Exploring Instructors' Experiences with Instructional Design Supported Course Design in Higher Education: An Analysis of Three Cases Based on Activity Theory

Yuan Chen

A Thesis

In the Department

of

Education

Presented in Partial Fulfillment of the Requirements

For the Degree of

Doctor of Philosophy (Educational) at

Concordia University

Montreal, Quebec, Canada

October, 2023

CONCORDIA UNIVERSITY
SCHOOL OF GRADUATE STUDIES

This is to certify that the thesis prepared

By: *Yuan Chen*

Entitled: *Exploring Instructors' Experiences with Instructional Design Supported Course Design in Higher Education: An Analysis of Three Cases Based on Activity Theory*

and submitted in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY (*Education*)

complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Signed by the final examining committee:

_____ Chair
Harriet Petrakos

_____ External Examiner
Adnan Qayyum

_____ Arm's Length Examiner
Rosemary Reilly

_____ Examiner
Ann-Louise Davidson

_____ Examiner
Ji Yae Bong

_____ Thesis Supervisor (s)
Saul Carliner

Approved by _____
Kim McDonough Chair of Department or Graduate Program Director

Nov.27, 2023
Date of Defense

_____
Pascale Sicotte Dean, Faculty of Arts and Science

ABSTRACT

Exploring Instructors' Experiences with Instructional Design Supported Course Design in Higher Education: An Analysis of Three Cases Based on Activity Theory

Yuan Chen

Concordia University, 2023

Designing high-quality online courses requires specialized skills and knowledge that instructors may not possess alone. To address this challenge, universities employ instructional design professionals to support course design and development. However, it is important to recognize that instructors are significant in higher education course design.

This case study explores instructors' experiences during the instructional design supported online course designing process. Fifteen instructors from two Canadian universities were interviewed. Three cases were selected based on the ID support modes to allow across case comparison.

The key findings revealed that instructors designing online courses did not explicitly follow standard ID models. Instead, they prioritized adapting existing course content to suit their needs. When working with IDs, instructors valued ID's expertise in course formatting and structures, and customized support offering instructional strategies and digital tools for optimized online courses. Yet how often instructors implemented ID suggestions and practices was influenced by several other factors, including course goals, time constraints, previous teaching experiences, design task complexity, and ID support availability. The study also identified challenges in the current course design process, including balancing instructors' workloads and desired effective course design, building pedagogical content knowledge in online course design and teaching, and bridging the gap between design needs and available ID supports.

This study provided an opportunity to understand ID supported course design and how ID suggestions were implemented from instructors' viewpoints. The results provided insights on how to improve ID support in higher education and help in better understanding the professional identity of instructional designers.

Acknowledgments

Completing this dissertation marks one of the most significant and memorable milestones in my journey as a learner and a developing educator. Throughout my PhD journey, I was fortunate enough to receive support and help from numerous individuals. I want to take this opportunity to express my heartfelt gratitude to them: Thank you to every one of them for making this Ph.D. journey one of the most incredible experiences in my life.

I thank my supervisor, Professor Saul Carliner, for holding my hand to step into the research world, for offering me various precious opportunities to participate in different research projects and to explore the beauty of the research world, and for guiding me to strengthen my skills and knowledge to conduct research individually. I thank him for his belief in my ability to undertake the proposed research, his encouragement throughout the entire thesis journey, and his close supervision and detailed feedback on each session/draft of my thesis.

I thank my committee member, Dr. Jiyae Bong, for her supervision in guiding me through the process of forming research questions and her endless support in revising my dissertation drafts. I thank my committee member, Dr. Ann-Louise Davidson, for offering great insight into my literature review and the theoretical framework parts of the study. I thank them both for taking the time to be my committee members and sharing their knowledge and research experiences with me. They were always available to me when I needed feedback or guidance.

I thank my external examiner, Adnan Qayyum and Rosemary Reilly, as well as my committee members and my supervisor, for offering me an excellent and informative discussion opportunity during my defence; thank you all for making my defence an insightful and enjoyable experience.

Also, I would like to thank my colleagues at TLS, Carleton University, for their mental and academic support in offering me insights into the practical world of instructional design, educational technology, and educational development. Also, thank you for your support in attending my dissertation defence and sending me best wishes before and after the defence. I thank my Managers, Patrick, Jared, and Mat, for allowing me to have flexible work schedules to spend time working on my dissertation.

Lastly, I dedicate my dissertation to my beloved parents and my friends. Your unconditional love, support, and understanding made me fearless while pursuing my academic dreams. I am immensely grateful for your presence and patience. I could not have completed my PhD journey without you.

Table of Contents

List of Figures

List of Tables

Chapter One. Introduction

The rapid growth of online courses in higher education has been evident in recent years as those courses have proven to be a critical component in generating revenue, reaching students beyond traditional areas, and offering flexible learning options (Seaman et al., 2018; Johnson et al., 2019). In Canada, over two-thirds of universities offer online credit courses, accounting for 8% of all university courses. As of 2019, one in five Canadian students had taken at least one course online (Johnson et al., 2019). The COVID-19 pandemic in 2020 caused an even more significant surge in online learning because it was considered a safe and viable option to ensure the continuity of education. To prevent any teaching and learning disruption, almost all university courses in Canada moved online during this time, with over 98% of students having some or all of their courses online (Doreleyers & Knighton, 2020). Many of these courses have remained fully online or hybrid, even as the pandemic has begun to subside (Bates, 2022). Johnson and Seaman (2021) predicted a continued increase in online courses in the coming years as more universities seek sustainable ways of teaching that similar situations will not disrupt.

This shift has highlighted the importance of ensuring the quality of online courses to provide students with effective learning experiences. Quality Matters defines quality online courses as those that could ensure students achieve desired learning outcomes effectively. The general quality features include clear course learning objectives, well-aligned assessments and measurements with learning objectives, well-designed instructional materials and learning activities, fostered learner engagement and interactions, effective use of technology, sufficient learning support, and ensured course accessibility and usability (Quality Matters.org, 2023).

Instructional design (ID) theories and practices have been consistently affirmed as crucial for the development of high-quality online courses because they provide a systematic approach to designing and developing learning materials that align with learning objectives, promoting learner engagement, and enhancing learning (Chen & Carliner, 2020; Drysdale, 2019; Quality Matters.org, 2023; Richardson et al., 2019; Xie et al., 2021).

In higher education, instructors play a pivotal role in designing and delivering online courses (Baran & Correia, 2014; Martin et al., 2019). According to the Inside Higher Ed Survey in 2019 (a year before the pandemic), around 46% of the faculty in the United States have taught at least one online course (Lederman, 2019). Also, there is a trend that younger and nontenure-tracked instructors are more likely to take up the tasks of designing and delivering online courses (Perry & Steck, 2019). While there is no sufficient data available yet on the numbers of instructors involved in designing and teaching in the new post pandemic online environment, it is anticipated that more instructors will be involved in online course design and delivery with the significantly increased number of online and blended courses in higher education institutions (Bates, 2022; Johnson & Seaman, 2021).

Unlike face-to-face courses, which rely heavily on lecturing and class discussions, online courses require instructors to understand online pedagogy, employ instructional design theories and practices, and be proficient in a variety of technologies to present course content and ensure seamless course navigation to help learners achieve learning goals (Perry & Steck, 2019; Singh et al., 2022). However, most instructors hired for their expertise in the subject matter have yet to receive formal training in instructional design or the creation of online courses (Carliner & Driscoll, 2009; Singh et al., 2022). Therefore, it can prove challenging to rely solely on instructors to design quality online courses that meet students' needs and expectations (Chiasson et al., 2015; Richardson et al., 2019). Many instructors reported challenges in their online course

design due to the inadequate instructional design support and training they received (McGee et al., 2017; Schmidt et al., 2016). A Canadian survey revealed that 73% of the instructor respondents considered inadequate training and support for preparing for online learning as barriers to embracing online education (Johnson et al., 2019). Other instructors disclosed challenges regarding the need for knowledge on how and when to get instructional design support at their institutions (Chow & Croxton, 2017; Tannehill et al., 2018). This issue has become more pronounced since the pandemic as more instructors designed and developed online courses (Lederman, 2020; Singh et al., 2022).

To address the issue, higher education institutions have hired instructional designers to assist instructors' course design and development process (Beirne & Romanoski, 2018; Halupa, 2019; Kumar & Ritzhaupt, 2017; Wagner & Hulen, 2015). This trend accelerated during the pandemic as institutions had to rapidly adapt to remote learning environments (Grajek, 2020). Instructional designers are systematically trained with learning theories and pedagogies to provide support and professional training for instructors to solve learning problems using emerging technologies (Reiser & Dempsey, 2018). In higher education institutions, instructional design professionals wear various titles such as instructional designer, eLearning specialist, instructional technologist, learning experience designer, and instructional developer (Chongwony et al., 2020; Fong et al., 2017; Kang & Ritzhaupt, 2015). They are crucial in offering instructors pedagogical, technical, and administrative support in designing and teaching online courses (King, 2017; Kumar & Ritzhaupt, 2017; Mancilla & Frey, 2020). Instruction designers can bring a range of benefits, such as applying systematic instructional design processes to complete course projects effectively (Andrews & Hu, 2021; Baldwin et al., 2018; Kenny et al., 2005; Ritzhaupt & Kumar, 2015) and improving learning outcomes by aligning the course objective, learning content. Also, they help promote the shift from instructor-centred to student-centred teaching by using constructivist instructional strategies and assessments (Perry & Steck, 2019) to encourage students' engagement and active learning. They help integrate multimedia and interactive modes of delivery to enhance students' involvement in the course and their connections with instructors (Dicks & Ives, 2009; Fyle et al., 2012; Senn & Wessner, 2021; Tsai et al., 2018). Instructional designers help optimize the structure and visual representation of a course (Halupa, 2019), leverage instructors' skills of using various digital tools in the best possible way to present their subject matter in an online environment (Fong et al., 2017; Halupa, 2019; Hixon, 2008; Liu & Dempsey, 2017), and apply universal design principles to ensure accessibility of the course content and make learning inclusive in an online environment (Mancilla & Frey, 2020; Xie & Rice, 2021). Additionally, instructional designers can ensure course quality by conducting course reviews using quality assurance standards (Chen & Carliner, 2020; Drysdale, 2019; Quality Matters.org, 2023; Xie et al., 2021). Finally, they can foster teaching innovation by collaborating with instructors to support their explorations of new teaching and learning best practices (Bawa & Watson, 2017; Drysdale, 2019; Fong et al., 2017; Halupa, 2019; Richardson et al., 2019).

Problem Statement

Although instructional designers can contribute numerous benefits to the course design process and enhance the quality of the course, the extent to which these advantages are realized relies heavily on instructors who play an essential role in making design decisions (Pan & Thompson, 2009). The assumption underlying this study is that instructors are introduced to standard instructional design processes and practices by receiving instructional design support. Many higher education institutions encountered challenges in delivering optimal instructional

design support because instructors did not understand instructional design services and were not sure instructors would implement suggested instructional design practices in their courses.

Many factors can influence instructors' embrace of instructional design. In general, instructional design practices are relatively new to most higher education instructors. Their unfamiliarity with instructional design theories and principles poses challenges in recognizing the value of instructional design in creating high-quality courses (Bird et al., 2007; Crowley et al., 2018; Dimeo, 2017; Fyle et al., 2012; Miller & Stein, 2016). Stevens (2013) indicated that a strong and positive working relationship between instructors and instructional designers is one of the keys to developing high-quality online courses. A clear understanding of instructional designers' skills and expertise can lead instructors to respect their design advice (Bennett & Albrecht, 2021; Drysdale, 2019; Halupa, 2019; Richardson et al., 2019; Stevens, 2013). You's (2010) and King's (2017) studies found instructors believed working with instructional designers allowed them to save time on online course design and development and ensured the instructional materials were effective for learners. However, their studies also pointed out instructors were still unsure about online pedagogy and theories. They should have realized instructional designers could bring this knowledge into developing online courses. Working with instructional designers who lack subject matter expertise in their specialty area presents "buy-in" difficulties for instructors (Bennett & Albrecht, 2021; Chao et al., 2010; Gerin-Lajoie, 2015; Hixon, 2008; Intentional Future, 2016; Liu & Dempsey, 2017; Richardson et al., 2019; Stevens, 2013; Xu & Morris, 2007) because many of them are used to relying on their own teaching experiences in traditional classrooms or design practices from colleagues (Chao et al., 2010). Lederman (2019) mentioned that only one-fourth of the instructors had asked for instructional design support when preparing their courses.

Also, instructors face challenges in allocating time and effort to focus on designing and teaching online courses due to the complexity of their job. They have other duties, such as conducting research, supervising students, and completing administrative tasks, which are often more closely tied to their promotions within the institution (Bawa & Watson, 2017; Curtis et al., 2017; Foster & Bauer, 2018; Hendrickson et al., 2013; Kálmán et al., 2020).

According to Kervin et al. (2013), instructors' mindsets and willingness to adopt new practices significantly affect the continuation of any educational initiations and innovations. Therefore, knowing how instructors perceive the value of instructional design and how they apply instructional design principles are essential for establishing effective instructional design support to help create successful online courses.

There are also challenges in offering sustainable instructional design support to meet instructors' diverse course design needs and cope with the continuously growing demands for support. According to Bates (2022), the support model in which instructional design teams collaborated with instructors to develop fully online courses following instructional design models was influential in creating high-quality courses in the past. However, with the continued growth of online and hybrid courses, this course design model needs to be revised to handle the increasing demand for instructors' course support (Bates, 2022). It is crucial to revaluate the various instructional design support models, considering how they can benefit instructors and address their specific course needs to successfully meet the high demands for support.

Instructional designers offer instructors a range of support regarding course design skills, knowledge, and resources to enhance the courses they create. However, most of the principles and models used by instructional designers originate from sources outside higher education (Halupa, 2019; Miller & Stein, 2016; Ritzhaupt & Kumar, 2015), which may not fully meet

instructors' course design needs (Chao et al., 2010; Stefaniak, 2017). For instance, traditional instructional design models were developed to prepare workplace training, which focuses on helping workers develop skills quickly to use on the job (Stefaniak, 2017). In contrast, higher education courses focus on nurturing students' cognitive and social skills (Xie et al., 2021) for their future professions and to serve as informed citizens. Also, instructional design theories and practices prioritize learner-centered instructional approaches and highlight the role of instructors as facilitators. However, in higher education, many instructors employ teacher-centered approaches and may resist the shift to student-centered approaches (Baran & Correia, 2014; Bennett et al., 2017; Miller & Stein, 2016). When creating online courses, instructors often do not consciously view their work as designing course materials but rather as constructing them, which differs from the perspective of instructional designers, who follow a more prescriptive design process (Bennett et al., 2017; Goodyear, 2015). As McCurry and Millinix (2017) and Xie et al. (2021) mentioned in their studies, instructional design support needs to be customized to meet each instructor's course needs. However, the effectiveness of current instructional designers' course design practices and strategies when working with instructors has yet to be discovered (Stevens, 2013; Xie et al., 2021).

Furthermore, the skills and knowledge necessary for designing courses in the context of higher education are often unclear and lacking in definition (Mancilla & Frey, 2020; Kumar & Ritzhaupt, 2017). This is because of the diverse teaching backgrounds instructors come from, especially those who were not fully exposed to online learning design and development until the COVID-19 pandemic.

In summary, there is a need to continuously enhance instructors' competencies in preparing online learning. This study contributes to the field of instructional design by expanding the existing literature regarding instructors' needs concerning instructional design. A more clearly defined instructional design support that addresses instructors' diverse and constantly evolving needs would help them effectively implement instructional design practices in their courses (Chao et al., 2010; Xie et al., 2021).

Understanding instructors' experiences with receiving and implementing instructional design practices in the course design process is crucial for generating new strategies that support instructors' teaching in higher education. By exploring the course design activities carried out by instructors, we can better understand the extent to which instructional design practices are implemented in higher education (Bennett et al., 2017; Baldwin et al., 2018). Also, comparing the implemented instructional design elements with the broader approach helps identify the specific instructional design practices employed in higher education.

The creation of high-quality and engaging courses relies on the establishment of strong working relationships between instructional designers and instructors in which they understand and respect one another's expertise (Bennett & Albrecht, 2021; Drysdale, 2019; Halupa, 2019; Richardson et al., 2019; Stevens, 2013). This study offers insights into the working relationships from instructors' perspectives and provides suggestions for enhancing these relationships. By examining instructors' experiences implementing instructional design elements in their course design during the COVID-19 pandemic and beyond, this study sheds light on the necessary skillsets and knowledge that future instructional designers need to develop to provide sustainable instructional design support to faculty in higher education.

Research Purpose

The purpose of this study is to explore the experiences instructors had during the ID-supported course design and development process, with a focus on instructor accounts of the

process instructors undergo to design and develop a course, the challenges they encountered, their perceived working relations with instructional designers, and the impacts ID support had on their course design practices. The following research questions guided this study:

1. How do instructors work with instructional designers to design online courses?
    a. How do instructors describe the course design process?
    b. What challenges did instructors face in the course design process?
    c. What are perceived roles and responsibilities of the instructional designers and instructors in the course design process, as indicated by the instructors?
2. Using the framework of activity theory, characterize how instructors engage in course design activities.
    a. What instructional design suggestions (cognitive tools) were provided to the instructors?
    b. How did instructors incorporate these suggestions into their course design practices and what are the key factors influencing their course design decision-making?
3. How do instructors perceive the impact of instructional design support on their course design and teaching practices?

Significance of the Study

Admittedly, many instructors chose to design online courses independently. This study focuses on the experiences of instructors who work with instructional designers to design online courses. At the very least, it would be helpful to empirically document instructors' real-life experiences with the ID-supported online course design in the context of higher education. The objective is to explore how instructional design principles and practices influence course design practices according to instructors' viewpoints. At the most, this study aims to uncover potential obstacles instructors encounter while utilizing ID support in the course design process, offering insights to address those challenges and enhance ID support within higher education.

Dissertation Structure

The dissertation is structured as follows: Chapter two presents the review of the related literature and the theoretical framework of the study. Chapter three provides the details of the research methodology. It presents the study design, the data collection instrument and procedures, and the data analysis process. It ends by stating the researcher's role and the strategies used to ensure the trustworthiness and validity of the study.

Chapters four through six present the results of the three selected cases. These include online course design activities supported by the standard ID process, express ID, and ID-related workshops. Each case provides participants' narrative of their course design experiences and a description of the activity system derived from all the participants involved in that case.

Chapter seven provides a discussion of the key findings. It answers the research questions using the findings from the three cases and the comparative analysis results among the cases. Chapter eight presents the conclusion, implications, and limitations and recommendations for future studies.

Chapter Two. Literature Review

This chapter situates this study within the relevant literature. It covers the topics that are relevant to this study, including online courses in higher education, a brief overview of the instructional design field and its connections with online education, the roles of instructors and instructional designers, the provision of instructional design support within higher education, and instructor's use of ID support. Then, this chapter identifies the gaps that have emerged from previous studies. This chapter closes by discussing the theoretical framework that informs this study.

Online Courses in Higher Education

With the rapid development of information and communication technologies, distance education became possible and has undergone a revolution, progressing from radio broadcast and education television to open universities and the current web-based education with both asynchronous and synchronous online learning methods over the past decades (Kentnor, 2015; Simonson et al., 2015). Online courses in this study refer to courses that are taught solely via a web-based learning environment with the use of diverse technology tools (Donova et al., 2019). Students may complete learning activities synchronously or asynchronously, but learners and instructors will be physically dispersed (Bates, 2022; Rasheed et al., 2020).

Growth of Online Courses

The rapid growth of online courses in higher education has been evident in recent years thanks to an involution of technology such as high-speed internet, smartphones and computers, diverse learning management systems, and other digital tools (Johnson et al., 2019; Seaman et al., 2018). Online teaching and learning has become an indispensable part of higher education institutions because of its benefits of generating revenues through increased student enrollments and reaching students beyond traditional areas (Bichsel, 2013; Johnson et al., 2019; Seaman et al., 2018), lowering institutional costs by addressing on-campus overcrowding (Johnson et al., 2019), maintaining or strengthening an institution's reputation by demonstrating a commitment to educational innovation (Davis et al., 2018), and offering convenience to students who seek more flexibility and individualized learning options (Bichsel, 2013; Castro & Tumibay, 2021). With the continuous evolution of information technology, online courses have the potential to provide learners with more interactive and engaging learning experiences.

In the Canadian context, more than two-thirds of universities offer online courses for credit, accounting for 8% of all university courses offered in the country. As of 2019, one in five Canadian students had taken at least one course online (Johnson et al., 2019). Similarly, in the United States, online course enrollment kept increasing while overall higher education enrollment saw a reduction (Seaman et al., 2018). Around 46% of instructors in the United States reported teaching at least one fully online course in their institutions (Jaschik &Lederman, 2018).

The COVID-19 pandemic accelerated the growth of online courses because it was considered a safe and viable option to ensure the continuity of education while complying with health regulations worldwide (Bao, 2020; Veletsianos, 2020). The emergency remote teaching (ERT) mode was applied at the beginning of COVID-19 to transfer face-to-face classes to online delivery quickly and ensure the continuity of teaching and learning in the Winter 2020 semester (Hodges et al., 2020). By the end of the Winter 2020 semester, many of the higher education institutions in North America decided to stay mostly online for the Fall 2020 semester or even Winter 2021 (Veletsianos, 2020). Because there was more time to prepare the Fall 2020 and Winter 2021 courses, many institutions started to prepare more carefully designed online courses (Naffi et al., 2020).

Almost all university courses in Canada moved online during COVID-19, with over 98% of students taking some or all of their courses online (Doreleyers & Knighton, 2020). Many of these courses have remained fully online or in a hybrid mode, even as the pandemic situation has begun to subside (Bates, 2022). Johnson and Seaman (2021) predicted a continued increase in the number of online courses in the coming years, as more universities seek sustainable ways of teaching that will not be disrupted by similar situations in the future.

Challenges Faced in Online Courses

Although previous research revealed online courses have the potential to be as effective as face-to-faces courses (Seaman et al., 2018; Bernard et al., 2014) or even superior to them due to the integration of a wide range of emerging technologies to accommodate students' diverse learning needs and provide them with a flexible and individualized learning environment (Bichsel, 2013; Castro & Tumibay, 2021), there are still concerns among educators regarding the quality of online courses (Baran & Correia, 2014; Esfijani, 2018; Seaman et al., 2018).

Many instructors considered online courses as "somewhat inferior" or "inferior" compared to face-to-face courses (Seaman et al., 2018). Multiple studies have also found students complained about the low quality of online courses they received during the pandemic while paying the same amount in tuition fees (Choi et al., 2021; Khan, 2021).

Higher education institutions face challenges in taking full advantage of the benefits of online courses. These challenges come from both students and instructors in the realm of online teaching and learning.

The challenges from the students' side include their lack of self-motivation and time management skills to stay on top of their coursework (Ferrer et al., 2020; Tsai et al., 2018). Online courses require a high level of self-discipline and digital literacy skills from students to ensure the efficacy of achieving the desired learning outcome (Hood, 2013; Lei & Lin, 2022). Students in the online learning environment often feel isolated and do not have adequate interactions with their instructors or peers, which hinders their learning engagement and retention because they are not able to feel a sense of belonging to the learning community that they used to have in face-to-face classes (Dwivedi et al., 2019; Lee, 2010; Soffer & Cohen, 2019). In addition, increased academic integrity violations in the online learning environment are a significant concern for educators (Rogers, 2006; Noorbehbahani et al., 2022). With students taking exams and submitting assignments online, it becomes challenging to monitor whether they complete the work indecently and without cheating, which undermines the credibility of online courses (Mott, 2010; Noorbehbahani et al., 2022; Underwood & Szabo, 2003).

The challenges from the instructors' side include a lack of faculty acceptance of online teaching and learning (Baran & Correia, 2014; Seaman et al., 2018), the shortage of trained instructor designers for online courses (Chao et al., 2010; Ciabocchi et al., 2016), and the inadequate resources to provide guidance and support for online course preparations (Parscal & Riemer, 2010). As online courses have become the norm in traditional higher education and their demands continues to increase in the post pandemic era, it is crucial to address the challenges that affect the quality of online courses and explore ways to enhance online learning environments.

The Quality of Online Courses

Quality Matters defines quality online courses as those that can ensure students achieve desired learning outcomes effectively. The general quality features include clear course learning objectives, well-aligned assessments and measurements with learning objectives, well-designed instructional materials and learning activities, fostered learner engagement and interactions,

effective use of technology, sufficient learning support, and ensured course accessibility and usability (Quality Matters.org, 2023). Instructor's presence and the strategies they use to interact with and support students are also important factors in providing engaging and meaningful online learning experiences (Martin et al., 2019; Todri et al., 2020).

Research argues that online courses require different sets of pedagogical skills and design and delivery processes compared to face-to-face classes (Harris et al., 2020). The learning materials and activities used in online courses should be different. The design and development of quality online courses requires the effective integration of subject matter content, pedagogical knowledge content, and a wide range of technologies (Andrews & Hu, 2021). Pedagogical knowledge refers to strategies and ways of communicating subject matter content to learners (Shulman, 1986). However, many online courses have compromised quality, which may be due to instructor's resistance of making changes to course content and teaching methods (Bennett et al., 2017; Miller & Stein, 2016) or their lack of online course design skills and experiences (Baldwin et al., 2018; Esfijani, 2018; Seaman et al., 2018). Therefore, knowing how instructors design online courses and the instructional strategies they use is essential to providing high-quality online courses.

Instructional design (ID) theories and practices have been consistently affirmed in providing effective guidance for the design and development of high-quality online courses (Chen & Carliner, 2020; Drysdale, 2019; Quality Matters.org, 2023; Richardson et al., 2019; Xie et al., 2021). The next section of this literature review provides an overview of ID history, related theories, and models.

Instructional Design

Instructional design (ID) is defined as "the systematic process for analyzing learning problems, designing, developing, implementing, evaluating and managing instructional materials which intended to make the learning more effective in a variety of settings" (Reiser & Dempsey, 2018, p. 5). It is an evolving field that reflects emerging pedagogical theories and technologies (Gustafson & Branch, 2002; Reiser & Dempsey, 2018). The field has been affected by many essential historical events and emerging learning theories over the past century.

History of Instructional Design

The early history (the 1900s to 1930s) of ID can be traced to when school teachers decided to use materials such as motion pictures, instructional films, and audiovisual materials to supplement formal teaching (Reiser, 2001a). World War II is considered the origin of ID as a field of study when educators and researchers worked together to effectively and efficiently train soldiers to integrate new military equipment into the battlefield (Reiser, 2001b). As part of the efforts, researchers found audiovisual slides, films, and other media showed great success in training a large number of individuals in a short time (Reiser, 2001b). As a result of these successes, businesses and industries started applying the process of instructional design to design job training after World War II.

Key ID practices included writing instructional objectives, designing effective instructional materials, and evaluating learning. B.F. Skinner's article in 1954 first described the concept of programmed instructional materials. According to Skinner's research, learning must be observable and measurable (Gustafson & Branch, 2002), and instructions must be given in small steps with immediate feedback (Reiser, 2001b). To ensure learners gain the skills and knowledge from the instructional material, Ralph Tyler and Bobbitt, Charters, and Burk (Gagne, 1965, as cited in Reiser, 2001b) introduced the use of learning objectives. Robert F. Mager, in the 1960s, further provided instructions on writing learning outcomes (Reiser, 2001b). In 1956,

Bloom published the *Taxonomy of Educational Objective*, which emphasized different levels of learning outcomes (Reiser, 2001b).

In the 1960s, Gagne's (1985) nine events of instructions articulated the basic process of designing instructional materials. The nine events of instructions are gaining the learner's attention, informing learners of objectives, stimulating recall of prior knowledge, providing guidance of learning, eliciting practices, providing feedback, assessing the learner's performance, and enhancing retention and transfer (Gagne, 1985). Applying those events would help learners achieve learning objectives effectively. Also, criterion-referenced testing (Glaser, 1963, as cited in Reiser, 2001b), which intends to test both students' entry behaviours and the behaviours they take from a program, is considered "a central feature of instructional design procedure" (Glaser, 1963, p. 60, as cited in Reiser, 2001b). In the late 1960s, as businesses and industries kept using the ID process in job training, there was an increased need to evaluate the value of training. Kirkpatrick's four levels of evaluation—reaction, learning, behaviour, and results—were adapted to evaluate training programs (Kirkpatrick & Kirkpatrick, 2006). From the same origin, researchers expanded the scope of traditional ID and went beyond individuals to focus on organizational performance. Performance improvement combines theories and principles from behavioral learning theory, system theory, organizational development, and communication theory, uses innovative tools and non-instructional interventions to analyze performance gaps, and then addresses or enhances performance problems (Richey et al., 2011; Reiser & Dempsey, 2018).

As the use of personal computers and technologies increased in the 1970s and 1980s, the field of ID switched focus to providing computer-based instructions (during that time, the computer was used to teach computer skills [Reiser & Dempsey, 2018]). The development of the internet in the 1990s brought interest in online learning, and the more stable internet of the 2000s rapidly increased online learning and blended learning (Seaman et al., 2018; Reiser, 2001b). ID professionals are needed to design and develop learning materials that integrate with new technologies into the online and blended environment (Origin Learning, 2015). In early 2010s, the focus on ID switched to the development of open educational recourses (OER) and Massive Open Online courses (MOOCs) to facilitate the easy access of learning materials for free or at a low cost (Porter, 2017). In recent years, the development of learning management systems has further shaped ID practices to allow multiple ways of organizing and tracking online learning activities. Also, the emerging technologies have enabled ID practices to focus on a student-centered approach that provides personalized and adaptive learning (Reigeluth et al., 2017).

Learning Theories Affect Instructional Design Practices

Many learning theories have influenced the development of ID. Skinner's behaviourism theories brought in the fundamental ideas in ID in the early 1950s. Behaviourism views learning as using external stimuli to make learners achieve desired behaviours (Ertmer & Newby, 2013). The learning tasks must be measurable and observable and can be achieved with practice. ID practices, such as writing learning objectives, criterion-reference testing, and providing instant feedback, are rooted in behaviourism theories (Richey et al., 2011).

Cognitive theories focus on how learners "acquire, process and store information" in their minds (Cherry, 2012, p. 2). It guides ID to consider different learner characteristics and learning strategies and create activities to connect prerequisite knowledge to new knowledge (Shift eLearning, 2019). According to cognitive theories, learners play active roles in processing learning content. ID strategies, such as consistent content structure, chunking learning materials,

and connecting new knowledge with learners' previous knowledge, are essential in helping learners process and store learning content (Richey et al., 2011).

Social cognitive theories assume "learners draw out information from observing the behaviors of others, and then make decisions about which of these behaviors to accept and perform" (Richey et al., 2011, p. 61). They focus on exploring individual learners' behaviors, the consequences of the behavior, how learners internalized the behaviors observed from the context, and individuals perceived self-efficacy. ID practices, such as setting clear learners' expectancy, clarifying the value of the learning tasks, and providing samples for learners to follow, help facilitate learning in the social contexts (Richey et al., 2011).

In recent years, the ideas of constructivism have also significantly influenced ID practices. Constructivism theories concentrate on learner-centred learning. Learning is the result of individuals' interpretation of their own learning experiences (Richey et al., 2011). It emphasises learning from authentic tasks and contexts and collaborative and interactive learning (Reigeluth et al., 2017; Reiser, 2001b). ID practices, such as designing problem-based learning activities, encouraging collaborative learning tasks, and scaffolding (Vygotsky, 1978), are rooted in constructivism theories.

ID Processes

The ID process is goal-oriented, focusing on identifying client's needs and goals and translating them into specific instructional materials called deliverables (Gustafson & Branch, 2002; Smith & Ragan, 2005). The origin of the ID process consists of task analysis, stating objectives, and testing (Reiser, 2001a). The analysis, design, development, implementation, and evaluation (ADDIE) model is a general process (often called a model, though it is better characterized as a conceptual framework) used as a conceptual model by many instructional design professionals. The ADDIE model presents linear and step-by-step procedures for designing instructional materials (Gustafson & Branch, 2002; Richey et al., 2011; Smith & Ragan, 2005). Many ID models have emerged based upon the ADDIE model by adding or tweaking the activities. However, ID practices are often nonlinear and come with back-and-forth and in-between steps (Gustafson & Branch, 2002). Some ID models have been developed over the past few decades to help identify the generic and applicable steps in the ID process within different contexts and to guide designers through the design process (Arshavskiy, 2017; Branch & Dousay, 2015; Reiser & Dempsey, 2018). Table 2.1 shows some of the commonly used instructional design models in different contexts with various focuses.

Table 2.1

Instructional Design Models

Models	Key Activities	Focuses	Contexts
Smith and Ragan's model (Gustafson & Branch, 2002; Smith & Ragan, 2005)	• Analysis • instructional strategies development • evaluation	Creating the instructional strategies, organization of the instructions, delivery methods, and management of the instructions (Smith & Ragan, 2005)	Workplace and education
Merril's Model	• Find the problem • Activation • Demonstration	Preparing instructions, provide real-world problems and provide	Workplace and education

	• Application • Integration	hands-on experiences to learners.	
ARCS model (Keller, 1987)	• Attention • Relevance • Confidence • Satisfaction	Learners' motivations throughout the instructions.	Workplace and education
Kemp's model (Arshavskiy, 2017; Branch & Dousay, 2015)	• A nonlinear and circular structured model • Planning • Analyzing problems, learners, and tasks • Instructional objectives • Content designing • Instructional delivery evaluation • Project management Revisions • Support services	Taking learners' characteristics and needs into consideration throughout the design process.	Workplace and education
Successive approximation model (SAM) (Arshavskiy, 2017)	• A simplified version of the ADDIE model • Information gathering • Iterative design: design, prototype, and review • Iterative development: develop, implement, and evaluate	Fast prototyping and iterative process to develop learning products.	The contexts where there is limited time and budget in designing and developing products
Four-door (4D) model (Arshavskiy, 2017)	• Library (information and resources to achieve learning objectives) • Café (learning through interactive activities) • Playground (activities to apply the knowledge and skills) • Evaluation center (includes assessments and tests)	Enables learners to choose where to start based on their personal experiences and preferences.	Self-controlled E-learning environment
Backward design Dick and Carey's model (Dick et al., 2017)	• Assess needs • Analyze contexts and learners • Write performance objectives • Develop assessment instruments • Develop instructional strategy • Develop/select instructional materials • Design and conduct evaluation	It starts with clearly defined outcomes and then uses them as criteria to build other elements.	Higher education

Diamond model (Branch & Dousay, 2015)	• A linear model
	• Phase one
	  ○ Analyzing multiple factors that might affect the feasibility of launching the project before starting the development. Considering the ideal solutions for the project and developing an operational plan
	• phase two
	  ○ project production, implementation, and evaluation
		Considering the policies and social factors within the institutions. Emphasizing organization support and faculty's ownership of the ID.	Higher education

Despite the impact of digital technologies and learning theories on ID and the development of new instructional design models by many researchers over the years, the ADDIE model is still the most popular model guiding ID practices, with little change observed in the ID process (Reiser & Dempsey, 2018).

ID and Online Course Design in Higher Education

Unlike face-to-face courses, which rely heavily on lecturing and class discussions, the design and development of online courses require designers to equip specific knowledge and skills such as understanding online pedagogy and learning theories, selecting proper instructional strategies to meet diverse learning needs, and being proficient in integrating a variety of technologies to present course content and ensure seamless course navigation to help learners achieve learning goals (Perry & Steck, 2019; Singh et al., 2022). In addition, ID theories and principles are also considered essential in designing and developing high-quality online courses (Chen & Carliner, 2020; Drysdale, 2019; Quality Matters.org, 2023; Richardson et al., 2019; Xie et al., 2021).

ID theories and principles help demonstrate measurable learning objectives and clarify the alignments between learning objectives and learning content, foster learner engagements by adopting learner-centered instructional strategies (Perry & Steck, 2019), and use multimedia modes to connect course content, learners, and instructors (Dicks & Ives, 2009; Fyle et al., 2012; Senn & Wessner, 2021; Tsai et al., 2018). Also, ID practices help organize course content and optimize the visual representation of courses (Halupa, 2019), leverage the effectiveness of integrating digital tools into learning content (Fong et al., 2017; Halupa, 2019; Hixon, 2008; Liu & Dempsey, 2017), and ensure the inclusivity of course content (Mancilla & Frey, 2020; Xie & Rice, 2021). With the increased high demand for online courses in higher education, many higher education institutions have devoted continuous efforts in seeking effective approaches to design and deliver quality online courses (Seaman et al., 2018).

Instructors in Higher Education

Instructors play the key role in designing and delivering online courses in higher education (Martin et al., 2019). Instructors in this study refer to individuals who teach courses in higher education institutions and have the expert knowledge related to the courses. Instructors hold different statuses including the following: tenured/tenure-track faculty, such as assistant professors, associate professors, and full professors, whose work focuses on research and services rather than teaching at the institutions (Foster & Bauer, 2018), and nontenure-track

faculty, such as contingent faculty, contract instructors, adjuncts, and lecturers, who are mainly hired to teach and have little-to-no research responsibilities (Foster & Bauer, 2018; Waltman et al., 2012).

Instructor's Work

In public research higher education institutions, faculty members' work comprises teaching, research, and services (Hendrickson et al., 2013). Teaching tasks include designing and preparing course content, course delivery, grading, office hours, supervising students, and communicating with and supporting students. Research refers to tasks such as conducting disciplinary and interdisciplinary studies, writing peer-reviewed articles and books, giving conference presentations, and preparing research funding proposals (Gopaul et al., 2016). Services vary from sharing expertise with professional societies, reviewing works of scholarly peers and administrative works such as curriculum design, hiring new faculty, and reviewing students' applications within institutions (Hendrickson et al., 2013).

Depending on faculty's status, the percentages of each job portion differs. In the Canadian context, tenured/tenure-track faculty members typically spend 40% of their time on teaching, 40% on research activities, and 20% on administrative work (Foster & Bauer, 2018), whereas nontenure-track faculty members are mainly hired and paid for teaching (Foster & Bauer, 2018; Waltman et al, 2012). They work around 30–40 hours per week on teaching, but a majority of them have another job outside of teaching (Foster & Bauer, 2018). More than 70% of faculty members follow the nontenure track in most institutions (Flaherty, 2018). In the Canadian context, according to a recent report, full-time faculty members are increasingly being replaced by casual lecturers (Usher, 2020). Perry and Steck's (2019) study revealed the trend that younger and nontenure-tracked instructors are more likely to be involved in designing and delivering online courses.

Instructor's Teaching in Higher Education

Teaching in higher education does not require a formal teaching qualification (Kálmán et al., 2020), and most instructors are hired based on their research or profession expertise in the field. Most of them have not received any formal training in teaching or ID (Carliner & Driscoll, 2009; Singh et al., 2022). Many factors affect instructors' teaching practices, as outlined below.

Faculty Status. Many of them have large workloads and are often required to work overtime, which often leads to them feeling pressured (Hemer, 2014). To manage the workload, they need to balance their work responsibilities of teaching, research, and administration. Instructors may lack motivation to improve teaching because universities value and reward instructors' research skills more than good teaching (Brownell & Tanner, 2012). Some faculty members chose to minimize their teaching work or recycle course content for multiple semesters to save time on course preparation so they can focus on their research and meet the criteria for promotion (Hardré et al., 2010; Kálmán et al., 2020).

Teaching Beliefs and Approaches. Faculty's epistemology beliefs, teaching approaches, intentions of teaching, and discipline and previous experience greatly influence their teaching practices in higher education. Epistemology beliefs relate to how faculty members see the nature of knowledge (Hofer, 2001). Epistemological realists view knowledge as an entity, which can be acquired and transferred from one another, and the goal of learning is to help learners master and construct knowledge, whereas epistemological relativists view knowledge as an activity in the context of the individual, and the goal of learning is to focus on developing and changing learners' thinking and acting related to the knowledge (Wegner & Nückles, 2015). Depending on the epistemological stance, teaching approaches are divided into two categories: teacher-oriented

and student-oriented approaches. The teacher-oriented approach focuses on transferring and acquiring knowledge. The role of the teacher is to transmit knowledge to the students. Lecturing is a commonly used strategy in the teacher-oriented approach. In contrast, the student-oriented approach emphasizes developing and changing knowledge. The teacher serves a supportive role in guiding students to build their own knowledge regarding the subjects being taught (Trigwell & Prosser, 2004; Wegner & Nückles, 2015). Teaching approaches have been found to be related to quality of learning. Changing teaching approaches may help improve students' learning (Trigwell & Prosser, 2004). Some studies have found student-oriented approaches worked better in improving students' learning (Stes & Van Petegem, 2014; Trigwell & Prosser, 2004). The student-centered approach is desired in higher education contexts (Aga, 2005). Faculty's self-efficacy— "knowledge a faculty has about the subject matter and pedagogy to help students learn and understand the course materials using a variety of teaching methods to achieve that purpose" (Park & Oliver, 2008, p. 265)—helps to understand why or why not faculty choose or change their teaching approach. According to Horvitz et al. (2015), a faculty with a high self-efficacy level is more likely to make changes. Also, regardless of which of the teaching approaches a faculty chooses, a careful preparation of the content is needed (Fink, 2003).

Motivations in Teaching. According to Hemer (2014), most faculty members care about their teaching quality, and they have the intention of helping teach students to think and question the related discipline. Faculty's intentions of teaching include inspiring students, knowledge acquisition, and enculturation (by making students become part of a subject-matter community; Wegner & Nückles, 2015). Some studies have revealed that faculty in different disciplines apply different teaching approaches (Hardré et al., 2010; Stes & Van Petegem, 2014). Also, faculty's personal teaching and learning experiences affect their conception of teaching and their choice of teaching approaches. For example, faculty members who were taught with a teacher-centered approach as students might be likely to choose a teacher-centered approach when teaching their own students (Oleson & Hora, 2014). As a result, when supporting a faculty's teaching practices, it is necessary to aid them with course design and a teaching style that is customized to their specific needs and styles (Baran & Correia, 2014).

Instructors' Online Course Design and Development

The design and development of quality online courses requires instructors to effectively integrate subject matter content, pedagogical content knowledge, and a wide range of technologies (Andrews & Hu, 2021). Also, they are expected to utilize ID principles and follow ID processes when designing online courses (Andrews & Hu, 2021; Baldwin et al., 2018; Chao et al., 2010). However, most instructors may not have adequate pedagogical content knowledge or be familiar with the various digital tools or learning management system (LMS) for delivering online courses (Perry & Steck, 2019; Singh et al., 2022). Moreover, the concept of ID is relatively new to most instructors.

