building rapport
Dropbox	Content sharing and revising
Blackboard	Content management, course organization

Figure 2. *A discussion forum within Blackboard*

Technologies for Student Interactivity

[Hai-Jew \(2010\)](#) discusses the use of technology to enhance student interactivity and to provide an improved student learning experience. Active participation in asynchronous learning tasks using online discussion forums and synchronous whole-class sessions was an expectation for all students in the course. Learning tasks were designed to support student interactivity by integrating a variety of technologies. Regular contributions to Blackboard discussion forums were required throughout each week of the course. We contend that peer and individual learning depends on the participation and shared commitment to fostering a collaborative knowledge building community. The technologies used to support an online scholarly community, student collaboration, and peer review are shown in Table 3. However, the list does not include additional technologies selected and used by students during the course.

Table 3. *Technologies used to promote student interactivity*

Tool	Purpose
Google Docs	Shared documents
Elluminate Virtual Office	Small group meetings, file transfer, application sharing
VoiceThread	Presentation, feedback, group work
Blackboard Discussion Forums	Scholarly community of inquiry

[Google Docs](#) was used to create shared student documents which provided an efficient manner to collectively gather information from students and also to model how shared documents function. In one case, the instructor provided a link to the Google Docs during a synchronous session and the students were asked to input information about progress with one of the learning tasks in the shared document. In another instance, students used Google Docs to self-select peer review groups. Despite the potential risk of students inadvertently deleting entries in a shared document, one of the advantages is that students can enter the information simultaneously and view the document as it develops.

The [Elluminate](#) web-conferencing system (Figure 3) was used for several synchronous sessions throughout the semester, including sessions with invited guest speakers from distant locations and for whole-class and small-group meetings. An editor of a peer-reviewed journal focusing on languages and linguistics gave a guest lecture on the submission of research manuscripts to an academic scholarly journal. In addition to the regularly scheduled synchronous class sessions, students were also provided

with 24/7 access to an Elluminate meeting space. Students used Elluminate for peer group meetings to discuss learning tasks and for meetings with the instructor.

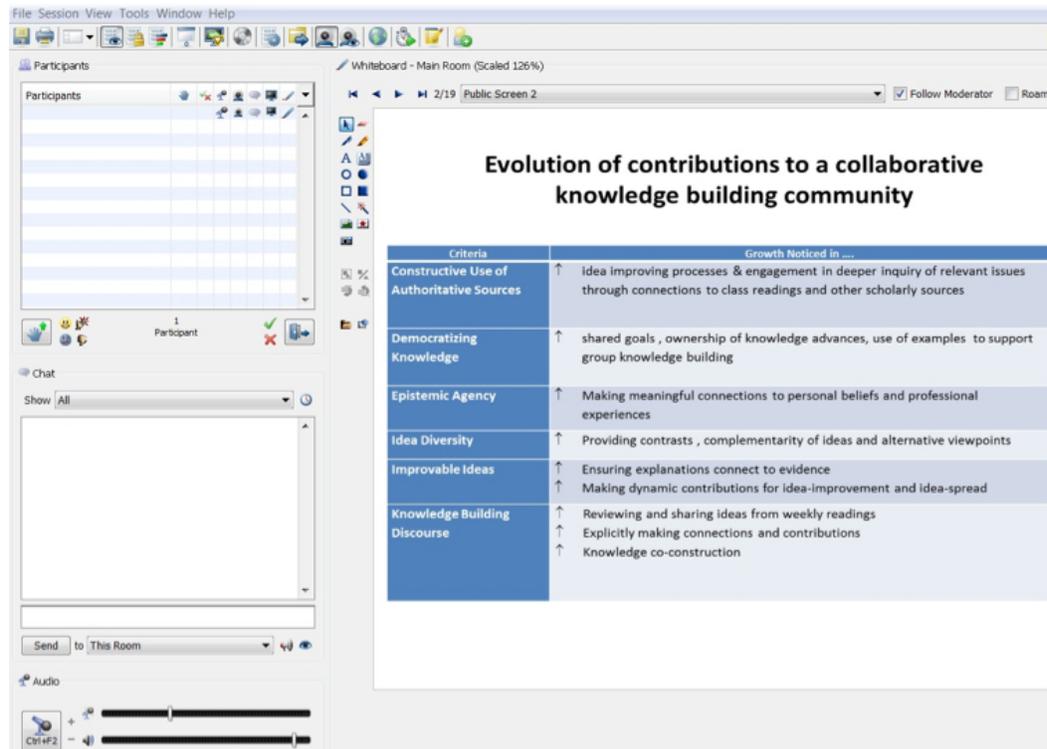


Figure 3. *The Elluminate web-conferencing environment*

Students developed an abstract or executive summary for a problem of practice and designed an electronic poster with visuals, text, and audio to represent the abstract. [VoiceThread](#), an asynchronous audio discussion tool, was used for this learning task, and it offered an interactive means for students to collaborate, provide a link for sharing the presentations, and provide peer reviews in text and audio formats.