When preparing online courses, many instructors tend to rely on their past teaching experiences, often from face-to-face classes, and try to mimic the same interactions they had with students in the classroom using digital tools (Chao et al., 2010; Shearer et al., 2020; Singleton et al., 2019). They prioritize adapting their existing course content used in the face-to-face classes for the online environment rather than creating new content (Bennett et al., 2017). Previous studies have found most instructors lack a grasp of pedagogical theory in their approach to deliver online courses and do not follow any design models to structure their courses (Andrews & Hu, 2021; Baldwin et al., 2018; Shearer et al., 2020).

As a result, online courses that are developed by instructors alone may not meet students' online learning needs and expectations fully (Baldwin et al., 2018; Chiasson et al., 2015; Richardson et al., 2019). Also, instructors have reported having challenges in spending too much effort and time on online course preparation (Bawa & Watson, 2017; Chiasson et al., 2015; Kálmán et al., 2020; Singh et al., 2022). Instructors have started to seek training opportunities and support to guide their online course design practices (Andrews & Hu, 2021; McGee et al., 2017).

Johnson et al.'s (2019) survey results indicated that instructors considered lack of support in preparing online courses as the top barrier to embracing online teaching and learning. Since the COVID-19 pandemic, this matter has become increasingly noticeable, given the greater number of instructors who have become involved in online course design and development since 2020 (Lederman, 2020; Singh et al., 2022). A more detailed picture on how instructors use ID theories and principles to design online courses is needed (Baldwin et al., 2018).

Instructional Designers in Higher Education

To address instructors' course design challenges and enhance course quality, instructional designers are hired to support faculty in online course design and development (Bawa & Watson, 2017; Beirne & Romanoski, 2018; Halupa, 2019; Kumar & Ritzhaupt, 2017). Instructional designers are systematically trained with learning theories and pedagogies to provide support and professional training for instructors to solve learning problems using emerging technologies (Reiser & Dempsey, 2018). In higher education institutions, instructional design professionals hold different job titles including instructional designer, eLearning specialist, instructional technologist, learning experience designer, and instructional developer (Chongwony et al, 2020; Fong et al., 2017; Kang & Ritzhaupt, 2015).

Due to the impact of COVID-19, universities are experiencing a rapid digital transformation, resulting in a significant increase in the demand for instructional designers to assist instructors in preparing their online courses (Gacanovic, 2020). According to Decherney and Levander (2020), instructional designers in higher education have become "the Sherpas of online learning teams, experts in how to teach and design a course online" (para. 5). Susan Grajek (May 15, 2020) reported QuickPoll results on how higher education institutions responded to the COVID-19 situation. The report showed a 77% increase in working with ID professionals to prepare online teaching during the pandemic.

Instructional Designers' Tasks in Higher Education

Cox and Osguthorpe's (2003) survey study on how instructional designers spend their time in higher education showed that instructional designers spent significant amounts of time with their faculty clients for meetings, reviewing projects, and providing support for faculty development. Fong et al. (2017), Ritzhaupt and Kumar (2015), and Wakefield et al.'s (2012) studies mentioned that the primary responsibilities of instructional designers in higher education are to support faculty members to meet their needs and achieve their goals related to specific courses. Similarly, Bawa and Watson (2017) pointed out that the primary task of instructional designers in higher education is to help instructors solve pedagogical and technical problems they encounter in the course design process. Instructional designers in higher education work closely with faculty members to ensure they understand the course development process and help them transfer their thoughts to the final course products (Outlaw & Rice, 2015).

Moskal (2012) and Brown's (2016) doctoral dissertations explored the required skills and knowledge of instructional designers in higher education. By interviewing instructional designers about their work experiences, both studies stated that collaboration with faculty is one of the

essential skills for instructional designers in higher education. Some studies emphasized the need for instructional designers to understand and communicate faculty's beliefs and desires in higher education when supporting faculty in transferring their teaching strategies to the online environment (Bawa & Watson, 2017; Dicks & Ives, 2008; Ritzhaupt & Kumar, 2015). Hart's (2018) research stated the importance of understanding and respecting the roles of both parties in developing quality online courses. Fyle et al.'s (2012) study on instructional designers' work in dual-mode institutions in the United Kingdom indicated instructional designers' responsibilities as collaborators (i.e., not to make decisions on what to do for course development but rather to work together with and listen to faculty members).

Other studies have addressed the social impacts of instructional designers in higher education. Campbell et al. (2009) emphasized the value of instructional design in influencing the change of teaching and learning in higher education. Yusop and Correia (2014) built on Campbell et al.'s (2009) ideas, stating that instructional designers should focus on caring about and integrating a faculty's thoughts into the course design process.

ID Support in Higher Education

Many higher education instructions provide ID services to support faculty in online course design and development. Different instructional designer supports provided at institutions include faculty development programs and workshops related to course design and development offered by instructional designers (Hixon, 2008; Mancilla & Frey, 2020), one-on-one consultations with instructional designers (Fong et al., 2017; Liu & Dempsey, 2017; You, 2010), and course design teams that have designated instructional designers to work along with faculty members for a period of time (Bennett & Albrecht, 2021; Hart, 2018; Stevens, 2013). The collaborative, team-based course design support model worked well in designing high-quality courses in the past; however, as online and hybrid courses continue to increase since the pandemic, this model is no longer sustainable when it comes to handling the high demand of instructors' course design support (Bates, 2022). A boutique style of support that focuses on assisting instructors' urgent course design needs has become popular lately (Lederman, 2019; Singh et al., 2022). During the boutique style support process, instructional designers do not help with the full course design process but rather only focus on areas that instructors identified as priorities.

Placement of ID Support

Although different institutions provide ID support in different ways, there are some common patterns regarding placement of the ID service within the organizational structure of higher education institutions, as outlined below.

- In a centralized unit, such as a center for teaching and learning, distance education center, or innovative teaching and learning center (Carré, 2015; Chao et al., 2010; Kumar & Ritzhaupt, 2017).
- Within individual departments, for discipline-specific support (Bird et al., 2007; Curtis et al., 2017; Wagner & Hulen, 2015).
- Partnering with off-campus corporations.

Most higher education institutions, especially medium- to larger-sized public universities, tend to use a centralized unit to provide ID support. Aldridge et al.'s (2013) survey on how universities organized services showed that more than 73% of the large-sized public higher education institutions in the United States utilized a central unit to manage and support their online programs. Fong et al.'s (2017) survey on ID-related professionals in higher education in the United States revealed similar results.

Types of ID Services

Previous studies have also revealed a variety of services that instructional designers provide to their institutions. The list below summarizes some commonly provided services.

- Provide ID-related suggestions:
    - Promoting pedagogical knowledge and the use of the ID process (Andrews & Hu, 2021; Baldwin et al., 2018; Sugar & Luterbach, 2016).
    - Encouraging the shift from instructor-centered to learner-centered instructional strategies to improve student engagement (Perry & Steck, 2019).
    - Writing measurable learning objectives and ensuring the alignment of learning materials with course objectives (Quality Matters.org, 2023; Ziegenfuss & Lawler, 2008).
    - Selecting multimedia sources and technologies to enhance learning interactivity (Dicks & Ives, 2009; Fyle et al., 2012; Tsai et al., 2018; Wagner & Hulen, 2015).
    - Improving instructors' presences to ensure students' engagement and connections with their instructors (Senn & Wessner, 2021; Tsai et al., 2018).
- Design and develop content:
    - Making design judgments related to teaching and learning strategies for the course based on an analysis of learners and learning environments (Gray et al., 2015).
    - Creating a design plan for the course (Gray et al., 2015; Xu & Morris, 2007).
    - Designing engaging learning activities and assessments (Fong et al., 2017; Perry & Steck, 2019).
    - Building and transferring course content to online course systems (Fong et al., 2017; Schwier et al., 2007).
    - Organizing and presenting course content using multiple technologies and authoring tools (Curtis et al., 2017; Fong et al., 2017; Halupa, 2019; Liu & Dempsey, 2017).
- Conduct a course review:
    - Using quality assurance standards to review the course and providing feedback for revisions (Chen & Carliner, 2020; Drysdale, 2019; Quality Matters.org, 2023; Xie et al., 2021).
    - Applying universal design principles to ensure the accessibility and inclusiveness of course content (Mancilla & Frey, 2020; Xie & Rice, 2021).
    - Editing designed instructional materials and activities, checking the content accuracy and ensuring the consistency of course format (Cowie & Nichols, 2010; Robert et al., 1994).
    - Conducting the course to ensure it complies with university policies, copyright requirements, and accessibility regulations (Gibbons, 2014; Campbell et al., 2009; Dicks & Ives, 2008; Mancilla & Frey, 2020; Xie & Rice, 2021).
- Project management:
    - Managing the flow of the course design process and making project plans (Crowley et al., 2018; Fyle et al., 2012).
    - Setting project milestones and managing the budget and resources to ensure the completion of the project (Carré, 2015; Cowie & Nichols, 2010; Hixon, 2008; Ritzhaupt & Kumar, 2015; Xu & Morris, 2007).

    - Connecting instructors to different sources of expertise or resources to serve their course needs (Crowley et al., 2018; Fong et al., 2017; Fyle et al., 2012).
- Instructor's professional development training:
    - Providing training on online pedagogy (Fong et al., 2017).
    - Providing training on developing instructors' skills in using emerging technologies (Halupa, 2019; McCurry & Mullinix, 2017; Scoppio & Luyt, 2017).
    - Familiarizing faculty members with the ID process and helping them apply it to the development of new online courses (Andrews & Hu, 2021; Baldwin et al., 2018; Godsall & Foronda, 2012; Knowles & Kalata, 2007).
- Technical support:
    - Although most instructional designers may not consider technical support their primary role, they are considered as the go-to person to instructors when they experience any technical issues during their online courses design and delivery (Sugar & Luterbach, 2016; Xie et al., 2021). You and Teclehaimanot (2010) explored the roles of instructional designers from faculty members' perspectives. The results found that technical support is still the primary reason faculty choose to work with instructional designers. Also, instructional designers always play a crucial role in providing maintenance and ongoing troubleshooting for existing online courses (Halupa, 2019; Knowles & Kalata, 2007; Xie et al., 2021).
- Support teaching innovation:
    - Instructional designers often act in an advocate role when it comes to an institution's innovative strategies, and they help instructors apply for teaching innovation funding, connect them with resources, and foster collaboration among instructors to encourage the exploration of implementing new technology tools in teaching practices and best practices of teaching and learning (Bawa & Watson, 2017; Drysdale, 2019; Fong et al., 2017; Halupa, 2019; Richardson et al., 2019; Xie et al., 2021).

Instructors' Use of ID Support

Although instructional designers in higher education institutions can offer varied support for instructors during the course design process and potentially enhance their course quality, the realization of these potentials largely depends on instructors because they play an essential role in making course design decisions on when and how to use ID support (Bennett & Albrecht, 2021; Lederman, 2019; Pan & Thompson, 2009; Richardson et al., 2019).

Dimeo (2017) and Lederman (2019) unveiled that only 25% of higher education instructors had engaged with ID support when designing online or blended courses before the pandemic. Many instructors leaned toward seeking advice from their colleagues with similar educational backgrounds (Lederman, 2019). The percentage of instructors collaborating with ID increased to over 75% during the pandemic (Kimmons et al., 2020). This increase required further exploration of instructors' use of ID support (Singh et al., 2022).

The ID support model, which has ID teams collaborate with instructors to develop fully online courses following ID models, has worked well in designing high-quality courses in the past (Bates, 2022). However, as more instructors have become involved in online and hybrid course design and delivery, that model is no longer sustainable when it comes to handling high demands and meeting instructors' various course design support needs (Bates, 2022).

Naffi et al. (2020) explored Center of Teaching and Learning (CTL) directors and representatives' opinions on the challenges and successes of instructors' rapid switch to online

learning during the pandemic. Their paper provided insights on what CTLs did to support instructors' online course preparation and teaching and how and when instructors sought out CTL support during the pandemic. The revealed challenges included instructors' resistance of online teaching and learning, their lack of readiness of online teaching, and balancing their work responsibilities at the institutions. Further exploration of instructors' experiences with online course design and delivery support and how they perceive the efficiency of the support is needed.

Instructors' Perceptions of ID Support

Previous research has revealed that many instructors value the instructional designer support provided in their institutions (Chittur, 2018; Xu & Morris, 2007). Xu and Morris' (2007) case study found that instructors expressed satisfaction with their instructional designers and viewed their experience as a valuable opportunity for professional development. Chittur's (2018) study showed that instructors valued the pedagogical support provided by experienced instructional designers. Moreover, interacting with instructional designers has been shown to help professors shift to a more student-centered instruction approach (Chittur, 2018; You, 2010).

King (2017), You (2010), and Roberts et al.'s (1994) studies have indicated instructors value instructional designers for their editorial role, keeping an eye on the course format, proofreading, and advising on the use of media, rather than for their consultancy role, which concentrates on providing pedagogical suggestions for the learning materials. Terantino and Agbehonou's (2012) study showed that faculty members consider ID services as essential to their online course design. Instructors found that working as a team with instructional designers helps improve the quality of the course and enriches their professional experiences in online course design and delivery (Brown et al., 2013; You, 2010).

Factors Shaping Instructors' Use of ID Support

Previous studies have delved into various factors that either facilitate or hinder instructors in embracing ID support and incorporating ID principles more comprehensively into their course design practice. The key factors elucidated in previous research have encompassed instructors' working styles and previous experiences, their understanding of ID, their self-efficacy in technology integration and openness to change, their course design needs, and their collaborations with professionals in ID.

Instructors' Working Style and Teaching Experiences. Hixon's (2005) study on faculty's experiences in collaborative course design revealed that instructors' working styles and previous experiences significantly affect their experiences working with instructional designers (Hixon, 2005).

Most instructors in higher education used to work alone with complete control over their courses. When working with instructional designers, instructors might be afraid they will step into their courses and change their teaching approach (Dimeo, 2017). Studies have shown faculty members have been concerned that the involvement of instructional designers would impede their academic autonomy (Bawa & Watson, 2017; Cowie & Nichols, 2010; Stevens, 2013). Sharing course content with instructional designers and receiving comments might sometimes make faculty members uncomfortable because they could feel they are being judged or losing control of their course content (Dimeo, 2017; Gunn & Cavallari, 2007). Certain instructional designers expressed issues regarding the ongoing communication and detailed feedback they offer, which could overwhelm instructors. This concern arises from the fact that faculty members are not accustomed to work so closely with professionals outside of their fields (Chao et al., 2010).

Instructional designers and faculty members have different backgrounds and use field-specific terms when talking to each other, which can lead to misunderstandings and confusion (Bird et al., 2007; Gerin-Lajoie, 2015; Hixon, 2008; Stevens, 2013; Xu & Morris, 2007). Instructional designers often do not have the adequate subject matter knowledge of the instructors, which might make it hard for instructors to buy into their suggestions (Chao et al., 2010). Instructors have indicated they expect instructional designers to better understand the subject matter content (You, 2010). Furthermore, some instructors have expressed concern about the loss of creativity in their courses and complained about the "same look" of online courses across the university if they worked with instructional designers to develop their courses (Chao et al., 2010; Oblinger & Hawkins, 2006; Pan & Thompson, 2009).

You's (2010) study found that faculty's experiences using ID services differ depending on the instructors' disciplines and their academic status at the institution. Instructors from different disciplines need different instructional strategies or need to adopt different ID practices (Halupa, 2019; Richardson et al., 2019; Scoppio & Luyt, 2017). For example, instructors in the humanities and social sciences intend to explore ways to increase student–student interactions in class, whereas instructors in science and engineering disciplines might focus on exploring instructional strategies that facilitate hands-on learning tasks (Andrews & Hu, 2021).

Instructors' academic status also affects their use of ID services. Their teaching priorities vary based on their academic status. Previous studies have revealed that younger and nontenure-tracked instructors are the major forces in designing and delivering online courses (Perry & Steck, 2019). Nontenure-tracked instructors might have more time and be more willing to engage with ID services than tenure-tracked instructors who have more research and administrative commitments (Bawa & Watson, 2017; Curtis et al., 2017; Foster & Bauer, 2018). Moreover, novice instructors might be more motivated than experienced instructors to seek out ID services to guide their teaching (Halupa, 2019).

Many successful cases of ID support share a common feature: instructional designers made efforts in understanding instructors' past experiences and their working style. For example, Berrett (2016) provided an example of how an ID team worked with the University of Arizona faculty members. The team worked closely with faculty members weekly, made sure to know the faculty's preferred teaching approach, and made them feel comfortable switching to an online mode. Dicks and Ives (2009) employed a conversation-based inquiry to explore instructional designers' reflections on how they engage with faculty clients in the process of designing instructions. Their study emphasized the significance of instructional designers employing both social and cognitive skills to establish effective communication with faculty and understand their ideas. Understanding faculty's work was found to be pivotal for instructional designers to collaborate efficiently with faculty (Dicks & Ives, 2009). Campbell et al. (2006, 2009) also adopted a conversation-based inquiry and worked with more than 20 instructional designers in several Canadian higher education institutions to explore their practices. Similarly, they highlighted that instructional designers' practices revolve around delving into the understanding of the faculty's detailed stories and goals through in-depth conversations. Then, instructional designers used these narratives to translate them into tangible outcomes using the ID process.

Instructors' Understanding of ID. Instructors' understanding of ID principles and instructional designers' roles and responsibilities has a great impact on whether they choose to embrace ID support, which further leads to the design of high-quality courses (Bennett & Albrecht, 2021; Drysdale, 2019; Halupa, 2019; Richardson et al., 2019; Stevens, 2013). Xu and Morris (2007) and Halupa (2019) suggested that having clear roles and responsibilities among

instructors and instructional designers helps build positive working relationships. Hart's (2018) study also emphasized the importance of understanding and respecting the roles of both parties in developing quality online courses.

However, many instructors reported not knowing instructional designers' skills and expertise and feel insecure about working with IDs because they do not have the same subject matter knowledge as the instructors (Bennett & Albrecht, 2021; Dimeo, 2017; You & Teclehaimanot, 2010). Some studies have found that instructors chose not to work with instructional designers because they could not see how instructional designers could help with their course design (Dimeo, 2017). Moreover, other studies have mentioned that instructors do not realize their institutions offer ID services or do not know how to get ID support (Chow & Croxton, 2017; Dimeo, 2017; Tannehill et al., 2018). This issue has become more pronounced since the pandemic as more instructors design and develop online courses (Lederman, 2020; Singh et al., 2022).

Most instructors are unclear on what instructional designers can do or what value they can bring to their projects. For instance, faculty may see instructional designers as technical support staff only, but the fact is that instructional designers can be of great help with the pedagogical aspects of projects (Pan & Thompson, 2009). Several studies have revealed that instructional designers usually feel their expertise or values are underestimated and feel they lack power in course design (Bird et al., 2007; Miller & Stein, 2016). Such a feeling could impede instructional designers' enthusiasm and affect the quality of their work in the long run.

Instructors' Self-efficacy in Online Teaching and Openness to Change. Teaching self-efficacy refers to instructors' confidence in their ability to help students improve their learning (Corry & Stella, 2018). Instructors with higher teaching self-efficacy tend to be more willing to make efforts toward changing their teaching or take teaching innovation at work (Bandura, 1977). In recent years, instructors' self-efficacy in online teaching has become of interest to researchers (Corry & Stella, 2018). Elements that have contributed to instructors' self-efficacy in online teaching include their perceived technology proficiency, pedagogical knowledge, and subject matter content knowledge; instructors' perceived ease of adopting online teaching; and willingness to collaborate with others, engage with students, and adapt teaching innovations (Corry & Stella, 2018; Gomez et al., 2022; Horvitz et al., 2015).

Instructors' self-efficacy is considered an essential factor in ensuring the quality of online courses because it predicts instructors' willingness to work through challenges and take up new challenges in mastering teaching in the online environment (Gomez et al., 2022; Horvitz et al., 2015). The online teaching environment is relatively new to most faculty members, which could lead to anxiety because there are many new things to learn (You, 2010). Instructors with higher teaching self-efficacy are more open to tackling challenges and exploring resources that help enhance their teaching and are therefore more likely to seek ID support.

Instructors' Course Design Needs. When creating online courses, instructors often do not consciously view their work as designing course materials but rather as constructing them, which differs from the perspective of instructional designers, who follow a more prescriptive design process (Bennett et al., 2017; Goodyear, 2015; Voogt et al., 2015). As McCurry and Millinix (2017) and Xie et al. (2021) mentioned in their studies, ID support needs to be customized to meet each instructor's course needs. Most instructors appreciated ID's individualized support specific to their course needs (Fong et al., 2017; Liu & Dempsey, 2017; You, 2010). Kampov-Polevoi's (2010) study on faculty's perspectives on the process of transferring a face-to-face course to an online one showed that instructors need ID consultations

more than full support. However, the effectiveness of current instructional designers' course design practices and strategies when working with instructors and the skills and knowledge instructional designers should equip to help instructors remains to be discovered (Kumar & Ritzhaupt, 2017; Mancilla & Frey, 2020; Stevens, 2013; Xie et al., 2021).

Working Relationship Between Instructors and IDs. Instructors and instructional designers are often paired to design and develop online courses (Chao et al., 2010; Halupa, 2019; Hart, 2018; Stevens, 2013; You, 2010). Research has shown that a positive and respectful relationship between instructors and instructional designers eases the course design process, encourages instructors' embrace of instructional design principles, and increases the likelihood of creating an effective online course (Halupa, 2019; Hart, 2018; Stevens, 2013; Xu & Morris, 2007). Campbell et al. (2009) employed narrative inquiries to explore the relationship between instructional designers and faculty in Canadian settings. The findings revealed that a positive working relationship should be mutually beneficial, where those involved influence each other. Chao et al. (2010) recommended establishing long-term working relationships between faculty and instructional designers to foster rapport. Similarly, Tate's (2017) research highlighted how building familiarity between instructional designers and instructors contributes to their positive working relationships. Stevens' (2013) study showed effective communication between instructors and instructional designers and mutual respect for one another's time and talent and commitment to course quality have positive impacts on instructors' positive course development experience.

Halupa (2019), Miller and Stein (2016), Richardson et al. (2019), and Xie et al. (2021) explored factors that could potentially lead to tensions in the working relationships between instructors and instructional designers. These conflicts primarily revolve around misunderstandings concerning of the roles and responsibilities of instructional designers and instructors, differing viewpoints in online teaching and course design process, and a lack of awareness regarding instructors' course design needs.

Other studies have focused on introducing effective models to facilitate the working relationships between faculty and instructional designers. Schwier et al. (2007) suggested a social constructivist model explaining the social agency roles that instructional designers should play when working with faculty members. Gunn and Cavallari (2007) proposed a heuristic approach to better guide designers to understand faculty members' needs and provide effective pedagogical and technological support. Using multiple case studies conducted in an Australian university, the models indicated effectiveness for team-based course development. Drysdale (2019) examined the effectiveness of a proposed collaborative model that facilitates faculty and ID relationships by giving instructional designers different roles in different phases of course design. The results showed a significant increase in course quality and relationships.

Gaps in Previous Literature

First of all, most of the studies that have explored the challenges and conflicts regarding providing ID support in higher education (Fyle et al., 2012; Halupa, 2019; Intentional Future, 2016; Liu & Dempsey, 2017) and investigated the roles and responsibilities of instructional designers (Ritzhaupt & Kumar, 2015) and working relationships between faculty members and instructional designers in higher education (Albrahim, 2018; Bawa & Watson, 2017; Carré, 2015; Chao et al., 2010; Hart, 2018; McCurry & Mullinix, 2017; Stevens, 2013; Xu & Morris, 2007) were written from instructional designers' perspectives rather than instructors' perspectives. It is necessary to include the point of view of the faculty regarding the use of ID support and how they feel about the roles each party plays in the course design process. You

(2010) conducted a study exploring faculty's perspectives on working with instructional designers to implement best practices in online course design. According to You (2010), "little is known about whether faculty attribute any improvement of their readiness of teaching online courses to work with instructional designers" (You, 2010, p. 73). More research is needed to explore faculty's perceptions regarding working with instructional designers. A better understanding of the faculty's experiences would help minimize the conflicts that might arise during the process and provide guidance for the instructional designers on how to better support faculty members (Hixon, 2005). Notably, You's (2010) study applied quantitative methods and was conducted before 2010. It is worthwhile to investigate a similar topic to see whether there has been any change in the past decade. Also, qualitative methods would provide detailed descriptions of the experiences that would enrich the findings of You's (2010) research.

Second, more research is needed on various factors that influence instructors' adoption of ID support and the specific ID practices and principles that instructors incorporate into their courses. Previous studies have identified factors such as having a clear understanding of ID and building collaborative relationships with instructional designers to contribute to instructors' acceptance of ID practices (Bennett & Albrecht, 2021; Drysdale, 2019; Halupa, 2019; Richardson et al., 2019; Stevens, 2013). However, a more in-depth exploration is required to understand the extent to which these factors affect instructors' implementation of ID support and the specific types of ID support they choose to implement.

Third, there is a call for more comprehensive investigations into instructors' course design practices and how they contrast with the ID process. Andrews and Hu (2021), Baldwin et al. (2018), and Berrett (2016) provided insights into the differences between instructors' and IDs' approaches to course design. A more thorough analysis of these differences could offer insights into the skills and knowledge future IDs would require to effectively support instructors.

Additionally, more research related to the experiences of using ID support to design and develop online courses in recent years is needed. During the pandemic, when everyone had to "embrace online learning fully" (Decherney & Levander, 2020, p. 2), there was a significant increase in the number of instructors working with instructional designers to design online courses. The types of ID services offered were also adjusted because of the change. Previous studies that focused on the ID model where instructional designers worked with instructors to go through the full course design and development cycle (Bates, 2022) might not accurately represent instructors' experiences and needs for ID support in the post pandemic era. Also, ID in higher education is an evolving field that continues to expand and change to meet the growth of online courses (Beirne & Romanoski, 2018).

Moreover, many recent articles (published between 2016 and 2020) related to the topics are grey literature. In contrast with scholarly literature, grey literature is defined as information produced outside of traditional publications (McKenzie, 2020). Grey literature aims to inform or promote certain viewpoints, products, or services to the targeted audience (Mitchell, 2016). Types of grey literature include whitepapers, blog posts, government documents, reports, and working papers (McKenzie, 2020). Some examples of grey literature related to the researched topic include Intentional Future (2016), which conducted a survey to profile instructional designers in higher education. O'Malley's (2017) article, which indicated there is still ambiguity regarding what instructional designers do in higher education. Tate's (2017), and Berrett's (2016) articles, which touched upon the working relationships between faculty and instructional designers. Miller and Stein's (2016) and Dimeo's (2017) articles on the challenges related to faculty and ID collaborations.

The grey literature provided benefits in exploring the research topic. First, it provided more current issues related to ID and online courses in higher education compared to scholarly literature because the majority of the grey literature does not go through the peer-review process and has fewer restrictions in publishing, which allows faster access to the latest focuses of the field. Second, it offers an overview of what is happening from the point of view of the professionals in the field, and the writing style of grey literature helps readers understand the related topic quickly. However, there are also drawbacks of the grey literature. For one thing, it sometimes is persuasive and biased because it often uses and presents data that is helpful to promote a particular viewpoint. For instance, articles on the importance of implementing ID in higher education are written mainly by instructional designers, with the assumption that ID is the solution to high-quality online courses. Those articles aim to make the audience "buy in" to the presented viewpoints and defend the value of ID rather than neutrally exploring the topic. Additionally, grey literature does not use conventional research methods when collecting and analyzing data, which may affect the validity of the results. Also, because grey literature may not be peer-reviewed, it is not as reliable as scholarly articles. Grey literature raised interesting viewpoints on the related topic and provided real-life examples from the field, but it may be helpful to explore these topics more scientifically. Therefore, more empirical research is needed into the viewpoints of the grey literature.

Theoretical Framework

This study examines how instructor course design activities are influenced by ID support. One key aspect under investigation is the impact of ID suggestions, which are offered by instructional designers, on instructors' course design practices. These ID suggestions encompass a range of ID principles, instructional strategies, and exemplars of best design practices. They are viewed as cognitive tools that instructors utilize within their course design activities.

Activity theory (AT) is the theoretical lens within this study that is used to provide a holistic and visual representation of instructors' stories in designing online courses in higher education. Examining instructor's course design as a collective activity mediated by tools offers a deeper understanding of how ID principles and practices can be used to support instructors' online course design and development.

Activity Theory

Originating from Vygotsky, AT provides a systemic approach to understand complex and interconnected human activity within social and cultural contexts (Engeström, 2015). *Activity* refers to purposeful and collective interactions between individuals' viewpoints or voices and goals (Cole & Engeström, 1993). Activity is considered as the minimal meaningful unit of analysis (Engeström, 2015).

According to AT, human activity is goal oriented. Individuals' motives or needs drive them to engage in an activity (Kaptelinin & Nardi, 2006). AT assumes the social and cultural nature of the human mind and that the human mind and behavior are inseparable, meaning that the human mind needs to be understood in the social and cultural contexts in which human activity occurs (Kaptelinin & Nardi, 2006). Tool mediation plays a central role in human interactions (Kaptelinin & Nardi, 2006; Kuutti, 1996). Human interactions are not direct between subject and object but rather are mediated by tools both physical and nonphysical. The subject uses tools to achieve the object (Cole & Engeström, 1993), and the subject is also affected by the use of the tools (Kaptelinin & Nardi, 2006). In AT, the complete understanding of a tool includes knowing when and how to use it.

The components within the activity are dynamic and may change as the context develops (Engeström, 2015; Mwanza, 2001). AT facilitates the analysis of changes over time in an activity system, which reveals the historical development of the activity (Engeström, 2015; Mwanza, 2001).

Activity Theory Models. Engeström's triangular model provides a visual representation of the activity system. The first generation of AT formed a triad model of subject, object, and artifacts (tools), which centers on an individual activity (Engeström, 2015).

The second generation of AT was inspired by Leont'ev, who differentiated between "individual action" and "collective activity" and expanded the unit of analysis to activity (Leont'ev, 1981, as cited in Engeström, 2015). According to Leont'ev, an individual's activity needs to be understood within its social context. An activity contains actions (a set of conscious behaviours to achieve a desired outcome) and operations (performed to complete an action) (Kuutti, 1996). Activity, action, and operations are not static but rather change dynamically as the context changes. Leont'ev emphasized what is being done but does not elaborate on how individuals interact in the activity within the social context (Engeström, 2015). Engeström's work provided an expanded model of Vygotsky's triad model by adding collective components of rules, tools, community, and division of labour to better examine the interaction between individuals and the social community in which they are involved. Each component within the activity system is dynamic and interacts with one another.

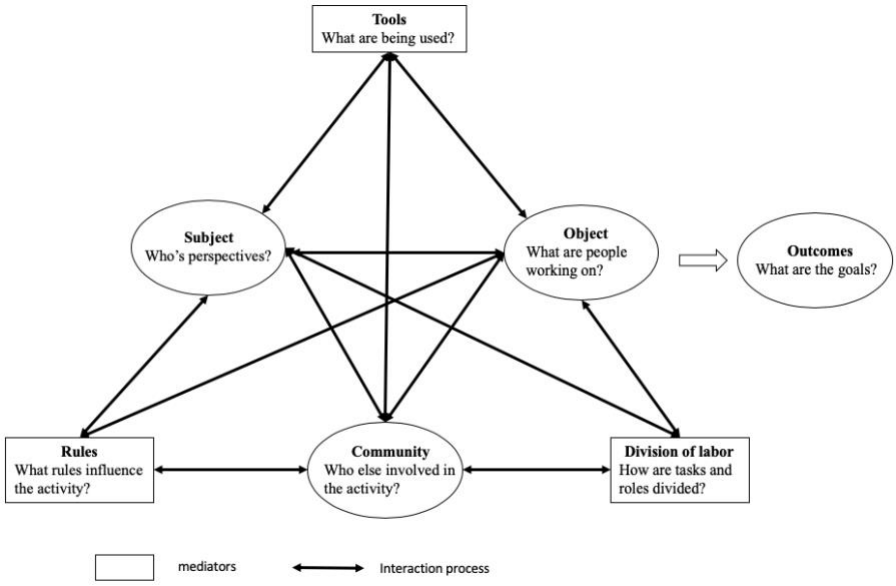
According to Engeström, within an activity system, subjects are motivated by the need to transform an object into an outcome (Kuutti, 1996) and tools are used to mediate the transformation process. Tool mediation is central to all human activities because it is the tool through which the users achieves their objectives. Individual actions are embedded in the social community and are influenced by the rules, roles, and division of labour within the community (Engeström, 2015).

The third generation AT expanded the unit of analysis to a minimum of two activity systems. One activity system is influenced by other activity systems that have partially shared objects. Activities are often not isolated but within the networks of interconnected activity systems (Engeström, 2015). Understanding dialogue between activity systems that have partially shared objects and multiple perspectives and voices in the network of the interacting activity systems is the focus of the third generation of AT (Engeström, 2015). Also, third-generation AT "opened up new possibilities to depict and analyze power relations among activity systems" (Engeström, 2009, p. 6).

Key Components of AT. According to AT, each activity system is visualized as an activity triangle with nodes that show the relationships between and among different components (Engeström, 2015). The top of the AT triangle shows the insertion of new tools into the activity. The middle depicts the subject working on achieving the object. The bottom of the triangle demonstrates the collective components of each individual's context. Figure 1 shows the visual of the activity theory triangle.

Figure 1

The AT Model (Adapted from Engeström, 2015)



The key components in an activity system include subject, object, outcomes, tools, rules, community, and division of labour (Engeström, 2015). Table 2.2 shows the descriptions of each key component.

Table 2.2

Key Components in an Activity System

Component	Descriptions
Subject	Individuals who carry out the activity (Mwanza, 2001).
Object	The products (either tangible or intangible) the subject wants to get out of the activity. It reveals the goal, intention, and motivations of doing the activity.
Outcome	The desired results the subject would like to achieve from doing the activity (Mwanza, 2001).
Tools	The means of carrying out the activity. Tools can be physical (such as a computer), virtual (such as LMS or a course web page), or cognitive (such as ID principles, theories, models, and best practices) (Cole & Engeström, 1993). Tools shape how the subject acts in the activity. Meanwhile, they are shaped by the subject (Kuutti, 1996).
Rules	Implicit and explicit policies, regulations, norms, and conventions affect the performance of the activity (Engeström, 2015; Mwanza, 2001).
Community	The environment that the activity is carried out in involves individuals who share the object and the outcome of the activity (Engeström, 2015).
Divisions of labour	Distribution of tasks, roles, and power relations among the subject or the community (Cole & Engestrom, 1993). It includes horizontal divisions of tasks among individuals based on expertise and vertical

	divisions based on the various power relations among members within the community (Peruski & Nushra, 2004).

The components in the activity system interact with one another and create subsystems within an activity. Based on the function of each subsystem, Engeström (2015) organized them into four subsystems: production subsystem (subject, tool, and object), distribution subsystem (object, community, and division of labour), exchange subsystem (subject, community, and rule), and consumption subsystem (subject, community, and object). Each subsystem represents a different relationship between components, and each subsystem can be analyzed separately to better understand specific components.

Appropriation in AT. According to AT, human activity is mediated by tools. Artifacts are mediators of human thoughts and behaviours (Kaptelinin & Nardi, 2006). The concept of appropriation refers to the extent to which individuals adopt tools (both physical and nonphysical) to use toward objects (Grossman et al., 1999). The extent of appropriation in an activity depends on individuals' characteristics, prior experiences, and motives. It mediates individuals' knowledge of the tools in the activity and affects their decisions on whether and how to use them. Depending on the level of understanding of the tools, Grossman et al. (1999) categorized appropriations into five degrees, as shown in the following table.

Table 2.3

Five Degrees of Appropriation (Grossman et al., 1999, pp. 16–18*)*

Five Degrees of Appropriation	Definitions
1. Lack of appropriation	Learners reject to use of the tool.
2. Appropriating a label	Learners know the name of the tool but need help understanding its feature.
3. Appropriating surface features	Learners know and use some of the features of the tool but need help understanding how those features contribute to the conceptual whole.
4. Appropriating conceptual underpinnings	Learners know the theoretical basis of the tool. They might not know the name of the tool but can use it occasionally in various contexts.
5. Achieving mastery	Learners can use the tool effectively.

In this study, ID suggestions are considered as invaluable tools to enhance the course design process, leading to engaging and effective learning experiences for students. AT is used as a tool to explore how and why instructors apply ID suggestions into their course design practices and how well these tools mediate instructors' course design objects in the context of higher education.

Contradictions in AT. Contradictions refer to "historically accumulating structural tensions within and between activity systems" (Engeström, 2001, p. 137). When the subject seeks to implement changes within the activity system and use external elements to support reaching their goals, the incorporation of external elements introduces an imbalance to the system, which results in contradictions between the nodes of the activity system.

There are four levels of contradictions to be analyzed within and between activity systems, as outlined below.

- Primary contradictions: refers to conflicts "within each component of the central activity" (Engeström, 2015, p. 71). For example, contradictions within faculty's personal beliefs about teaching online and their teaching experience.

- Secondary contradictions: "conflicts between two components of the central activity" (Engeström, 2015, p. 71). For example, contradictions between faculty's teaching experiences and ID suggestions provided by instructional designers.
- Tertiary contradictions: "conflicts between the object of the dominant form of the central activity and the object of a culturally more advanced form of the central activity" (Engeström, 2015, p. 71). For example, a teaching system and the implementation of a new process of teaching within the system (Lewin et al., 2018).
- Quaternary contradictions: "conflicts between the central activity and its neighbour activities" (Engeström, 2015, p. 71). For example, an instructor system and ID system.

Contradiction is the primary source of the transformation and development of activity systems (Engeström, 2001). If the contradictions are resolved or adapted, it will help expand the activity, which can lead to transformation (Engeström, 2001). The transformation is the process of bridging gaps between the object and the outcome of the system. The subjects can make decisions on transforming the objects of the activity system in four ways (Russell & Schneiderheinze, 2005, p. 40), as outlined below.

- Narrowing: object contraction.
- Switching: shifting the object in response to contradictions.
- Disintegrating: fragmenting or splitting of the object.
- Widening: object expansion.

In the context of this study, one of the main objects of an instructor's course design activity is to create an engaging course for students. An example of narrowing is when instructors choose to focus on designing several learning activities to make them interactive for students rather than working on the entire course. An example of widening is when instructors have learned ID principles from the course design process and implemented them in other courses they teach. Attributes such as relative advantage, compatibility, complexity, trialability, and observability from the innovation diffusion theory (Rogers, 2003) help make sense of instructors' decision-making when it comes to how they deal with contradictions.

Applications of AT

In educational research, AT helps to understand an individual's cognition and learning development within the social, cultural, and historical context in which learning occurs (Dang, 2017; Kahveci et al., 2008; Mackie & Thongpravati, 2019; Russell & Schneiderheinze, 2005). It also helps explore how users interact with different tools (physical or cognitive tools) in the learning process and the mediating role of the tools (Al-Huneini et al., 2020; Benson et al., 2008; Kaatrakoski et al., 2017; Motteram, 2019; Schuh et al., 2018). Also, AT can be used as an analytical framework to explore educational change and innovation (Boz & Allexsaht-Snider, 2023; Park & Jo, 2017; Westberry & Franken, 2015; Zheng et al., 2019). It allows researchers to analyze how new tools or educational practices are introduced and interact with existing practices.

Additionally, AT has been used as an analytic tool to identify the contradictions and challenges within and between activity systems (e.g., Lewin et al., 2018; Murphy & Manzanares, 2008; Voogt et al., 2015) and a tool to evaluate the effectiveness and impacts of particular activities or interventions (e.g., Mwanza-Simwami et al., 2009; Zheng et al., 2019).

The second generation of activity theory model is used in this study to create a clear and structured framework for examining instructors' ID supported course design activity. The rationale for choosing this model is twofold. Firstly, this study focuses on a single activity system that consists of instructors' operations and actions linked to course design, mediated by

ID support. The second generation of activity theory emphasizes individual activity systems and the internal interactions among key elements such as subject, object, tools, rules, community, and division of labor (Engeström, 2015). It allows researchers to design interview instruments and collect data based on these different components. This aligns with the purpose of this study. While the third generation of activity theory could broaden the understanding of ID-supported course design by analyzing interconnected activity systems involving both instructors and instructional designers, this study deliberately concentrates on instructors. This focus aims to fill gaps in existing literature, which predominantly emphasizes on instructional designers' experiences. This study aims to understand the challenges instructors face within their course design activity system. Focusing on a single course design activity system allows the identification of important factors affecting instructors' ways of handling tensions and their strategies of effectively using ID support to achieve their course design goals.

Furthermore, this research views ID support as a tool that mediates instructors' course design activity. The primary concern of this study is on how instructors utilize ID support and how various elements within the course design activity mutually influence one another. The second generation of activity theory helps to explore the reciprocal relationship between users and the tools they use and investigate how these tools shape their actions to attain desired outcomes. This model is suitable for this study's intent, focusing on the impact of tools within a specific activity system, in contrast to the broader scope of the third generation, which encompasses psychological and social tools' influence across various contexts (Engeström, 2001; 2015).

Chapter Three: Methodology

The purpose of this study is to explore instructors' course design experiences that are supported by instructional designers (IDs) while also examining how ID support influences instructors' decision-making during the course design process. The following research questions guide this study:

1. How do instructors work with instructional designers to design online courses?
    a. How do instructors describe the course design process?
    b. What challenges do instructors face in the course design process?
    c. What are perceived roles and responsibilities of the instructional designers and instructors in the course design process, as indicated by the instructors?
2. Using the framework of activity theory, characterize how instructors engage in course design activities.
    a. What ID suggestions (cognitive tools) were provided to the instructors?
    b. How did instructors incorporate these suggestions into their course design practices, and what are the key factors influencing their course design decision-making?
3. How do instructors perceive the impact of ID support on their course design and teaching practices?

This chapter provides an overview of the research methodology adopted for this study. First, it discusses the rationale behind choosing the research design, followed by a selection of research settings and cases. Next, it outlines the participant selection criteria, sampling methods, and data collection process, which include participant recruitment and data collection instruments. Then the data analysis plan is presented. Additionally, this chapter describes the researcher's roles and perspectives and how these have affected the study. This chapter concludes by addressing the credibility and trustworthiness of the study.

Research Design

This study is a qualitative case study that focuses on understanding instructors' online course design experiences supported by instructional designers. It aims to reveal the mediating role of ID support through detailed descriptions of the behaviours and perceptions of the instructors involved. Instructors' ID supported course design activity is a complex process that we can only understand by considering social and cultural contexts.

This study follows a qualitative approach because it enables researchers to explore topics that involve human experiences and obtain an in-depth understanding of people's actions and words in their social and cultural contexts (Creswell, 2013). It emphasizes gathering detailed descriptions from people involved in the researched phenomenon. Qualitative research is intended to make sense of the problem from the participants' perspectives (Denzin & Lincoln, 2011) as opposed to seeking to establish broad generalizations. This study is situated in the constructivist paradigm, which assumes truths are built by the participants in the context and meaning they attribute to their experiences (Denzin & Lincoln, 2011). "Truths" here refer to the subjective way individuals see the world and how they construct knowledge.

The case study approach is selected when the research emphasizes gathering detailed descriptions from participants' accounts of the researched phenomenon within its natural context (Creswell, 2013; Yin, 2018). The case study approach "investigates a contemporary phenomenon in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident" (Yin, 2018, p. 15). It helps the researcher answer "how" or "why" research questions in a bounded system using various sources of evidence from

individuals within the context (Yin, 2018), which makes it suitable to answer this study's research questions such as "How do instructors work with instructional designers to design online courses?" and "How do instructors perceive the impact of ID support on their course design and teaching practices?" The case study method is suitable for exploring participants' past experiences in a contemporary event in which the researcher has little control (Yin, 2018). The case study focuses on the uniqueness and commonality of the researched object. It facilitates "the object's stories to be heard" (Stake, 1995, p. 1). The case study design focuses on identifying the unit of analysis and selecting cases for studying. Rather than generating the results, the purpose of the case study is to understand specific cases in great detail (Creswell, 2013; Yin, 2018). Specifically, this study applied case study approach aiming to better understand and explain the impact of ID support on instructors' online course design. The unit of analysis in this study is ID support modes used by instructors when designing online courses. The bounded system is the online course design process at Canadian universities.

A holistic multiple case study design was used for this research. According to Yin (2018), a holistic multiple case study involves the investigation of more than one case but with only one unit of analysis. It enables the researcher to explore the same phenomena through more evidence, providing richer results than a single case study, and creating more reliable and convincing findings. For this study, collective or cumulative cases were chosen to provide a comprehensive picture of different types of ID support in higher education, which would help to understand the topic in-depth (Denzin & Lincoln, 2011). The individual cases were selected based on the types of ID support commonly provided in Canadian universities. Instructors' self-described experiences on how they utilized ID support is the key focus when providing rich description of each selected cases. Additionally, convenience, proximity to the researcher, and ease of accessing the participants (Creswell, 2013) were considered while selecting the cases. The detailed case descriptions and participants selection are described in the "Case selection" and "Participant selection" sections.

Research Setting

The selection process for research sites involved identifying higher education institutions that offer ID support to instructors for developing face-to-face, fully online, and blended courses. To be considered, the institutions must employ ID professionals and offer at least one type of ID support.

For convenience and feasibility, public universities in Canada were chosen as research sites. These universities were easily accessible and did not require extensive travel for the researcher. To ensure manageable scope and control contextual variables, two comprehensive universities with similar sizes, structures, and missions were selected.

University A is a comprehensive university located in Canada that has approximately 45,000 students and 2,500 faculty and staff members. The university is led by its president, provost and vice presidents, and its administration is overseen by a board of governors and the senate. The university's mission is to align its quality of learning with society's challenges. To achieve this, the university began offering online courses in 2000 and now offers more than 125 for-credit online courses each year. The production of these online courses is supported by an administratively separate organization within the university that provides ID services. This organization covers the costs of ID teams and ensures that the online courses meet the highest standards of quality.

University B is a comprehensive university located in Canada. It has a student population of approximately 31,000 and employs around 3,000 faculty and staff members. The institution is

led by a president, provost, and vice presidents, and the administration is overseen by a board of governors and the senate. The university's mission is to leverage the power of higher education to share knowledge and shape the future. The institution started offering distance learning courses in the mid-1990s and currently provides around 150 to 200 for-credit online courses each year. The Teaching and Learning Service (TLS) team provides support for online course design and development and services related to instructors' professional development, digital learning, and multimedia and educational technology. This support includes workshops and one-on-one consultations. For more detailed descriptions of the two institutions, please refer to the case results chapters.

Case Selection

In this study, a unit of analysis is the ID support mode that assists instructors' online course design activities. Each case is defined by the process of creating an online course with the assistance of one ID support mode. The bounded system is online course design in Canadian universities and the timeframe begins when instructors start accessing the ID support and ends when their course design is completed and they no longer getting support from IDs.

The instructional designer support provided to instructors varies across different educational institutions. The case selection process was centered on identifying ID support models commonly utilized within higher educational institutions. Those collective cases were chosen to offer insights into both shared characteristics and differences that enhance our understanding of the complex activity of the ID-supported course design. The selected cases share several common characteristics, which include the following:

1. All three cases were chosen from comprehensive universities of the same size in Canada—Case One and Case Two occurred at the same institution
2. Professional instructional designers with similar qualifications provided ID support in all three cases
3. All three cases involved online course delivery through LMS, with each course having its own dedicated page on the LMS
4. Full-time and part-time instructors were recruited as research participants in all three cases.

For the purpose of this study, the following cases have been selected:

- Case One: This involves designing an online course with the help of a standard ID service. At University A, instructors collaborate with an ID team to create a complete and self-paced asynchronous online course. The support process follows the ADDIE cycle and starts from ideation to planning course structure, preparing and producing course content, and finally launching it on an LMS. The course design process takes between 4 to 8 months. Once the course is ready, the university is authorized to run the course and receives a fee per student. The instructors retain ownership of their course materials.
- Case Two: University A offers an express ID service to help instructors prepare their courses for online delivery within a short period. Instead of going through the complete ADDIE process, the focus is on addressing instructors' urgent needs and providing guidance or assistance based on the available time frame and resources. The process begins by identifying instructors' urgent course design needs and ends when those needs are met or the allocated support time is used up. The course design typically takes 1 to 3 months, after which the instructors retain the rights to run their courses and own their course materials.

- Case Three: At University B, instructors can participate in workshops related to ID principles and practices to design and deliver their online courses. The workshops cover topics such as writing learning outcomes, using multimedia, and introducing to LMS. The aim of these workshops is to equip instructors with knowledge and resources on ID and educational technology. During the workshops, ID professionals facilitate the sessions, presenting the content and answering any questions the instructors may have. The instructors have the freedom to prepare their courses independently, with the support of workshop resources. The support provided by the ID professionals begins when the instructors participate in the workshops and ends when the workshops are over. The instructors are free to choose when to take the workshops, before or during the time they design their online courses. After the courses are ready, the instructors retain ownership of their course materials and have the right to run them.

Selection of Participants

The participants of the study are instructors who have worked with instructional designers to design online courses at either University A or B. As suggested by Stake (1995), including three to five participants in each case helps lead to a detailed description of the experiences related to a particular situation.

Purposeful sampling was used to select participants who were able to provide information relevant to the research questions (Creswell, 2013). The specific selection criteria were to select participants who did the following:

- Work at the selected university within a teaching role, including tenure/tenure-tracked faculty members (professors, associate professors, and assistant processors), full-time instructors (hired in the teaching streams), and part-time instructors (hired to teach specific courses).
- Have taught at least one course online in the past three years.
- Have gone through the course design and preparation process, working with at least one of the three types of ID support mentioned in the previous case selection section.
- Have developed and delivered the course (fully online or blended) using asynchronous delivery or synchronous delivery (or both) as a delivery format.
- Have a course site on the institution's LMS and course-related documents such as course plans and design templates that could be shared with the researcher.
- Are willing to share their experiences and their materials with the researcher.

Convenience sampling was applied to allow for the choosing of participants that the researcher had easy access to, which enabled closer interaction. Having direct access is a suitable criterion for case selection in a study (Yin, 2018).

Data Collection

A qualitative case study requires rich descriptive data collected from the participants through multiple sources (Yin, 2018). The data collection procedure consists of gaining access to the research site, recruiting participants and collecting data using different techniques, including interviews, course related documents, and other historical materials (Creswell, 2013).

Gaining Access to Selected Research Sites

To gain access to the selected research sites, certain steps were followed, as outlined below. First, ethics approval was obtained from the research office at Concordia University in August 2021. Then, ethics clearance was obtained from University A and University B, which permitted me to conduct the research at both universities. Then, contact was made with the academic administrator of the organization that provided ID support services at University A and

the supervisor of ID from the teaching and learning services at University B. I conducted information interviews with them and gathered detailed information about their organization's ID support services. They gave me a demonstration of the process of ID services applied in their organization, showcased several sample courses that have gone through the support process, and shared the feedback they received from the instructors who had experiences with ID support. Additionally, they shared a list of potential instructor participants to be contacted with their course titles.

Participant Recruitment

To recruit participants for my research, I adhered to the following specific process.

1. I utilized the lists of potential participants provided by the academic administrator and the supervisor of ID at the two universities.
2. I searched for the instructors' contact information on the institution's websites and created three lists of instructors' email addresses based on the ID support they received.
3. I sent an invitation letter (see Appendix A) to each email list to explain the purpose of the study and seek instructors' interest in participating in my research.
4. I sent a follow-up email (see Appendix B) to those who responded to the invitation letter. The email provided detailed information about the study's purpose, data collection methods, and information needed from the participants. In addition, it explained how the research data would be collected and analyzed. In this follow-up email, I invited participants to take part in a 45- to 60-minute semistructured interview (see interview protocol in Appendix C). I also attached a PDF version of the research consent form to the email, which provided participants with sufficient information about the study.
5. After participants agreed to participate in the study, I sent them a follow-up email (Appendix D) requesting they select their preferred interview dates and times.
6. Once I received their responses, I sent a confirmation email (Appendix E) and a research consent form (Appendix F).
7. A day before the scheduled interview, I sent a reminder message to the participants to confirm the interview time and request them to sign the consent form.

All of the participants were recruited on a volunteer basis. Only participants who responded to invitations and confirmed were selected. Information on recruitment is shown in Table 3.1.

Table 3.1

Participant Recruitment for Each Case

Cases	Dates	Participants contacted	Participants responded	Participants recruited
Standard ID process	September 2021–November 2021	20	5	3
Express ID process	September 2021–December 2021	23	13	6
ID workshops	November 2021–March 2022	27	9	6

Fifteen participants from different academic disciplines and with different teaching experiences were selected based on selection criteria. Out of the 15 participants, eight were

tenure/tenure-tracked faculty members, two were full-time faculty members in the teaching stream, and five were part-time instructors. Three participants had experiences with standard ID support, six participants had experiences with express ID support, and six participants had experiences with ID workshop support.

Interviews

Interviews served as the primary method for gathering firsthand experiences and perspectives of participants concerning their ID-supported course design experiences. Semistructured interviews were used to help me learn about specific topics by allowing me to prepare a few questions in advance and add follow-up questions during the interviews (Rubin & Rubin, 2012). A total of 15 one-on-one interviews with instructor participants selected from Universities A and B were conducted from September 2021 to March 2022. The duration of each interview ranged from 60 to 90 minutes, depending on the complexities of the instructors' course design activities and their willingness to share insights. It is noteworthy that all the interviews were conducted via Zoom, in adherence to public health regulations related to COVID-19. All 15 interviews were recorded using Zoom's recording feature, with 14 being video recordings and one being an audio recording due to the participant's limited internet bandwidth on the day of the interview.

Interview Protocol. The interview questions were designed following the second generation of the AT framework (Engeström, 2015). The objective was to uncover the interactions among the various components within the instructor's course design activity system—namely, subject, object, tools, rules, community, and division of labour.

The interview guide comprises ten questions, divided into three parts. The first part collects participants' background information, the second part captures their self-described course design experiences, and the third part elicits their opinions (see Appendix D).

The first three questions in the interview guide aimed to gather information about the participants' teaching experiences and their knowledge of online teaching and learning. Following this, Questions four through six were used to prompt the participants to describe their course design activities. These questions were designed to encourage the participants to elaborate on their course design goals, the tools used in the process, the people involved, and any rules and policies that may have affected the course design process. Questions seven and eight were used to facilitate the participants' reflections on their course design experiences, including any challenges they faced and changes they made during the design process.

During the development of the interview guide, the original questions were created following the AT framework to cover the different elements that mediated the activity. However, during the interviews with the participants, I employed a more flexible approach that allowed them to share their course design experiences in their own words. In addition to the protocol questions, I posed follow-up questions to encourage participants to expand upon their perspectives.

Interview Procedures. Fifteen interviews were conducted, and all of them took place using Zoom. Each interview followed a similar structure, as outlined below.

1. At the beginning of the interview:
    a. I restated the purpose of the study and told the participants the interview would take about 60 minutes of their time.
    b. I verified that participants signed the consent form for the study.
    c. I reminded participants of their right to stop the interview at any time and about the confidentiality of the interview.

   d. I answered participants' questions related to the study and the interview.
2. During the interview:
   a. I asked questions about participants' experiences and perspectives related to their course design activities and the ID support following the interview protocol (See Appendix D).
   b. Participants responded to the questions with their personal experiences and reflected on their experiences.
   c. I asked further questions to facilitate the conversation with participants and encouraged them to provide examples to support their points of view.
   d. When needed, I paraphrased what I heard from the participants and asked participants to verify or correct my interpretation of their points.
   e. At the end of the interview, I invited participants to do screen sharing to show me their course pages and explain their course structures.
   f. Finally, I invited participants to provide me with additional information they wanted to share.
3. After the interview:
   a. I sent a thank-you message to participants via e-mail (See appendix G) and asked them to share additional materials they mentioned in my interviews.
   b. Once the interviews were transcribed, I sent a copy of the transcripts to the participants and asked them to verify the accuracy of the transcripts (See Appendix H for a sample letter).

Documents and Visual Materials

In addition to primary data sources, this study also utilized documents and visual materials to gain better insights into the ID services provided to the participants. Publicly available information from institutional websites, web pages of ID workshops, previous workshop recordings, feedback from instructors who used ID services, course design call-for-applications files, and recordings of conversations with ID service providers were all collected. Furthermore, to gain a better contextual understanding of the participants, instructors' profiles and descriptions of their work were obtained through the institutions' publicly available sources.

At the end of the interview, I requested participants to share any documentation regarding their experience with course design. This could include documents such as a course design process documents, a lesson-planning document, or email exchanges between instructors and instructional designers. Moreover, to gain a better understanding of the activities of instructors while designing the course, I collected course documents and visual materials that could show the outcomes of the design activities after obtaining permission from the instructors. Examples include screenshots of course websites on the LMS to display course appearances, course syllabi and learning-material documents, and lecture slides created by instructors. These materials were used to supplement and verify the interview data and help answer the research questions of this study.

The Researcher and Their Suppositions

As the researcher, I served as the primary data collection instrument in the study (Yin, 2018). I drew upon my previous experiences when conducting the study. According to Creswell (2013), the ways researchers filter and interpret researchers' personal experiences and stances significantly influences the research data. It is important to outline researchers' previous experiences and identify how they may shape the interpretations of the research results.

My work experience designing courses with instructors in higher education directly relates to this study's central phenomena. I worked as an instructional designer at a comprehensive university for over 8 years. My job involved individual consultations with instructors, managing course projects, facilitating workshops, and providing technical support. During my tenure, I provided ID support in all three modes covered in this study. Until 2020, my work primarily focused on working with instructors through the full ID process to develop asynchronous online courses. Since the outbreak of COVID-19 in March 2020, I have been providing express ID support to help instructors develop their courses online within a short period.

Through my work, I have had the opportunity to closely collaborate with instructors to support their course design practices. This has allowed me to build strong relationships with them, gaining their trust and making them feel comfortable sharing their experiences with me. This has been particularly helpful in understanding their course design activities.

Suppositions

I am interested in this research topic and believe that instructors' use of ID support in course design activities in higher education needs to be further explored. Having been learning and working in ID for more than 10 years, I have some suppositions influencing how I perceive and work in the field.

As an ID professional, I believe instructional designers help improve the quality of a course in terms of its effectiveness, efficiency, and appeal. My understanding of quality online courses is guided by the Quality Matters standard (Qualitymatters.org, 2023), and I have a certification in using Quality Matters rubrics to review online courses. I believe online courses require different content compared to their face-to-face counterparts. I assume all instructors are willing to devote time to prepare their courses. When designing the course, I intend to follow the ADDIE model to frame the design workflow.

Also, the role of instructional designer extends beyond merely providing technical support in creating courses on LMS or incorporating technology into teaching. It is also an instructional designer's responsibility to guide and support instructors in their professional development by providing suggestions based on pedagogical theories such as Bloom's taxonomy, cognitive multimedia learning theory, and the principles of instruction.

Finally, it is a supposition that the outbreak of COVID-19 posed both challenges and opportunities for higher education to incorporate online courses in the future. Because of the pandemic, many instructors had to switch to online teaching without prior experience (Lederman, 2020). Many gained experiences during the pandemic and decided to keep their courses online, seeking support to improve course quality in the post pandemic period. This change has had significant impacts on instructional designers in higher education, resulting in increased workloads and a shift of tasks and responsibilities. However, there is little literature focusing on the how instructors were supported by instructional designers during this period.

Addressing Researcher's Biases

When conducting this study, I tried to minimize my influences on participants' responses. First of all, the interview questions were carefully designed, and I had my supervisor review the questions to ensure there were no leading questions that forced participants to agree with the researcher's preconceived ideas (Merriam & Tisdell, 2015). Second, I made sure I did not have any professional or personal relationships with the participants involved in all three cases. Although I work at the same university with six instructors involved in this study, I had no previous working experiences with them prior to the study. After this study, I had several course

design consultations with Jenny and Cecilia for their other courses. I made sure all the participants were aware of my role as a doctoral student and an instructional designer at a university before agreeing on participating in my study. Third, during the interview I was cautious to avoid interfering with instructors when they shared their course design experiences. I tried to avoid commenting on their experiences or sharing other instructors' experiences during the interviews. My interactions during the interviews focused on encouraging participants to share more about their course design experiences and took notes when they shared their course websites or appeared to react in a certain way based on their body languages. Also, I considered each interview as an opportunity to learn about instructors' course design experiences. I took reflective notes after each interview, noting any unexpected data and checking whether participants were engaged. I would always wait until the next day to transcribe the interview data so that I could view it with fresh eyes.

Data Analysis

I conducted a thematic analysis to explore instructors' ID-supported course design experiences. According to Nowell et al. (2017), "thematic analysis is a useful method to examining the perspectives of different participants, highlighting similarities and differences, and generating unanticipated insights" (p .2), and it also provides flexibility for incorporating data to meet the needs of the study. Interview data is the primary data for this study, supplemented by documentary and visual data. The data analysis process included data preparation and organization (Creswell, 2013), data coding, and communicating the data analysis results. Figure 2 shows the data analysis procedure of this study.

Data Preparation and Organization

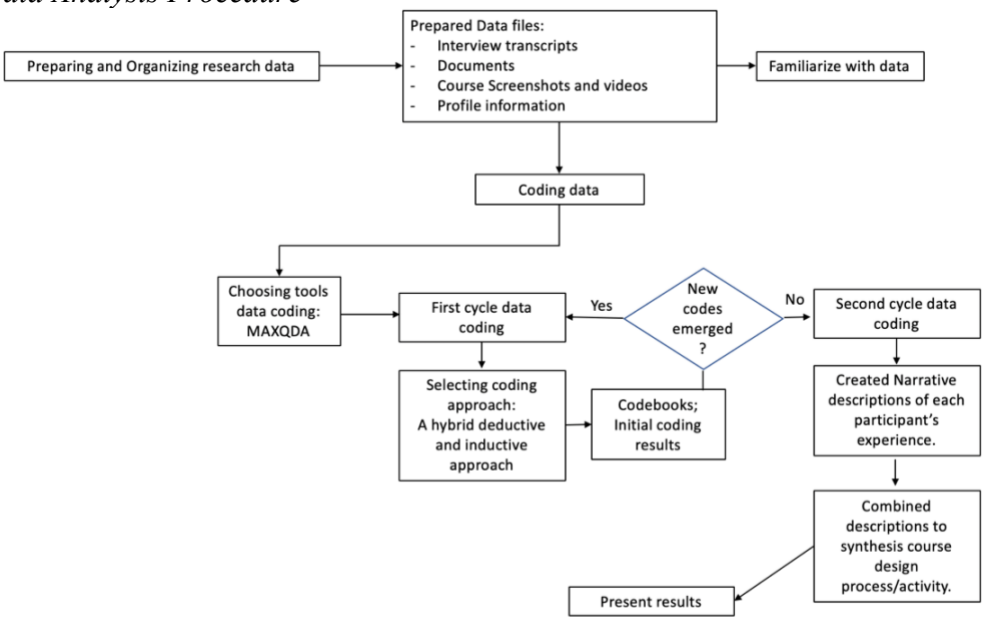
All interview recordings were transcribed to text files using Otter.ai (an online platform that provides AI transcription technology to convert video and audio files into text files). The transcripts were saved as Word files. I listened to the original interview recordings and read through the transcribed files to verify the accuracy of the transcriptions. Irrelevant conversations, such as the purpose statements at the beginning of each interview, questions related to the interview process, and greetings between participants and the researcher, were removed from the transcripts because they do not directly relate to answering the research questions.

For each instructor's course, I created a dedicated folder and saved all the relevant documents they shared with me, such as the course syllabus, lesson plans, learning activities, and emails exchanged with instructional designers. This way, everything was organized and easily accessible. These documents were used to support and verify the information provided in the interviews.

The institutional websites that contained information on ID services, guidance on how to access ID services, and instructors' profiles were collected. To organize them, I documented the URLs in a Word file, printed web pages, and wrote a summary based on the information included on the websites to gather background information for the study. I also collected visual materials of the instructors' course sites. I documented the course URLs in a word file. During the interview, I encouraged instructors to share their screen and walk me through their online courses. I saved all the video clips of instructors demonstrating their online courses and stored them in a dedicated folder for each course. In addition, I took screenshots to note specific learning activities when watching the video clips to prepare the data for analysis. These videos and screenshots were helpful in visualizing instructors' course design ideas and verifying the information instructors provided in the interview.

Figure 2

Data Analysis Procedure



To manage all the data and make it easy to assess it for the data-analysis process, I created three main folders and named them "Standard ID," "Express ID," and "Workshop-based ID" based on type of service provided. Then I created a subfolder for each instructor and named it according to the course name provided by the instructor. Each subfolder contains an instructor's interview transcript, a summary of their profile information, video clips and screenshots of their online course, and documents they shared with me. Then, I added subfolders to the three main folders based on the type of ID service instructors received. All the folders and files were stored on a password-protected laptop that only the researcher have access to.

Data Coding

Once the research data was prepared, I proceeded to data coding for the interview transcripts, documentations, and visual materials. MAXQDA (a software for assisting qualitative data analysis) was used to ease the process of exploring data, organizing and manipulating data, generating codes, and searching for themes. A code in qualitative research refers to "a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data" (Saldaña, 2021, p. 4).

All interview transcripts, documents, and screenshot images of the course sites were imported onto MAXQDA. Before coding, I spent time reading through each interview transcript, related documents, and course websites to familiarize myself with and gain initial understanding of all the research data. Then I followed a two-cycle coding plan (Saldaña, 2021).

During the first cycle of coding, I employed a hybrid approach that combined both deductive and inductive coding methods (Xu & Zammit, 2020). The first-cycle coding began with a deductive approach. I predefined a list of codes based on the elements involved in the second-generation activity system framework (Engeström, 2015), research questions, and related literature. A sample of the codebook can be found in Appendix I. The deductive coding provided me with a structured way to start the coding process and allowed me to capture information relevant to the research phenomenon.

For each interview transcript, I first read it line by line and assigned predefined codes to texts. Then, I read it again and conducted open coding to identify new codes that were not previously defined. Also, I used vivo coding to capture the exact language used by the participants to describe their experiences (Saldaña, 2021). After these two steps, I revisited the transcript and repeated the steps a few more times until no new code emerged.

The documents and visual materials were analyzed using the same codebook. As these materials were mainly collected to supplement the interviews, I used an open-ended descriptive coding approach (Saldaña & Omasta, 2017). For example, when analyzing email exchanges between instructors and IDs, I initially read through the content and took notes on my first impression of the purpose of the email. Then, I analyzed it line by line and coded the content, such as types of ID support needs, ID support provided, the languages used, and the relationships between IDs and instructors. When analyzing the course website, I first browsed the course page to take notes on its structure, digital tools used, and the types of learning activities included. Then, I listened to the instructor's descriptions in the video they recorded to show the course and compared them with my notes.

During the second cycle of coding, my focus was on grouping codes into themes and categories. I used pattern coding to group similar codes from the first cycle (Saldaña, 2021). I reviewed the codes from first cycles to identify commonalities and assigned them to a code that could represent these similarities. This helped reduce the number of codes. The selective coding was used to further refine codes and enabled me to form key themes that emerged for each participant. The coding results were used to create narratives of participants' course design activities, generate visual representations of the course design activity systems, and answer research questions.

Communicating Data Analysis Results

Once the coding process was completed, the next step was to interpret the research data and present it meaningfully.

Case Context and Participants' Demographics. I utilized the summaries from the documentation that introduced the institutions and their ID services to create contextual descriptions for each case. I used the instructors' profiles and their self-introductions to gather demographic information such as gender, discipline, faculty ranking, and teaching experience. Instructors' information such as their teaching experiences and faculty ranking also helped when I determined the aspects of the course design activity system for each case.

Narratives of Participants' Experiences. I wrote narratives account of each instructor's course design experience based on all data collected from them. I used themes that emerged from the coding process to structure each narrative. The purpose of these narrative was to document key events of the instructors' course design process. Each narrative included instructors' teaching background, course descriptions, key course design events such as designing the course interface, recording course videos, challenges faced during the course design process, and perceived roles and responsibilities of both the instructors and instructional designers. These narratives provided a foundation for investigating the similarities and differences of course design experiences among instructors within and across cases. In addition, these narratives assisted in identifying key elements within the course design activity system, which was then used for analyzing course design activity systems. These narratives are reported on in Chapters four, five, and six.

Generating a Course Design Activity System for Each Case. Based on the data collected and the narratives I prepared earlier, I constructed an activity system model for each

case using the second generation of Engeström's triangular model (Engeström, 2015) to connect different elements of an activity together (Yamagata-Lynch, 2010). This model represents course design activity based on the experiences of all instructors in each case. For every course design activity, the subject (instructors), tools (ID suggestions and supports), object, rules, community, and division of labour were identified and aligned to each node of the triangular model. The course design activity system models created visual representations of instructors' course design experiences based on different types of ID support. This helped to "identify the activity and its outcomes within the context and the critical variables affecting the entire activity" (Yamagata-Lynch, 2010, p. 6). Also, this allowed further explorations of the mediating impacts of ID suggestions and supports (considered as cognitive tools in this study) in the course design process. The use of an activity system helped to identify tensions among different elements in the system. Through the use of thematic analysis, I explored the causes of tensions and noted them on the course design activity system model for each case. The activity system for each case is presented at the ends of Chapters four, five, and six. The comparisons among different activity systems are discussed in Chapter seven.

Cross-Case Comparison and Answering Research Questions. To explore how ID support affected instructors' course design activities in various contexts, a cross-case analysis was conducted on instructors' experiences with the ID support provided. Three cases with different ID support modes were included to compare and contrast the themes that emerged from each participant's data across the three cases. The major similarities and differences among the instructors' narratives across the three cases were listed and used to answer Research Question One, which related to instructors' course design experiences. The common themes were compiled to describe the common course design processes depicted by the instructors, the challenges they faced in course design, and their perceived roles and responsibilities of instructional designers.

During the research, three models of course design activity systems were compared, and their similarities and differences were listed. This information was used to answer Research Question Two regarding instructors' course design activity systems. Moreover, the ID suggestions (considered as cognitive tools) mentioned by instructors and how instructors used those suggestions were separately listed to explore the impacts of the tools on instructors' design activities. Finally, I used data and themes related to changes in instructors to answer Research Question Three, which focused on the impacts of the ID support on instructors' teaching and course design practices. The cross-case analysis results and answers to the research questions are presented in Chapter seven.

Trustworthiness

Trustworthiness refers to the level of confidence with which the qualitative research has been conducted in a rigorous manner, that the interpretation of the findings is neutral, and that the research results are useful (Lincoln & Guba, 1085). In this study, trustworthiness was enhanced by the detailed descriptions of the research procedures and findings. Providing a clear understanding of how the research methods were selected and how data was collected and analyzed to lead to reliable results. Four criteria—credibility, transferability, dependability, and confirmability—were used to establish trustworthiness (Lincoln & Guba, 1985). Credibility refers to whether the research results accurately represent the participants' voices and experiences (Lincoln & Guba, 1985). Transferability touches upon the extent to which research findings can be applied to similar contexts and participants. It will be up to the readers to determine if the results could be transferred to their own contexts (Lincoln & Guba, 1985).

Dependability addresses the stability and consistency of the research process to obtain the research findings (Merriam & Tisdell, 2016). Confirmability defines the degree to which researchers' interpretations of findings accurately represent research participants' experiences and perceptions (Nowell et al., 2017). According to Lincoln and Guba (1985), ensuring the credibility, transferability, and dependability of a study can lead to a high level of confirmability.

To ensure the credibility of this study, ID principles and models and AT were used as theoretical guidance in the interview protocol design, coding process, identifying key themes, and generating meaningful results of this study. Both ID and AT theories have been used in previous studies that explore course design and the mediating roles of tools in an educational context (Yamagata-Lynch, 2010), which added to the credibility of this study.

To ensure the transferability and dependability of this study, I provided robust descriptions of the research process, including participant recruitment, interview procedures, data collection methods, and the data analysis process. I also presented a thorough account of the research contexts, participants' teaching backgrounds, their courses, the ID services participants engaged in, and participants' course design activities to ensure the transferability of this study. By doing so, readers can trace the research process and make informed judgments about the transferability and dependability of the study (Nowell et al., 2017).

During the coding process, I performed external coding validation to enhance the credibility and confirmability of the study. I invited two individuals as extra coders for my study. The coders helped identify any bias or ignorance I had during coding. Both coders have master's degrees in educational technology and know qualitative research methods. I created three documents, each with five excerpts randomly selected from one of the transcripts in each case. I provided the coders with the list of the codes I created in the coding process and asked them to code the three documents. Before they started, I met with them via Zoom to describe the meaning of each code on the list. Once they finished coding, I compared my coding results with theirs. I met with them one more time to discuss the discrepancies in the coding results. I revised my coding results based on the feedback I received from the two coders.

I used member checking to help ensure the credibility and dependability of the study. I invited all the participants to review their interview transcripts and provide comments. After I finished writing the narratives for each participant, I shared them with the corresponding participants and asked them to check and verify if the narrative represents their account for their online course design activity. I refined the narratives based on the feedback I received from the participants.

I employed data triangulation to improve the dependability of this study. I used documents and visual materials to supplement participant's interviews. These materials helped support and verify the information provided in the interviews.

The credibility and dependability of this study was strengthened by enlisting external experts to review the research process and research findings. My research supervisor and committee members reviewed the interview questions to ensure they were relevant and did not contain leading questions that could influence participants' responses. Furthermore, my research supervisor and committee members reviewed the research process and preliminary findings to identify any potential biases and provide insights into how to present the results with rich data and in a concise manner. To receive additional suggestions, I asked a colleague, who is also an instructional designer at a university, to review the research process and research findings and provide me with suggestions. Based on their feedback, I revised my interview questions, research process, and research findings.

Additionally, to enhance the confirmability of the study, I conducted a bracketing interview and documented my personal experiences and assumptions related to the research topic to minimize any potential bias. Also, I kept reflective notes to record the thoughts and decisions I made during the data collection and analysis process. These notes assisted me in identifying any bias I might have and maintaining the transparency of the research process.

Chapter Four. Case One: Preparing Courses Using Standard ID Services

In the standard instructional design services model, instructors work with an instructional design team to produce a complete online course for self-directed study. Support begins at the earliest phase of the process (i.e., coming up with course ideas) and continues through structuring the course structure and preparing and producing the content. The process is completed when the course launches, typically on a learning management system (LMS) such as Moodle, D2L, or Canvas.

This chapter describes the standard instructional design (ID) support process through the individual experiences of three instructors—John, Luis, and Kathy—who worked with a team of instructional design experts to develop fully online course at the institution. Beginning with an overview of the university context in which the process was studied, the chapter then details the course development process undertaken by each of the three instructors with the standard support of the instructional design service. Their experiences describe the general activity system underlying the standard instructional design services.

About the Research Context

The research site is a comprehensive university in Canada. The university started offering online courses in 2000 and now provides more than 125 for-credit online courses each year, allowing students the flexibility to take a course remotely rather than coming to campus.

An administratively separate organization within the university provides the standard instructional design services for online courses. This organization is responsible for the cost of the instructional design teams that support online course production. The university pays the copyright owner of the course materials and pays instructors for time spent developing the courses. Instructors work together with an instructional design team throughout the course production process. The instructors can receive a cash payment, course remissions, or both for developing a course.

Once the course is developed, the organization hosts and manages the courses and receives an administrative services fee for each student who uses the online learning program. Parts of the fee are used to offset development courses for the courses.

Once the course is offered, instructors are also paid a fee per student. Instructors retain ownership of all of their course materials, along with the rights to use the materials for other teaching and research-related activities within the university. They can also license course materials for use by other instructors.

To develop an online course, an instructor must first apply to the office of the Vice-Provost for Teaching and Learning. The vice-provost selects courses for development and signs an agreement with the instructor to start the process and authorize compensation. The vice-provost's office also notifies the course development group, whose leader contacts the instructor to begin the course development process.

Course design typically takes between four and eight months, depending on such factors as the instructor's previous experience with teaching online, whether the course has been taught before, and, if so, whether the course materials are already available and ready for use online. In addition to the university instructor, the course development team is made up of various professionals who help design, develop, implement, and maintain the course. These include:

- Course producers (or production managers), who act as project facilitators and are responsible for setting and managing the project's timeline, budget, and deliverables.

They monitor the project, distribute sources, and are the main point of contact for all stakeholders.

- Learning experience designers (or instructional designers), who are crucial in suggesting solutions for planning, designing, and developing online courses. They work closely with the instructors, media producers, and other experts to create courses that meet instructors' needs and provide students with good learning opportunities.
- Interactive developers (or content developers), who are responsible for producing engaging online learning content on the learning management system, such as animations or other learning aids, quizzes, and multimedia course materials.
- Videographers, who assist instructors in recording and editing video lectures.
- Course coordinators, who serve as the contact point for instructors once the course goes live. They are responsible for receiving and communicating course content updates or instructor requests each semester, passing on these requests to the proper individual on the design team as necessary.
- Visual designers, who are responsible for the interface design of the course page on the learning management system. They also provide artistic directions for using digital tools and creating images for the courses.
- Web developers (or informational technologists), who help create course web pages and educational games or materials using programming languages. They are responsible for integrating applications and plugins, maintaining the course site, and updating the content as needed.
- Quality assurance specialists, who are responsible for checking the accuracy and usability of the course product and assessing the course's effectiveness through users' experiences.

The organization presents all the online courses in an asynchronous learning format. However, each instructor is encouraged to have some synchronous sessions so they can interact directly with their students, and to schedule an on-campus final exam.

Once the university has approved a course for development and notified the course development group, the documented course development process proceeds as follows:

1. Analysis and Recommendations
    a. Initial meetings. The course producer and learning experience designer meet the instructor to analyze the requirements for the course, such as the instructor's vision and any pedagogical or technical strategies that must be integrated. The instructor briefly describes the course and shares the syllabus, reading materials, and assessment strategy, if available. In turn, the production manager and learning experience designer provide the instructor with an overview of the organizational course development process.
    b. Brainstorm within the design team. After these initial meetings, the course producer and learning experience designer review the course materials and work within the design team to develop some recommendations concerning the learning path, such as the technical tool selections and pedagogical strategies.
    c. Prototype. Once an appropriate learning path has been selected, the learning experience designer proposes a course structure and creates one prototype lesson.
    d. Instructor feedback. The course producer presents the team's recommendations and shows the prototype lesson to the instructor. The instructor may approve the proposed learning path and course structure as-is, or work with the course producer to revise it.

2. Planning and Sharing Responsibilities
    a. Project plan. Once the instructor agrees on the proposed learning path for the course, the course producer prepares the project plan, which includes the budget, proposed timeline, and a breakdown of roles and responsibilities of the instructor and the design team. If the instructor has elected to receive payment for the copyright on the course content, the initial payment is made when they sign off on the project plan.
    b. Collaboration agreements. The instructor, the organization, and the vice-provost of innovation in teaching and learning must all provide written consent for the collaboration agreements for the project plan.
    c. Project assignment. The course producer appoints a project lead (often the learning experience designer) to act as liaison with the instructor.
3. Content Strategy
   The learning experience designer and the instructor meet to discuss the course learning content. If the course has been taught before in a traditional classroom, the learning experience designer assists the instructor in reorganizing and adapting the content for online delivery. If the course has not been taught, the learning experience designer will provide suggestions regarding learning activities and objectives based on best online learning practices. The instructor prepares the subject matter content and works with the learning experience designer on the interactive concepts of the content. The learning experience designer prepares a storyboard based on the instructor-provided content. They work together closely on preparing a course design document, which comprises the learning objectives, main topics, and media selections used to present the learning content, along with the reading materials and learning activity plans. The instructor finalizes the storyboard, and the learning experience designer helps with proofreading it. Ideally, by the end of this step, each course lesson should be storyboarded and ready for production.
4. Video and Audio
   Videographers work with the instructor to create video and audio components for the course. Specifically, the videographer helps record course materials such as the instructor's lectures or interviews. Alternatively, the instructor could choose to record their lectures as voice-over to accompany a slideshow. The lectures could be in video or audio format, depending on the instructor's preference. Once the lectures are recorded, the instructor sends them to the videographer for quality checking. If the sound or image are not clear in the lectures, the videographer will ask the instructors to revise them. The videographer edits the videos and audio and stores the final products for the course.
5. Design and Integration
   Designing the course involves planning its look and feel. The learning experience designer, course developer, and graphic designer work with the instructor to make the course content and site visually appealing using various media. The learning experience designer works with the course developer and instructor to make the course structure easy to navigate, thus providing an optimal learning experience. Integration means the content developer puts the learning content (videos and audio) in place and sets up learning activities on the learning management system.
6. Informational Technology Development

The content developers and informational technologists install the course infrastructure on the learning management system, which includes adding any required additional plugins, setting up dates and times for assessments, and implementing tracking systems.

7. Quality Assurance
   Quality assurance specialists conduct quality assurance tests, evaluating the performance of the course on various browsers and devices and proofreading the course content. Once the course goes live, the quality assurance specialists help the instructor conduct a course evaluation using surveys or focus group interviews to assess the course's usability and learner satisfaction.
8. Implementation
   The course coordinator is responsible for setting the start and close dates for the course and releasing the course content as scheduled. Before the course goes live, the course coordinator makes sure the course page has all the necessary resources for the support services and that all the training necessary for running the instructor's course has been completed.
9. Post-Implementation Phase
   The course coordinator is the primary contact for technical and administrative support during the semester, updating broken content for the course and assisting the instructor and students with any technical issues they may experience in accessing the course site or viewing the content. The course coordinator works with the instructor to update the course outline, set up course release dates/times, set up activities, and update any learning content before each course iteration.

Instructors' Experiences with the Standard ID Process

This section describes the course design experiences of three instructors who have gone through the standard instructional design process. All three instructors have tenure positions. All teach in the humanities. Two are male, one female. One has 12 years of experience, the second 15, and the third over 30 years. Table 4.1 shows participants' demographic information related to their discipline, academic status, teaching years, and technical skill level. Technology skills range from low to high. The subsequent sections describe their experiences in detail.

Table 4.1

Demographic Information

Participant	Gender	Faculty Status	Years Teaching	Discipline	Technology Skills
John	Male	Tenured	12	Humanities	High
Luis	Male	Tenured	15+	Humanities	High
Kathy	Female	Tenured	30+s	Humanities	Low

John: Making Old English Come Alive Online

John developed and taught an online course on Old English literature. This section describes John's experience, background, and beliefs about teaching, along with information about the online course and John's experience with designing it, with special attention to his

perception of the respective roles and responsibilities of instructors and instructional designers in the course design process.

About the Instructor and His Perceptions of Teaching Online. John has more than ten years of teaching experience in higher education. He teaches undergraduate and graduate courses in English literature. Prior to teaching at universities, he worked as an online editor for a magazine, where he gained experience in web development and programming.

John conducts research on medieval English and Old English literature. When he developed the course, his general teaching responsibilities were two to three courses per term, and he estimates that he spent 30% of his time in research, 40% in teaching, and 30% in service.

Among the courses that John teaches is one on Old English literature. Before he designed the online version of the course, he taught the course in person. John sees the teaching of Old English literature as a way to present the old stories to students and engage students directly with the content. Old English literature uses ancient vocabulary and grammar that requires translation to be understood by modern English speakers. One of the significant challenges of teaching Old English literature is helping students read and understand it. When teaching in-person classes, John assigns readings for students, gives lectures, and uses discussions to keep students engaged during class sessions. In his classes, John aims to help students build skills for a final course project, an essay on the influence of Old English on J.R.R. Tolkien's 1937 novel *The Hobbit*. The essay requires students to translate Old English to modern English. In addition to full-class meetings, John also arranges to meet every student individually to talk about their course projects.

According to John, his previous experience learning English literature made him think more about more efficient teaching methods: "I do not like the way that in the class when the teacher would have assigned everyone to translate a passage because I would just focus on translating my sentence, I wouldn't hear what everybody else was saying" (interview, September 27, 2021). His own experiences led him to consider teaching online. According to John, online teaching is "just like other formats for teaching or communication, which has its good parts and bad parts. . . . [It is] a type of teaching and learning that this generation will not be able to avoid." John has been a proponent of online teaching even before working on his online course. He wants to stay ahead of emerging teaching methods, and is willing to try different tools and strategies to see the possibilities of teaching and learning in the online environment. He found that with the help of communication tools such as Zoom and Microsoft Teams, the interactions between instructor and students become more accessible online than in face-to-face classes. However, John found challenging in motivating students to engage with the course content online.

> I think the student-content relationship is based around motivation. I think that coming to class and having the teacher see you and being surrounded by everybody who has done the readings is motivating because you might feel embarrassed if you haven't. What if you get called [on] in class? So that little push is the hardest thing to get during online teaching because you just turn off your computer and pretend it does not exist. (interview, September 27, 2021)

Teaching Beliefs and Practices. John defines teaching as sharing literary stories with students and helping students build their skills and knowledge of the subject matter. He defines the instructor's role as a content presenter providing students with engaging stories related to the course subject. and as a facilitator to help students build their skills. Students play a central role in the learning process. John values students' engagement and interactions with each other.

Before starting to teach online, John described online learning as one thing that "this generation will not be able to avoid" (interview, September 27, 2021). He is willing to try new teaching strategies and emerging technologies.

About the Instructor's Experience with Course Design. This section describes John's course design experience with the standard instructional design process. Specifically, this section explores the goals for the course, the course, a walk-through of the process for designing the online course, and contradictions and challenges that arose in the process.

Goals for the Course. The goal (or objective) of John's effort to design an asynchronous online course is to create an experience in which students contribute to shared documents and work as small groups to read and translate Old English literature. That is, his motive was

> . . . to design the course the way I actually learned Old English: learn with my friends from the same class: we would meet in a café, and would do the translation together, and then we would discuss with each other and look up words in the dictionary. (Interview, September 27, 2021).