Blackboard discussion forums were used by students to post messages and to provide feedback to peers in their assigned dialogue groups each week. Students were asked to reflect on assigned readings, discuss readings with the dialogue group, and consolidate ideas and questions. The instructors also encouraged students to post questions to the question and answer forum in Blackboard. However, most questions were sent to instructors using e-mail. The instructors would then re-post the question to the forum with an answer in text or video format to provide all students with access to the same information. Overall, the instructors and students leveraged a variety of digital tools for collaboration and interactivity for an improved learner experience.

Discussion

There were a number of benefits in working collaboratively to design a course, create new learning tasks, and co-create new assessment rubrics. The first benefit is the multiplicative effect of the diverse ideas, expertise, and experiences of experienced postsecondary educators from two different educational research disciplines. The collaborative approach to instructional design resulted in a much stronger course design than may be possible with one instructor working alone to revise a course. The instructors report a deeper understanding of formative and summative assessment approaches as a result of collaborative discussion and decisions about criteria, quality definitions, and scoring strategies. A second benefit of this collaborative approach to design is the collaborative pedagogical and social support during course delivery. Similar to the shared workload and decision making benefits extolled by [Ziegenfuss and Lawler \(2008\)](#), the instructors reflected on the value of second and third opinions on the quality of student work, and student issues like late assignments, group dysfunction, and plagiarism. The design team provided ongoing professional peer support and advice to each other throughout the course delivery and instructional process, and in dealing with course challenges as well as celebrating the many learner

successes. The final benefit experienced by all members of the design team was the enhanced and strengthened professional relationships and pedagogical expertise that developed and endured beyond the duration of the course.

Collaborative Instructional Design Approach

A collaborative instructional design team of educators can strengthen the process for the design and redesign of online courses. In this case, the collaborative team included the authors, each sharing their diverse ideas, varied discipline backgrounds, and extensive teaching experiences for collaborative knowledge building as a professional group that resulted in an enhanced course design. Furthermore, the program coordinators brought extensive online teaching experience, educational technology expertise, discipline expertise, institutional knowledge, and leadership experience to the collaborative team.

Members of the design team had been involved in prior group or team teaching opportunities. However, this graduate course design process was the first time both instructors had worked in collaboration with a colleague at a distance on the instructional design for an online, graduate-level course for credit. Both of the instructors worked with a different program coordinator and relied on the mentorship and guidance provided by their respective program coordinator. Consequently, the program coordinators were both copied on many of the e-mails seeking input and feedback at various stages of the course development and responded to emergent issues during course deployment. The program coordinators offered valuable advice, support, and insights to the course instructors as they both had online teaching experience and a deeper understanding of the overall graduate-level program, as well as a sense of the characteristics of the graduate students in the respective cohorts.

Ongoing Professional Peer Support

Fullan (2008) argues job-embedded learning and social support among colleagues are necessary components for learning and growth. In the workplace colleagues have many opportunities to share ideas informally and provide peers with support in hallway or staff room conversations. Similarly, the instructors met during the 6-week course using Skype with no set agenda and 1 hour to talk. Regular meetings increased the instructors' sense of accountability and professional transparency. Ongoing, intentional professional dialogue allowed the instructors to share ideas and discuss strategies, like anticipating questions students might ask and then attempting to answer these in advance, and to discuss successes and challenges with teaching the class. These regular meetings provided professional peer support, and also diminished the isolation that may have otherwise occurred for these online instructors. [Chao et al. \(2010\)](#) found collaboration fostered by conversations created a sense of team solidarity. [Ziegenfuss and Lawler \(2008\)](#) contend that true collaboration requires investment by members of the design team in the development and management of the course as well as a level of professional trust. The instructors agreed they developed a sense of trust and comfort in seeking feedback and guidance from each other, and from the program coordinators, regarding questions or student issues as they arose during the course. Online technologies supported both job-embedded learning and social support for the off-campus instructors and onsite faculty members.

Dealing with Course-Related Challenges

The collaborative instructional design team provided mutual support to each other for course-related challenges, such as issues with a printed text in an online course, fostering a scholarly community of inquiry, presenting technology-rich projects online, and providing attribution in scholarly writing.