In addition to creating an online environment in which students would work on shared documents to translate literature, edit the translations, and comment on the material, John wanted to make the course "accessible" by providing students with flexible class schedules to take the course at their own pace. Also, John wanted to include effective student-content interaction. He wanted to motivate students to engage with the content because he felt the online environment makes it difficult for students to commit to reading and watching the required learning materials. He hoped to create interactive activities to help students engage with the learning content.

About the Course. The Old English literature course is a third-year undergraduate class with no prerequisites. It is an asynchronous course with about 120 students registered each semester. The course introduces Old English literature by having students explore passages in Tolkien's novel *The Hobbit.* The main objectives of the completed course are:

- Read the academic and creative works of the author J.R.R Tolkien
- Develop a sophisticated understanding of Old English grammar and vocabulary

Graded assignments for the course include:

- Worksheets: Students must answer the knowledge checking questions after each unit.
- *Hobbit* discussion participation: Students need to make two posts on given topics during the lessons related to the novel.
- Group translation exercises: Students are assigned to a group and work together to translate given passages.
- Translation essentials test: Students answer 15 questions in 30 minutes online.
- Sight-reading exam: Students translate one paragraph out of five given paragraphs.
- Midterm exams: Students answer random selection questions from the worksheets in 105 minutes online.
- Final exams: Students must complete a 30-minutes online quiz with multiple-choice and short-answer questions, then meet the instructor for 10 minutes to translate a passage from the Old English reader live, and finally write an essay on the influence of Old English on *The Hobbit*.

The course has 10 units. Each unit starts with a description of the main objectives and continues with pre-recorded video lectures and reading materials about Old English grammar and vocabulary, followed by practice activities (e.g., quizzes, translation, sight-reading, and grammar and pronunciation exercises) to check the knowledge learned from the learning materials. Each unit closes with a group activity, in which students work together to translate Old English

passages using shared documents and discussion forums. Games are used to provide students with an engaging learning environment. For example, once students complete the quizzes or translation exercises set as challenges successfully, they will earn badges or flames for their accomplishment and be able to check their standing on the class leaderboard. Once students earn enough badges or flames, they will be able to unlock the next unit of the course.

Going Through the Course Design Process. John had the idea of making his Old English course online about a year before starting the actual course design process. In the intervening time, he became aware of the curriculum innovation development fund administered by the provost's office, which aims to encourage faculty to explore new ways of improving their courses and teaching strategies. He submitted an application for funding, describing his ideas for the course, and later had a chance to meet with an instructional design expert to discuss what it would take to develop the course online. The instructional design expert provided him with suggestions and helped him create a basic proposal.

After talking to the ID expert, John started to think about the concept of learning objectives. The provost's office approved his application, and John used the funding to cover his working time for developing the course. John had initial discussions with the design team came while he was teaching the same Old English course in person. He used the classroom sessions to try out some learning activities and ideas to integrate into the online course. For instance, as he delivered lectures in the in-person class, he tracked student questions to ensure they would be addressed in the online lectures, where the asynchronous format would make real-time clarifications impossible. He also tried using quizzes to check students' understanding of the learning content, which he would adapt for the online course.

John also mentioned that when he worked on this online course, the university focused on building sample courses to advertise online teaching and learning. As a result, he feels he received plenty of support from the design team, particularly the visual designers and programmers, beginning with his initial meeting with the instructional designer.

The following describes each primary phase in the development process from John's perspective.

The First Meeting. At John's initial meeting with the design team, including an instructional designer and a visual designer, he talked about his goal to work "on the look and feel of the course and the design and structure of each lesson" (interview, September 27, 2021). In that first meeting, the instructional designer explained the course design process. As John recalled, it was a "very well worked-out process of what they requested from me, and what results they would share with me." John would first share his ideas about the course content or learning activities with the design team, who would provide feedback and suggestions. In their regular meetings, the design team would show John mock-ups based on his ideas and ask for his approval. Once John approved, the design team would then populate the final products.

Establishing Learning Objectives. According to John, the design team introduced the concept of learning objectives. Through his early conversations with the instructional designers, he realized it was essential to have clear learning objectives and think about different strategies to help students achieve them. He then started to write learning objectives on his own. From John's perspective, "the instructor is responsible for the learning objectives of the course and needs to retain control over them as much as possible as well as make sure those objectives are being met" (interview, Setp.27, 2021). Once John had all the learning objectives ready, the instructional designer helped him "turn the learning objectives into the course materials." For example, one of the course learning objectives was to read Old English passages. The

instructional designer helped John develop the gamification idea and create a treasure hunt game that would help boost students' engagement in reading Old English.

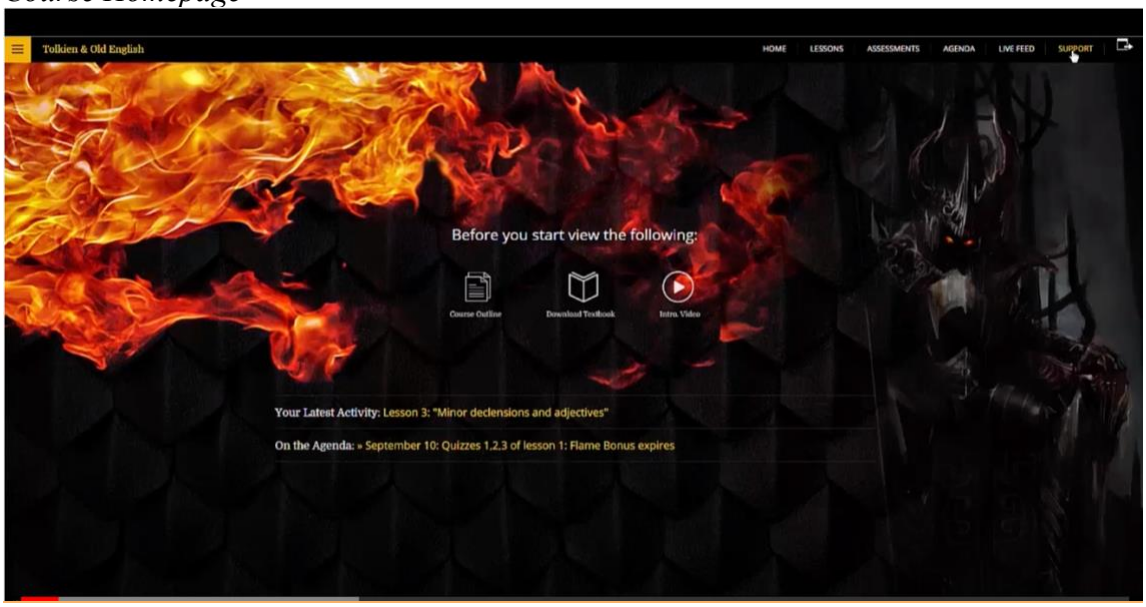
Designing the Course Interface and Structure in the LMS. The course interface allows students to access learning content and interact with the content—and each other—via a web browser. Key components of the course interface include:

- Navigation components, which relate to how users browse the course
- Information components, which include all the learning materials and resources for the course
- Input controls, which define how users respond and interact with others
- Layouts, which relate to the visual and structural design of the web pages.

When working on the course interface, John had ideas about the visual presentation of the course homepage and individual lessons. He described his visual ideas in writing—for example, detailing the types of images he would like to see on the course home page. Moreover, he proposed layouts for each lesson. The visual designer, programmer, and instructional designer helped realize these ideas, designing prototypes of the proposed interface and course structure based on John's specifications. John reviewed the prototypes and provided feedback about the design via email and in-person meetings. Once John approved the interface and course structure, the instructional designer and the programmer followed the structure when creating the 10 units of the course. See Figure 4.1 for an example of the course page.

Figure 4.1

Course Homepage



Designing Learning Activities. After designing the overall look and feel of the course and its structure, John worked with the team to design individual learning activities. These included course lectures, assessments and ways to communicate with students.

- Course lectures. The design team provided John with a dedicated laptop, good-quality headphones, and a microphone, which he used to record his course lectures. The audio portion was accompanied by PowerPoint slides. According to John, it took him three weeks to record all the course lectures. He described it as an "intense

experience" (interview, September 27, 2021), but ultimately enjoyed the process because recording all of the lectures at once helped him ensure the consistency of the content and draw connections among lectures. John did all of the recordings on his own.

While recording, John tried to replicate some of the teaching strategies he used in face-to-face classes, but adjusted them to the online environment. For instance, when he read passages, he would provide pauses to give students time to think through the learning content: "You sit with students and walk them through the content, and then you give them a hint when they get stuck" (Interview, September 27, 2021).

After he recorded the lectures, John sent the audio files and slides to the design team's videographer. The design team checked the sound quality and help clear the copyrights of the images used in the slides. As John recalled, he had to redo some of his slides because it was found that he did not have permission to use the images. The videographer helped to find some replacement images.

- Assessments. Two types of assessments were included in the course: non-graded assignments and graded assignments. The non-graded assignments aimed to provide students with practice exercises to help them engage with the course content, whereas graded assignments assessed how well students achieve the course learning goals. When designing assessments, John proposed ideas to the instructional designer, describing their purpose and alignment with the learning objectives. The instructional designer offered suggestions for the types of exercises that would work well in an online environment based on John's descriptions. Together, they designed an activity plan based on this exchange of ideas. The instructional designer would prepare prototypes for John's approval, then create content for each activity, including instructions on how to complete the activity and activity content (e.g., questions and answers). Once complete, the instructional designer entered the activities into the course page on the learning management system.

  The Smaug Attack game designed for the course is an example of a non-graded assessment. The instructional designer suggested using gamification to boost engagement in the course. Gamification is an instructional technique whereby designers add playful elements to enhance learners' interests in the learning content. John took the suggestion and worked collaboratively with a programmer and an instructional designer to design the game. The purpose of the game is to help students read Old English and translate it into modern English. It is like an adventure game that requires students to explore the scenes (written as lines of poetry in Old English) and complete challenges (multiple-choice or short-answer questions). If students completed the challenges successfully, they would unlock a new unit and get badges for the unit. Figure 4.2 shows the game and the badges. John mentioned it was a fun experience to work with designers to create the game.

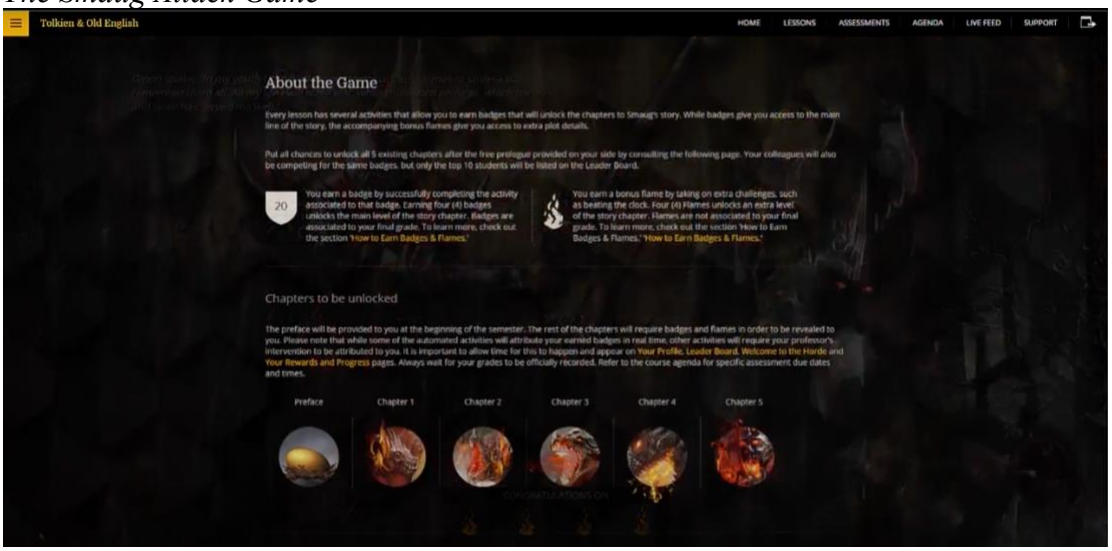
  Similarly, John had hoped to have platform for students to translate an Old English passage together and comment on one another's work until they understood the story. To that end, the instructional design team created a wiki—a shared area in the course site that enables students to work, add and edit content, and comment on others' work.

  Regarding the graded assessment, as noted earlier in the course description, this course used quizzes to test students' reading comprehension and translation skills.

The unit quizzes and mid-term and final exams all contained both multiple-choice and short-answer questions. John created the quiz questions on his own. The instructional designer and content producer added the quiz questions to the course site. Another graded assessment was a written assignment. John used the same format he had employed in his previous face-to-face course. During the interview, John shared his concerns about academic integrity in designing online exams for online courses: "I think pretty much all remote evaluations are a certain level of participation because you cannot really know if students have the book or website open when doing the online exams. But on the other hand, that is the reality of life in the digital age" (Interview, September 27, 2021).

Figure 4.2

The Smaug Attack Game



John's concern about academic integrity was not addressed in the design process, but he suggested instructional designers help with those issues and provide recommendations on the approaches that could be used to address the issue.

- Communication with Students. John's course is mainly in asynchronous format, with one live session with each student to assess their translation skills, which counted as part of the final exam for the course. He ran the live sessions using Adobe Connect, a communication tool supported by the design team.

Entering Course Materials into the LMS. After the course materials were ready, the instructional designer collected them from John and shared them with the content developer. John had no direct access to the LMS so the instructional designer and the content developer worked together to upload the course content and set up the activities into the LMS. Once the course was set up, the instructional designer provided a test account John could use to verify that the course appeared and operated as planned. After John reviewed the course and confirmed everything was fine, the design phase was completed.

Implementation of the Course. When the course launched, the course coordinator became its primary contact to John. John monitored the course and reviewed students' activities during the course, contacting the course coordinator if there are any technical issues with the course. For example, John mentioned in his interview that when students were trying to use the wiki, some of their text inputs did not show correctly. He contacted the course coordinator, and the team helped him fix the issue. Additionally, the course coordinator also set up the open and close dates

for the course each semester. John needed to send the updated course outline to the course coordinator before each semester to ensure the course stays updated.

Use of Technology. During the course design process, John and the design team used the following technologies:

- Learning Management System (LMS) used by the course development group (a proprietary system that differs from the one used by the university it serves) to create, deliver and manage the course content online. Tools that were included in the LMS:
    - Quiz tools to assess students' understanding of the course content
    - Discussion forums to communicate with students and answer their questions related to the course
    - A wiki to provide a shared space for students to work in groups
    - Games to increase students' engagement with the learning content
- PowerPoint to present course lecture content
- Adobe Connect to run live sessions to meet with students individually

On issues involving technology, John consulted with the instructional designer. He described his needs, and the instructional designer recommended technologies to fulfill them. When approving technologies, John also considered the accessibility and privacy capabilities of the technology. For example, when choosing the tool for students to share documents, he chose a wiki over Google Docs because a wiki could store all the data on the university's learning management system, where students' information would be protected, whereas Google's server is inside the United States, where the data could not be controlled and would be subject to the USA PATRIOT Act. Similarly, with accessibility John wanted students to be able to view course content and do course activities on any device, including phones and tablets. John also turned to instructional designers for help with technical glitches during the course design phase, and found the instructional designer responsive when resolving problems.

John rated his ability to use technology as "a fairly high competence" (interview, September 27, 2021) because he knew about the history of the internet, had tried lots of emerging technologies in the past, and followed the new technology trends closely. He believes that instructors who want to develop new online courses should have a certain level of digital literacy to increase their sensitivity to the capabilities of technologies.

Challenges. As an instructor, John found that the course design process posed a number of challenges. These included:

Time Spent Preparing the Course. John described the development of the course as "a ton of work" (interview, September 27, 2021). He spent three whole weeks, working five to six hours per day, recording all the course lectures, and attended multiple meetings with the design team to communicate his needs for the course. Also, he spent time thinking about the tools and strategies to be used for the course: "The thing that was surprising for me was the how much of the developing of the course involves having to go back to the drawing board and think about how the course should be delivered and what technology tools to use."

Limitations of Available Technologies. Although John is comfortable with various technologies and is open to adapting them to his course, he still faced some challenges.

- Choosing technology to meet both instructor and students' needs. When selecting tools, John needed to consider the features of the tool and keep in mind whether the tool was compatible with the learning management system.
- Balancing ease of use with privacy and security. When selecting a tool, John had to consider whether it complied with the institutional privacy and security

regulations. Returning to the use of a wiki as an example, John was aware that Google Docs would be easier for students to use as a shared space to write, edit, and comment on each other's work. However, it did not satisfy the privacy and security regulations. Wiki came in as an alternative option because it has similar features, but it required the programmers to spend additional time building it for the course and presented some technical glitches when used by students. John described himself as "frustrated" by these technical limitations.

- Cross-platform accessibility. John wanted all students to be able to access all course content using any device (including a smartphone), and to download the course content. However, the current LMS is optimized primarily for web browsers and did not allow the course video and audio content to be downloaded.

Lack of Resources to Prevent Cheating in Online Exams. John is concerned about academic integrity—more specifically, about students cheating—when preparing the online exams for his course. A common issue raised when describing the online evaluations was that it is impossible to control whether students use open books or resources in an exam setting. John admitted this as a challenge, but says the answer is to design more effective online exams rather than try to stop students from checking outside resources during. He hoped future instructional design support would address this issue in depth.

Changes in Teaching Beliefs and Practices. As noted earlier, before starting to teach online, John described online teaching as "just like other formats for teaching or communication, which has its good parts and bad parts" (interview, September 27, 2021) and described online learning as "a type of learning that this generation will not be able to avoid." John's beliefs about online learning did not change as a result of this experience developing an online course. However, he emphasized that designing online courses requires much thinking and experimenting in delivering the learning content.

According to John, the course design experience changed his teaching practices. For example, he created different ways of assessing students, such as doing one-on-one oral exams with students rather than asking students to submit essay papers only. Things he learned from the course design process were to take time to write learning objectives and think about different modes of delivery of online content through multimedia, live meetings, and discussion forums. John described his experience working with instructional designers as "extremely valuable" (interview, September 27, 2021).

Roles and Responsibilities of Instructors and Instructional Designers. In our interview, John noted that "the ideal interaction between the instructor and the instructional designer is that the instructors apply the course subject content and the learning objectives. The instructional designers turn the learning objectives and course subject content into the course materials" (September 27, 2021). This observation highlights the deep connection between the work performed by the instructor and the work performed by the instructional design team. John sees course design as a collaborative process in which he retained control over the vision of the course, the learning objectives, and the subject content while the instructional design team helped bring his vision to life. Table 4.2 summarizes each party's key roles and responsibilities on this particular project from John's perspective.

Table 4.2

Instructors' and Instructional Designers' Roles and Responsibilities, as Seen by John

Instructor's Roles and Responsibilities	Instructional Designer's Roles and Responsibilities
Role: Leading the design process. **Responsibilities:** • "Instructors need to retain control over as much as possible of the learning objectives and make sure those objectives are being met" • Write and prepare course subject content • Communicate ideas about creating course content and activities with the design team • Make decisions for the course structure and format • Have an appropriate level of digital literacy to be aware of the capabilities of online learning	**Role:** Supporting the instructor **Responsibilities:** • Suggest appropriate technical tools and design learning activities • Turn instructors' vision and ideas for the course into the tangible course materials • Check copyright/permissions for the course materials • Help the instructor and students resolve technical issues

Luis: Creative Ways of Sharing Ancient Knowledge with Students

Luis developed and taught an online course on Christian Religion. This section describes Luis's experience, background, and beliefs about teaching, along with information about the online course and Luis's experience with designing it, with special attention to his perception of the respective roles and responsibilities of instructors and instructional designers in the course design process.

About the Instructor and His Motivation to Teach Online. Luis has been tenure-track faculty at the university since 2005, becoming a full professor in 2010. He began his teaching career in 1996. Before joining the university, he taught at other higher education institutions across Canada. He teaches undergraduate and graduate courses in religion and Christian origins, and at various times has served as the department chair and the graduate program director for the university. Luis researches religion and politics. He received a research grant from the Social Sciences and Humanities Research Council of Canada for his work. Besides his rich teaching experiences, he also had previous working experience in computer science, which offered him a good base for using technology to teach.

According to Luis, his general teaching responsibilities were three courses per year, and he estimates that he spent 40% or even 50% of his time in research, 30% in teaching, and 20% to 30% in service. Luis appreciates having the freedom to teach a course in his research area: "I find satisfaction in the fact that I am able to bring the results of my research into my teaching, which is not always the case for other instructors because not all the courses we teach allow us to do that" (interview, October 11, 2021).

Among the courses that Luis teaches is Christian Origins. Before designing the online course, he taught the course in person for four years. One of the challenges of teaching a subject like theology is finding effective ways to share ancient wisdom with students who have little prior knowledge about the subject. He believes using technology tools would help present the course subject content better. Luis described his university as "a pioneer in online learning"

(interview, October 11, 2021). The university provides a supportive environment for faculty to develop online courses, which impacts his interests in designing an online course.

Luis had previous experience in preparing lectures and readings as course packages for distance education conducted by mail. His experience made him embrace online teaching quickly: "I see a lot of potential in online teaching and learning, and I think it is certainly something that will gain lots of people's interest in the future" (interview, October 11, 2021). He distinguishes between asynchronous online courses and remote teaching courses, defining the former—based in pre-recorded lectures—as "traditional online courses." In remote teaching courses, by contrast, instructors can see students' faces, if only virtually.

Luis sees the benefits of online teaching and learning, such as having more students in each class and presenting the course content nicely with the help of technology. Overall, Luis had positive experiences with online teaching and learning, but there were, in his words, "ups and downs" (interview, October 11, 2021). He thinks the most significant difference in online courses is that the instructor will not see the students, so the instructor must adjust his presentation of the course content. When teaching online courses, he tried to mimic some of the teaching strategies used in face-to-face classes but used different formats to achieve the same learning outcomes: "I kind of trying to do what I normally do in class, but keep it in mind that you are not in front of the students for real" (interview, October 11, 2021). Also, he mentioned that online classes are more lenient because instructors will not watch students completing the quizzes, which increases the chances of cheating. However, he believes that there is more potential to help address the challenges with more advanced technology.

Teaching Beliefs and Practices. Luis sees teaching as a way to share and exchange ideas with students. "I am in contact with young people with new ideas all the time. It stimulates me. It is a pleasure to teach" (interview, October 11, 2021). When teaching, Luis applies a structured instructor-led approach. He lectures, then uses seminar sessions to answer students' questions. He sees the instructor's role as sharing knowledge of the subject and explaining course content, and the role of the student as receiving the course content and asking questions. Before developing this course online, Luis described teaching by distance as "creating packages of lectures and readings."

About the Instructor's Experience with Course Design. This section describes Luis's experience with the standard instructional design process.

Goals for the Course. Luis was inspired by the other online courses offered by the university and grew interested in developing one himself. His goal was mainly to "present the classical course in a beautiful format and integrate technologies to share ancient knowledge with students" (interview, October 11, 2021). Specifically, Luis wanted the design team to "help with the copyright clearance on the learning materials" and "design the course site" (interview, October 11, 2021).

About the Course. Christian Origins is a second-year undergraduate course open to students in any academic major, with no prerequisites. Like all online courses at this institution, it is an asynchronous course with about 250 students registered each semester.

The course examines the historical origins of Christianity, focusing "on how communities and individuals in the first six centuries of the Common Era understood the Bible and interpreted its traditions to address their historical, social, and theological and spiritual requirements" (Luis' Course outline, 2021). The main objectives of the course are to:

- Discuss the influence of the Bible in the formation of Western Civilization
- Explore the historical and social issues related to Christian tradition

- Rethink contemporary Christianity (Luis' Course outline, 2021)

Graded assignments include:

- Three online quizzes consisting of multiple-choice questions related to the course content. Students have 40 minutes to complete and submit the quiz.
- A take-home exam consisting of four to five open-ended questions related to the topics covered in the course, in which students are expected to write their responses to each question.

The course has 10 units. Each begins with an introduction from Luis and a timeline to provide historical context for the content, followed by a reading section containing the required readings and Luis's audio recordings to explain the readings. The follow-up lesson slides have video lectures, graphs, and text materials embedded. Each unit closes with a review of the lesson highlights.

The course uses pre-recorded lectures, audio recordings, and readings to present material to students. It also provides a glossary of terms to help students understand the conceptual knowledge of the course. A discussion forum allows students to ask questions related to the course and communicate with their peers. Quizzes administered throughout the course use multiple-choice questions to assess students' understanding of the conceptual content.

Going through the Course Design Process. Luis learned of the opportunity to develop online courses through his department chair. He was the first one in his department to design an online course. He acquired funding to hire a research assistant from the organization and a course release to develop the course. Luis had all the course content prepared before his first meeting with the course design team, and had clear ideas regarding the help he would need from them.

The First Meeting**.** Luis met with the lead instructional designer and one instructional designer in the initial meeting with the design team. During the meeting, Luis shared his needs in designing the course. His primary request was to design a visually appealing course site. The lead instructional designer showed Luis several examples of online courses designed by the design team and suggested that he use them to generate ideas for a design format. Luis was offered the options of either using a existing course structure template or working with the design team to create a new course structure. The lead instructional designer arranged for Luis to have access to the university's other online courses, so he could determine which course design elements would be most suitable for his proposed course. Once Luis decided on the format of the course structure he wanted, the design team would help him integrate it. Additionally, during the initial meeting, the lead instructional designer laid out the expectations for both the instructor and the design team:

> The instructional designer made it clear that the professor has to come up with the content, and we are free to put whatever content we considered appropriate. However, he said that the design team supports the design of the actual look of the course and whatever we need to run, like assignments and quizzes. (interview, October 11, 2021)

After the first meeting, the lead instructional designer engaged with the design process only occasionally, in a supervisory role. Luis mainly worked with the instructional designer.

Designing the Course Interface and Structure in the LMS. The design team helped Luis develop what he called the "actual look of the course" (interview, October 11, 2021). The instructional designer and the web designer built a navigation system for the course homepage. When working with Luis, the instructional designer first proposed ideas about the course navigation and explained them to Luis, who offered feedback and made the final decisions. The

instructional designer then created the course homepage to Luis's specifications. Figure 4.3 shows the navigation design on the course homepage.

In our interview (October 11, 2021), Luis noted:

> We go some ideas from [the novel and film] *The Da Vinci Code* to create the navigations for course lessons, especially since it is a course dealing with early Christianity. The designer shared the idea with me initially. I thought it was like a piano keyboard, and students choose keys, but actually, they said, 'It is not a piano, but like the scroll from *Code*, you punch in the numbers, and then you are in the lesson.

Figure 4.3

Course Homepage

The instructional designer also helped Luis design the layout for each lesson and suggested "where to put what content" (interview, October 11, 2021). For example, the instructional designer proposed adding a timeline at the beginning of each lesson to show the learning content, and Luis embraced the suggestion. Each unit followed a consistent structure, starting with an introduction, timeline, readings, and study notes (See Figure 4.4). The design team proposed the structure to Luis, and he provided feedback via email and telephone and approved the structure.

Figure 4.4

Lesson Structure

Designing Learning Activities. After designing the overall look and feel of the course and its structure, Luis worked with the design team on learning activities. These included:

- Course content. Even before working with the design team, Luis had most of his course content as PowerPoint slides and he wanted the design team to help make his slides "as attractive as possible" (interview, October 11, 2021) by adding images,

videos and audio. The instructional designer sought out some course materials to add to the slides and clear copyright for the video and image files Luis had provided. When preparing lesson content, Luis had the freedom to choose the subject matter content. He and his research assistants worked together to create the lesson content, then shared it with the instructional designer. The instructional designer would meet with Luis either in person or via phone to provide some suggestions, and it was up to Luis whether he wanted to embrace the suggestions. According to Luis, the instructional designer "suggested things for improvements and things that he might not notice." For example, Luis wanted to share some of the terminology used in the course with the students, and provided a list of definitions to the instructional designer. The instructional designer took the information and created a "glossary of terms" section on the course site.

In our conversation, Luis also mentioned that the instructional designer suggested that he (Luis) conduct an interview with an expert in the field and use it as part of the lesson content to make the lesson engaging. Luis did not initially take the suggestion, but as the course was going live, he reconsidered, in the end, he interviewed one field expert and incorporated their discussion into the course. The videographer helped him record the interview, clear copyrights with everybody involved, and edit and upload the interview video to the course system. Once the materials were ready, the instructional designer incorporated all the videos, audio, and images into Luis's PowerPoint slides and then created the lesson content using, as Luis put it, "a software fancier than PowerPoint" (interview, October 11, 2021).

- Recording course lectures. The subject matter content of the course was presented mainly via oral lectures. Prior to working with the design team, Luis had prepared most of the subject matter content of the course using PowerPoint slides. He worked with the instructional designer and to record his course lectures, choosing to present them in video format rather than as voice-over. As Luis recalled, the videographers went to his home office to record the lecture sessions. Luis followed the videographers' suggestions of not walking around in a room when recording and breaking the material into smaller lecture chunks, between 30 seconds to 10 minutes long. Once the lectures were recorded, the videographers edit the videos to ensure that the audio and the text matched and the sound quality was good. They made decisions on whether particular segments needed to be rerecorded. Luis would follow their suggestions and rerecord the lectures as needed. The videographers checked the copyright status of all images used in the slides.

  Luis used audio recordings to explain the readings and help students understand the text. He wanted to create a reading experience similar to that in his face-to-face classes: "I tried to do what I normally do in class in my field. We go over texts and try to understand the text. I was trying to do a bit hermeneutics of the text and pointing to the main ideas in the reading using the audio files" (interview, October 11, 2021). Luis recorded these audio files by himself. When he finished recording, he sent the audio files via email to the instructional designer, who would later help him upload the files to the course lessons.
- Assessment. The majority of course assessments are multiple-choice question quizzes, administered after every three lessons. These are graded to check students' understanding of the conceptual content. Luis created the multiple-choice questions in

Word documents and shared them with the instructional designer, who formatted and uploaded them to the course site. Luis also prepared questions for a final exam. The course coordinator on the design team helped load the exam questions onto the course system and created instructions for taking the exam.

- Communication with Students. Luis aimed to interact with students and engage them in the course. The instructional designer set up a general discussion board on the course website to provide students with a space to exchange ideas related to course topics. However, Luis did not give any specific instructions or prompts to encourage students' participation. The instructional designer also encouraged Luis to hold live sessions with students using Adobe Connect. Luis attended an Adobe Connect workshop to learn about the tool. However, he was hesitant to use it, as he experienced several technical glitches during the workshop.

Entering Course Materials into the LMS. After all the course materials were prepared, the instructional designer collected them and entered them into the learning management system. Luis did not have access to the back end of the course site, but he had faith in the design team and let them take care of that aspect of the course. The instructional designer entered the content for each lesson following the preordained structure and set up and added questions to the quizzes, checking the content to make sure everything worked properly. Once the course was set up, Luis reviewed the course on the LMS. Once Luis gave his approval to the completed course, the design phase officially ended.

Implementation of the Course. When the course launched, the course coordinator became a primary contact person for Luis. Every semester, before he teaches the course, Luis contacts the course coordinator to review the course outline, make occasional changes to the learning materials, and update information related to the teaching assistants for the course. He monitors the course content periodically and reports any broken links. The design team sets the start and end dates for the course each semester and help to administer the final exam, delivering exam questions to students and collecting exam submissions.

Use of Technology. During the course design process, Luis and the design team used the following technologies:

- PowerPoint to present course lecture content
- Videos to present course lectures
- Audio recordings to explain the key points of the course readings
- The LMS used by the design team to create, present, and manage the course content online. Tools embedded in the LMS include:
    - Interactive slides, which integrated images, audio, and videos with PowerPoint slides, to present the learning content for each lesson
    - Quiz tools to assess students' understanding of the course content
    - Discussion forums provide students with a space to share ideas related to the course with others

Luis rated his ability to use technology as high. He is open to embracing new technologies and believes new technologies would improve online courses. His previous work experience in computer science and distance education made him confident in using technologies. He took workshops related to technologies at the institution. However, he did not integrate many new technologies when he designed the course.

Challenges. During the course design process, Luis found several challenges and contradictions, which included:

Lack of Resources for Engaging Students Online. Luis found it difficult to encourage students to view all the course materials and participate in online activities. Luis found it was hard to motivate students to learn, and he noticed the trend that students' discussion activities decreased quickly over the semester. "A lot of students are there just for 'I want to know what you should prepare for the exam, and for the quizzes. I'm not interested [in anything else], I [only] need to get my grade for the course'" (interview, October 11, 2021).

Lack of Support and Training in Using New Technologies. When encouraging instructors to use new technologies in their courses, it is necessary to provide them with sufficient training to help them see the benefit. According to Luis, he attended the Adobe Connect workshop provided by the organization to which the design team belongs. The workshop aimed train instructors to use the interactive features of Adobe Connect. However, as Luis recalled, many technical glitches occurred in the workshop setting as facilitators tried to demonstrate the features, and technical staff on hand could not figure out how to solve them. As a result, Luis was hesitant to use Adobe Connect in his course.

Instructors and ID's Divergent Perspectives on Sharing Course Materials. Luis identified differences in perspective between the design team and himself during the design process. For example, Luis mentioned he was not comfortable with his audio files and video files being downloadable by students. The ID team, however, contended that this was an excellent way to make the course materials accessible for students. Another example arose over the issue of sharing exam questions. Luis was concerned about academic integrity and worried that students would find the exam questions online rather than studying for the exam, while the design team (as he saw it) was focused primarily on protecting the copyright of exam questions: "For them [the design team], it was an issue of copyright, whereas for me, it was more like an ethical issue" (interview, October 11, 2021).

Changes in Teaching Beliefs and Practices. Before developing this course online, Luis described teaching by distance as "creating packages of lectures and readings" (interview, October 11, 2021). After this experience working with a design team on an online course, Luis saw more potential for new technologies to improve courses in his field: "It is really nice to see the possibility of combining technology with the discipline and to be able to share the ancient knowledge with people like that."

As for the teaching practices, Luis mentioned that the design process made him think more about the clarity of his previous course content. He reflected on how he had taught before, and integrated some of the ideas from this course design experience into his other courses.

Overall, though, Luis praised his "awesome experience" (interview, October 11, 2021) working with the instructional designers, and the experience made him want to further embrace online teaching and learning: "If I have a chance to design a new course or revamp some areas of this course, I would be willing to consider whatever new ideas they [the IDs] have."

Roles and Responsibilities of Instructors and Instructional Designers. In conversation with Luis, he makes plain that he sees himself playing the central role in the instructional design process of communicating ideas and choosing the content for the course. He valued the collaboration with the instructional design team, especially in designing the course format: "In terms of the format of the course, they [the IDs] played a very important role, whereas the course content is my responsibility. We were sharing in that sense" (interview, October 11, 2021).

Luis considered his working relationship with the instructional designer to be a respectful one:

> I have not had the impression that they [the IDs] were trying to overstep the boundaries to suggest stuff that they would consider me to be the specialist. Obviously, I recognized that I was not a specialist in the design, and they were not specialists in my topic, so that is how it went. We went along as they agreed with what I said, [and] I agreed with what they said. (interview, October 11, 2021)

Luis talked only a bit with the instructional designers about the pedagogical aspect of the course. According to Luis, the instructional designer "gained experience about pedagogy from other courses, but they were not necessarily experts in pedagogy" (interview, October 11, 2021). Also, Luis mentioned that the lead instructional designer was very good at providing pedagogical suggestions, but he only joined the first two meetings. Table 4.3 shows how Luis sees the specific responsibilities of the two parties.

Table 4.3

Instructors' and Instructional Designers' Roles and Responsibilities, as Seen by Luis

Instructor's Roles and Responsibilities	**Instructional Designer's Roles and Responsibilities**
Role: Primary role focusing on the subject matter content and the ideas of the course **Responsibilities:** • Provide subject matter content • Choose the teaching and learning strategies • Make final decisions on course layouts and materials used • Communicate course ideas clearly to the design team	**Role:** Equal role, but focusing on the format design aspects of the course **Responsibilities:** • Design the look of the course • Set up course content on the LMS • Format the learning materials provided by the instructor • Provide support in course maintenance • Deliver course product on time

Kathy: Sharing Anthropological Study of Culture Online

Kathy developed and taught an online course on the anthropological study of culture. This section describes Kathy's experience, background, and beliefs about teaching, along with information about the online course and Kathy's experience with designing it, with special attention to her perception of the respective roles and responsibilities of instructors and instructional designers in the course design process.

About the Instructor and Her Motivation to Teach Online. Kathy started teaching in higher education in the 1990s. She teaches both undergraduate and graduate courses in linguistics and anthropology. Kathy researches theories of cultural and social change and the linguistic representation of cultural knowledge and practice. Her primary research topics include urbanization in the Pacific and sociolinguistic aspects of Pijin, the English Creole spoken in the Solomon Islands.

At the time she developed the course, Kathy's general teaching responsibilities were three to four courses per year. She spent more than 10 hours each week preparing her teaching materials. During the semesters when she is teaching, she spends 70% of her time teaching and 30% doing research and supervising graduate students: "I try to dedicate at least one day each week to my research, but most of the time, it does not work like that" (interview, November 5, 2021).

Among the courses that Kathy teaches is Introduction to Culture. Before she designed the online course, she taught the course in person. Kathy updates her teaching materials each

semester to make them better for students' learning. She sees the online course as a possible way to make her course visually appealing.

Kathy is interested in online teaching and learning. She thinks it has many good aspects, such as flexible learning places and times, students being able to learn at their own pace, and multimedia integration. She also sees it as a good opportunity for students to become independent learners. According to Kathy, an online course is a "fixed format. . . . You cannot make slight adjustments from week to week as you normally do in the classroom" (interview, November 5, 2021). "Online teaching and learning has its place in academia. It is an approach that is extremely important for the students because that allows them to learn how to become independent and to work at their own pace" (interview, November 5, 2021).

Comparing online learning with face-to-face classes, Kathy found the most significant difference is the types of interactions, both among students and between students and instructors: she expressed concern about "students not being able to learn from each other to the same extent that they can when they listen to how people phrase questions and how they answer questions" (interview, November 5, 2021).

Additionally, she mentioned that online learning might not be the best fit for first-year undergraduate students because she believes students need to be highly disciplined to succeed in the format: "Online learning demands students to be extremely disciplined, but many of the students who just finished *Cégep* or High school have not yet mastered the skills of being independent learners" (interview, November 5, 2021).

When talking about designing online courses, Kathy expressed her willingness to try different strategies and technologies, and she raised the point that her "hesitation is not about how to do online teaching, but how best to do it" (interview, November 5, 2021).

Teaching Beliefs and Practices. Teaching is important to Kathy. She enjoys working with students and building relationships with them: "Young students keep us young, both intellectually and mentally, because they challenge us with all sorts of new ways of thinking about the world and new ways of talking" (interview, November 5, 2021). When teaching, she sees her main role as to guide students to learn by "giving them chances to work with each other" and "helping them gain confidence in their abilities to learn." She believes students play a central role in their own learning process. Also, she believes new undergraduate students need additional guidance in learning, so she applies a more structured approach to helping them build their learning abilities. Moreover, Kathy believes that course content needs to be updated frequently to ensure it is suitable for students' learning.

About the Instructor's Experience with Course Design. This section describes Kathy's experience with the standard instructional design process.

Goals for the Course. Kathy has long been an advocate for online teaching and learning in her department. Moreover, she is willing to try new teaching strategies to facilitate students' learning. Her goal in designing an asynchronous online course was to make learning more interesting for students and make them more knowledgeable in the field of anthropology. She wanted to produce interviews with some anthropology professionals and integrate those interviews with her course lectures to achieve her goal. She also wanted to make her lecture slides to be more interactive by adding graphics and animations.

About the Course. Introduction to Culture is a second-year undergraduate course about the anthropological study of culture. It is a required course for anthropology majors and an elective for other interested students. Like all online courses at this institution, it is an asynchronous course with 250 to 800 students registered each semester.

The course introduces the anthropological study of culture. The main objectives of the completed course are:

- Present the concepts, models, and methods used by anthropologists
- Examine elements that sustain social life
- Discuss the relevance of issues related to cultural anthropology

Graded assignments include:

- Two quizzes on readings and class materials. For each quiz, students are required to complete 40 questions in 50 minutes.
- Current affairs assignment: Students read one of the newspaper or magazine articles provided by the instructor and then answer five questions related to their chosen article.
- Take-home exam: At the end of the semester, students answer short-answer and essay questions related to the course content.

The course comprises 13 lessons, each beginning with a rundown of the lesson's learning objectives and a lesson introductory video. Each lesson continues with a learning guide, required readings, and the lesson lectures, and closes with a self-assessment which aims to help students check their understanding of the content. Lectures were chunked by lesson topics, and the lecture content includes texts, images, and video or audio elements.

The course uses pre-recorded video lectures, audio, and readings to present material to students. Required reading incudes the instructor's blog, which Kathy updates every week, sharing resources related to the topics of each lesson to provide students with opportunities to stay on top of developments in the field. Non-graded self-assessment quizzes, made up of multiple-choice questions, allow students to check their understanding of the course materials. Students can take the quiz, then check the answers and revisit specific topics as needed.

Going Through the Course Design Process. Prior to working with the design team, Kathy met informally with the director of the organization that provided the course design support. She shared her concerns about the pedagogical issues she foresaw, such as the difficulty of student-instructor and student-student interactions with the director. She also talked about her plans to transfer her face-to-face course to an online format. The director approved her initial plan for the course and offered the design team to support Kathy's online course development. The design process started when Kathy got approval from the director and connected with the instructional designer. Major phases of the process include the first meeting, working on the course materials, designing the course interface and structure in the LMS, designing learning activities, entering course materials into the LMS, implementation of the course, and revising the course.

The First Meeting. In Kathy's initial meeting with the design team, which included the director and the instructional designer, she shared her ideas about designing the course. She asked the design team to help her specifically with making interactive learning content and recording videos for the course. The design team offered "a free rate" (interview, November 5, 2021) for supporting her course design. The central role of the design team was to help implement Kathy's ideas. During the meeting, the design team explained the timeline for developing an online course and asked her Kathy submit the course-related content following specific deadlines requested by the design team.

The online course represented an addition to Kathy's existing workload. She received stipends for teaching the course (calculated by the number of students enrolled), but was not compensated for her time spent preparing the course. Additionally, Kathy signed a contract

regarding the reproduction and intellectual property rights, stipulating that she "retains the intellectual property of the course" (interview, November 5, 2021).

Working on the Subject Matter Content. After the initial meeting with the design team, Kathy spent about four months, mainly working on her own, to produce subject matter content for the course. During that period, Kathy wrote a plan for each lesson, using a template she developed on her own. Each lesson plan included the type of media (video, images, or text), audio files for narration for the content, source files to support each topics and the estimated duration of each topic. She used different colors in her lesson plan to show where she wanted to add interactive elements. Kathy would contact the instructional designer when she got stuck seeking effective formats to present her subject matter content. The instructional designer would offer suggestions on suitable strategies or technologies. See Figure 4.5 for a lesson plan example. The instructional designer later used the lesson plans to create the course in the learning management system.

Figure 4.5

Lesson Plan Example

Visual	Audio	TC in	TC out	Readings	Sound files
	Lesson 4 : language and communication				
Xine: Video	Hello, As we look at and watch what is happening around us, we note that human beings around the world spend the best part of their time communicating : They communicate with each other, They communicate with the supernatural through prayers,				
Xine: slide with VO  Maroccan women chatting by the road. Marrakesh, 2006 (*Photo by C.Jourdan*)  Anthropologist Kevin Tuite, from Université de Montréal, in conversation with participants in his research project in Georgia, 2005 (*Courtesy: Kevin Tuite)*	What is language? Let's have another look at the definition of language that I proposed in the opening segment of this lesson: a code for communication consisting of a set of symbols and a set of rules for constructing messages Is this definition precise enough? As it is, we might as well be talking of artificial computer languages based on mathematical conventions. For this definition of Language to be more complete, we need to add that these symbols are arbitrary and conventional they are used by peoples living in societies; they are passed down from generation to generation. And finally that these symbols may be oral, written, or signed (like in sign language). As the tool of communication between human beings, Language is central to culture. Think about all the activities we enter into via language and you will understand why we say that language is truly the essence of our humanness :: The relevance of the study of language for anthropology has been rendered particularly important by the works of Franz Boas and it has led to the development of a subfield of anthropology called : linguistic anthropology, which focuses on the relationship of language and culture. The relationship between linguistic and anthropology is an old one. Linguistic anthropologists study this relationships by looking at the social interactions and meanings as can they be revealed by the study of discourse and speech. Note here that I am not talking of language, but of speech defined as the social and invidual use of language. Speech is				What is language?

Designing the Course Interface and Structure in the LMS. After Kathy created the lesson plans, she sent them to the instructional designer. Then the instructional designer reviewed the lesson plan to assess feasibility of the plans based on available time and resources. Also, the instructional designer provided suggestions on selecting multimedia or adding content to support Kathy's ideas on making the course interactive. Kathy had several in-person meetings with the instructional designer and e-mail exchanges before agreeing on the lesson plans. After that, the instructional designer showed Kathy several possible lesson structures in the LMS based on her plans. Kathy and the instructional designer looked at the structures together, and then Kathy decided on the structure of the course lesson. Once the final decision was made, the instructional designer created the lesson structure for each lesson in the LMS.

Additionally, Kathy wanted to design a visual representing the meaning of anthropology to use as the home page banner for the course. She met with a graphic designer from the design team and described her ideas for the image, which the designer then rendered as the logo for the

course. Kathy was enthusiastic about the results because she felt the graphic designer shared her vision and captured the essence of the field of anthropology.

Designing Learning Activities. After designing the overall look, feel, and structure of the course, Kathy worked with the IDs on individual learning activities. These included:

- Lecture content. The subject matter content of the course was presented in slide format. Lecture slides included all the content mentioned in the lesson plans, starting with some guiding questions and the learning objectives for each lesson, then outlining the learning content by topics before concluding with a recap of key concepts and a list of references. The instructional designer helped Kathy transform the lesson plans she had created into PowerPoint slides, adding animations and graphics within the slides to make the interaction visually appealing. After the instructional designer finished creating the lecture slides, she sent the slides to Kathy to review. Kathy described the lecture slides as "fixed slides" (interview, November 5, 20210), and used them to record her course lectures.

  Kathy presented her lectures for each lesson in video format, working with two videographers from the design team—one responsible for filming, the other monitoring the sound. The lectures were recorded between semesters. The first six were completed over the course of a month, followed by a hiatus as Kathy performed her regular teaching duties. Recording resumed after the semester. The entire process of recording the lectures took about half the year to complete. Once the lectures were recorded, the videographers sent the video lectures to the instructional designer, who checked the quality of the recorded videos, working with Kathy to make any necessary changes.
- Preparing interview materials. One of the major innovations Kathy wanted to implement to her course was the integration of video interviews with anthropology professionals from different provinces of Canada. Kathy had the raw video files before working with the design team. She wanted the design team's help with editing the files. In her lesson plan notes, she indicated spots where interview segments should be inserted, noting where each clip should begin and end. The instructional designer helped edit the interview files, cut the interviews into segments, and edited them into Kathy's lecture videos.
- Blogging. Creating Life in Anthropology is a blog written by real anthropologists about their experiences in the field. Kathy created the blog as an adjunct to the course, as a way to help students become more knowledgeable about various anthropology topics. Kathy and the instructional designer worked together to develop this project. Kathy contacted her anthropology colleagues and provided the blog's content, whereas the instructional designer chose the blog tool and devised the structure of the related student activity. Kathy updated the blog and added new posts regularly.
- Assessments. The course includes both graded and non-graded assessments. Self-assessments comprise 5–10 multiple-choice questions at the end of each lesson to check students' understanding of the lesson topics. The answers become visible to students after they submit their responses, allowing them to assess their understanding of each topic and review the related learning content as needed.

  Quiz on the course outline: The purpose of the activity is to ensure students read the course outline. It includes 10 questions about the information covered, in which students must score 100% before they can proceed to the rest of

> the course. Graded quizzes consisting of 40 multiple choice questions each.Written assignments, which require students to submit responses to questions provided by the instructor.
>
> Kathy prepared all the quiz questions and self-assessment activities in Word files. Then, the instructional designer helped her choose an assessment tool in the learning management system and formatted the questions for the platform. Kathy prepared the questions as for the written assignments on her own.

Entering Course Materials into the LMS. After the materials were ready, the instructional designer uploaded all the course content and learning activities to the learning management system. As with John and Luis, Kathy did not have access to the development end of the course site. After the course content had been loaded into the LMS, Kathy reviewed the course site to verify that everything was correct. The instructional designer made revisions based on her feedback. Upon Kathy's final approval of the course content, the design phase was complete.

Implementation of the Course. When the course launched, the course coordinator became the Kathy's primary point of contact. She contacted the course coordinator each time she needed to update the course content, submitting her requests and the new content via email. The course coordinator then assigned the tasks to the design team members as needed to update specific content. The course coordinator is also responsible for setting up the open and close dates for the course each semester, and for setting up the deadlines for assessments and scheduling final exams.

Redesigning the Course. After the course had been online for a couple of years, Kathy thought about updating it to take advantage of emerging technologies and design ideas. Specifically, she wanted to "recreate some of the lesson lectures . . . though more in terms of online pedagogical theories" (interview, November 5, 2021). In addition to the original course design experience, Kathy also shared her experiences of redesigning the course.

Kathy worked with a design team, including two instructional designers and two ID interns, on the redesign of the course. Kathy met with the design team several times to discuss new theories of online learning, the possible changes needed for her content, and the new structures of the lesson. As Kathy recalled, she mainly worked with the interns on specific tasks during the redesign process. The two instructional designers were there to support her if any issues arose during the process. For example, one of the interns helped Kathy review her lesson content, spotted the terminology used in the lessons, and then provided her with suggestions on how to more clearly explain the terminology to students. Kathy took their advice and considered the language she used in her course content: "She [the instructional design intern] taught me how to rephrase things to be much more open and to explain things without using terminologies to students. I learned a lot with her" (interview, November 5, 2021).

Also, the instructional design interns worked with Kathy to make her lesson content more interactive by integrating different technologies. They met several times to discuss possible interactive activities for each lesson, exploring activities that would facilitate students' interactions to a greater degree than discussion boards. Kathy explained the types of activities she wanted for her course. The instructional design intern provided some activity examples used in other courses to show Kathy some of the possible options. Kathy sometimes disagreed with these suggestions, and would explain her opinions to the intern based on her teaching experiences.

> At times, I had to explain to her that some pedagogical ideas sound nice, but in practice in the classroom, for this type of materials, I cannot do that. And she [the instructional

> design intern] would say, "Fair enough," [and] we would do something else. I enjoyed this kind of discussion, as long as instructional designers are not imposing their visions. . . . They were good discussions, and they opened up my mind to possibilities and [were] very interesting. (interview, November 5, 2021)

The instructional design intern then created a mock-up lesson with the proposed activities for Kathy to review. However, the redesign of the course had to be postponed due to the COVID-19 pandemic.

Use of Technology. During the course design process, Kathy and the design team used the following technologies:

- PowerPoint to present course lecture content.
- Videos to present course lectures and interview content
- LMS, used by the design team to create, present and manage the course content online. Tools that were included in the LMS:
    - Interactive slides, which integrated images, audio, and video with PowerPoint slides to show the learning content for each lesson
    - Quiz tools to assess students' understanding of the course content
- Blog page, which Kathy used to post recent articles and stories written by anthropologists around Canada

Kathy rated her ability to use technology as low and described herself as "barely able to use the computer" (interview, November 5, 2021). However, she was willing to learn what was necessary for the course and take suggestions from the design team. As Kathy mentioned, she learned new technologies mainly from the instructional designer: "The technology changes so quickly, I am always lagging behind, but they [the instructional designers] are on top of things, so they feed me with possibilities."

The instructional designer helped with most technical tasks, such as creating animations for the slides, uploading the videos, and setting up course lessons in the learning management system.

Challenges. During the course design process, Kathy experienced several challenges and contradictions, which included:

Preparing Quality Online Courses. According to Kathy, the main concern for most instructors is not the technical challenge of putting a course online, but how to best do it from a pedagogical standpoint. She shared her uncertainty about not knowing how students would react to the course materials:

> When you are in a classroom, you can see right away whether students are falling asleep or they are interested. If you see that they are not interested in the course content or are confused, you can adapt and adjust things right away to bring them back. But you cannot do that online because it is a fixed format. You have to anticipate the places where students might lose interest, and it is hard to anticipate. (interview, November 5, 2021)

Lack of Effective Student Interaction. Kathy mentioned that meaningful interactions among students were almost impossible. Kathy tried to open the discussion board for students to share their thoughts. However, not all the students used the discussion board, or used it ways she did not expect. Kathy pointed out that it was tough to figure out ways to make sure students interacted with each other beyond using the discussion board in the online course. She also tried to have live office hours to encourage students to communicate with her or her TAs, but most students did not feel ready to join the office hours to talk to the teaching team.

Divergent Course Visions between Instructor and IDs. The different educational backgrounds of the instructor and the design team created some friction when designing the course. Kathy revealed that when beginning the process, she had expectations for the instructional designer and the web designer to understand her discipline and her visions for the course. There were disagreements when the design team members could not understand her vision. Kathy shared an example about redesigning the image for the course homepage:

> I did not like the design of the new homepage because it did not capture the character of the anthropology. We [that is, Kathy and the graphic designer] went back and forth. She tried several times and did a few changes, but she did not know what anthropology was all about. So, I said "No, it does not work. I will keep the old homepage." (interview, November 5, 2021)

Another example Kathy shared was working with one of the instructional design interns. They had difficulty talking to each other because the intern was concerned more about using different theories of education from the books and having a detailed lesson plan. By contrast, Kathy thought she had already sufficiently outlined all lesson content. The difficulty affected the progress of the course design: "She [the instructional design intern] was nice, and I respect her fully, but she was a bit too rigid at following what was in the textbook and lacked the kind of vision that I wanted for the course" (interview, November 5, 2021).

Contradictions Between Teaching Experiences and Pedagogical Sound Suggestions. Because Kathy has more than 30 years of experience teaching face-to-face, she has already developed her style of teaching. Kathy had tried different teaching strategies over the years and gotten feedback from her students. Sometimes her teaching experiences contradicted some of the recommended pedagogical strategies:

> After spending 30 years in the classroom, you know what is pedagogically sound even though you have not been trained in pedagogy. So, at times, I had to explain to people, "Look, the theory is nice, but in the classroom, for this type of material, I cannot do that." (interview, November 5, 2021)

She gave an example about trying to do "flipped classes" with students, a technique wherein the instructor provides the lectures in video format, sharing them with students beforehand, then students spend the class meeting working on learning activities: "I tried the flipped classes several times, but students' comments are regularly the same. They do not like it. It is well thought of by theoreticians in education, but in practice, in the classroom, it does not work for social science" (interview, November 5, 2021).

Kathy also mentioned that not all pedagogical suggestions or best practices apply across all disciplines. When designing the course, instructors and designers might need to agree on which pedagogical techniques are most appropriate for the given disciplines or course subject.

Lack of Resources to Prevent Cheating in Online Exams. Kathy noted that preventing students from cheating or sharing exams was challenging for online courses. She realized that some students shared exams on the web, but neither she nor the university could take immediate action to remove them from the internet. As for cheating during the online exams, she only reported those students who cheated, but she did not make additional changes to the exam.

Changes in Teaching Beliefs and Practice. As noted earlier, Kathy's beliefs about online learning included "an online course is a fixed format," "online teaching and learning has its place in academia," and "online learning demands students to be extremely disciplined to do well" (interview, November 5, 2021). Her beliefs about online learning did not change after this

experience with developing an online course. However, she pointed out some changes in her teaching practices.

In designing the online course, Kathy discovered new ideas and possibilities for teaching pedagogically and technologically. She started to make changes to her in-class teaching by introducing more technologies in the classroom, as well as designing learning activities around available technologies to make learning more engaging. Also, when preparing her course materials, she tended to use more visuals, break the lectures into smaller chunks, and intersperse lectures with elements such as activities, visuals, and videos.

Not only did Kathy discovered new ways of presenting her course content—she also noticed herself thinking about technology as more than just a tool to facilitate learning, and considering the pedagogical aspects embedded in the design of the tools. Kathy enjoyed working with the instructional designer and thought that "having a team of specialists in online teaching and instructional design at the institution is very worthy" (interview, November 5, 2021).

Roles and Responsibilities of Instructors and Instructional Designers. Kathy valued the work of instructional designers in supporting her in transforming her ideas into a pedagogically sound online course. Moreover, she adopted ideas from the instructional designer about presenting the learning content in a dynamic way: "Instructional designers guide us in designing the instructions of the course. I enjoyed the discussion with them, as long as they are not imposing their visions." (interview, November 5, 2021).

Kathy sees the instructor as the leader in the instructional design process and the instructional design team as support partners.

> I produced the content, I produced what I wanted, and then I sat with the instructional designer. They [the instructional designers] were there as support, really. What they did was allow me to have my vision ahead, and they facilitated it. They did as best they could to make it possible. The relationship is good. (interview, November 5, 2021)

Table 4.4 lays out her perceptions of the parties' respective roles and responsibilities.

Table 4.4

Instructors and Instructional Designers' Roles and Responsibilities, as Seen by Kathy

Instructor's Roles and Responsibilities	**Instructional designer's roles and responsibilities**
Role: Primary role focusing on the subject matter content and the visions of the course. **Responsibilities:** • Produce intellectually sound learning content • Communicate her visions about the course • Make decisions on course structure and teaching and learning strategies	**Role:** Supportive role to help the instructor look for ways to implement her vision. **Responsibilities:** • Listen to and understand instructors' ideas about the course • Offer possible technical and pedagogical options, solutions, and support based on instructors' needs • Transform and set up the course content into an online format

The Course Design Activity

The second generation of Activity System (Engeström, 1987) is used to present instructors' course design, supported by the express instructional design. This section describes the subject of the activity, its object, the tools and rules used to perform the activity, the

community involved in the activity and the division of labor within it, the challenges and contradictions that arose in the process, and the change and development represented. The section closes with a visual presentation of the activity system for the standard instructional design service.

Subject

The subject of this activity system is the instructor. All three participants are tenure-tracked faculty members at the university. They indicated they spent 30%, 40%, and 70% of their time teaching, respectively. Each of the three participants has more than 10 years of teaching experience in humanities disciplines. They see teaching as a way to share knowledge with students and help them build their skills. All three participants used an instructor-centered approach while teaching. Two of the participants emphasized that students play a central role in their own learning, with instructors facilitating the learning process. They all believe interaction is essential for students' learning. One of the participants also mentioned that his previous experiences as a student impacted his way of teaching.

Before designing the courses for online delivery, all three participants had taught the same course face-to-face. Two of them had previous experience related to programming and website design, which helped them embrace working with online courses. All three participants are open to online teaching and learning, recognizing its benefits, such as convenience and flexibility. They believed the use of technologies would make the course visually appealing. While concerned over their inability to see or have real-time interactions with students during online classes, all three participants indicated a willingness to explore new strategies and formats for teaching.

Object

The object of the instructors' course design activities was threefold: a) developing an asynchronous online course, b) making the course content interactive so as to be interesting for students, and c) staying up-to-date with technologies and strategies for teaching. All three instructors worked towards designing quality online courses to facilitate students' learning. According to Quality Matters (Qualitymatters.org, 2023), a quality online course is visually appealing and easy to navigate, and provides students chances to learn content in various formats while effectively interacting with the content, the instructor, and other learners.

Tools

All instructors interviewed used three sets of tools to carry out the standard ID supported course design activities: physical, virtual, and cognitive tools.

- Physical tools included:
    - Laptops, headphones, and microphones to record course lectures
    - Subject matter content materials, such as textbooks, to prepare course content.
- Virtual tools comprised:
    - Tools used to prepare the course content, such as PowerPoint slides, Word files, images, videos, and audio files
    - tools used to present the online course, such as the LMS and the applications embedded therein, including quizzes, discussion forums, blogs, wikis, and games
    - Tools used for communication, such as Adobe Connect, email, and phones
- Cognitive tools included:
    - Instructional design principles and pedagogical, technological, and instructional strategies suggested by the instructional designers

- Instructional designers' hands-on support and guidance on creating course structure and content as well as using technology tools

Rules

The policy, norms, and regulations instructors followed during the course design process were as follows: a) all the participants followed the course design process used by the design team and signed the contract for the design project plan. The design project plan includes information about the design process, proposed timeline, budget, and roles and responsibilities of the instructor and the design team. b) The university policy regarding online courses and faculty's intellectual property stipulates that each course at the university must to have a final exam, and that faculty members retain the rights to their course content. The development of the course, however, is considered outside the instructor's regular teaching responsibility. c) When designing learning activities for an online course, instructors need to consider their compatibility with the LMS's capabilities. d) Instructors are given only user access to the LMS to review and deliver the course. They cannot set up the course, enter content into the LMS, or administer the course each semester without help from the instructional design team. e) After a course is launched, the course coordinator is the primary contact for the instructor, who must contact the course coordinator if they need to update the course content. The course coordinator assigns tasks to the design team accordingly.

Community

The instructors' community consisted of a) instructional designers, b) videographers, c) graphic designers, d) the course coordinator, e) programmers, f) TAs and instructional design interns, and g) students.

Division of Labor

All three instructors see their roles as the leader in the course design process and the expert in the subject matter content of the course. They perceive themselves as responsible for preparing the learning content, selecting teaching and learning strategies, making final decisions about the course's look and feel, and communicating their ideas and visions of the course with the design team.

Two out of the three instructors considered instructional designers as their support partners. One considered instructional designers as equal partners, but focused on designing the course format and structures rather than the course learning content. All instructors valued instructional designers' specialties in designing course layouts and providing pedagogical and technology-related suggestions. The instructors considered instructional designers as being a liaison to connect with other professionals, such as graphic designers or videographers. Instructors expected instructional designers to support them in transforming their visions for the course into a finished product, to help them put the course content online in an interactive and visually appealing way, and to offer them options and recommendations for effective online teaching and learning.

Instructors described the activity of designing the course format as collaborative in which instructional designers and instructors would discuss different options, and the parties would collaborate to find solutions together. All three participants claimed that their relationships with instructional designers were positive. According to the instructor participants, instructional designers had expertise in different fields, and all parties demonstrated mutual respect by not trying to overstep the boundaries of each other's field.

Challenges

The following challenges in the activity system had impacts on participants' activities in preparing for their online courses:

Producing Quality Online Courses Using Available Tools and Resources. All the instructors experienced conflicts between their ideal vision of the course design and the reality of adjusting their plans to adhere to university policies by using the tools that are already available to them. The instructors recognized the benefits of using technology to make their courses more interactive and visually appealing. However, all mentioned that they needed to consider whether the technologies existed to allow them to implement their desired activities, and if so, whether those tools were compatible with the LMS. At times, instructors had to compromise their ideas for learning activities to accommodate the available tools. Also, instructional designers' suggestions are often mainly based on the universities' available tools. For example, John chose Wiki as a substitute for Google Docs because of the security and privacy policies surrounding tools that are monitored outside of the country.

Other conflicts arose between an instructor's willingness to integrate new tools into their course and the training available for them to learn how to use those tools effectively. Luis, for instance, mentioned that technical glitches were a source of frustration and affected his confidence in using a particular platform (Adobe Connect) in his course.

Divergent Perspectives: Instructors vs. Instructional Designers. Conflicts sometimes arose when instructors and the design team looked at things from different perspectives. Taking the concern over students sharing exam files online as an example, instructors' primary concern was academic honesty—that is, the worry that students would not learn the content properly if they got the exam with answers online—whereas the design team viewed the issue in practical terms of protecting instructors' intellectual property. Also, because the design team and the instructors have different educational backgrounds, conflicts sometimes arose when the design team tried to design visuals or content that represented the instructors' vision accurately. Instructors valued instructional designers as experts in designing course formats and technology rather than as pedagogy experts, because most instructional designers do not have teaching experience.

Contradictions Between Instructors' Real Teaching Experience and Suggested Pedagogical Practices. When the ID team did venture into pedagogy, it occasionally became a source of friction. Instructors' personal teaching experience affected their buy-in to the suggestions provided by the instructional designers. Incorporating new pedagogical suggestions would require changes to instructors' current teaching styles. If instructors could not visualize the benefit of the change, it was hard for them to commit to it. All the instructors had more than 10 years of teaching experience, and had formulated a teaching style that worked for their students based on practice and student feedback. The pedagogical suggestions provided by the instructional designers mostly came from research rather than teaching practice. Instructors expressed a belief that there are discipline-specific ways of teaching, and some pedagogical suggestions might not be applicable in their discipline. For instance, Kathy reported having tried some of the suggestions over the years and finding them unsuitable for her discipline.

Lack of Experience and Support for Preparing Courses in the Online Environment. All three instructors cited bemoaned the lack of effective strategies for enhancing students' engagement in the online learning environment. Being unable to see students and to know whether they are actively engaged with the content and other students was a big challenge when designing their online courses. The instructional designers helped tackle the challenge by

providing suggestions for teaching strategies and applying certain activities. However, the instructors reported insufficient support from the instructional designer, and found the suggestions offered might not be applicable for all disciplines. For example, Luis and Kathy both tried to use discussion boards to encourage students to talk to each other, but not many students took advantage of it. They remained uncertain about how to make the online discussions work.

Lack of Strategies for Preventing Plagiarism in Online Assessments. The three instructors all mentioned their concerns about students either looking for exam answers online before taking the exams or sharing exam content with others. It seemed hard to stop students from engaging in these activities. When designing their courses, Luis used a large question bank so that not all students would get the same exam. John, for his part, tried to have individual meetings with students to assess their learning, and suggested that the instructional designer might provide more recommendations for approaches to address plagiarism.

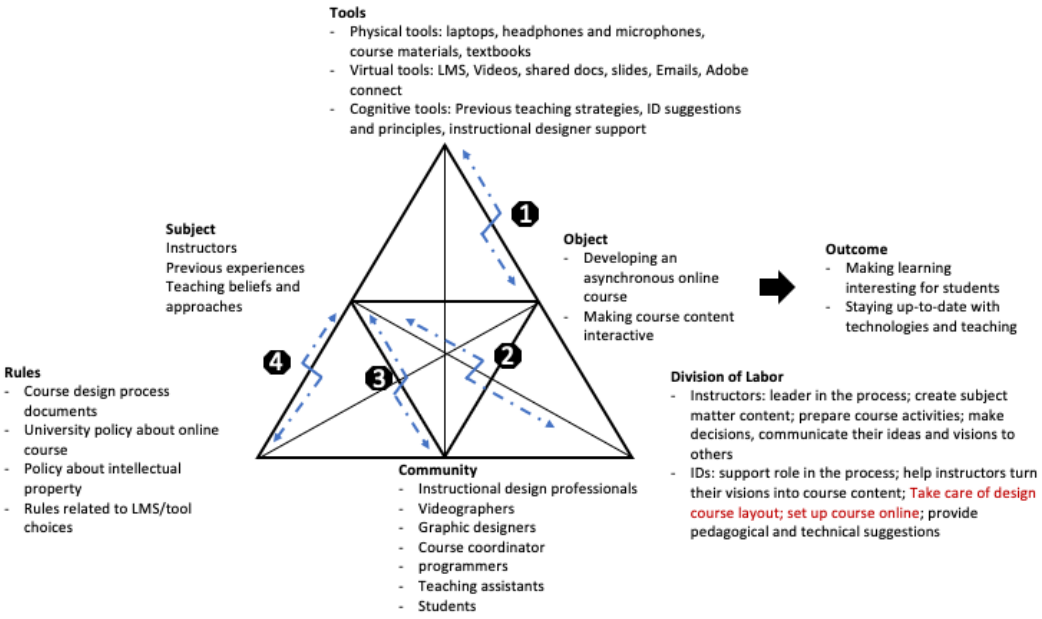
Instructors' Time and Efforts Spent on Preparing the Course. Instructors admitted that preparing online courses took a lot of time and effort. It is noteworthy that instructors mentioned that their challenges arose not so much from preparing a course online as from preparing a course with good quality. According to Quality Matters (Qualitymatters.org, 2023), a quality online course is visually appealing and easy to navigate. It provides students chances to interact with the content, the instructor, and other learners, and facilitates students' learning with different types of learning content. Kathy mentioned it was hard to know if her online course was good because she was unable to get instant feedback from the students as she would in a traditional classroom.

Change and Development

Instructors indicated that their experiences with the standard ID process made them reflect on their teaching. Because they could not get real-time feedback from students if the course content was confusing, they put more thought into making sure the content was clear. All three instructors applied the ideas drawn from this experience to their face-to-face classes—for instance, breaking lectures into small chunks to help students absorb the information. John created different ways to evaluate his students using both one-on-one oral exams and written assignments. Kathy started to use interactive activities in her face-to-face classes to keep students engaged during the lectures. Two out of the three instructors mentioned that the standard ID process made them more open to new pedagogical ideas and emerging technologies, and thus more willing to consider designing learning activities around new technologies. Interestingly, Kathy's understanding of the use of technology changed from "technology is used to show learning content" to "technology can be used to design pedagogically sound learning activities" (interview, November 5, 2021). Another noteworthy finding was that John found online courses enabled him to have more interaction with individual students. Additionally, the instructional designers impacted instructors' course design experiences. Two instructors mentioned that they tend to embrace online teaching and learning more after going through the design process. John learned from the instructional designers the concept of measurable learning objectives, and how learning objectives and learning activities align, and has been inspired to write learning objectives and use them to guide learning activities. Figure 4.6 shows the activity system for standard ID services.

Figure 4.6

The Activity System for Standard Instructional Design Services



- **Tension 1**: Tools-Object: The cognitive tools were not sufficient for achieving instructor's objects on engaging students and avoid plagiarism in online exams.
- **Tension 2:** Subject-Division of labor: Instructional designers' suggestions conflicted with instructors' teaching experiences. Instructors had hard time visualizing their suggestions.
- **Tension 3:** Subject-Community: Instructors and instructional designers had different perspectives towards some course design aspects.
- **Tension 4:** Institutional rules restricted the selection of digital tools

Chapter Five. Case Two: Preparing Courses Through Express ID Support

With express instructional design service, instructors work with an ID team to prepare a course for online delivery in a short period. Instead of going through the full analysis, design, development, evaluation and implementation circle, the express support prioritizes addressing the urgent course design needs of instructors and providing timely assistance to them based on the available time and resources.

This chapter starts by presenting the research context and then delves into narratives of each instructor's course design experiences. By sharing individual instructors' accounts, the chapter aims to provide a comprehensive understanding of instructors' course design activities, perceived roles and responsibilities of instructional designers and themselves, challenges and developments experienced during the course design process. The chapter concludes by providing a visual representation of the course design process supported by express instructional design.

Context

The research site is the same as Case One. The organization pays for the cost of the instructional design team support time, but instructors will not receive any payment for developing their courses. The instructors own the copyright of their course materials.

During the years 2020 and 2021, the institution's provost for teaching and learning sent out a call for application via email to all the departments to seek for instructors' interests in getting support on preparing their courses for online delivery. To receive the support, instructors first need to ask permissions from the chair of their department. Once they get approved by their department, they fill out a short application to write a brief introduction about their courses and explain the reasons for requesting the support. Then, they send the application to the organization. The organization choses from the applications based on resource availability and notifies the instructors if they receive the support within a week.

The express ID-support course design takes one to three months, depending on the instructors' time and experience with online teaching. Each instructor has around 80 hours of support time from the design team. All of the supported courses are hosted on Moodle platform and deliver in both asynchronous and synchronous learning formats.

The design team comprises the same professionals described in Case One. Most of the design team has a course producer and a learning experience designer who work closely with the instructor. The typical course design support provided by the design team include:

- Course content structure support: the design team provides suggestions on course layouts and navigations and suggestions on chunking course content.
- Course design support: the design team helps instructors proofread their course outline, provided pedagogical recommendations about designing assessments and gives tips on online teaching.
- Digital tools support: the design team provides guidance on selecting digital tools to meet the instructor's needs for content presentation or learning activity creations on Moodle. Also, provides training or instructional materials on how to use specific tools for instructors.
- Evaluate course accessibility: the design team helps instructors check the accessibilities of the course content, prepare closed captions and alt text for multimedia content, and provide suggestions on creating accessible learning materials.

The express course design process proceeded as follows:

1. The design team asks the instructors to prioritize their needs for preparing the online course before their first meeting.

2. During the initial meeting, the design team and instructors discuss the needs together to clarify them and then the design team assess their feasibility.
3. The design team and the instructors agree on the list of the tasks to be supported.
4. The instructor mainly works with the learning experience designers on the course design tasks. The course producer is there to make sure the project is on track.

Instructors' Experiences with the Expressed Instructional Design Process

This section describes the experiences of six instructors who have gone through the express course design process between 2020 and 2021. Among the six instructors, four have tenure positions, and two are part-time instructors. Two teach in the social science, two in the science, and two in the humanities. Four are female, and two are male. Four have more than ten years of teaching experience, and two have fewer than two years. Technology skills range from low to high. Table 5.1 shows participants' demographic information related to their discipline, academic status, years of teaching, and their level of technical skill.

Table 5.1

Demographic Information

Participants	Gender	Faculty Status	Year of Teaching	Discipline	Technology Skills
Rita	Female	Tenured	15 years	Social Science	Medium
Anne	Female	Tenured	7 years	Science	High
Jake	Male	Tenured	24 years	Social Science	High
Mike	Male	Tenured	15 years	Science	Medium
Gaby	Female	Part-time Instructor	2 years	Humanities	Medium
Emma	Female	Part-time Instructor	2 years	Humanities	Low

Rita: Constructing a Course Online as a New Art Form

Rita developed and taught an online course on child and youth care work. This section describes her experience doing so, including her background, beliefs about teaching and online learning, experience with the course design process, and her perceived roles and responsibilities of instructors and the design team in the course design process.

About the Instructor and her Motivation to Teach Online. Rita has more than 15 years of teaching experience in higher education and teaches undergraduate and graduate courses in youth work practice. She became a tenure-tracked faculty at the university in 2011, with her research focuses including adolescent suicide prevention education and practice, youth work pedagogy and practice, and mental health literacies.

Before getting the tenure track position, Rita taught at a small teaching university, where she gained experience teaching in the classroom and constructing class activities. Besides

teaching in universities, she worked as a child and youth care practitioner in residential settings and crisis shelters for over two decades.

Rita's general teaching responsibilities are two courses per semester. Among the courses she teaches is the Introduction to Child and Youth Care Work course. Rita taught the course in person before moving it online. She switched to online due to the outbreak of COVID-19. Rita's experience with distance education dates back to a decade ago when she taught via internet phones as a sessional instructor. Also, her previous experience working remotely through teleconference and videos while being a clinical supervisor of a standardized intervention with parents and foster parents made her comfortable teaching online. Rita has learned strategies to connect and have rich relationships with people online over the years.

Compared to face-to-face classes, Rita pointed out she put more effort to prepare and teach online classes. She found that instructors can only manage eight to ten students on the screen to pay attention to students' nonverbal expressions and keep students engaged in the online environment. Rita did not see interacting with students as a barrier to online teaching and learning. On the contrary, she mentioned online environment makes more chances for one-to-one interaction with students than in face-to-face classes.

> "I have gone years with nobody showing up to the office hours, but over the last 18 months since we moved online, I have had more interactions with students than I ever have had." (Interview, Oct.12, 2021).

Also, Rita found students would be more willing to share if they join the classes from the spaces where they feel safe.

Teaching Beliefs and Practice. Rita likes working with young people in their 20s and sharing their passion and energy for the work. She sees teaching as a way to guide students' progress and help them prepare for their future careers in the field. Students play a central role in learning, and the instructor is there to support them. She enjoyed seeing the evolution in students' work.

When teaching, Rita focuses on making the learning content tangible for students and connecting the conceptual knowledge with real-world practices. She applies experiential learning strategies in her classes. For example, she would prepare an intervention with parents during class and ask students to play the role of parents in the intervention and then write reflections on the experience.

About the Instructor's Experience with Course Design. This section describes Rita's experience with the expressed instructional design process. Specifically, this section includes a brief description of the course, a walk-through of the course design process, contradictions and challenges that arose during the design process, and the roles and responsibilities of instructors and the design team perceived by Rita.

About the course. The Introduction to Child and Youth Care Work is a required course for undergraduate and graduate diploma students in youth work. It has 15 to 20 graduate and 35 to 40 undergraduate students registered each semester. The course is delivered online via Moodle using both asynchronous and synchronous formats.

The course provides an overview of the history of the child and youth care field and a review of seminal writings and recent literature on best practices. The main objectives of the courses are:

- Provide students with an understanding of the scope and status of the child and youth care work

- Sensitize students to the necessary competencies and daily challenges of the work in a range of settings
- Review relevant theory of child and youth care work
    - Graded assignments include:
- Reading and Learning pod discussions. Students read the assigned reading, join a small learning group of their choice, participate in the weekly discussions on the given topics, and post their responses for each topic.
- Practitioner presentation. Students do a group presentation on topics provided in the readings.
- Case Scenario Assignment, Students complete a written reflection on the case scenario provided.
- Scope of practice. Students write a paper related to the scope of child and youth work practice.

The course has 13 lessons. Each lesson begins with a weekly roadmap to provide a checklist to remind students what to do for the week. It continues by providing all the video lectures and then the learning activities. The lesson closes by providing additional resources. The course uses pre-recorded lectures, slides and readings to present material to students. The course provides small group discussion activities for students to interact with others. Also, the course provides scheduled one-to-one chats with the instructor via zoom.

Goals for the Course. One of the reasons Rita chose to use the Express instructional design support is to explore effective ways to present the introductory course with many theoretical concepts to students. Rita wanted to ensure the course is suitable for the online environment.

Going through the Course Design Process. The course design process started when Rita first met with the design team. Major phases of the process include having the first meeting, designing the course interface and structure in Moodle, designing learning activities, entering course materials into Moodle, and implementing the course.

First Meeting**.** Rita had the initial meeting online with the design team, which consisted of a project manager and two educational technologists. During the meeting, Rita shared her interest in constructing a course suitable for the online environment. Each member on the design team described about their expertise and roles in the project. The project manager outlined the tasks the team wanted Rita to complete.

> "I remembered it being really clear that their (the design team) role was not about the content. Their job was the accessibility, presentation (course content), and the technology pieces, and the methods of engagement for students to connect with you online. My job was to provide the course material or course content. They were shaping what I was saying (about the course content)." (Interview, Oct.1, 2021)

Then the design team met with Rita again the following week to craft a timeline of what needed to be produced. Rita decided on the final timeline for course deliverables and shared it with the design team. She also sent the design team some of her recorded video lectures and the intro video prior to the meeting. The design team provided her feedback during that meeting.

Design of the Course Interface and Structure in the LMS. Rita worked closely with one of the educational technologists on the design team to design the course structure on Moodle. The educational technologist met with Rita and provided her suggestions on how to layout the course and how to use different features available on Moodle. For example, to help students better navigate the learning content each week, the educational technologist suggested that Rita prepare

a weekly roadmap with a list of all the tasks to complete for the week. Rita took the advice and created roadmaps for each week.

Rita created the course interface and structure based on the educational technologist's suggestions. The educational technologist also provided feedback on the structure to help make it easy for students to follow. Rita revise the structure based on the feedback.

The course started with a Home section, which included an introductory video from Rita, the course outline, discussion forums for students to introduce themselves and ask course questions, and a signup sheet to for students to select members for group activities. Then, the course was structured by weeks. Each week consisted of a weekly roadmap, a page with all the video lectures, learning exercises related to the week, and links to additional resources related to each week's learning topic. The course ended with a section that included all the graded assignments.

Design of Learning Activities. After designing the course interface and structure, Rita designed individual learning activities. These included:

- Course content. Rita worked with an educational technologist to rethink the amount of content the students needed and narrow topics to the essentials.

  > "It is not about the (providing the subject matter) content, but try to hone the content to the point that it is exactly what you want to say to students." (Interview, Oct.1, 2021)

  Rita used PowerPoint slides to present her course content. She created the subject content of the slides. The educational technologist with expertise in accessibility provided Rita with a PowerPoint template, which guided selecting the layout, colors and font sizes to ensure the slides are accessible for students with special needs. Rita followed the template when creating her lecture slides. She sent her slides to the educational technologist for review. The education technologist helped check and edit Rita's slides to ensure accessibility.

  Rita then pre-recorded videos to present course lectures by herself. She also provided transcripts of the videos to accommodate different students' needs. After she finished recording her videos, Rita sent her video lectures to the education technologist for review. The education technologist helped check the videos' sound quality and the transcripts' accuracy.
- Assessments. include both non-graded and graded learning activities. Rita worked with the educational technologists together when preparing course assessments. The educational technologists provided her with suggestions and examples of best practices for online learning. To help students feel engaged in the course, the educational technologists suggested creating an introduction activity using a discussion forum to allow students to post an audio or video to introduce themselves to their peers. To facilitate students' group collaborations, the educational technologists suggested doing an online group presentation in the early weeks of the course. The educational technologists also provided assignment templates to show Rita different ways creating assignments to meet various learning needs. They helped her prepare an assignment that allows students submit podcasts as the assignment and then rate their peers' work.

  Additionally, the design team assisted Rita creating descriptive the grading rubrics for all of her assignments. When working on the rubrics, the design team showed several rubric templates to Rita. Rita selected the template she wanted and created the

criteria based on it. The design team then reviewed the rubrics and provided suggestions for changes.

Initially, Rita was hesitant about the suggestions and unsure if she could manage new learning activities. However, after she met with the educational technologists several times, she trusted their expertise and decided to try the new activities.

> "If it is going to be the best scenario for this course, for the students, then I am just gonna roll with it." (Interview, Oct.1, 2021).

- Communication with students. It refers to the ways Rita used to interact with students. Rita set office hours to have one-to-one meetings with students via zoom. She found that online environments gave her more chances to communicate with individual students in her course. Also, she created a question and answer forum to encourage students to post their questions online and help each other answer them.

Entry of Course Materials into the LMS. After the materials were ready, Rita entered the course content and learning activities into Moodle with the help of the educational technologist. Specifically, the educational technologist showed Rita how to set up activities such as discussion forums and assignments and provided her suggestions on organizing the course on Moodle. Rita entered most of the course content herself after getting suggestions from the educational technologist. The educational technologist set up all the graded assignments and the file types for submission on Moodle on behalf of Rita and then showed her how to change settings.

Implementation of the Course. Once the course was set up, Rita delivered the course through Moodle in Fall 2020. One of the educational technologists stayed with her to help troubleshoot issues, fix and add course content during the course implementation phase.

Use of Technology. Rita used the following technologies for her course design process:

- Moodle to create, deliver and manage the course content online. Tools included:
  - Discussion forums for students to post their questions related to the course content and to interact with their peers
  - Assignment folder for students to submit their assignments
- PowerPoint slides to present course lecture content
- Yuja to record course lecture videos and present them on Moodle
- Recorded lecture videos, YouTube and TED videos to present course content
- Zoom to run small group activities and have one-to-one meetings with students

Rita rated her ability to use technology as a medium. She is comfortable with technology and willing to try all the new functions.

> "I am not incredibly savvy, but I am willing to press all the buttons and know I can get into the situations if needed." (Interview, Oct.1, 2021)

On issues involving technology, Rita worked with the educational technologist from the design team to resolve them.

Challenges. The challenges Rita faced during the course design process included:

The forced decision to make the course online. It relates to the Pandemic context. Rita mentioned motivational challenges in taking extra time and effort to create a good online learning environment. Both instructor and students were forced to work with the online course. However, the main reason for moving the course online was to accommodate the COVID situation, not because the online environment would make it better. Also, Rita said that the amount of time and effort put into the course design varied among instructors, which caused inconsistency for students to know what to expect when they take courses online.

The availability of service provided vs. instructors' needs. It was not a contradiction for Rita during her design process, but at the time when she wanted to keep working with the design team to improve her courses. Rita mentioned the course design support was only provided for a limited time. However, when she taught the course once and wanted to explore more options to revise the course or review the design process again, the service was no longer available. Admittedly, Rita said there were course design workshops provided at the institution. However, she found those workshops provided general resources for a larger group rather than focusing on the specific design suggestions for her course.

> "There is no go-to team to walk me through my course design questions. The IT folks are not the same and they are interested in 'is it working' whereas educational technologists focus on 'is it engaging'." (Interview, Oct.1, 2021)

Changes in Teaching Beliefs and Practices. After having the experience of developing and delivering the course online, Rita mentioned she put more effort into thinking about what content to put in the lecture and slides. She provided more guidance for students to support their learning. Also, she became more comfortable working with design teams to take their advice and let them work on what works best for her course. Rita started to use what she had learned from the experience when designing other courses. "The design team worked with me on one course, and then I took what they taught me and translated it into every other course that I have done since." (Interview, Oct.1, 2021)

As a result of developing an online course, Rita gained positive experience dividing students into smaller groups and creating learning pods to allow students to do various group activities. Rita started to spend more of the class time on learning activities and for students to interact with each other rather than lecturing.

Roles and Responsibilities of Instructors and Instructional Designers. Rita had a positive experience with the design team and appreciated the support she received from the design team. She enjoyed working with the design team to think through her course organizations and activities.