There were challenges in requiring a printed text as a resource in an online course. The design team selected Belcher's (2009) book, *Writing your journal article in 12 weeks: A guide to academic publishing success*. The book offers a pragmatic approach to writing educational research, and Belcher's 12-week model was easily adapted to a 6-week spring course. Although the textbook order was processed immediately by the University bookstore, the text did not arrive in time for the beginning of the course for some students.

As an alternative, it was suggested students could purchase the text either in print format or as a [Kindle](#) book from [Amazon.com](#). However, even the alternative option posed problems for students living in countries without access to Amazon. The delay in receiving the course text in paperback format from the University bookstore and the problems with access to the electronic format of the book presented a challenge for some students at the beginning of the course. As much as the instructors liked Belcher's

(2009) book, selecting open access electronic materials may reduce anxiety for students unable to access a printed text for a 6-week online course.

Fostering a scholarly community of inquiry in an online course is challenging, and the instructors were able to provide each other with support and guidance in fostering communities of inquiry willing to share their work. The instructors shared ideas for improving scholarly discussions in the online forums to include thought-provoking comments, deeper questioning, and use of paraphrasing to seek clarification and understanding through collective knowledge building. The instructors also provided ideas to each other for modifications to the course delivery in order to meet the specific needs of the students. For instance, in one class, the synchronous sessions in Elluminate were moved to different dates to accommodate the student schedules. In the other class, the synchronous sessions were reduced in number from five to four and were optional for students to attend. The synchronous sessions in both classes were recorded for students to view at an alternate time, which is particularly helpful for students living in different time zones.

Presenting technology-rich projects during synchronous online sessions was found to present some challenges. The second learning task required online presentations by individuals or groups during one of the live, synchronous e-learning sessions with the whole class. In one of the cohorts, a number of the presentations were technology-rich and included multimedia files, and digital content with text, images, audio, and video. It was quickly determined the class could not view the multimedia files simultaneously by sharing the files from one desktop. The files would freeze and remain still on one image or the audio narration or sound was not clearly heard or understood. Providing an external link to the presentation and providing time for students to view the multimedia file independently proved to be a more reliable method for sharing multimedia files during online class presentations. The "timer" tool in Elluminate was also used to provide students with a visible timer and set time to view the multimedia file and then return to the live discussion. The instructors determined it is more efficient to have students prepare multimedia presentations on external servers and make accessible with a link instead of sharing the actual digital file from a personal computer during a synchronous session.

In one of the cohorts, only a few of the students had experience in presenting using an online format. Students were also offered the alternative option of posting a narrated video presentation. Those students who chose the video option, in general, had a concise and higher quality presentation. Ultimately, of those students who chose to present in real time, few were able to deliver a concise presentation within the 2-minute time limit. In one case, the instructor had to intervene when it was evident the pair of students who were presenting had gone through fewer than half of their slides and it was well beyond the time limit. Delicately managing online class presentations can be a challenge for the instructor.

Providing attribution is important, in particular when learning about scholarly writing, so course readings were assigned regarding proper attribution in academic writing, and students were expected to provide proper attribution in all writing, including discussion forum messages. Throughout the course, the instructors discussed the difficulties students were experiencing with using American Psychological Association (APA) style and shared ideas to increase proficiencies in providing attribution in scholarly writing. The APA 6th edition Publication Manual (APA, 2010) was listed as a recommended course reading but not assigned as a required reading. Perhaps, students should consider accessing the APA manual early in their M.Ed. studies to practice providing proper attribution in all scholarly writing.

Challenges

[Chao et al. \(2010\)](#) found the extent of course revision required along with the time to develop a new course can limit collaboration, while a strong rapport can facilitate collaboration. In this collaborative course design project, there was a limited time frame for the instructors to establish and build a rapport with each other and a perceived increased investment in time was needed to develop the course. There were approximately 4 weeks to fully develop the instructional design, including development of a day-to-day calendar for the course, constructing assessment rubrics with detailed criteria, ordering the required textbook, and receiving approval for the course syllabus. Both instructors committed fully to collaborative instructional design with a shared leadership approach and were required to develop rapport with each other quickly. For future collaborative design efforts, it will be helpful to start earlier, and allocate more time for relationship building and working on the design as a team.

At the beginning of the partnership, both instructors felt it was challenging to get to know each other's epistemological underpinnings and pedagogical styles. This experience echoed that of over 600 survey respondents in which 90% of respondents said they felt that their virtual teams suffered insufficient time to build relationships, followed by the speed of decision making, and differences in leadership and decision-making styles ([Solomon, 2010](#)). In this virtual collaboration, both instructors felt there was a high level of professionalism and commitment, which seemed to mitigate this potential challenge, and supported a collaborative, productive partnership. Both instructors felt the depth of their working relationship and their individual and collective pedagogical expertise and experiences were strengthened and much greater by the end of the course than when they started the design process.

The work was intensive similar to the increased workload and difficulties [Wilson and Schwier \(2009\)](#) describe in their exploration of instructional design through a service learning approach where students were teamed with an external client for an authentic instructional design experience. The limited timeline for the instructional design required the instructors to invest significant time to work together intensively during the 3-week period prior to the commencement of the course; to share and revise work, such as exchanging versions of the course syllabus, drafts of the assessment rubrics, and day-to-day plans for the coursework. The comfort and facility in using technological resources, such as Skype, supported the present virtual partnership in efficiently and effectively working within a short time frame.

Furthermore, the instructors continued collaborating and providing each other with support during the delivery of the online course. The instructors perceived increased time was spent in exchanging information and engaging in ongoing professional dialogue. [Hartman, Dziuban, and Moskal \(2000\)](#) surveyed 48 postsecondary online instructors and of those who taught fully online, almost 85% felt satisfied with their online teaching experience, despite the perception among almost 75% of instructors that there was much more workload in an online course compared to a face-to-face course (p. 167). Online courses require a significant time investment for the instructor at the front-end of the course to ensure the instructional design is comprehensive. A collaborative instructional design approach takes extra time for meetings, negotiating ideas, document revisions, managing document flow, and online course creation. Consequently, preparing an online course coupled with working in partnership and engaging in a collaborative and supportive approach to instructional design and course delivery demands an increased time investment for instructors. That said, we contend that the increased time investment is worthwhile for improving the process of course design and subsequently supporting job-embedded professional learning experience for the instructors.

Conclusion and Recommendations

The collaborative instructional design team found that [Hai-Jew's \(2010\)](#) four-fold approach to updating an online curriculum was a useful frame for the analysis of experience with the design, development, and teaching of two sections of an online graduate course. In this paper, we have used a descriptive approach to document our collaborative course design process and to provide a reflective analysis of shared experiences, the benefits and challenges, and the course design and delivery.

As an outcome of our collective reflection on the experience of designing and teaching a graduate-level course, the authors make three key recommendations for online instructors, instructional designers, and faculty administration:

- 1) Establish collaborative instructional design teams to develop high-quality online learning experiences for graduate students, and to provide continuous professional learning and growth for faculty and instructors;
- 2) Leverage current digital technologies and resources to facilitate instructor and student collaboration, communication, and community building;
- 3) Support and extend instructor-to-instructor communications beyond the design phase into the course delivery and online teaching phase, and post-course evaluation phase, to benefit from the mutual support provided when dealing with emerging course issues and outcomes.

The instructors and faculty members found that working with a design team was ultimately a more enriching professional experience and pedagogical practice than working alone. Working on a collaborative instructional design team provided a meaningful professional learning and academic development opportunity that involved discipline rich, scholarly dialogue with continual idea sharing, and a commitment to consider multiple perspectives and ideas. Moreover, working on a collaborative

instructional design team gave the instructors and faculty members a venue for intentionally reflecting on previous school and postsecondary teaching experiences, for documenting lessons learned to help guide collaborative course design efforts, and ultimately for designing a high-quality online graduate learning experience and online space for graduate students.

Another recommendation for instructors interested in collaborative instructional design is to leverage digital technologies and resources to increase time efficiencies for collaboration to create and share digital content, for regular communications, and to facilitate professional learning. Digital technologies may also support continual collaboration and professional learning beyond the duration of the course. The technologies described in this paper may benefit others interested in fostering collaborative partnerships.

The experience of two instructors in a collaborative partnership with faculty members, which developed while designing a 6-week online graduate-level course may serve to amplify the need for further research and study related to extended collaborative design teams, and connections to professional learning and continuous academic development. Furthermore, the experiences documented and shared in this paper exploring practitioners' collaborative work can be influential in the design of professional learning experiences for online course instructors. This work may serve to inform faculty administration in providing a vision for collaborative course design. There were many benefits noted in establishing a partnership and collaborating through instructional design, including ongoing professional dialogue and peer support. Even though challenges were observed, such as an increased time investment for instructors and a perception of increased workload, working on an instructional design team yielded substantial benefits, and the associated job-embedded professional learning experiences were foundational elements resulting in a valuable online teaching and learning experience.

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