> "Overall, it was an excellent experience, particularly in the design phase. It is so lovely to have somebody that is invested in your course." (Interview, Oct.1, 2021)
>
> "They (the design team) did not do anything content-wise, but they helped me in terms of structure, so writing out my lecture recording ahead of time, creating the slides in ways that were accessible for students."
>
> "I'd make a cake, and they (the design team) would ice it and decorate it to make it look like you need to eat it." (Interview, Oct.1, 2021).

More specifically, Rita sees the specific roles and responsibilities of the two parties as identified in Table 5.2.

Table 5.2

Instructors and instructional designers' roles and responsibilities as seen by Rita

Instructor's Roles and Responsibilities	**ID's roles and responsibilities**
• Role: Primary, focus on course subject content • Responsibilities: • Prepare course content and make them accessible	• Role: Support, focus on course organization • Responsibilities: • Provide suggestions on presenting course content and designing learning activities

- Make decisions on course layout and organizations
- Design learning activities
- Create assignment instructions and rubric
- Create an engaging learning environment
- Set up the course on LMS
- Provide guidance and feedback on course accessibility
- Provide suggestions on course structure and navigation on LMS
- Support setting up the course on LMS
- Oversee the project timeline

Anne: Restructuring a Geographic Information System Course Online

Anne developed and taught an online course on geographic information system (GIS). This section describes her experience doing so, including her background, beliefs about teaching and online learning, experience with the course design process, and her perceived roles and responsibilities of instructors and instructional designers in the course design process.

About the Instructor and her Motivation to Teach Online. Anne has been teaching in higher education since 2015. She teaches undergraduate courses in geographic information system. Before teaching in universities, Anne worked as a researcher in Agriculture and Agri-Food areas. Anne had a varied educational experience and got various degrees such as economic engineering, rural administration, and geographic information system (GIS) from different countries before she found her research interests in spatial analysis of the environment. Anne researches remote sensing and GIS. Her research focuses on applying GIS to the environmental monitoring of vegetation dynamics.

Anne likes working at the university because it gives her “ultimate freedom” to do research. According to Anne, “research is a strong component" of her job, and “then teaching comes afterwards.” (Interview, Oct.8, 2021). Her general teaching responsibilities were two courses per year. Among the courses that Anne teaches is the Advanced Geographic Information System course. Before moving the course online, she taught the course in person. She sees teaching GIS as a way to train students in the area and get them involved in research. According to Anne, one of the significant challenges of teaching is to make the course interactive while ensuring each student has the similar learning experience. Anne put many efforts into preparing her lectures and using digital tools to create various interactive exercises for students.

Anne moved the course online due to the outbreak of COVID-19. She has “mixed feelings” about teaching online. On one side, she likes the flexibility of the online course. Both students and herself could access all the course information from anywhere. However, the online environment brings challenges because her course relies heavily on software which might cause technical problems when students do not have stable internet at home.

> “If I was not teaching technical courses, I think I like to create blended courses. Because I already use a lot of the online things in the in-person class, that is not really big difference.” (Oct.8, 2021).

Anne found that social interactions among students are missing in the online environment compared to face-to-face classes. Although students could work in groups using zoom breakout zoom, she found it was different because most of the time, students turned their cameras off, and she could not see students' facial expressions while communicating with their peers.

> “It feels like teaching to a black window, it is not fun, it is just like talking alone.” (Interview, Oct.8, 2021).

Also, Anne mentioned that it was challenging to do lab exercises online. Discipline-specific software requires high-quality internet connections, which some students might not have at

home. For another, it was hard for her to track students' progress during the lab exercises or provide immediate help to students.

Teaching Beliefs and Practices. Anne defines teaching as a way to train students to make sense of the concepts in the subject area. She tries to make connections between the theory and practice using in-class exercises. Within teaching, she sees students play the leading role in their learning and the role of the instructor to guide and train students to achieve their learning goals.

About the Instructor's Experience with Course Design. This section describes Anne's experience with the expressed instructional design process. Specifically, this section includes a brief description of the course, a walk-through of the course design process, contradictions and challenges that arose during the design process, and the roles and responsibilities of instructors and the design team perceived by Anne.

About the Course. Advanced Geographic Information System is a fourth-year undergraduate course on database structure and spatial analysis techniques for students in geography major. The course is delivered online due to the outbreak of COVID-19. Both asynchronous and synchronous formats are used to deliver the course.

The course introduces practical and theoretical questions about interpreting geographic information systems in the context of particular problems and real data sets. The main objectives of the course are:

- Acquire more in-depth information about the concepts and theory of geographic information systems introduced in previous courses, including raster and vector data models, advanced geo-processing and geo-statistics.
- Acquire advanced skills in using GIS tools for spatial analysis centred on raster-based and vector-based analyses and geo-statistics.
- Acquire advanced skills in the use of advanced GIS tools to address real-world problems
    - Graded assignments include:
- Weekly readings and quizzes, in which students read course materials and answer related quiz questions via Perusall (an online learning platform used to present course reading materials).
- Lab assignments, students need to complete one individual, two individuals or in a group of two lab reports on given topics.
- Term project, students work in groups of two or three to complete a project proposal and a final project report on a topic of their choice related to GIS data sources using ArcGIS software.
- Exams, students complete a midterm and a final exam via Moodle.

The course runs for 13 weeks, with two classes with lab sessions per week. Each week begins with the lecture and the lecture slides. It continues with the in-class activity and then the lab exercises. Each week closes with the graded assignment that is due that week.
The course uses synchronous lectures, recorded lectures and readings to present learning content to students. The course readings were presented via Perusall to allow students to interact with the reading materials by annotating and doing quizzes related to the reading content.

Goals for the Course. One of Anne's goals for the online course was to provide students with a clear and well-organized course interface on Moodle. Another goal was to create interactive course content to make the course engaging for students.

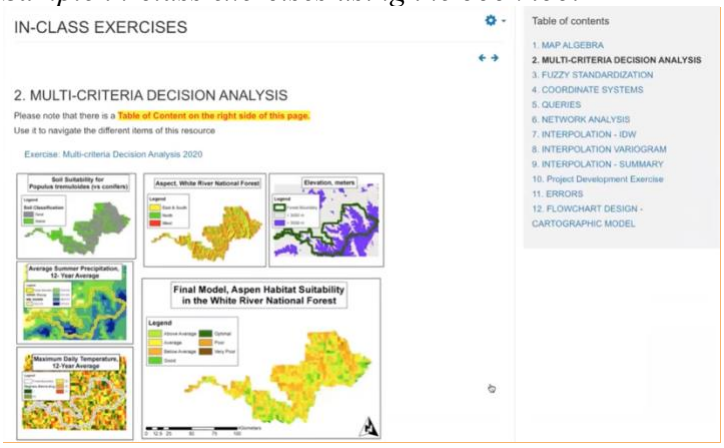
Going through the Course Design Process. The course design process started when Anne first met with the design team.

First Meeting**.** Anne had the initial meeting online with the design team, which consisted of a learning experience designer and an educational technologist. During the first meeting, the design team asked Anne to list her course design requests and then discussed the task priorities with her. The design team communicated with Anne that they had 80 hours to support her course project. A week after the first meeting, the design team met with Anne again to provide feedback on her requests and finalized that the design team would focus on assisting Anne in designing the interface and structure of the course on LMS and creating two video lectures. The design team shared some instructional documents about how to set up tools in LMS. During that meeting, the design team and Anne agreed on the ways they would work together: "They (the design team) will provide me with the information (about certain tools on Moodle), and I will try to implement that. If ever I had problems, I would ask them for a meeting, and they would go over the tools with me. I will prepare the information for the videos, and they provide me with some guidelines and tools to help organize the slides." (Interview, Oct.8, 2021).

Design of the Course Interface and Structure in the LMS. Anne worked closely with the design team to develop ideas for the course organization. Anne wanted her course pages on Moodle to be easy to navigate for students. The design team suggested that she use the book tool (which allows users to create multiple pages within a book-like structure. It also has a table of content to help users navigate through pages within the book) in Moodle to organize and present her course materials. Anne liked the ideas and decided to use the book tool. Then, the design team shared instructional materials on how to set up the book tool on Moodle with Anne. Anne followed the instructions and use the book tool to set up her course introduction session and the lab exercises. According to Anne, once she knew what tools were available and get instructions on how to use them, she is confident in following the instructions and setting up the tools by herself. See Figure 5.1 for an example of the book tool.

Figure 5.1

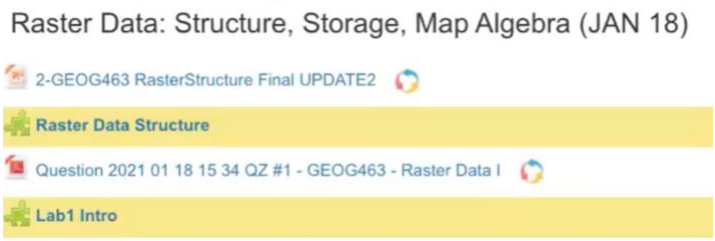
Sample in-class exercises using the book tool



After getting suggestions from the design team, Anne decided on the course structure independently. The course structure consisted of a general course introduction session, a separate session for all the in-class lab exercises, a separate session for all the graded assignments, and 13 lessons. Each lesson started with the lecture slides and lecture recordings, and was followed by the resources and links related to the in-class exercises. Figure 5.2 shows an example of the lesson structure.

Figure 5.2

Lesson structure



Design of Learning Activities**.** After designing the course structure on Moodle, Anne designed individual learning activities. These included:

- Course content. Anne chose Perusall (an online learning platform used to present course reading materials. It allows instructors to add quizzes to check students' understanding of the reading and enables students to take notes and ask questions during reading) to present her course reading materials and improve students' engagement with the course materials while reading.

  Regarding course lectures, Anne chose to do weekly synchronous classes via zoom. She planned to avoid long lectures and used the live classes to summarize the week's key concepts. Anne decided to record the course lectures to ensure every student had access to the lecture content.

  Besides the synchronous lectures, Anne prepared two pre-recorded videos to present the course content. She worked closely with the design team to create the videos. Specifically, Anne prepared the slides, the narrations for each slide, and images for the videos. Then she shared those sources and her ideas about putting animations to the videos with the learning experience designer on the design team. Then the learning experience designer asked the media producer from the design team to create videos with interactive animations using the materials provided by Anne. Once the videos were ready, the media producer sent them to Anne for review and edited the videos based on her requests.
- Assessments include both non-graded and graded learning activities. Anne prepared most of the graded assignments by herself and re-used most of the graded assignments from previous semesters. She used Crowdmark (an online grading platform that allows instructors to work with TAs collaboratively) to collect and grade students' assignments. Anne worked with the design team to develop a gallery activity that encouraged students to share the graphics they created during the lab exercise. Specifically, Anne wanted an art repository for students to upload maps and their analysis results. The are repository should allow other students to see each student's map and then comment on them. The design team listened to Anne's requests and suggested using the database tool (which allows students to share multimedia content such as images, and texts, with others and provide comments on the shared content) on Moodle to develop the activity. The design team met with Anne and showed her the database activity sample and setup instructions. Then, Anne decided to use the tool and asked the design team to help create the activity.
- Communication with students refers to the ways Anne used to interact with students. Anne set up weekly office hours via zoom. She used the Scheduler tool on Moodle to manage students' appointments. Also, she created a question and answer forum on Moodle to encourage students to post their questions online and help each other answer them.

Entry of Course Materials into the LMS. After the materials were ready, Anne entered most of the course content and learning activities into Moodle by herself, following the instructional materials provided by the design team. Anne contacted the educational technologist when she had questions when entering the content into Moodle. The educational technologist helped Anne set up the gallery activity on Moodle and then showed her how to edit the activity.

Implementation of the Course**.** Once the course was set up, Anne delivered the course through Moodle in Winter 2021 by herself without additional support.

Use of Technology. Anne used the following technologies during her course design process:

- Moodle to create, deliver and manage the course content online. Tools included:
    - Book tool to present course materials in an organized way
    - Database tool allows students to share multimedia content such as images, and texts, with others and provide comments on the shared content.
    - Scheduler tool to allow students to book an appointment with the instructor.
    - Discussion forums for students to post their questions related to the course content and to interact with their peers
    - Quizzes to administrate mid-term and final exams
- PowerPoint slides to present course lecture content
- Recorded lecture videos to present course content
- Zoom to run live class sessions and group discussion activities
- Perusall, an online learning platform used to present course reading materials and enabled students to annotate the readings for getting course participation grades
- Crowdmark is an online grading platform that allows instructors to work with TAs collaboratively to grade and provide feedback on students' written assignments.

Anne is comfortable teaching with technology. Before developing the online course, she explored and integrated several new digital tools to create an engaging student environment. She did not face many issues using digital tools during the online course design process. The only technology issue Anne mentioned related to the network and computer systems to run discipline-specific software, which depends on students' devices and is out of her control.

Challenges. The challenges Anne faced during the course design process included:

Lack of Time. Anne found it was challenging to develop a course online within four months while teaching another course simultaneously. It was tough for her to find time to work on the course. Also, Anne mentioned there was a deadline for getting the course design support from the design team, and all the course support had to be completed by the end of the Fall 2020 term, which made it more challenging.

> "I almost did not create the video lectures because I did not have time to go over the lecture and do the narrations. The videos were created on the very last day before they (the design team) had to stop working." (Interview, Oct.8, 2021).

The availability of course design support vs. instructor's needs. It relates to the time the design team is available to support the instructor's course design and the types of support available at the institution. Anne said the design team offered her 80 hours of support time, and had to prioritize the tasks she wanted the design team to help the most. However, after 80 hours, the support was no longer available. She had to be on her own when she wanted to explore some digital tools or learning activities to revise her courses. Also, Anne mentioned her willingness to know how to create more interactive learning content, such as animated video lectures. However, there were not enough resources or support available at her institution. She said the institution's

teaching and learning center provided resources to showcase various digital tools but not enough to show instructors how to use them in specific disciplines. Moreover, Anne found the individualized support focusing on the instructor's course especially helpful. However, that support was no longer available at the institution, making it challenging for instructors who wanted to keep working on improving their courses.

Changes in Teaching Beliefs and Practices. Anne's teaching beliefs or ways of teaching did not change much after this experience of designing a course for online delivery. However, she knew more about how to create a clear and organized course structure on Moodle, and she also applied what she learned from this course to other courses she taught. Additionally, she re-used the interactive learning activities she created for the online course in her face-to-face classes to help students learn the content effectively.

Roles and Responsibilities of Instructors and Instructional Designers. Anne loved working with the design team and would like to keep working with the design team if support is available at the institution. Based on conversations with Anne, she sees instructor as the owner of the courses in the instructional design process and the instructional design team as the support.

> "The course is mine. I just need support to (prepare) that. I do not need them (the design team) to take over my course." (Interview, Oct.8, 2021)

Specifically, Anne sees the responsibilities of the two parties as identified in Table 5.3.

Table 5.3

Instructors and instructional designers' roles and responsibilities as seen by Anne

Instructor's Roles and Responsibilities	**ID's roles and responsibilities**
Role: Primary Responsibilities: • Communicate the requests for course design support • Meet the deadline to share materials with the design team • Design subject matter content • Develop learning activities • Make decisions on tool selections • Organize and structure course on LMS	Role: Support Responsibilities: • Be responsive • Collect information from the instructor and coordinate members and tasks within the design team • Provide suggestions and ideas on course design and course organizations • Know about the use of the technology • Provide guidelines, instructions and templates on using digital tools

Jake: Empowering Students' Statistical Skills in an Online Course

Jake developed and taught an online course on international relations. This section describes his experience doing so, including his background, beliefs about teaching and online learning, experience with the course design process, and his perceived roles and responsibilities of instructors and instructional designers in the course design process.

About the Instructor and His Motivation to Teach Online. Jake has taught in higher education since 1998, although he never intended to become an academic before joining the university. He teaches undergraduate and graduate courses in strategic studies and international relations. Before teaching in universities, Jake worked in various fields, including being a rugby coach in high school, joining the army, and researching military and war in developing countries. His previous work in the army provided him with rich experiences in preparing structured

training sessions and providing explicit instructions to ensure learners meet the learning goals with a high standard.

Jake is interested in war and the military, so he did related research in developing countries. His primary research focuses are on security and strategic studies. His research projects explore arms racing and its impact on war causation, sharing nuclear weapons, naval strategy, and military doctrine and planning.

Jake's general teaching responsibilities are three to four courses per year. Although he is hired as a professor to focus on research, Jake believes the institution did an excellent job of encouraging good quality teachings.

> "The institution gives professors bonus points for teaching well, though it does not punish bad teaching, it is included when evaluating professors. It matters to have good quality teachings." (Interview, Oct.5, 2021)

Among the courses that Jake teaches is the Introduction to International Relations. Jake has taught the course in person for several years. He sees teaching international relations as a way to develop student's skills to analyze concepts and examine political issues statistically. One of the significant challenges of teaching a social sciences course with quantitative content is students' lack of confidence in math. To address the challenge, Jake recorded detailed videos explaining statistics and put them on YouTube for students to watch. He also spent extra time with students to practice statistics and build their quantitative skills.

Jake has rich experience teaching remotely with videos and satellite televisions in the army back in the 1990s. Before moving the international relations course online due to the outbreak of COVID-19, Jake had already started recording videos, uploaded them on YouTube, and used them for his in-person classes.

Jake described himself as a "big fan of online teaching" (Interview, Oct.5, 2021). In his opinion, the online course includes both asynchronous elements where students watch pre-recorded lectures on their own and synchronous sessions where students apply what they have learned from the lectures and discussion or debate with their peers. Jake considered avoiding cheating in online tests as the biggest challenge. Compared to face-to-face classes, he found that the online environment is more flexible for students to learn in their comfortable place and enables students to interact with others constantly through chat during the synchronous class sessions. Also, it is easier for instructors to know students' names. Additionally, due to the pandemic, the library provided remote access to all the reading resources and statistics and math software, bringing students benefits.

Teaching Beliefs and Practices. Jake defines teaching as a way to empower students' competency in the subject matter area. Within teaching, Jake sees the role of students as the center of learning and instructor as facilitating students' learning process. Jake feels happy as an instructor to help students build their statistics skills and maintain long-term relationships with his students after they complete the course.

Jake applies the flipped class format when teaching, providing pre-recorded video lectures for students to watch before class sessions. He then uses live sessions via zoom to answer students' questions, go through problem-solving exercises together, and run group activities such as debates and discussions.

About the Instructor's Experience with Course Design. This section describes Jake's experience with the expressed instructional design process.

About the Course. Introduction to International Relations is a second-year undergraduate course about the concepts and approaches related to international relations for all undergraduate

students interested in the subject matter and a mandatory course for students in a political science major. It has about 100 students registered each semester. The course was delivered using both synchronous and asynchronous formats in Fall 2021.

The course introduces the principal theories, concepts and debates in the contemporary study of international relations. The main objectives of the completed course are:

- Get familiar with the basic concepts and approaches to the study of international relations
- Discuss the basic theoretical approaches to international relations
- Use the concepts toward the formulation of hypotheses for generalizable testing
- Analyze concepts and examine political issues

Graded assignments include:

- Weekly quizzes, in which students answer a two-minute quiz related to each week's reading and video lectures.
- Hypothesis testing assignments, in which students must write five assignments associated with the simulations related to the learning content. Students must follow the rules provided by the instructor, use the software files to operate the simulation and write a report based on the assignment instruction.
- Exams
    - Two mid-term exams, in which students complete 15 short-answer questions related to the lectures covered in the first six weeks of the classes.
    - A final exam, students complete short-answer questions related to the course content.

The course has 26 separate units. Each unit includes pre-recorded video lectures, assigned readings, lecture notes and an online quiz.

Goals for the Course. Jake's goals were to convert all course lectures to videos with PowerPoints and set the course content and exams up on Moodle for students promptly.

Going through the Course Design Process. The course design process started when Jake first met with the design team. Major phases of the process include having the first meeting, designing the course interface and structure in Moodle, designing learning activities, entering course materials into Moodle, and implementing the course.

First Meeting**.** Jake had the initial meeting with the design team, which consisted of a learning experience designer and an educational technologist. According to Jake, the learning experience designer was the primary contact person and ensured the process operated smoothly. In contrast, the educational technologist was the one who did most of the work for his course. During the first meeting, the design team briefly introduced the types of support they could offer. Jake communicated what he needed from the team. Jake and the design team quickly agreed that the design team would help Jake set up quizzes and the grade book on Moodle. Jake would contact the educational technologist if he had any questions.

Design of the Course Interface and Structure in the LMS**.** The educational technologist on the design team designed the course structure. Jake reviewed and agreed with the structures. He also decided to use the structure as a template for his future courses. The course structure had all the written assignments and assignment instructions in one module and placed on top of the course, then each lesson was a separate module. Each lesson, includes the video lectures, lecture slides and notes, resources about simulation activities, and a weekly quiz.

Design of Learning Activities**.** After designing the course structure, Jake prepared individual learning activities. These included:

- Course content, which included pre-recorded lectures, lecture slides and lecture notes. Jake used the same lecture slides and notes from his previous in-person classes. He recorded the lectures on his iPad at his house and finished recording within a week. Then, he uploaded his video lectures to his YouTube channel and then put the links to the videos in both his course outline and on Moodle site.
- Assessments include both non-graded and graded learning activities. Jake used an online platform called Vassal to provide students with simulation exercises related to the course content. The simulations help students apply their theoretical knowledge to practical issues. He had five hypothesis testing assignments related to the simulations. He prepared the instructional videos about the rules of each simulation and the instructions for written assignments separately to guide students in completing the assignments.

  Jake used quiz tool on Moodle to administrate the weekly quizzes and the exams. He provided the quiz questions to the educational technologist on the design team. Then the educational technologist helped him create question banks and set up the quizzes for each week on Moodle.

  Jake decided to use Proctorio (an online proctoring service to record students' screens while writing the exams) to minimize cheating during online exams. The exam office at the institution provided the instructional resources for the courses that used the proctoring service. Jake made the resources on how to take exams with Proctorio available to students on Moodle. The educational technologist linked the Proctorio into his course site. Jake contacted the support staff from the Proctorio team directly when students had technical issues during the exams.
- Communication with students refers to the ways Jake used to interact with students. Jake used email to communicate with students. To avoid students communicating with him "like they have instant messaging" (Interview, Oct.5, 2021), Jake set the rule to ask students to put all their questions into one email, and he would answer each student once a day. Also, Jake had scheduled online office hours via zoom to chat with students individually.

Entry of Course Materials into the LMS**.** After the course materials were ready, Jake uploaded the lecture slides and notes into Moodle on his own. Then the educational technologist helped organize the Moodle site and create the quiz questions in the question bank. The educational technologist also helped Jake set up each quiz's time, attempt, and open and close dates. After setting up the quizzes, the educational technologist reviewed quizzes and ensured each quiz display correctly. Additionally, he helped Jake add the grade items to the grade book and ensure quiz grades would automatically send to students' grade book and be visible to students during specific periods.

Implementation of the Course**.** Once the course was set up, Jake delivered the course through Moodle in Fall 2020.

Use of Technology. Jake used the following technologies during his course design process:

- Moodle to create, deliver and manage the course content online. Tools included:
  - Quiz to administrate weekly quizzes to test students' knowledge of the assigned reading and video lectures
  - Assignment folder for students to submit their assignments
- PowerPoint slides to present course lecture content
- Recorded lecture videos on YouTube

- Vassal software, which is an open-source game engine to run simulations related to the course subject matter
- Zoom to run synchronous class sessions and have one-to-one meetings with students
- Email to communicate with students
- Proctorio is an online proctoring service that records students' screens while writing the exams. Then instructors can review recorded data to check for academic misconduct.

Jake rates his ability to use technology as high, and he is comfortable with technology. On most of the issues involving technology, Jake was able to resolve them on his own. Jake emailed the institution's information technology services (ITS) for support for the issues related to Moodle quizzes.

Challenges. Jake did not face any challenges or contradictions during the course preparation process, but he shared suggestions that could help the institution better support instructors in the course design process:

- Add additional resources. Jake suggested the design team create short instructional videos about using different tools available on Moodle. He mentioned that the available instructional videos on the internet were not customized to the Moodle used at the institution. It would be helpful to have a library of videos for instructors to search for them quickly and learn the technical tools independently.

Changes in Teaching Beliefs and Practices. According to Jake, preparing the course for online delivery did not change his teaching overall. Moving the courses online provided him access to different software, allowing him to have more options when teaching the course. The design team helped Jake set up the course structure, and Jake applied a similar course structure to his future course, which, in his opinion, saved him lots of time in setting up courses.

Roles and Responsibilities of Instructors and Instructional Designers. Jake was satisfied with the support he got from the design team. He mentioned that the design team helped him save lots of time with the Moodle setup and quiz administrative tasks and allowed him to focus on the teaching aspect. Jake sees himself as the leader in the course design process and the design team as support.

> "They (the design team) were the model of assistance. They fulfilled my demands efficiently and pushed options and advice."
>
> "They know Moodle, they probably know other things, but I do not need their other skills. They offered help with Moodle." (Interview, Oct.5, 2021)

The specific roles and responsibilities of the two parties were identified in Table 5.4

Table 5.4

Instructors and instructional designers' roles and responsibilities as seen by Jake

Instructor's Roles and Responsibilities	**ID's roles and responsibilities**
Role: Primary Responsibilities: • Prepare the course content • Teach the course • Communicate with students	Role: to assist instructors Responsibilities: • Setup course on Moodle • Setup question bank, quizzes, and grade book • Answer technical questions

Mike: Transferring Introductory Genetics Course Smoothly Online

Mike developed and taught an online course on genetics. This section describes his experience doing so, including his background, beliefs about teaching and online learning, experience with the course design process, and his perceived roles and responsibilities of instructors and instructional designers in the course design process.

About the Instructor and His Motivation to Teach Online. Mike has more than 15 years of teaching experience in higher education. He teaches undergraduate and graduate courses in genetics. Mike worked as an adjunct professor and co-taught an advanced genetics course with another professor at another university before joining the current one. Before teaching in universities, he worked as a researcher at the National research council. He was hired as a full professor with the research chair position at the institution and started to teach undergraduate classes ten years ago.

Mike researches the genetics of the yeast Saccharomyces cerevisiae. His primary research projects include using an array of genetic and genomic approaches to investigate pathways involved in various Candida Albicans functions to identify new treatment options for patients suffering from Candida infections.

Mike's general teaching responsibilities were one to two courses per year. According to Mike, teaching is not the priority for his job at the institution because he has other responsibilities such as directing research, writing papers and supervising graduate students.

> "I am paid to do research. In fact, my research chair requests that I have protected from teaching." (Interview, Sept.28, 2021).

Mike teaches courses that connect to his research and interests. Among the courses that Mike teaches is the Molecular and General Genetics course. Before moving the course online due to the outbreak of COVID-19, he taught the course in person. One of the significant challenges of teaching the introductory course is to grade the large classes. Mike used multiple choice question exams with an automatic grading system to address the challenge.

Mike started to teach online due to the outbreak of COVID-19. He did not make many changes to his teaching method or the course content but transferred his course content to Moodle platform and taught via zoom. Mike defined an online course as "the transfer of information using technologies" (Interview, Sept 28, 2021). He transferred to teaching via Zoom seamlessly. Mike found that students' feedback was reduced compared to face-to-face classes. For example, fewer students would respond to questions during zoom class. Also, he could not pick up when students felt confused about the course content because he did not always see students' faces online. However, Mike mentioned that the learning results of the online course stayed the same as the in-person classes.

Teaching Beliefs and Practices. Mike defines teaching as a way to transfer knowledge to the students. He sees his role in teaching as providing knowledge to students, whereas students play a central role in their learning. Mike gives lectures and uses PowerPoint slides in his classes.

About the Instructor's Experience with Course Design. This section describes Mike's experience with the expressed instructional design process.

About the Course. Molecular and General Genetics is a second-year undergraduate course about genetics for students in biology. It has more than 120 students registered each semester. The course was delivered using synchronous and asynchronous formats during Winter 2021.

The course introduces basic genetic principles and molecular genetics. The main objectives of the completed course are:

- Solve questions based on mono and dihybrid crosses
- Write essays on genetics-related topics
- Explain the functioning of cellular processes such as transcription and translation
- Map genes on chromosomes
- Solve questions based on genetic complementation
- Solve questions based on gene regulation circuits
- Describe the Hardy-Weinberg equilibrium
- Solve problems based on genetic engineering and genomics

Graded assignments include:

- Weekly tutorial assignments
    - Weekly tutorial quizzes, in which students answer five multiple choice questions each week, and the best six quiz grades account for 60% of the tutorial marks.
    - Weekly tutorial assignments, in which students answer an essay question each week, and the best four assignment grades account for 40% of the tutorial marks.
- Exams
    - One midterm exam, in which students complete 25 multiple choice questions
    - One final exam, in which students complete 50 multiple choice questions

The course has 14 units, each with synchronous lectures and discussion sections. The course uses synchronous lectures with PowerPoint slides to present material to students. The course provides discussion activities to allow students to interact with their peers. Online quizzes were used to test students' understanding of the subject matter.

Goals of the course. Mike had two goals for the course: to transfer his previous in-person course content to the online environment and to set up the online exam suitable for the large class size.

Going through the Course Design Process. The course design process started when Mike first met with the design team. Major phases of the process include having the first meeting, designing the course interface and structure in Moodle, designing learning activities, entering course materials into Moodle, and implementing the course.

First Meeting**.** Mike had the initial meeting online with the design team, which consists of a learning experience designer and an educational technologist. During the first meeting, Mike and the design team agreed to work together to transfer the course content online and ensure the course would run smoothly. Specifically, Mike requested the design team to help implement the online examinations.

> "It (the course design support) was totally flexible. They (the design team) asked about what things I need help with, and they come back with a plan." (Interview, Sept.28, 2021)

Design of the Course Interface and Structure in the LMS. Mike did not spend much time designing the course interface and structure because he decided to keep giving "the classic lectures" (Interview, Sept.28, 2021), in which he would talk through lecture slides via zoom each week. The course content on Moodle was mostly PowerPoint slides, the zoom link to the class session, and the recorded lecture for each week. The educational technologist on the design team helped Mike develop the structure of the examination section. The exam structure included the components of elements to show on each question page, logistics to select questions from the question bank, navigation through exam questions, grade calculation methods, and ways to display correct answers. Once the structure was established, Mike met with the design team online to review it. The design team explained the structure and provided suggestions, and Mike

tested it to ensure it worked. After the exam structure worked smoothly, Mike followed the structure to prepare the exam questions for the course.

Design of Learning Activities**.** After deciding on the course structure, Mike prepared individual learning activities. These included:

- Course content. Mike mentioned that he "never designed the course content" (Interview, Sept.28, 2021), even for the in-person classes. He got the course content and lecture slides from the instructor who taught the course previously, and he modified some aspects of the course over the years. According to Mike, the basic information about genetics stayed the same regardless of who taught the course.

  > "A series of core things of introductory genetics are universal basic in the course given here or in the course given at other universities." (Interview, Sept.28, 2021).

  Mike used the same slides from his previous in-person courses to present most of the course information for the online course, and he gave synchronous lectures via Zoom each week.
- Assessments include both non-graded and graded learning activities. One of the non-graded learning activities was the group discussion. The learning experience designer from the design team suggested that Mike include discussion activities to allow students to interact with their peers. Mike took her suggestion, chose discussion topics that were relevant and interesting for students, and decided to do weekly discussions using the Zoom breakout room.

  Mike used online quizzes to deliver exams for the course. He worked closely with the educational technologist to develop the quizzes. Specifically, Mike shared his requests about having randomized questions in the exams and having three different versions of the exams to minimize cheating. Then the educational technologist provided a template based on the exam structure and asked Mike to format the exam questions using the template. Mike then prepared the exam questions and add them to the exam template file.
- Communication with students refers to the ways Mike used to interact with students. Mike had teaching assistants to help him run tutorials via zoom to answer students' questions.

Entry of Course Materials into the LMS. The educational technologist helped Mike organize the course content and upload the exam questions on Moodle. Mike uploaded the lecture slides and independently set up the course zoom link on Moodle.

Implementation of the Course**.** Once the course was set up, Mike delivered the course through Moodle in Winter 2021. He contacted the educational technologist to set up deferred exams during the course implementation phase.

Use of Technology. Mike used the following technologies during his course design process:

- Moodle, to create, deliver and manage the course content online. Tools included:
  - Quizzes to administrate mid-term and final exams.
- PowerPoint slides to present course lecture content
- Zoom to provide synchronous lectures and to run group discussions

Mike is comfortable with technology overall, but he does not have much time to organize his course on Moodle. He asked the educational technologist to help with the course setups. On issues involving technology, Mike contacted the educational technologist to resolve them.

Challenges. The challenges Mike faced during the course design process included:

Instructor's Time and workload vs. Course design suggestions. Mike mentioned that some of the suggestions provided by the design team were helpful and would make the online course

visually appealing and exciting for students. However, implementing those design suggestions required instructors to devote much time to thinking and preparing the learning content for the online course. He had many commitments as a professor at the university, and with his primary focus on doing research than teaching, finding time to design and develop a course that is effective for an online environment was challenging. Additionally, Mike only delivered the course online once and would return to in-person teaching in Fall 2021. He preferred not to spend too much time exploring or implementing online teaching and learning strategies.

Minimizing the risk of cheating in online exams. When preparing for the exams for the online course, Mike was concerned that students might search for the answers on the internet or have other students help them take the exam. It was challenging to prevent students from cheating during the online exams. Although the university provided the online proctoring system, Mike was uncomfortable using it and found it intrusive. Instead, he created three versions of the exams and randomized the questions within the exams to help minimize the risk of cheating. Mike mentioned that creating different versions of the exams required lots of time and effort, which might not have been done quickly without the help of the course design services.

Changes in Teaching Beliefs and Practices. Mike's teaching beliefs and practices did not change after having the experience of preparing a course for online delivery.

> "I expect when I go back to teaching in person, my teaching framework will be exactly the same." (Interview, Sept.28, 2021).

Although Mike mentioned that some design suggestions or online learning strategies were "conceptually fun and interesting" (Interview, Sept.28, 2021), he would not spend much time applying them. Because Mike believes the subject matter content is the most critical part, he would prefer to focus on presenting the content to students.

> "It is like everybody has to balance. My first goal is to provide information to students. I do things that are easy to implement and seem to work to help students' uptake of the information." (Interview, Sept.28, 2021)

Roles and Responsibilities of Instructors and Instructional Designers. Mike had good experiences working with the design team. He valued their expertise in providing technical support and suggestions about designing the course structure, and he appreciated their patient and timely support. Based on conversations with Mike, he sees instructors play the crucial part of the course design process and the instructional design team as support.

> "My role was to provide the content, and the support people were the interface between me designing the content and then the content arriving in students' computers."
>
> "The design team is a critical part of the process that is not all that much fun. It is more fun preparing and giving lectures than designing the distribution of an exam." (Interview, Sept.28, 2021)

Table 5.5 shows the specific responsibilities of the two parties as identified by Mike.

Table 5.5

Instructors and instructional designers' roles and responsibilities as seen by Mike

Instructor's Roles and Responsibilities	ID's roles and responsibilities
Role: Primary Responsibilities: • Provide subject matter content for course learning activities • Prepare and give lectures • Transfer the course information to the online environment and ensure the course run smoothly	Role: Support Responsibilities: • Provide suggestions on course organization and design • Provide technical support • Design the distribution of online exams • Facilitate the transfer from in-person course to online

Gaby: Bringing a Hand Building Course Online

Gaby developed and taught an online course on hand-building ceramics. This section describes her experience doing so, including her background, beliefs about teaching and online learning, experience with the course design process, and her perceived roles and responsibilities of instructors and instructional designers in the course design process.

About the Instructor and Her Motivation to Teach Online. Gaby started teaching hand-building ceramics at the institution in 2020. Before that, she taught a course with the same subject matter in person at another higher education institution. Besides teaching in universities, Gaby is a full-time professional artist. She explores clay to craft and design sculptural frameworks. She focuses on using visual art skills and materiality to present ideas. Her works enhance the interior design of many luxury establishments internationally.

Gaby took the teaching job for the first time when her graduate advisor offered her the opportunity to replace him while he was on a sabbatical. Gaby enjoyed teaching and described herself as a "natural teacher" (Interview, Oct.13, 2021).

The course that Gaby taught is Ceramics. Before she designed the course online, she taught a course with similar content in person once at a different university. According to Gaby, hand-building ceramics needs a combination of the technical side and theoretical components. It aims to teach students to use clay as an art medium to express thoughts. One of the significant challenges of teaching is to help students dig deep to find their motivations and emotional connections to create artwork. Gaby addressed the challenges by working closely with students and sharing her experience as a professional ceramicist.

Gaby started to teach online for the first time due to the outbreak of COVID-19. According to Gaby, taking the hand-building course in front of a computer while working on artwork with clay and water is challenging. But she is open to online teaching and learning and sees it as a teaching format that needs different strategies to engage with students. Compared to face-to-face classes, Gaby found she spent more time preparing the learning materials for online classes because she wanted to ensure that things such as links, audio, and videos work properly for students. Moreover, the ways to interact with students differ. She could go around tables and see students work immediately during face-to-face classes. However, in an online environment, it is hard to follow what students are working on tightly on screen. Gaby chose to have one-to-one meetings with students instead to keep students engaged.

Beliefs about Teaching. Gaby defines teaching as a way to help students make great arts and become artists. Within teaching, she sees students as the center of their learning and the role of the instructor as a guide to help students reach their potential.

Gaby focuses on balancing the theoretical and practical components of the course while teaching. She connected the ceramic course and art by showing students examples of the current ceramic artists' projects. She created close personal connections with students by reading their logs and talking to them individually.

About the Instructor's Experience with Course Design. This section describes Gaby's experience with the expressed instructional design process.

About the Course. Introduction to Ceramics is a first-year undergraduate course about hand building using clay for students majoring in fine arts and studio arts. The course was delivered using both asynchronous and synchronous formats, with 20 students registered during the 2021 winter semester. The course introduces clay as an art medium to create artworks. The main objectives of the completed course are:

- Understand ceramic techniques, including hand building, glazing and firing
- Describe three hand building strategies: coil building, pinching, and slab building
- Employ various hand-building techniques using clay
- Explain and present the ceramic artwork

Graded assignments include:

- Weekly log books, in which students must write down their notes and observations or take photos each week to show what they are working on and what is going on with their artwork.
- Four Art projects, in which students must create four art projects using different hand-building strategies, articulate the creation process, and explain the context of the project.
- Project presentation, in which students must do a visual presentation using PDF to show their projects and share their reflections about what they have learned from the creation process.

The course uses pre-recorded lectures, visuals and readings to present material to students. The course has 24 modules. Each module begins with a visual related to the topics covered and continues by presenting the learning content, artists' presentations, and graded assignments. Each module ends with glossaries.

Goals for the Course. Gaby's goals for the course were to incorporate digital tools to make an engaging online learning environment and have a well-structured and "aesthetically pleasing" (Interview, Oct.13, 2021) course on Moodle for students.

Going through the Course Design Process. The course design process started when Gaby first met with the design team. Major phases of the process include having the first meeting, designing the course interface and structure in Moodle, designing learning activities, entering course materials into Moodle, and implementing the course.

First Meeting. Gaby had the initial meeting with the design team, which included a course producer and a learning experience designer. During the first meeting, the design team described their roles in the process to Gaby. The course producer ensured everybody was on the same page about the topics to discuss at each meeting, and Gaby would mainly work with the learning experience designer on the course. Gaby shared with the design team how she wanted to teach the class and what types of support she needed from the team. Specifically, Gaby asked the design team to help set up the course content and learning activities on Moodle and organize the

videos using Yuja (a platform to record, store and share video lectures). Gaby and the design team agreed they would meet via zoom regularly to work on the course.

Design of the Course Interface and Structure in the LMS. Gaby worked with the learning experience designer to establish the course format. Gaby thought about using a grid format to present the course modules. However, the learning experience designer suggested that she use a linear format to make the course easy to navigate and have better accessibility for students. However, Gaby did not like the liner format because it requires students to scroll down a very long list to access the later modules of the course. The learning experience designer then suggested setting the format to show the latest module first. Gaby took the suggestions, and the learning experience designer showed her how to set up the format. The learning experience designer also suggested structuring each module and worked with Gaby to organize each module on Moodle. The course structure included a course description with related visuals on the top main page of the Moodle site. Then it had a course outline and showcase forum on the main page to encourage students to share their work with their peers and personal folders for students to upload their weekly project logs. Furthermore, each module had an introductory image, followed by learning content in PDF files, artist presentations, and module assignments. It ended with glossaries which provided students with information about the skills and knowledge needed to work on their projects.

Design of Learning Activities**.** After designing the homepage and the course structure, Gaby designed individual learning activities. These included:

- Course content. Gaby recorded videos to present her course lectures, demonstrate hand-building techniques and provide tutorials on how to make different subjects using ceramics for students. She recorded the videos in her art studio, where she had access to all the materials and tools to create ceramic projects. Also, she chose to teach her synchronous course sessions in the art studio to provide students with an authentic context of working as artists. After creating the videos, Gaby uploaded videos to the Yuja platform, which is the recommended platform to host the lecture videos. However, she had issues putting the videos into different categories, such as lecture videos, tutorial videos, and technique videos. The design team helped Gaby create different folders, organize the videos in Yuja, and ensure students have access to the video lectures on Moodle.

  Gaby used PDF files to present lecture slides and instructional materials related to hand-building techniques. Also, she created an Instagram account for the course and integrated it on Moodle to help students view ceramic artists' works in the real world.
- Assessments include both non-graded and graded learning activities. Gaby prepared a warm-up activity for the first class on her own to know the student's goals for the course. The warm-up activity required students to search for artists' videos on three hand-building techniques online and then select one technique for their first project and explain the reasons for selecting that option. It also helped students explore different hand-building techniques before accessing clay in the second week of the class.

  When designing the weekly logbook activity to ask students to write down their project progress, Gaby thought students would send the logs to her via email each week and then provide feedback. The learning experience designer suggested that she create personal folders for students. She could track each student's progress, approve their work, and provide feedback within the personal folders on Moodle. Gaby took

the suggestion, and the learning experience designer helped her set up the personal folders by creating group folders. Then, she assigned one student per group on Moodle to allow students to upload photos and text files.

Gaby designed a project presentation as the final assignment for the course. The purpose of the assignment was to ask students to showcase their work and to reflect on the creating process. The learning experience designer provided suggestions on creating the assignments and worked with Gaby together to think of creative ways of presentations based on the available online environment. They decided to have students present using a PDF document. Gaby prepared some guidelines to help students structure the presentation and keep their focus on it. She provided questions to guide students' reflection on their creating process. The examples of the questions included: "what was your original intention of the project? What obstacles or issues did you encounter? How did you resolve them? How would you like to change the project if you were to start over?" The activity's concern was figuring out how to show the physical artwork online.

Moreover, some students did not have adequate materials to complete the final product due to limited access to the materials such as clay or firing equipment. Gaby asked students to use photographs, drawings or sketches to show their final artwork and made it clear to students that they were evaluated on the articulation of the creating process of the artwork rather than the completion of the work. Figure 5.3 shows an example of the presentation.

Figure 5.3

A student's visual presentation example

Additionally, Gaby mentioned that the learning experience designer provided her advice on grading assignments effectively. For example, the learning experience designer suggested that Gaby provide grading rubrics to students before grading them. The learning experience designer also provided suggestions on how to weigh different course activities. As a novice instructor, she found the suggestions to be beneficial.

- Communication with students refers to the ways Gaby used to interact with students. Gaby used the announcement board on Moodle to send students important messages such as what to prepare for the upcoming class and what needs to be done before the next class. Also, Gaby had weekly one-to-one meetings with individual students via zoom breakout room to look at students' projects and answer their questions related to their projects.

Entry of Course Materials into the LMS**.** After the course materials were ready, Gaby entered most PDF course files on Moodle by herself. The learning experience designer helped her set up the artwork file submission folders for each student, assignments, and discussion

forums on Moodle. Gaby and the learning experience designer worked together on entering the videos to Yuja on Moodle. Gaby uploaded all her recorded videos to Yuja, and the learning experience designer created folders and sorted the videos based on the categories of the videos.

Implementation of the Course. Once the course was set up, Gaby had one last meeting with the design team at the beginning of the semester to help her check the setup of the course and then she delivered the course through Moodle in Winter 2021 by herself.

Use of Technology. Gaby used the following technologies during her course design process:

- Moodle to create, deliver and manage the course content online. Tools included:
  - Discussion forum, which allowed students to showcase their works with their peers
  - Assignment tool, which allowed students to submit their presentations
  - Folders, which allowed students to upload their files and photos to a private folder and get feedback from the instructor
  - Yuja to host and present course video lectures
- YouTube to present instructional videos
- Instagram to provide access to artists' works outside the class
- PDF documents to present course lecture slides
- Zoom to run synchronous class sessions and have one-to-one meetings with students

Gaby is relatively comfortable with technology tools but sometimes has specific questions about certain tools. Regarding technology issues, Gaby tried to resolve them on her own. However, she mentioned it would be helpful if the design team could be available to help answer her questions on specific tools.

Challenges. The challenges Gaby faced during the course design process included:

Providing the right amount of information for students. It is a challenge related to Gaby's experience with online courses. The course was Gaby's first online course. She wanted to prepare students with clear instructions to guide them in learning asynchronously online and provided adequate materials to help students learn. At the same time, she did not want to overwhelm students with too much information. Gaby found she lacked the experience to decide on the right amount of content.

Balancing between designing a visually appealing course and instructor's time. Gaby is a professional artist and works with high-end luxury firms. Her artistic background gave her high expectations of the look and organization of the course. She wanted her course to be well-organized and concise with the choice of formats, image sizes and multimedia. According to Gaby, the high-quality course content was vital because it showed an example to students of what their work should look like and communicated her expectation to them. However, creating high-quality graphics and animated videos is time-consuming and requires a significant amount of work. Gaby did not have enough time to make the visually appealing course that met her work standard, nor did she have the fund to pay for an assistant.

Instructors' support needs vs. availability of the support service. It contains twofold: Firstly, the express course design support at the institution was only available for instructors for one semester. Gaby found that after working with the design team, she was more willing to try new tools and strategies for online courses and had specific questions related to exploring certain tools in depth. However, the support was no longer available, and she had to look for the answers on the website herself, demotivating her to apply new ideas in her course. Another part of the contradiction was about the ways the course design support was provided to the instructor. Gaby mentioned that the design team was so helpful and generously set up some of the course

activities on Moodle for her. She appreciated their help, and it saved her lots of time in preparing other course materials. However, she did not learn how to set up the activities. As a reault, it became challenging when she needed to re-set the same activities for future course iterations or edit the existing activities. It was even more challenging as the support was no longer available at the institution. Gaby had to look for the resources and learn to use the tools again on her own.

Changes in Teaching Beliefs and Practices. After having the experience developing the course for online delivery, Gaby felt she was more structured and prepared before teaching and better at keeping the focus on each class. She found that preparing online courses helped instructors improve their teaching flow.

> "You cannot just come into class and say, let me just read a chapter for you, because you cannot feel the room. You have to be super prepared. Also, you need to be very organized and make sure the class is not long because it is brutal to be online all the time." (Interview, Oct.13, 2021)

Also, having the experience of teaching the course online, Gaby realized it is possible to build strong connections with people via a screen if someone considered strategies for doing so and spent time with students.

Roles and Responsibilities of Instructors and Instructional Designers. Gaby had a great experience working with the design team. She appreciated the suggestions the design team provided and praised the quality support the designer provided her.

> "That is like boutique (the express support), they (the design team) are like a concierge. I couldn't live without them afterwards." (Interview, Oct.13, 2021).

Based on conversations with Gaby, she sees herself playing a major role in designing the course. The design team played an essential role in providing her with technical support and giving her course structure and layout suggestions. Table 5.6 shows the roles and responsibilities of the two parties as described by Gaby.

Table 5.6

Instructors and instructional designers' roles and responsibilities as seen by Gaby

Instructor's Roles and Responsibilities	**ID's roles and responsibilities**
Role: Primary Responsibilities: • Prepare subject matter content • Prepare guidelines for assignments • Make decisions on the course format and structure • Design the course activities • Consider different strategies to connect students with the subject matter • Create different ways of connecting with students	Role: Support Responsibilities: • Provide suggestions on designing course structure and learning activities • "To set up a whole bunch of bells and whistles" (Oct.13, 2021) • Coach instructors through setting up technical tools • Be a good team player

Emma: Making a course on Art Engaging Online

Emma developed and taught an online course on arts for adults. This section describes her experience doing so, including her background, beliefs about teaching and online learning, experience with the course design process, and her perceived roles and responsibilities of instructors and instructional designers in the course design process.

About the Instructor and Her Motivation to Teach Online. Emma started teaching undergraduate courses in art education in 2020. Before that, she taught informal training programs related to the art museum for adults in continuing education at the university. Prior teaching in universities, she worked as an art museum educator, walking people through exhibitions and discussing artworks in galleries. Emma also had experience developing art programs where people visited the gallery, listened to the artists talk about their work, and had panel discussions with the artists.

Emma researches museum studies. Her research focuses on cultural politics in art museums and museum learning and engagement.

The course that Emma teaches is Arte for Adolescents/Adults. She taught two courses at the time she prepared this course. It was her first time teaching the course and also her first time teaching online. Emma sees teaching of art education as a way to have students put their life experience and enthusiasm into interpreting the arts. According to Emma, one of the significant challenges of teaching art education during the pandemic was that she could not see students and could not communicate with them the spontaneous way she used to do in the class. Also, she was concerned about students' well-being during the hard times and did not want to add more pressure on students when they took the course.

Emma started to teach online due to the outbreak of Covid-19. She was new to online teaching and was not as comfortable with the technology tools used for online teaching. Emma described teaching online as "teaching to black screens" (Interview, Sept.28, 2021). She presented her lecture similar to the way she did for face-to-face classes.

Emma described her teaching style as very participatory and spontaneous, and she found it challenging to prepare those elements in an online environment. She said it was because of her lack of experience with the online learning environment.

> "I had many ideas about teaching, but I do not know how to do them online." (Interview, Sept.28, 2021)

Compared to face-to-face classes, Emma was more tentative when asking students to participate or answer questions online. She was not sure if students were anxious or not because she was not able to see students' faces.

> "If I cannot see them (students), I cannot read their body language. I cannot see their facial expressions. I cannot see them responding to what other students are saying non-verbal reactions to things. I cannot see if people are looking engaged or not. There is guesswork that has to happen. I would ask a bit more softly like, 'you can do this if you want to, but no pressure." (Interview, Sept.28, 2021)

However, Emma mentioned that she got more teaching opportunities because she could teach remotely at different universities without travelling.

Beliefs about Teaching. Emma defines teaching as engaging students to put their life experience, enthusiasm and intentions into understanding the subject matter. Within teaching, she sees students as the central to their learning and instructors as facilitators to get students to interact with others and construct their knowledge. She uses the participatory approach while teaching. She introduces subject matter content through role-play or scenario-based activities. Also, she prefers to be around students, listens to them, and talk with them during class.

About the Instructor's Experience with Course Design. This section describes Emma's experience with the expressed instructional design process.

About the Course. Arte for Adolescents/Adults is a multi-level undergraduate course about museum education, learning and engagement. It is a required course for students in art education,

but it is also an elective course for students from other disciplines. The course was given online due to the outbreak of COVID-19, and it used both synchronous and asynchronous formats for delivery. It had about 70 students registered each semester.

The course introduces adolescent and adult development theories and their effect on their behaviour and attitudes towards learning and art making. The main objectives of the completed course are:

- Learn different types of group management and support techniques appropriate for adolescent and adult students
- Integrate aspects of popular culture into curriculum planning
- Design educational tools for the art museum
- Reflect on the professional practice of museum education

Graded assignments include:

- Class Discussion: Students must post a question related to the course topics and answer two of their classmates' questions.
- Reflection assignment, in which students write their reflection on a professional practice related to museum education, learning and engagement.
- The final project: students create an educational product or tool for an art museum, which could be used by the visitors or the artists who come to the museum. Also, students share the final project with the class.

The course has 12 units. Each unit includes the zoom link to the live class, the lecture slides, and the activities related to the unit. The course uses live lectures and PowerPoint slides to present material to students. Discussion forums are used to provide students with opportunities to interact with their peers.

Goals for the Course. Emma's goal for the course was to create an engaging online learning environment for students, synchronously and asynchronously, with the learning content and their peers.

Going through the Course Design Process. The course design process started when Emma had the first meeting with the design team. Major phases of the process include having the first meeting, designing the course interface and structure in Moodle, designing learning activities, entering course materials into Moodle, and implementing the course.

First Meeting**.** Emma had the initial meeting with the design team, which included a project manager, a learning experience designer and an educational technology specialist. Specifically, the project manager was there to facilitate the first meeting, then the learning experience designer and the educational technology specialist worked with Emma throughout the course design process. During the meeting, the design team explained the types of support they could provide and the amount of time available to support Emma.

> "The learning experience designer would be there to check in and make sure everything is ok. And I would work with the educational technology specialist through the ins and outs." (Interview, Sept. 28, 2021)

The design team and Emma agreed to communicate through emails and online meetings. The design team would send check-in emails regularly, and Emma would prepare her questions for the design team and share them in advance to help the design team prepare for the meetings. Also, the design team asked Emma about her previous experiences with the course and her needs in designing the course.

Design of the Course Interface and Structure in the LMS. According to Emma, she did not think about developing an online course when she started to prepare her course. Instead, she

adapted the course to deliver it online. As a result, she did not spend much time designing the structure for the course on Moodle. She uploaded the course content and activities and categorized them by weeks on Moodle.

Design of Learning Activities. Emma started planning the course outline and the learning content before developing the course for online delivery. At the time Emma started working with the design team to design the learning activities, they focused on adapting her existing course plan for the online environment. The learning activities included:

- Course content. Emma presented the subject matter content through PowerPoint slides and synchronous course lectures. She used Zoom to give synchronous lectures each week, and a teaching assistant helped her monitor the zoom sessions. Emma also had guest speakers to join the synchronous classes and discuss with students.
- Assessments include both non-graded and graded learning activities. Emma offered students opportunities to interact with their peers using a discussion. Emma worked with the learning experience designer and the educational technology specialist on preparing the discussion activity. Emma had the idea of having students write a question about the reading or the lectures online and then reply to two of their fellow students' questions. The design team suggested using a discussion forum on Moodle for this activity, and they coached Emma on how to set up the discussion forum.

  Emma co-designed the course final project assignment with the design team. When working together on designing the assignment, Emma shared her ideas that she wanted the students to use visuals and text to present their final projects and then to be able to share their works with their peers. The educational technology specialist on the design team suggested using a database tool on Moodle to create a project gallery which could meet Emma's needs for the assignment and then showed Emma some examples about using the tools. Emma took the advice and prepared the content for the assignment, and then the educational technology specialist helped her set up the assignment on Moodle. When setting up the project gallery activity, Emma met with the educational technology specialist via zoom, shared the screen, and worked on the assignment creation. According to Emma, the design team helped display the assignments on Moodle and make connections between the assignments and students smoothly.

  Additionally, Emma created rubrics for the graded assessments. She took training courses at the institution's teaching and learning center on creating and setting up rubrics on Moodle.
- Communication with students refers to the ways Emma used to interact with students. Emma decided to spend extra time having one-to-one meetings with students via Zoom to help them learn in an online environment and go over the course content for students at the different levels. To make the meeting reservation easier for students, the design team suggested that Emma use the scheduler tool on Moodle. The scheduler tool helped manage students' appointments by allowing students to select the time slots and then provide them with the link to the appointment. The educational technology specialist on the design team worked with Emma to set up the scheduler for her course. Also, Emma worked with the design team to create an optional survey on Moodle to invite students to share their thoughts on the course.

Entry of Course Materials into the LMS. After course materials were ready, Emma worked closely with the educational technology specialist on the design team to enter the course

content and learning activities into the LMS. Specifically, the educational technology specialist provided Emma with instructions on how to set up different tools on Moodle and shared screens to show Emma set up steps. Emma followed the instructions and set up all the course activities with the educational technology specialist together using a shared screen.

Implementation of the Course**.** Once the course was set up, Emma delivered the course through Moodle in Winter 2021. The teaching assistant helped her monitor the chat and create breakout rooms during the synchronous class sessions via zoom.

Use of Technology. Emma used the following technologies during her course design process:

- Moodle to create, deliver and manage the course content online. Tools included:
    - Discussion forum, which allowed students to post questions related to the course content and to interact with their peers
    - Survey tool to collect students' feedback for the course
    - The scheduler tool allows students to reserve a time slot to meet with the instructor.
    - Database tool allows students to share multimedia content such as images, and texts, with their peers and provide comments on the shared content.
- PowerPoint slides to present course lecture content
- Zoom to run synchronous class sessions and group discussions, and have one-to-one meetings with students

Emma rated her ability to use technology as low. She got more comfortable with technology after developing and teaching the course. Regarding technology issues, Emma consulted the resources on the website or contacted the educational technologist for assistance. Also, during the course implementation phase, the teaching assistant helped Emma with technical issues.

Challenges. The challenges Emma faced during the course design process included:

Disconnected from students in the online environment, a challenge related to the instructor's lack of experience with online teaching and learning and the difference between in-person and online classes. Emma mentioned she was unsure how to keep students engaged with the course content and their peers in the online learning environment. She only felt connected with students when she saw students' assignment submissions. It could be addressed when Emma gained more online teaching experience.

The availability of the course design support has not fully meet Instructor's needs. Emma had a teaching assistant to help with her course preparation. However, based on the institution's rules about teaching assistants' roles and responsibilities, the design team could not work with the teaching assistant directly. For example, Emma had to meet with the design team to get instructions on how to set up activities and then she had another meeting with her teaching assistants to share the set-up instructions.

> "It could be easier if I brought my teaching assistants with me to the design meetings, but I could not give any of my (design support) time to my teaching assistants. I would have liked my TAs to learn things that the educational technologist taught me" (Interview, Sept.28, 2021)

Changes in Teaching Beliefs and Practices. Emma considered her experience working with the design team to prepare the course online as a learning experience. She had learned more about the design aspects of the course and was excited to work with designers and get ideas from them and try to work on things together. Also, she was more open to online teaching and

learning after having the experience. Emma mentioned that her thoughts on developing a course have shifted:

> "Instead of thinking what is not possible online, I started to think more like somebody who does work in tech, and ask myself what is possible."
>
> "I want to learn more about effective, engaging teaching strategies, from the design phase and make the learning more dynamic." (Interview, Sept. 28, 2021).

Roles and Responsibilities of Instructors and Instructional Designers. Emma appreciated the course design support the institution provided to her and was excited to work with the design team together to prepare her course content for online delivery.

According to Emma, she took full responsibility for preparing and delivering the course. The instructional design team was there to help her achieve her goals.

> "I did not think of them (the design team) as pedagogues, I designed my course, and they helped me adapt it online."
>
> "(I expected them) to understand the discipline, and understand who we are as teachers, what kind of classroom environment we want to create and then to support us to the best of their abilities to create that environment online." (Interview, Sept.28, 2021)

Table 5.7 shows the specific responsibilities of the two parties as described by Emma.

Table 5.7

Instructors and instructional designers' roles and responsibilities as seen by Emma

Instructor's Roles and Responsibilities	ID's roles and responsibilities
Role: Primary Responsibilities: • Prepare pedagogical content • Prepare content for the assignments • Design the course • Try to figure things out herself before contacting the design team for support • Communicate questions and requests clearly with the design team • Respect the work agreement shared with the design team	Role: Technical Support and then co-designer on assignments later in the process Responsibilities: • Understand instructor's discipline and needs • Provide course design ideas and suggestions • Provide suggestions on the choices of digital tools • Coach instructors through setting up technical tools • Assist instructors design assignments • Check-in with instructors regularly

The Course Design Activity

The second generation of Activity System (Engeström, 1987) is used to present instructors' course design supported by the express instructional design.

Subject

The subject of this activity system is the instructor. Among the six instructor participants, four are tenure track faculty, and two are part-time faculty. Three of the instructors indicated that their priorities at the institution are research rather than teaching.

They see teaching as a way to transfer knowledge to students, prepare students' competencies in applying skills and knowledge in the field, and make connections between students' experiences and the subject matter. Three participants spent additional time interacting

with students and making close relationships with students, and two focused on sharing their research expertise with students.

All the instructors switched to online teaching due to the outbreak of COVID-19. Two of the six instructor participants have prior online teaching experiences, and two are new to online teaching. In general, instructors are open to online teaching and learning and praised its convivence and flexibility. Most participants consider not being able to know students' immediate reactions during the class to be the major challenge for online teaching.

Instructors did not think about designing their courses for online delivery when they started preparing the course. All of them started by adjusting their existing content and using digital tools to help present it online.

Object

The objects include adjusting existing course content for online environment, creating well-structured courses on LMS, and incorporating digital tools to make courses engaging for students.

Tools

Instructors used three types of tools to carry out the express course design activities: physical, virtual, and cognitive.

- Physical tools
    - Laptops, iPads, headphones and microphones
    - Subject matter content materials such as textbooks
- Virtual tools
    - Tools for producing the course content, such as PowerPoint slides, Word files, PDF files, images, videos and audios
    - Tools for presenting the course content and learning activities, such as video production tools, LMS and the applications embedded in the LMS including quizzes, assignment, folders, discussion forums, scheduler, database, book tool and survey
    - External tools to facilitate students' interactions such as Perusal and Vassal
    - Tools for communication: Zoom and email
    - E-proctoring software
- Cognitive tools
    - Instructional design theory and principles, online pedagogy, multimedia principles, and learning theories
    - Instructional designers' support and guidance on course structure, technology tool selections and learning activity design

Rules

The rules mediated the activity of express instructional design: 1) Each instructor participant got 80 hours of support from the design team. Also, the express instructional design was one-time support, which is no longer available to instructors after 2021. 2) The institution has its customized LMS and supported technology tools, instructors need to adjust their learning activities and content to comply with the available tools. 3) Instructors comply university's policy about online courses. The course development task is part of instructor's regular teaching responsibility. Instructors comply with institutions' accessibility policy (Such as included support resources for students with disabilities, provide alt texts for images, and provide multiple ways of accessing the learning content) when presenting course content. 4) Instructors retain the

rights to their course content and had control over their intellectual property. 5) Instructors' time allocated to teaching and course development differ based on their faculty status.

Community

The instructors' community consist of: 1) the learning experience designers, instructional designers, educational technologists and course producers who provided the course design support services. 2) Videographers. 3) Teaching assistants. 4) Students.

Division of Labor

All six instructors considered their roles as a leader in the course design process and assumed full responsibility for their course preparation. Specifically, they were responsible for developing the learning content, creating engaging learning activities, making design decisions. Instructors described the design team's roles as providing support in tackling challenging design tasks. Instruction design team primarily assisted in structuring and organizing course content on the LMS, while also offering guidance on setting up digital tools.

Instructors identified two approaches of collaborating with the design team. The first approach involved working together with instructional designers on design tasks. During this process instructional designers provide suggestions and instructions on how to do particular design tasks effectively. Then, instructors followed the suggestions and completed the tasks independently. The second approach entailed having the instructional designers complete the design tasks on behalf of the instructors, allowing instructors to save time and focus on other aspects of course preparation.

Course Design Challenges

Instructors revealed the following challenges in their activities of designing online courses.

The Availability of the Instructional Design Support Fails to Fully Meet Instructors' Needs. It contains twofold: the duration of support from instructional designers and the ways the support is provided. Rita, Anne, Emma and Gaby pointed out that the course design support was only available for one semester. After working with design team and benefited from the process, they felt motivated to further explore course design. However, they were disappointed that the support was no longer available, which left them discouraged and inclined to give up on exploring new technical tools or teaching strategies.

Regarding the provision of course design support to instructors, all six instructors mentioned their reliance on the design team to assist in setting up learning activities on the LMS. This approach helped instructors save time on course building tasks. However, Anne, Emma and Gaby pointed out that they had to spend extra time on relearning how to do setup tasks and modify existing content once the course design support was no longer available. Rita, Anne, Gaby, Emma and Jake expressed the need for a collection of instructional materials that guide instructors on setting up learning activities using different tools on the LMS.

Lack of Experiences on Online Teaching and Learning Practices. Being new instructors in the institution, Gaby and Emma highlighted the challenges they faced in determining the right amount of learning content for their students, as well as assigning appropriate weights to different assignments. Also, Rita expressed uncertainty regarding whether the learning materials she had previously used in face-to-face classes would effectively transfer to the online learning environment.

Engaging students in the online environment is a commonly mentioned challenge in previous studies on online teaching and learning. Instructors wanted to ensure students actively interact with the learning content and had opportunities to communicate with both their peers and

instructors. In face-to-face classes, instructors rely on visual cues such as body language and facial expressions to assess student engagement. However, there visual cues are often absent in online classes. Anne and Emma felt uncertain about whether students were actively interacting with the course content and each other, as they could not see students' facial expressions in the online setting. Mike and Anne noted that instructional designers might offer suggestions to enhance student engagement in online classes, but these suggestions may not applicable for specific disciplines, nor did instructors have time to implement these strategies.

Avoiding cheating in online courses, which relates to administering online exams while minimizing the risk of students sharing exams materials or having others complete their exams, emerged as a significant challenge for instructors when preparing courses for online delivery. Mike mentioned this challenge during the interviews. According to Mike, the institution attempted to address the challenge by providing an e-proctoring system. However, he was concerned about students' privacy and comfortable level of taking the proctored exams. Instructors needed to think about alternative strategies and collaborate with the instructional designers to prepare for the online exams. Instructors expected to receive additional suggestions and guidance from the instructional designers regarding the design of alternative exams tailored to their disciplines.

Balancing between Instructors' Workload and Good Course Design Practices. Creating a visually appealing online course that is both easy to navigate and engaging for students requires a significant amount of time and effort from instructors. In interviews, five instructors mentioned they had other work commitments such as research and other professional obligations, which limited the time they could dedicate to course design. Four instructors expressed a desire to create interactive and well-structured courses for their students, and they appreciated the course design suggestions given by instructional designers. However, they did not have enough time to fully implement these suggestions or explore digital tools to enhance interactivity. As a result, they had to balance course quality with the time available for course preparation. As Mike mentioned: "I would be interested in designing interactive activities if I had infinite time, but you are not just teaching. You are directing research and editing your students' theses. It is like everybody has to balance. And I do things that are easy to implement." (Interview, Sept.28, 2021).

Preparing Courses for Online Delivery During COVID-19. All instructors prepared the courses for online delivery due to the outbreak of COVID-19, and none thought about putting the course online initially. Therefore, instructors focused on adjusting their existing ideas for in-person teaching to make them appropriate for the online environment. Five out of six instructors mentioned they did not "design" but "constructed", "organized", or "administrated" the course online.

Instructor's Change and Development

All the instructors mentioned they applied some ideas or used some content created during this course design process to prepare and deliver other courses. Rita, Emma and Gaby indicated they put more efforts into preparing the right content for their courses. Also, they provided more detailed guidance for assignments to support students' learning. Four instructors stated they designed other courses following the same course layouts and structure. Jake and Mike reused the quizzes for their later iterations of the course, which saved them lots of time in setting up the activities. Anne reused the interactive videos that were created by the design team in her face-to-face classes to support students' learning.

Five instructors mentioned working with the design team helped instructors see more possibilities in presenting the course content and designing learning activities. They had access to more digital tool options to help them prepare their courses. Emma mentioned the course design experience shifted her thoughts on developing a course: “instead of thinking what is not possible online, I started to ask myself what is possible.” (Emma, Sept.28, 2021).

Four instructors indicated they became more comfortable working with others on their course and trust their expertise to make their course courses better. As new instructor who started teaching in 2020, Emma and Gaby considered the course design activity as a learning experience to help them think about planning the course ahead and improve their teaching flow.

Working with instructional design teams made instructors more open to online teaching and learning. Interestingly, both Rita and Emma mentioned the online learning environment offered them more chances to interact with individual students. They spent more time meeting with individual students rather than lecturing.

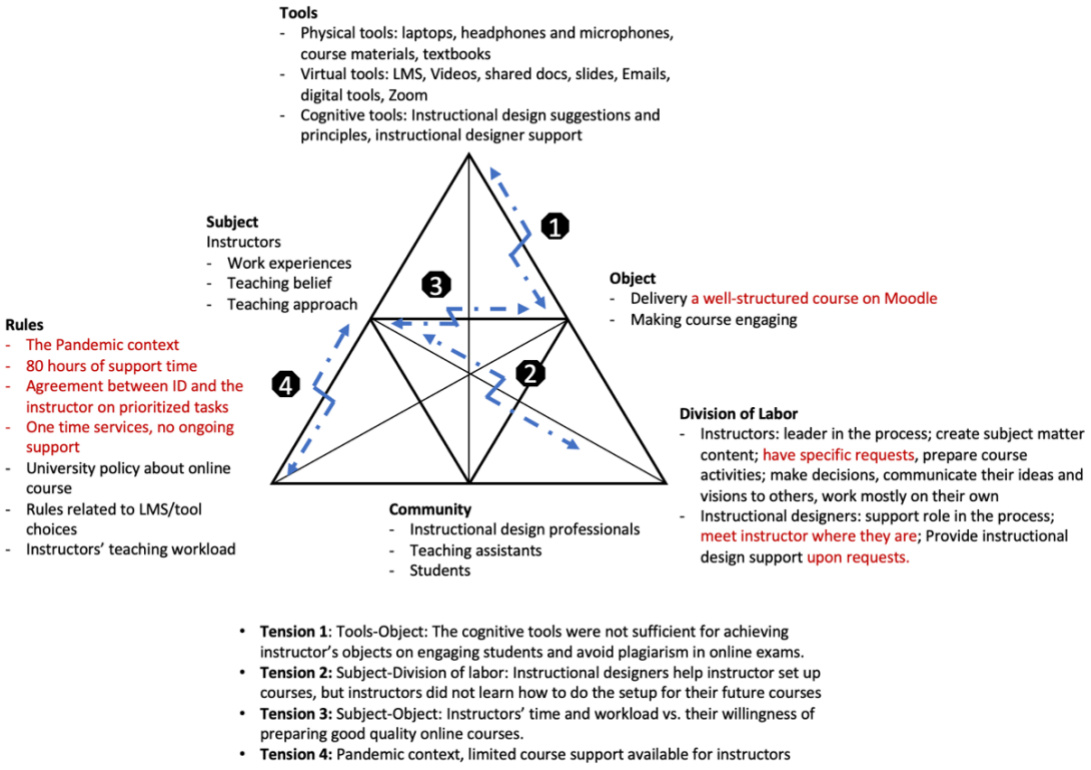
Noteworthily, three instructors indicated that their course design experiences did not change their teaching practices. They were back to teach in person classes. As Mike stated:

> "I expect when I go back to teaching in person, my teaching framework will be exactly the same." (Mike, Sept.28, 2021).

Figure 5.4 presents the activity system of the express instructional design support.

Figure 5.4

The activity system for express instructional design support.



- **Tension 1**: Tools-Object: The cognitive tools were not sufficient for achieving instructor's objects on engaging students and avoid plagiarism in online exams.
- **Tension 2:** Subject-Division of labor: Instructional designers help instructor set up courses, but instructors did not learn how to do the setup for their future courses
- **Tension 3:** Subject-Object: Instructors' time and workload vs. their willingness of preparing good quality online courses.
- **Tension 4:** Pandemic context, limited course support available for instructors

Chapter Six. Case Three: Preparing Courses Through ID Workshop Support

Case 3 examines instructors who engaged in instructional design workshops to aid in preparing their online course content. Under the workshop-supported model, educators opt to take part in various workshops that pertain to instructional design principles and practices, tailored to meet their course design and delivery requirements. Workshop content encompasses topics such as crafting learning objectives, using multimedia, and introducing Learning Management Systems (LMS). The workshops' primary objective is to furnish educators with knowledge and resources related to instructional design and educational technology, empowering them to independently develop their courses. Throughout these workshops, instructional design experts serve as facilitators, delivering workshop content, addressing educators' questions, and offering course design and development materials. The support initiative begins when educators join the workshops and concludes upon the workshops' completion.

This chapter provides an overview of the educators' experiences within the workshop-supported course design process. It begins by outlining the university's contextual backdrop within which this process was investigated, followed by a portrayal of the activities associated with workshop-backed course development. Subsequently, it spotlights the six instructors who participated in the research. The chapter concludes by explaining the overarching activity system that underpins the workshop-supported course development procedure.

Context

The research site is a comprehensive university in Canada. The university started offering distance education in the mid-1990s. Before 2019, the university offered an array of for-credit online undergraduate courses, numbering between 150 to 200 annually, along with a more limited selection of approximately 10 to 20 online graduate courses. These offerings were designed to cater to the diverse learning needs of students, affording them the advantages of flexibility and convenience associated with online learning. Additionally, the university offered an online master's degree program as part of its academic offerings.

However, the landscape of online education at the university underwent a significant transformation in response to the global COVID-19 pandemic. Over the past three years, the majority of traditional in-person courses transitioned to an online format. This transition was due to the outbreak of COVID-19 and the ensuing need to adapt to remote instructional modes. At present, the university provides three types of online courses:

- Synchronous courses, in which students join the course at scheduled dates and times. The courses are delivered via web conferencing tools.
- Asynchronous courses, in which students learn the course content online via the university's LMS at their own pace. Students are expected to participate and complete learning tasks following due dates.
- Blended courses are a combination of scheduled class meetings online and asynchronous activities.

The university's teaching and learning centre assists with the creation and enhancement of online courses. It offers services for the professional growth of educators, digital education, multimedia, and educational technology. These services include seminars, collaborative course development, and personalized consultations.

In this case, the workshop-based approach refers to a course development initiative that comprises a sequence of instructional design workshops facilitated by the teaching and learning support teams to aid instructors in preparing their courses. In the last three years, the workshops have concentrated on crafting courses tailored for online instruction, a response to the challenges

posed by the COVID pandemic. The core curriculum for course design consists of four essential workshops, with an additional optional workshop for educators seeking to expand their expertise and adopt innovative teaching strategies. Specifically, these workshops include:

- Course Design 101 is a fundamental workshop that begins with the key concepts of instructional design, such as learning outcomes, assessment, and instructional strategies, and then introduces the process of designing and developing a learning module.
- Course Design 102 focuses on providing the instructors with knowledge and skills to develop clear and measurable learning outcomes for their courses and evaluate the alignment of learning outcomes with their course content.
- Course Design 103 explains the cognitive theory of multimedia learning and introduces the multimedia principles to be considered when designing course materials that facilitate students' learning.
- Course Design 104 focuses on presenting various types of learning activities as well as methods for providing effective feedback to specific learning activities to support student learning.
- Optional Course Design workshop showcases examples of online activities that effectively facilitate class engagement and communications and explores the pedagogical principles behind those activities.

Each workshop includes two hours of live synchronous sessions via Zoom and some asynchronous post-workshop reflection activities focusing on applying the workshop content to design courses. Workshop materials such as slides, videos, and worksheets are available to the participant via the university's LMS. During the workshops, the instructional designers work as facilitators to present workshop content, answer participants' questions, and provide feedback to the post-workshop reflection activities. Each workshop is capped at 25 participants, and the teaching and learning services team provides each workshop at least once each semester.
The workshops are introduced to all the instructors through the university's newsletter each term and on the teaching and learning services web page. All university instructors have access to register for the workshops. They are free to choose one or more workshops to attend based on their needs. Those who complete all the workshops will receive a course design certification from the university to recognize their skills in designing courses. To finish the entire program takes from one month to a year, contingent on whether instructors choose to complete all of the workshops within a single semester or distribute them across multiple semesters.

Instructors are fully responsible for designing and developing their courses for online delivery, and they fully own their courses. Instructors who used the workshop-supported services to prepare online courses could register for the workshops at any time, depending on their availability and needs. The workshop content can be used as guidance for instructors to develop their courses. The course design typically takes between 1 to 4 months. The length differs based on various factors, including whether instructors have taught the course before, the amount of the learning materials needed to be designed or re-designed, and the instructors' teaching experiences.

Instructors' Experiences with the Workshop-Supported Course Design Process. This section describes the experiences of six instructors who have completed the workshop-supported course design process. Of the six instructors who participated in the study, two are full-time instructors, three are part-time instructors, and one has tenured position. Two teach in the humanities, two teach in social science, one in science, and one in engineering. Five are

female, and one is male. Three have less than a year of teaching experience, and others have 3, 9, and 25 years of teaching experience, respectively. Table 6.1 shows participants' demographic information related to their discipline, academic status, years of teaching as well as the level of technical skill. Technology skills range from low to high. The subsequent sections describe their experiences in detail.

Table 6.1

Demographic Information

Participants Acronym	Gender	Status	Year of teaching	Discipline	Technology Skills
Jenny	Female	Full-time instructor	Nine years	Social Science	Moderate/High
Cecilia	Female	Full-time instructor	Three years	Humanities	High
Alex	Male	Tenured	Less than a year	Engineering	Moderate/High
Ellen	Female	Part-time Instructor	Less than a year	Humanities	Moderate
Lia	Female	Part-time Instructor	Less than a year	Science	Moderate/High
Cindy	Female	Part-time Instructor	25 years	Social Science	Moderate/Low

Jenny: Engaging English as Second Language Learners in Online Classes

Jenny is a full-time instructor at the university. She has taught English as a second language (ESL) courses at the institution since 2013. This section describes her experiences in developing an advanced-level ESL online course, including her teaching and working background, her beliefs about teaching, beliefs about online teaching and learning, her experience with the course design workshops and the course design, as well as her perceived roles and responsibilities of instructors and instructional designers in the course design process.

About the Instructor and her Motivation to Teach Online. Jenny has more than nine years of teaching experience in higher education. She teaches English courses to English as a second language (ESL) students at the university. Before teaching in universities, she worked as an English teacher at private schools in Canada and abroad to help international students prepare their English skills for universities. Jenny is hired as a full-time teaching faculty and her primary responsibility at the university is teaching. She teaches one to two courses each semester.

Jenny instructs an intermediate-level ESL course among her teaching responsibilities. Before creating the online curriculum, she conducted face-to-face instruction for the same course. Her passion for teaching arises from the opportunity it affords her to gain insights into

various cultures through her students and engage with them. Teaching English as a second language is her preferred subject matter, as it grants her the autonomy to choose captivating topics for her classes. Jenny underscores the significance of student involvement in the process of learning English as a second language. Within her instructional sessions, she frequently employs discussions and group activities to foster student interaction and facilitate their integration of the language into their academic and everyday experiences. Jenny incorporates various technologies, such as polling, written reflections, and breakout rooms, to enhance student engagement in the study of English.

When talking about online teaching and learning, Jenny likes the flexibility of teaching online so that she does not need to spend too much time driving to school for each class. She is also comfortable using different digital tools to prepare her courses. However, she found that the level of interaction online is not the same as in face-to-face classes.

> "It is a continuous challenge to maintain and create the type of interactions and develop students' speaking skills in the same way in an online environment the way they were in the classroom" (Interview, Nov.19, 2021).

Jenny believes that keeping students engaged in online classes requires more effort from the instructors. Also, being unable to see her students made her feel "worn down" (Interview, Nov.19, 2021).

> "I am spending much effort like being a cheerleader to get students involved. But I did not have to spend the same level of energy in the classroom to get them to participate" (Interview, Nov.19, 2021).

Because of COVID-19, Jenny switched her course to a mix of synchronous and asynchronous learning. She used an asynchronous format to share course materials and do pre- and post-class activities via the university's LMS. Then she met with students synchronously each week. When preparing activities for her online course, Jenny adapted the activities used in face-to-face classes but used digital tools to run them. Also, she decided to shorten the online classes and transfer some of the class activities to asynchronous activities. According to Jenny, the lack of real-time feedback in online activities is a disadvantage for students struggling with learning.

> "Good students would do well no matter what you throw at them, but it is the ones who struggle that struggle with the lack of face-to-face teacher support" (Interview, Nov.19, 2021).

Beliefs about Teaching. Jenny sees teaching as a means of engaging with students and assisting them in linking educational materials to their everyday experiences. She perceives students as active participants in classroom activities, with the instructor's primary role being to facilitate their learning. In her teaching approach, Jenny employs a method centered on instructor-led discussions.

About the Instructor's Experience with Course Design. This section describes Jenny's experience with the workshop-supported instructional design process. Specifically, it explores the instructor's activities of taking the course design workshop, the course itself, a walk-through of the process for designing the course, and contradictions and challenges that arose during the design process.

Taking the course design workshop. Jenny took the course design workshops in the summer of 2020, right before she taught her first online course in the fall of 2020. Before taking the workshops, she participated in many webinars on designing and teaching online. However, she was overwhelmed by the information offered online and unsure how to use information from

different sources. She wanted to have several workshops that are connected and built upon each other to guide her online course design consistently. She signed up for the course design workshops at the university, hoping the workshops could guide her in making decisions on the tools and strategies for preparing for her upcoming online course.

During the workshops, Jenny listened to the facilitators (instructional designers), observed examples and took notes. She did not work on her course design during the workshops, but she started to think about what could be done for her course. At the end of each workshop, she was asked to look at her course, reflect on the content learned from the workshop, and then get feedback from the instructional designers.

The workshops yielded valuable insights for Jenny, encompassing theoretical content about the creation and enhancement of online courses, evidence-based recommendations, real-world illustrations showcasing the application of these suggestions in educational settings, and personalized guidance following her attempts to incorporate these concepts into her course development endeavors post-workshop.

Goals for the course. According to Jenny, her goal in designing her first online course was to use appropriate strategies and tools to make it engaging for the online environment. She incorporated what she had learned from the workshops when preparing her course.

About the Course. The Advanced Level English Second Language is an undergraduate course designed for English as a second language students who need to develop the language skills required for academic study. The course is fully online, uses synchronous and asynchronous formats, and is delivered via the institution's LMS. The course has around 25 registered students each term. Students have two synchronous sessions with the instructor each week for 1 to 2 hours, then complete asynchronous activities independently.

The course introduces English reading, writing, listening, and speaking in academics. The main objectives of the completed course are:

- Understanding academic reading materials commonly found in first-year university courses
- Constructing a readable text of up to 1500 words
- Understanding oral/audio content between popular and various academic sources
- Participating in class discussions in various contexts, asking questions for clarification in classes and presenting academic content

Graded assignments include:

- Orientation assignment: Students must read the course outline and complete a related quiz. Also, students must introduce themselves and post one comment to another student's introduction using a forum.
- Diagnostic assignment, in which students must complete assessments on reading, listening, vocabulary and writing to identify the area in which they need the most support.
- Pre-class reading activities, in which students must read the assigned articles, take notes and submit proof of reading.
- Post-class reflections, in which students must submit written reflections on their experiences with the class activities after each unit.
- Academic blogging, in which students will be given prompts and need to respond to 250 words using only course-related sources based on the prompts.
- Comprehension quizzes, in which students must take two quizzes on vocabulary, content, and academic knowledge related to the topics covered in the course.

- Writing assignments, in which students must choose one of the provided topics and write a research paper of 500 words related to the topic.
- Presentations, in which students must do one recorded presentation and one live presentation on assigned topics.

The course has 13 units, and each unit has two lessons. The unit begins with a class plan with two parts: synchronous and asynchronous sections. The synchronous section provides instructions and learning materials for preparing the live class each week. The materials include PPT slides and links to live classes. Moreover, the asynchronous part includes learning materials that require students to learn individually at home after the live classes. The learning materials include readings, interactive content (a type of material that requires users' inputs) and videos. Each unit ends with the homework page, which lists all the graded activities of the unit. To provide students with opportunities to practice the skills and knowledge they have learned from the unit, the course provides practice quizzes and interactive content activities. The course provides discussion forums to allow students to communicate with the instructor and their peers.

Going through the Course Design Process. The course design process started when Jenny selected topics and reading materials related to each topic for the course. Major phases of the process include selecting topics and readings, designing the course structure, designing learning activities, entering course materials into the LMS, and implementing the course.

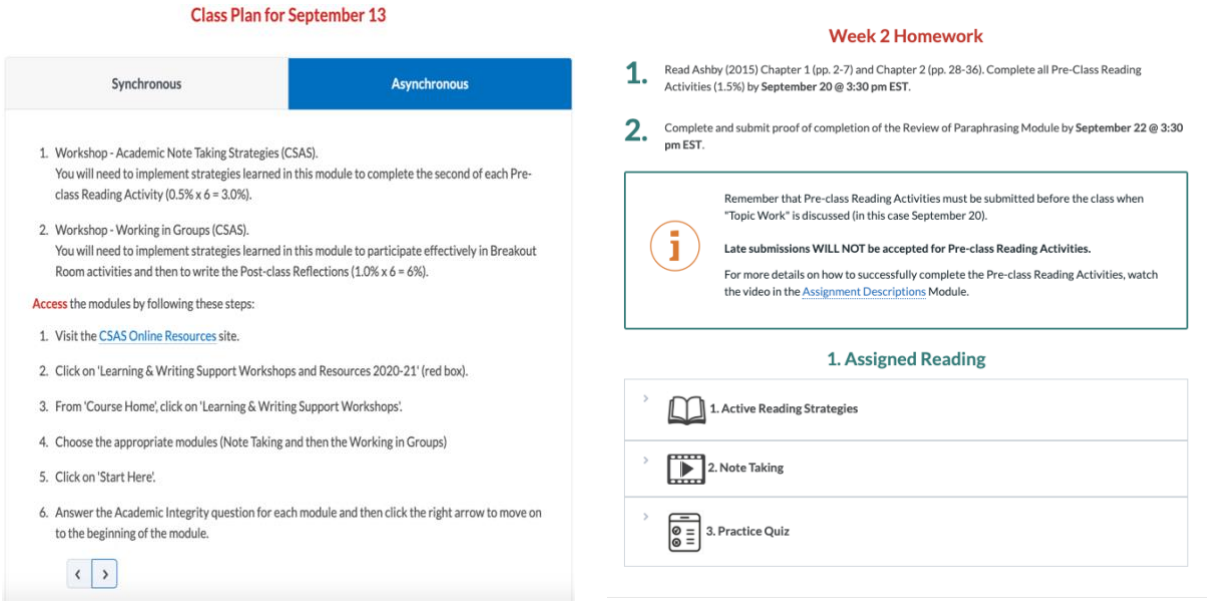
Selecting course topics and readings. Jenny began her course design process by selecting the topics. She chose topics that "are general enough that most students would be interested in or something that might impact them beyond the classroom" (Interview, Nov.19, 2021). Then, she chose readings for the course based on the topics. When selecting readings, Jenny employed software created by her colleagues to check whether the vocabulary used in the articles was appropriate for her advanced ESL course level. After that, she ensured that all the reading materials were available online or through the university's library system.

Design of the Course Structure**.** Jenny independently developed the course structure, determining the course format and selecting digital tools for delivering course content. She opted for a blend of H5P interactive elements, videos, and written materials for content presentation. In crafting the structure for each module, Jenny applied insights gained from course design workshops, striving for a clear, consistent, and accessible presentation of course materials to benefit students. She devised a standardized template for each module, featuring both synchronous and asynchronous segments. To distinguish between these components, Jenny utilized the tab function within the Learning Management System (LMS) (see Figure 6.1). The asynchronous segment encompassed pre-class assignments, mandatory for completion before the synchronous class session. During synchronous sessions, students engaged in group activities facilitated via Zoom breakout rooms. Furthermore, Jenny incorporated a homework page, offering students a concise overview of the required learning activities for each module (see Figure 6.1).

To enhance accessibility, Jenny ensured there were at least two pathways to access each learning component within her course. As an illustration, she embedded links to practice quizzes on both the homework and asynchronous activity pages.

Figure 6.1

Tabs for synchronous and asynchronous content and Homework Page Structure



Design of Learning Activities. After creating the course structure, Jenny proceeded to develop specific learning activities for the instructional program. These activities encompassed a variety of educational components, which can be categorized as follows:

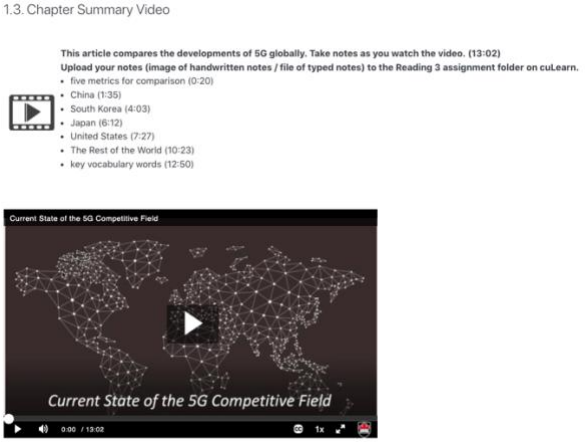
- Course orientation. This module serves the purpose of aiding students in becoming acquainted with the course framework and allowing them to experiment with technological tools before employing them for the submission of their graded assignments at a subsequent point in the course. According to Jenny, the orientation module was one of the suggestions provided during the course design workshops. She acknowledged the suggestion and created the orientation module on her own. The orientation module includes introduction videos to explain the course learning goals and walk through the course structure, a quiz to test students' knowledge of the course expectations and technological requirements and an assignment to ask students to post a self-introduction video using a screen capture tool provided by the institution.

  > "I get students to use Kaltura (a screen capture tool) to do a self-introduction video. It is a way for them to try to learn the technology in a low-stakes situation before they have to use it for a graded assignment" (Interview, Nov.19, 2021).

- Course lectures. Jenny used pre-recorded video lectures to present the course content to students. Before designing the course, Jenny already had several pre-recorded lecture videos from previous semesters, and she wanted to use those videos in her course. However, she was worried that students would not be able to concentrate on watching two-hour videos online each time, and she also found it challenging to find time to re-record the videos. To address the concerns, Jenny took the suggestion from the course design workshop facilitator to provide a list of content indicating the start minutes for each topic in the video lectures (see Figure 6.2). This segmented the video lectures into smaller units aimed to enhance students' ability to locate various learning materials.

Figure 6.2

An example of a list of content for each video lecture



In addition to the course lectures, Jenny prepared weekly video messages to provide students with a preview of the main content of the week and remind them of the learning tasks for the upcoming week. She wanted to use those weekly messages to communicate with the students and keep them engaged.

- Assessments include both non-graded learning activities and graded assignments. Jenny recreated some of the same activities in her face-to-face class but selected digital tools to present them in an online environment.

> "A lot of the activities were sort of adapted from what I would normally do in a face-to-face classroom, adapted just in terms of timing, digital tools available" (Interview, Nov.19, 2021).

Jenny prepared a practice quiz for her synchronous classes to test students' prior knowledge of each class before introducing new content. She derived the concept of linking students' prior knowledge with new course material from the course design workshops and used polling to deliver the quiz questions in her synchronous classes.

Jenny discovered that polling exercises actively involve students during synchronous class sessions, employing them to track student attendance. She also invested effort into designing group activities for her synchronous sessions. She attempted to deliver educational content through various mediums, including videos, audio recordings, and written materials. In addition, she established online breakout rooms to facilitate group activities within the synchronous classes.

She used interactive content to provide the learning activities for the asynchronous sessions. She worked with her colleagues to co-develop the interactive learning activities. The interactive activities allow students to watch or read the learning content, do some exercises such as quiz questions or write a comment, and get instant feedback after completing the exercises.

For graded assignments, Jenny incorporated advice from course design workshops to establish learning outcomes and offer explicit assignment instructions.

> "I became more self-aware on what I am looking for in each assignment, get more explicit in explaining the assignment and communicating my expectations clearly with students" (Interview, Nov.19, 2021).

Additionally, Jenny learned from the course design workshops that asking students to reflect after learning is a good practice for online learning. She incorporated e-portfolio

assignments in her course, where students write reflections on their learning. One concern Jenny had was selecting the tools for the e-portfolio assignment. Because the e-portfolio tool is new to students, which might add more workload for students to learn to use the tool, to address the issue, Jenny provided additional support sessions on using the e-portfolio.

- Communication with students. Jenny created an "Ask your instructor" forum to give students a place to ask course-related questions. She also followed the suggestion provided in the course design workshop to create a "student lounge" forum to encourage them to interact with each other. Jenny chose to use an intelligent agent –a system that sends reminders for certain groups of students upon setting up – in LMS to notify students of the due dates and learning tasks. Also, Jenny created an anonymous survey to get students' feedback on the design of the course, and she used that feedback to revise her course to make it easier for students to learn.

Entry of Course Materials into the LMS. Once the course materials were prepared, Jenny seamlessly integrated the course content and learning activities into the Learning Management System (LMS). She adhered to the module templates she had previously developed independently. Whenever she encountered challenges or had inquiries regarding the LMS's technological tools, Jenny took a proactive approach. She either sought assistance from the institution's teaching and learning services or attended workshops dedicated to the use of specific technologies. For instance, she acquired proficiency in utilizing intelligent agents by participating in a dedicated workshop and received guidance from workshop facilitators when implementing them within her course.

Implementation of the Course. Jenny launched the course on her own, making a few necessary tweaks based on students' feedback throughout the semester. For instance, some students found it hard to find the assignment submission link on the course page. Jenny addressed it by embedding submission links to multiple places.

Use of Technology. During her course design process, Jenny used the following technologies:

- LMS is used by the institution to create, deliver and manage the course content online. Tools included in the learning management system:
    - Quiz tools to assess students' understanding of the course content
    - Discussion forums to communicate with students and answer their questions related to the course
    - HTML template to structure course content on each page
    - Intelligent agents send automated email notifications to students to remind their due dates and learning tasks
- Kaltura, a screen capture tool to record course video lectures
- HTML 5 Package (H5P) is a system to create interactive content to present course learning content.
- BigBlueButton, an open-source conferencing system designed for online learning, is used to run synchronous class sessions and group activities.
- Poll Everywhere to run polling and quiz questions and to engage students in synchronous class sessions
- CuPortfolio is an institutional customized electronic portfolio platform used to collect students' work in digital formats such as files, artifacts, videos, and audio. It is used to showcase students' learning progress and achievements.

Jenny likes to try new technologies and new features for her online classes. On issues involving technology, she consulted with the educational technologists from the institution's teaching and learning services. She rated her technology level as medium to high.

> "Knowing that, if I tried it and it went wrong, then I could contact someone and they could help me figure it out, that gave me the confidence to try something new" (Interview, Nov.19, 2021)

Challenges. The challenges Jenny faced during her course design process include:

Lack of Resources or Strategies for Engaging Students in Online Learning Activities. It includes encouraging students to participate in synchronous class sessions and complete asynchronous online exercises in the LMS. Jenny mentioned that she spent much time adapting her previous face-to-face learning activities to online learning activities. She found it hard to keep students engaged for more than two hours in the synchronous class sessions.

> "Face-to-face interactions give you the level of energy, and you feed off each other in the class, but staring at the screen creates tiredness that is not the same as being in the classroom. I am trying to get students involved to do things in the online environment, which I just do not have to do in face-to-face classes" (Interview, Nov.19, 2021).

Seeking the Best Way to Display the Course Online. Jenny paid close attention to structuring the course online. She recognized that having a consistent and easy-to-follow course structure would help students access learning content effectively. However, she said it was hard to meet every student's needs.

> "Students are so different, some of them prefer this way, and others prefer other ways. It is challenging to put myself in the eyes of a student to think what is the best way to get the content to them" (Interview, Nov.19, 2021).

Balancing Student Workloads and the Use of Digital Tools. Jenny chose to incorporate an e-portfolio tool into her course design. An electronic portfolio serves as an effective means to gather and archive students' work, showcase their learning evolution, and offer a platform for self-reflection. Nevertheless, Jenny acknowledged that the e-portfolio system was unfamiliar to most students, necessitating an initial learning curve before they could effectively use it. Acquiring proficiency with a digital tool posed an additional workload for students. Furthermore, she encountered the challenge of providing support in an online learning environment. Unlike in a traditional classroom, she did not have the immediate visibility to discern the specific issues students encountered while working with the e-portfolio. This presented an obstacle in offering timely assistance to address their concerns.

Effectively Applying Course Design Suggestions to a Specific Course. Jenny said that she received valuable advice from course design recommendations, although she encountered challenges when implementing some of these suggestions in her course. For instance, she embraced the idea of creating weekly introductory videos to enhance student engagement. However, she observed that only a limited number of students clicked on these videos, while others chose to disregard them.

Changes in Teaching Beliefs and Practices. Jenny's experience in developing an online course led to a heightened focus on effective communication with students through clear and well-structured instructions. She "paid more attention to the ways of communicating with students through clear and structured instructions" (Interview, Nov.19, 2021) when she prepared her courses. She wrote clear learning objectives for each module and assignment using "the action verbs and students' skills in mind." Also, she kept some strategies in online classes for her future face-to-face classes. For example, she kept using polling activities in her classes to

encourage all the students to participate in the activities and check their knowledge simultaneously.

Furthermore, Jenny expressed her increased willingness to embrace new technologies and experiment with innovative teaching approaches to facilitate effective student learning. Her confidence in adopting these methods stemmed from her awareness of the availability of resources and support systems to aid her in this endeavor.

Roles and Responsibilities of Instructors and Instructional Designers. Jenny had a very positive experience with the course design workshops.

> "There are some real takeaways in terms of changes that you can make for your course, or you can feel affirmed that you are doing something good" (Interview, Nov.19, 2021).

In Jenny's course design process, she assumed the central role, with instructional designers offering valuable ideas and suggestions to assist her in refining the activities and design of her course. The specific responsibilities of each party are outlined in Table 6.2, which clarifies their respective roles and contributions to the course development process.

Table 6.2

Instructors and instructional designers' roles and responsibilities as seen by Jenny

Instructor's Roles and Responsibilities	**ID's Roles and Responsibilities**
Role: Primary Responsibilities: • Select digital tools and teaching strategies • Decide and create the course structure • Create course learning activities • Set up the course on LMS	Role: Support Responsibilities: • Share the course design knowledge with the instructor • Provide ideas and suggestions on course design strategies, course structure, and learning activities • Provide ideas on selecting technical tools

Cecilia: Exploring Possibilities for Online Language Learning

Cecilia is a full-time instructor who developed an online course on French writing. This section provides an overview of Cecilia's experience in developing an online course on French writing. It encompasses her background, perspectives on online teaching and learning, her participation in course design workshops, her involvement in the course design process, and her perceptions of the roles and responsibilities of both instructors and instructional designers in the course development journey.

About the Instructor and Her Motivation to Teach Online. Cecilia has been passionate about teaching since she was a child. She tried different teaching roles, from babysitting to high school teachers, and then decided to be a university teacher. She has accumulated a wealth of teaching experience throughout her career, having served as a contract instructor and a teaching assistant during her Ph.D. studies.

Cecilia was hired as a full-time teaching faculty at the university and started teaching undergraduate courses in the French language in 2019. She spends about 80%-85% teaching and about 15% on administrative duties such as coordinating other courses in her department. Her general teaching responsibilities are two courses per semester.

Among the courses Cecilia teaches is the advanced French writing course. Before she designed the online course, she taught the course a few times in person. Like other language teachers, Cecilia values the interactions with students while teaching the French language. One

of the significant challenges of teaching French is the production components, both oral and written productions of the language. She tried different teaching formats and incorporated various technologies to ensure students had adequate opportunities to use the language.

Cecilia started to teach online due to the COVID-19 outbreak. Although she did not choose to teach online, she is excited about online teaching and learning. She is interested in technology and wants to explore what is possible for language learning. Moreover, she considered the pandemic "an interesting professional development opportunity" (Interview, Nov. 8, 2021) to explore online teaching and learning despite the difficulties related to interacting with students in language classes.

Cecilia provided her definition of an online course as "a course taught in an online context that has asynchronous components" (Interview Nov. 8, 2021). She emphasized the importance of thorough preparation and thoughtful consideration when designing online courses. According to her, careful planning is essential to ensure the effectiveness of online instruction.

She specifically highlighted interaction among students as a significant challenge in language courses, given their substantial oral components. However, she noted that the online learning environment offers various avenues for student participation that may not be as prevalent in face-to-face classes. For instance, students have the option to ask questions anonymously through shared notes and engage in text-based or live chat discussions with both instructors and peers, and this has resulted in increased participation in her online classes.

Beliefs about Teaching. Cecilia views teaching as a social event in which she could have contact with students. Within teaching, she sees her role as guiding students to develop their skills and knowledge, whereas students play a central role in their learning. She feels "it is fulfilling to see students' growth and improvements" (Interview, Nov. 8, 2021).

Cecilia applies the flipped class format when teaching, providing asynchronous learning content for students to learn before scheduled class sessions. She then uses live online sessions to have interactive activities with students to practice their language skills and help students solve the problems they had during their self-learning.

About the Instructor's Experience with Course Design. This section describes Cecilia's experience with the workshop-supported instructional design process.

Taking the Course Design Workshop. Cecilia took the in-person course design fundamental workshops in 2019, right after being hired as a teaching faculty. She chose to take the workshops because she wanted to improve her skills in teaching, and she believed there was something out there to help her be a better teacher. Also, being a new faculty at the university, she wanted to know more about the resources available at the institution. She saw the workshops as opportunities to connect with her colleagues and teaching and learning service staff members. During the workshops, Cecilia listened to the presentations provided by the instructional designers, took notes, and shared ideas about teaching with her colleagues.

Participating in the workshops helped reassure Jenny that she knows about teaching strategies and made her confident about her teaching skills even though she had no formal training in education. When she participated in the workshops, she did not have an active course development project. However, the knowledge and skills acquired during these workshops significantly informed her subsequent online course design endeavors.

Goals for the Course. Cecilia viewed the course development as a means of advancing her professional growth. Her primary objectives in designing the course were twofold: first, to enhance the previous iteration of the course, and second, to investigate potential tools and methodologies for online language instruction (Johnson et al., 2019).

About the Course. The *Français Écrit* is an advanced French writing course for undergraduate students who are learning French as a second language. The course has both synchronous and asynchronous elements. It delivers in a HyFlex mode (a teaching model used at the institution to allow students to choose to attend asynchronous classes either in person or online). The course has about 25 students registered each semester.

The course introduces techniques of French written communication in various academic contexts, such as descriptions, critiques, and reflections. The main objectives of the completed course are:

- To use French in academic paragraphs correctly and effectively
- To reflect on the relationships between French and your mother tongue
- To develop skills in self-correction and proofreading
- To use available writing tools (such as dictionaries and writing support from the university) effectively

Graded assignments include:

- Dictation, in which students listen to the audio provided by the instructor online, write down the texts, and submit their responses.
- Written Assignments
    - A short news article in which students must select one image provided by the instructor and write a short story (300-400 words) about the image.
    - An informative report, in which students write a 500-600 word report on analyzing a website of a French university.
    - An argumentation, in which students pick a controversial topic and then write 650-850 words that include different points of view on the topic and defend their opinions.
    - A cover letter, in which students find a job advertisement and then write a letter of intent to apply for the job position.
- Quizzes. Students must complete eight quizzes on vocabulary and conceptual knowledge related to the course throughout the semester.
- Portfolio, in which students must upload their assignments and write reflections on their learning process.
- Final exam. Students must complete a live proctoring writing exam online.

The course consists of eight units, with each unit dedicated to a specific course topic. The instructional structure of each unit follows a consistent format, beginning with a clear statement of the unit's learning objective. Subsequently, the unit provides detailed guidance and tasks related to pre-class activities, which encompass readings, video materials, and quizzes. These pre-class activities are essential for students to complete before engaging in synchronous class sessions.

During the synchronous class sessions, students have access to recorded lectures and accompanying presentation slides, which serve as valuable resources for enhancing their understanding of the course material. To conclude each unit, the curriculum includes post-class activities. These post-class activities consist of graded assignments relevant to the unit's content and reading materials to prepare students for the subsequent unit. The course uses video lectures and reading materials to present course materials to students, quizzes to allow students to practice their language skills, and an e-portfolio to provide students with opportunities to reflect on their learning process.

Going through the Course Design Process. The course design process started when Cecilia worked on revisiting her course learning outcomes. Major phases of the process include establishing the course learning objectives, designing the course interface and structure in the LMS, designing learning activities, entering course materials into the LMS, and implementing the course.

Establishing Learning Objectives. Cecilia had taught the same course face-to-face several times before designing the course for online delivery. She said that the learning objectives in the face-to-face course were broad and vague. The course design workshops helped her think more about having specific and measurable learning objectives. Cecilia revised the learning objectives using action verbs and focused on communicating them effectively to students. Also, she considered the alignment between the learning objectives and learning activities.

Design of the Course Interface and Structure in the LMS. Cecilia wanted to have a "welcoming homepage" (Interview, Nov.8, 2021) for her online course. When she took the course design workshops, she found a sample homepage shown during the workshop was a good fit for her course. So, she reached out to the workshop facilitators for advice. Then she designed the course homepage independently. She used visuals to make the homepage appealing and added an individualized welcome message for students. She also included a block about her bio for students to get to know their instructors. For the course structure, Cecilia engaged in discussions with instructional designers to solicit recommendations for creating a user-friendly and accessible learning experience for her students. During these consultations, the instructional designers introduced her to a course module template. This template featured pre-configured pages with explicit instructions delineating the learning objectives and delineating pre-class, in-class, and post-class activities for students.

After careful consideration, Cecilia chose this template for her course. However, she customized it to align with the specific requirements of her course. In her adaptation, Cecilia chose to consolidate all relevant information about each module onto a single web page. To facilitate seamless navigation among the various components of the weekly learning content, she strategically incorporated hyperlinks. This approach was implemented to ensure that students could easily access and navigate the course materials (Johnson et al., 2019). Figure 6.3 shows a sample of Cecilia's course module.

Design of Learning Activities. Upon finalizing the homepage and course structure, Cecilia proceeded to craft individual learning activities for her online course. These activities included the following components:

- Course content. Cecilia recorded video lectures that incorporated both French and English content. She decided to make bilingual lectures based on her previous experiences teaching the same course face-to-face, recalling that students often had some misunderstandings during class because of their competencies in understanding the academic content in French. Cecilia's experience highlighted that students occasionally encountered difficulties in understanding academic content presented in French. In such instances, she had to switch to English to clarify concepts and ensure students grasped the material accurately. In an online learning environment, immediate clarification might not be feasible. Thus, the inclusion of bilingual videos allowed students to refer to translations when needed, facilitating their understanding of course concepts. Additionally, Cecilia sought guidance from instructional designers to implement strategies for designing lecture slides that were clear and accessible. These efforts underscored her commitment to optimizing the learning experience for her students

(Johnson et al., 2019). Cecilia also created a welcome video to show students the navigation of the course and go through the important information such as the course outline, course schedules, and digital tools used in the course.

Figure 6.3

A Course Module Sample

- Assessments include both non-graded and graded learning activities. Cecilia said, "Designing assessment is the most important task" (Interview, Nov.8, 2021) for her during the course design process because she has never done that before. She applied the ideas from the course design workshops to ensure the assessments aligned with the course learning outcomes and to look for the best way to assess each learning activity. Cecilia used breakout room discussions for her synchronous live classes. To encourage students to participate in the discussions, she assigned reading to students to prepare for the in-class discussion and assigned the students to groups based on their topic of interest.

  For the graded assignments, Cecilia reused the same written assignment content she created from previous face-to-face courses. Instead of asking students to submit written assignments as Word files, she used an e-portfolio to provide each student with a space to present their written works and see their progress throughout the semester. She also applied the idea of creating a rubric from the course design workshop and created her rubric to help students understand the expectations of the written assignments. Cecilia created quizzes that included fill-in-blank and short-answer questions to test grammar and conceptual knowledge.

  Cecilia recognized the significant concern of plagiarism when assessing language skills in an online environment. She was particularly concerned about students potentially using tools like Google Translate to assist them during exams. To address this concern and maintain the academic integrity of the assessment process, she implemented live proctoring using BigBlueButton for the final exam.

Cecilia took proactive steps to facilitate the successful execution of the live proctoring process. She initiated the process by applying for online proctoring support through the exam office at her institution, a decision that was subsequently approved. In preparation for the final exam, Cecilia provided students with comprehensive instructions regarding the purpose and objectives of the exam. She also equipped them with resources to support their performance both before and during the exam, thus ensuring that students were well-prepared for this critical assessment (Johnson et al., 2019).

- Communication with students refers to the ways Cecilia used to interact with students. She learned strategies for communicating with students from the course design workshops and applied some of them in her course. For example, Cecilia wanted to ensure that all the students in her course had the chance to interact with others. She said that some students are shy about speaking up during synchronous sessions. To address this issue, she used BigBlueButton (a web conferencing tool embedded in the institution's LMS, which allows anonymous postings and shared notes) to allow students to share their thoughts in various ways. She created an "Ask your instructor" forum for students to post questions related to the course and encouraged students to help each other answer the questions. Also, Cecilia sent weekly messages through the announcement board in LMS to ensure that students were aware of the important dates and activities each week. Additionally, she included a mid-term survey to gather students' feedback about the course structure and check if they have any learning-related challenges.

Entry of Course Materials into the LMS. After the materials were ready, Cecilia entered most of the course content and learning activities into the LMS herself. She asked one of the instructional designers from the teaching and learning services to help enter the quiz questions into the question library on the LMS. Once the instructional designer had entered all the quiz questions, Cecilia reviewed the questions and then set up the quizzes herself.

Implementation of the Course. Once the course was set up, Cecilia delivered the course through the LMS in Fall 2021 without additional assistance. She also coordinated all the different sections of the same course by sharing her course content with her colleagues who taught the same course in different sections. She assisted those instructors in copying the course content from her course to their courses.

Use of Technology. Cecilia used the following technologies during her course design process:

- The Learning Management System (LMS) creates, delivers, and manages the course content online. Tools included in the learning management system:
    - HTML templates to create content pages for each module
    - Announcement board to post weekly reminders
    - A quiz tool to check the students' understanding of the conceptual knowledge
    - Discussion forums for students to post their questions related to the course content
    - The survey tool to get students' feedback about the course
- Recorded videos to present course lecture content
- PowerPoint slides to present course lecture content
- E-portfolio for students to post written assignments and reflections
- BigBlueButton to run breakout room activities, answer the students' questions, and invigilate exams online.

Cecilia rated her ability to use technology as high. She understands HTML (Hypertext Markup Language) and feels comfortable working with it. She likes exploring new technologies. Cecilia took workshops about the LMS to learn its features. On issues involving technology, Cecilia checked the support websites created by the teaching and learning service at the institution and figured most of the things out by herself. Cecilia got support from an instructional designer when she needed to add quiz questions to the question bank for her course.

Challenges. The challenges Cecilia faced during the course design process included:

Lack of strategies for building Interactions in an Online environment, which refers to students' interactions with their peers and the instructor. Cecilia found it challenging to learn foreign languages online which rely heavily on oral communication using the target language among learners.

Lack of strategies for avoiding plagiarism in Online exams. Cecilia noted that students were required to showcase their French writing skills in the final exam. Nonetheless, during the online writing exam, students had internet access, which potentially enabled them to use tools like Google Translate to translate their content into French. To tackle this issue, Cecilia opted to modify the assignment by instructing students to compose their exams in French, critically analyze their responses, and implement live proctoring. She emphasized the potential usefulness of recommendations for redesigning similar assignments in future courses.

Balancing between exploring new technology tools and the instructor's workload. Cecilia noticed some of the tools could be beneficial for making her course more engaging and better for students. However, she did not have adequate time to explore the options, learn more about the tools, and then use the tools in her course.

Changes in Teaching Beliefs and Practices. Cecilia's experience in designing an online course has significantly bolstered her confidence in course development, with a particular focus on assessments. This experience prompted her to place a greater emphasis on ensuring that course learning objectives are both transparent and quantifiable for students. Additionally, she has become more attentive to aligning course activities meticulously with these stated learning objectives. Furthermore, Cecilia has grown more cognizant of the importance of accessibility in course content delivery. In the online learning environment, where students may not have direct interaction with the instructor, she recognizes the paramount need to make course materials accessible to all students, eliminating any barriers that could impede their access to the learning content. This heightened awareness of accessibility underscores the critical role it plays in promoting inclusive online learning experiences. Cecilia's commitment to ensuring accessibility not only aligns with best practices in online education but also reflects a dedication to equitable learning opportunities for all students.

Roles and Responsibilities of Instructors and Instructional Designers. Cecilia is pleased with her experience taking the course design workshops and working with the design team.

> "They (the design team) are amazing. I do not always come out of them being like, 'Oh this was life-changing', but I always come out of them with something new. I am a satisfied customer" (Interview, Nov.8, 2021).

Based on conversations with Cecilia, the course design workshops help reassure her that she knows how to design a course and how to teach. She recommended that all the new instructors take the course design workshops before designing and teaching their courses. She sees the roles and responsibilities of the instructor as the lead in the course design process, and

the design team is there to support her. The specific roles and responsibilities of the two parties were identified in Table 6.3.

Table 6.3

Instructors and instructional designers' roles and responsibilities as seen by Cecilia

Instructor's Roles and Responsibilities	**ID's Roles and Responsibilities**
Role: primary role Responsibilities: • Prepare course content • Learn to design • Create and design the course • Share design and teaching practices with colleagues	Role: supportive role Responsibilities: • Present the course design content and share ideas about it • Provide course design consultation support upon requests

Alex: Preparing a Course in HyFlex Mode

Alex developed and taught a mechanical engineering course. This section provides an overview of his background, teaching, and online learning principles, participation in course design workshops, course development experience, and his views on the roles and responsibilities of instructors and instructional designers in the course design process.

About the Instructor and his Motivation to Teach Online. Alex began his career in higher education as an instructor in 2021, specializing in biomechanics at the institution. Before assuming his role as an instructor at the institution, Alex pursued a substantial portion of his academic studies abroad. In 2021, he relocated to Canada, marking a significant transition in his academic journey.

Alex's early teaching experiences were primarily cultivated during his doctoral studies, where he delivered lectures aligned with his research interests. These teaching opportunities not only enriched his academic repertoire but also provided a platform for him to share his expertise with students. Alex's primary research includes the mechanical properties of tissues. When he developed the course, his general teaching responsibilities were one course per year, and he estimates that he spent 35% time in research, 50% time in teaching, and 15% time on department service.

> "I am not hired as an instructor specifically. I am expected to do research. It is quite a significant workload." (Interview, Nov.16, 2021).

Notably, this course employed a multifaceted instructional approach, amalgamating synchronous online sessions, traditional face-to-face instruction, and asynchronous components facilitated through the Learning Management System (LMS). Crucially, the course was administered in a HyFlex instructional mode, necessitated by the prevailing COVID-19 restrictions. In this pedagogical model, known as HyFlex, students had the flexibility to opt for either in-person or online attendance for each class session. This adaptable approach aimed to accommodate varying student preferences and circumstances while ensuring the continuity of education in an era characterized by the challenges posed by the pandemic.

Alex said he has "strong opinions about online teaching and learning" (Interview, Nov.16, 2021). As a new instructor with limited experience in online teaching and learning, Alex considered online learning as "less structured learning," which required "students to learn on their own with videos" (Interview, Nov.16, 2021). For one thing, setting up the synchronous session each week was much work for him, especially when there were technical challenges. For

another, Alex did not consider posting lectures online and letting students watch lectures whenever they wanted as a good way of learning.

> "Posting lectures online devalued the learning because it makes the lectures similar to those YouTube videos" (Interview, Nov.16, 2021).

Alex also believes that successful engagement with asynchronous online learning requires students to exhibit maturity in their approach to learning and a capacity for self-discipline and commitment to their educational endeavors. He expresses apprehension that some students may confront challenges related to time management in the online learning environment, potentially procrastinating and commencing their coursework at the eleventh hour.

Within the HyFlex format, where Alex concurrently instructs both online and in-person cohorts of students, he acknowledges that there might be disparities in the level of interaction and engagement he maintains with these two groups. While he ensures a robust interaction experience for in-person attendees, he recognizes the need to further refine and enhance his strategies for engaging the online cohort to a comparable extent. This acknowledgment underscores his commitment to equitable learning experiences for all students, regardless of their mode of participation.

Beliefs about Teaching. Although research is his priority, Alex does care about students' learning. He wants to "be able to do a good job in teaching" (Interview, Nov.16, 2021). He spent a significant amount of time exploring resources about teaching and preparing lecture content. With teaching, Alex uses the instructor-led approach. He sees the role of instructors as helping students achieve their goals and the role of students as the center of their learning.

Alex said that he has been adapting his teaching style while teaching. At the beginning of the semester, he lectured the total class hours. Then he started to add some pop-up quiz questions, encouraging students to participate in class. In recent classes, he incorporated discussion activities by giving students some exciting topics to discuss at the end of each class to make students engaged.

About the Instructor's Experience with Course Design. This section describes Alex's experience with the workshop-supported instructional design process.

Taking the course design workshop. Alex took the course design workshops online in Summer 2021. He did not start preparing his course content when he took the workshops. Alex was new to teaching and took the workshops to be an effective teacher and get started with course design and development. During the workshops, Alex listened to the presentations provided by the workshop facilitators (instructional designers), did group activities with his peers, and wrote reflections on his learning from the workshops. At the end of the workshops, he submitted assignments and got feedback from the instructional designers. One example of the assignment is that Alex shared some of the course slides he created after taking the Course Design 103 workshop, applying some ideas suggested during the workshops. Alex found the workshops to be a valuable source of insights that significantly enriched his approach to course design. Specifically, his major takeaways encompassed the creation of clear and measurable learning objectives, structuring a well-organized course outline, enhancing communication with students, effectively integrating multimedia elements, and employing appropriate assessment methods. He successfully integrated some of these workshop ideas into his course design process. However, he acknowledges that he is still in the process of fully assimilating certain concepts and expresses a willingness to apply them when he revises the next iteration of his course, underscoring his commitment to ongoing improvement in his teaching practices.

Goals for the course. Alex's goal for the course was to prepare students for a good learning experience. When designing the course, he focused on preparing the right amount of course content for students and on presenting the content effectively.

About the Course. The Biomechanics course is designed for fourth-year undergraduate students majoring in Engineering. This course focuses on the intricate aspects of muscle movement and nerve control. It adopts a blended instructional approach, incorporating both synchronous and asynchronous elements to cater to diverse learning preferences. The course is delivered using the HyFlex instructional model, which is a teaching methodology employed by the institution. HyFlex allows students the flexibility to opt for either in-person or online attendance for synchronous class sessions, accommodating varying student circumstances and preferences. In terms of enrollment, the course typically registers around 30 students each semester, providing a conducive and interactive learning environment for a manageable cohort of students.

The course introduces the mechanics of single cells, tissue mechanics, anatomy, and biomechanics problems. The main objectives of the completed course are:

- To describe the basic components of single cells, methods for measuring cell mechanical properties, and the role of cell mechanics in physiology and disease
- To describe the mechanical properties of tissues, relate their structure to their function, identify their failure modes, and compare them to common engineering materials
- To identify bones, ligaments, tendons, nerves, and muscles in the human leg, arm, and back/spine by name, function, and anatomical location
- To make, justify, and validate appropriate assumptions that allow complex biomechanical problems to be solved using the techniques of basic mechanics and solve biomechanics problems

Graded assignments include:

- Lab activities, in which students must complete anatomy experiments and analysis on campus and submit lab reports
- Problem sets, in which students must solve biomechanics problems provided by the instructor using the provided data tables and diagrams and submit responses via the learning management system
- Exams
    - Mid-term exam, in which students have 90 minutes to answer six open-ended questions in a quiz hosted on the learning management system
    - Final exam, in which students have three hours to answer ten open-ended questions in a quiz. The exam is proctored using the CoMaS e-Proctor system.

The course is conducted in the HyFlex mode, a pedagogical model implemented by the institution. This model provides students with the autonomy to select their mode of participation for asynchronous classes, enabling them to attend either in person or online. Over the course of 13 weeks, the instruction includes two live sessions each week. Within the Learning Management System (LMS), the course content is thoughtfully organized by distinct categories that correspond to different aspects of the curriculum. The initial unit of the course encompasses fundamental information such as the course outline and details regarding the course policies, setting a foundational framework for the students' engagement with the course.

The second unit includes the communication channels, such as links to the course live sessions, and the third unit contains the lecture notes for each week. The fourth, fifth, and sixth units provide information about the lab exercises. The last unit of the course includes the exam

information and links to the exams. The course uses lecture notes to present course content to students. The course uses an e-proctoring system for the final exam. It provides presentations and practice quizzes to familiarize them before taking the exam.

***Going through the Course Design Process*.** The design process started when Alex met with the instructor who had taught the same course before. Major phases of the process include meeting with the previous instructor, establishing the course map, designing the course interface and structure in the LMS, designing learning activities, entering course materials into the LMS, and implementing the course.

Meeting with the Previous Instructor. Alex initiated his course design process by engaging in a constructive dialogue with the instructor who had previously taught the same course approximately a year earlier. During this collaborative exchange, the previous instructor generously shared essential instructional materials, including the course outline, lecture notes, and instructional videos. This valuable resource pool provided Alex with a robust foundation upon which to commence his course design journey. Furthermore, Alex conducted extensive discussions with the former instructor, thoroughly reviewing the existing course outline. This deliberate examination enabled him to discern elements that required adaptation and tailoring to align with his unique approach and instructional objectives. Alex's proactive engagement with the previous instructor and the shared materials facilitated a seamless transition into the course design phase.

Establishing the Course Map. Alex created his course map after meeting with the previous instructor. He described the document as his "course calendar" (Interview, Nov.16, 2021), in which he listed the dates of all the class sessions he would be teaching for the semester. He then added the topics he wanted to cover to each class and aligned the lab problems. After that, Alex considered the amount of content he needed for each topic and how to split the content into lecture chunks. Alex adapted the course topics from the previous instructor and revised the previous instructor's course outline to use for his course.

Design of the Course Interface and Structure in the LMS. Alex used the default course page template provided by the institution as his course interface. He took several workshops related to the features of the LMS to explore different possibilities before designing the course structure. Alex designed his course structure on his own. The course structure included five major blocks: a course overview, a communication module, a lecture slides module, a lab module, and an exam module. He created a separate communication module, which includes the Zoom link to join the synchronous course based on the recommendations he received from the workshops. Recognizing the preferences of his students, Alex acknowledged that students tend to appreciate having early access to lecture slides. This proactive approach aligns to foster a conducive and student-centric learning environment where course materials are easily accessible, supporting students in their preparations for the course ahead.

Design of Learning Activities. After designing the overall look of the course and its structure, Alex created course learning activities. These included:

- Course lecture content. This presents the subject matter content to students. Alex independently read textbooks and articles when preparing the subject matter content for his lectures. Before taking the course design workshops, Alex thought he needed to provide a 90 minute length of lecture each week. After the workshops, he learned that 90 minutes of lecturing would overwhelm students. He needed to divide the lectures into smaller chunks and embed some exercises to get students involved. For example, Alex wanted to recap the previous lecture at the beginning of each week. However, both the

course design workshops and his colleagues suggested that he create questions related to previous lecture content and ask students to solve the problems instead. According to Alex: "it is a significant amount of work to prepare lecture content, especially when teaching the course for the first time" (Interview, Nov.16, 2021).

In addition to the lecture content, Alex also prepared the lecture slides. As a dedicated researcher, Alex has garnered practical insights into effectively presenting subject matter content through slides. These insights have proven invaluable in preparing his lecture slides for his teaching endeavors. Participation in course design workshops further broadened Alex's pedagogical toolkit. It encouraged him to explore diverse modes of content delivery, encompassing text, visuals, and audio elements, to cater to the diverse learning needs of his students. This approach aligns with his commitment to ensuring an inclusive and adaptable learning environment. Alex also became more attuned to the imperative of ensuring the accessibility of his lecture slides. In response to this awareness, he adopted strategies such as providing alternative modes of content representation. For instance, when displaying diagrams, Alex thoughtfully included both the visual diagram and a corresponding text description that provides a clear link to the visual representation. This thoughtful approach enhances accessibility, ensuring that all students can engage with the course content effectively.

Alex also actively sought feedback and guidance by submitting some of his designed slides to instructional designers at the end of the course design workshops. This constructive feedback loop proved to be a valuable resource, offering insights and improvements that enriched his teaching materials and pedagogical approach.

- Assessments, which include non-graded class activities and graded assignments. Alex used Poll Everywhere to ask students instant questions and engage them during synchronous classes. Alex got suggestions from the course design workshops about making connections between in-class activities and graded exams, so he created questions with similar structures and let students know that they would see similar questions in the exams. The questions contained multiple-choice and short-answer questions. There were also lab activities in the course. Alex created lab problem sets and asked his teaching assistant to help collect data sources for the lab activities.

  Alex included two online exams and used the quiz tool in the LMS to administer them. Alex created the quiz questions for the exams. He asked the instructional design professionals from the teaching and learning service to support him in setting up the quizzes and adding questions to them. He used the e-proctoring software to address the cheating issues.
- Communication *with students* includes the strategies Alex planned to use to interact with students. Because the course was delivered in HyFlex mode, Alex had both students join classes face-to-face and students join online via Zoom. For online students, he used the chat feature in Zoom to communicate with students, but he mentioned there were challenges in interacting with online students.

  "I do not think I manage the interaction with the Zoom group as well as I could. I think that is quite difficult." (Interview, Nov.16, 2021).

  Alex wanted to address the issue by providing more options for students to discuss things with their peers and the instructor in a future iteration of the course. He also used a survey to gather students' feedback about their satisfaction with the course. He learned the idea of gathering students' feedback to improve the course design from

the course design workshops and hired a student partner to help him create survey questions.

Entry of Course Materials into the LMS. After the materials were ready, Alex independently entered most course content and learning activities into the LMS. He got support from an instructional designer on the teaching and learning service team to help him enter the quiz questions into the quiz tool in the LMS, set up the points for each question, and review the midterm quiz to ensure it was set up correctly. Alex also asked his teaching assistant to upload the lab learning content into the LMS.

Implementation of the Course. Once the course was set up, Alex launched it by making all the course content available to students through LMS at the beginning of the Fall 2021 semester without any additional assistance.

Use of Technology. During his course design process, Alex used the following technologies:

- The institution uses the Learning Management System to create, deliver and manage the course content online. Tools included in the learning management system:
    - The Quiz tool to deliver mid-term and final exams
- PowerPoint slides to present course content to students
- Zoom was used to run synchronous class sessions.
- Poll Everywhere to present quiz questions and engage students in synchronous class sessions
- E-proctoring software to invigilate exams delivered via a learning management system reduces cheating.

Before designing the course, Alex took several workshops to learn the LMS and related technology tools. He could resolve most of the technical issues when preparing for his course. Alex described himself as "technically able" (Interview, Nov.16, 2021).

Challenges. The challenges Alex encountered during the course design process included:

Being a new instructor in higher education. Alex mentioned that many of his challenges came from being new to teaching and not having taught the course before. As a result, he had to spend lots of time exploring how to write a course outline, include a proper amount of learning content, and prepare exam questions. Also, he is concerned about not having enough time to know more about students' needs or whether the course content aligns with students' goals for their careers. Additionally, working with teaching assistants was also new to Alex. He had challenges of not knowing how to use his teaching assistants effectively. Alex mentioned he only asked his teaching assistants to take care of lab activities this semester, but he might want to ask them to do some gradings in the future to reduce some of his workloads.

Lack of time to apply the ideas gotten from the workshops. Alex valued the ideas he acquired during the course design workshops. However, due to time constraints, he encountered challenges in fully implementing these concepts. One specific example pertains to the creation of learning objectives, which was a relatively new concept for him.

During the workshops, Alex gained insights into the selection of appropriate verbs used in crafting learning objectives and had the opportunity to practice formulating learning objectives for relatively straightforward tasks. Nonetheless, given the time limitations, he opted to adapt and modify the existing learning objectives from the course outline provided by the previous instructor, rather than composing entirely new learning objectives for his course. This pragmatic approach allowed him to leverage existing resources while still incorporating the principles and strategies he had acquired during the workshops to enhance the course's instructional

components. He found writing learning objectives was "harder than what he thought it was gonna be" (Interview, Nov.16, 2021).

Changes in Teaching Beliefs and Practices. Through his course development journey, Alex accumulated valuable experience in designing and delivering courses tailored for both online and face-to-face instructional modes. This hands-on experience heightened his awareness of students' diverse needs, prompting him to contemplate the incorporation of additional interactive activities in his future course offerings. As a result, he recognized the importance of fostering engagement and active learning among his students. Furthermore, after successfully developing and delivering the course, Alex formulated a structured plan for the subsequent redesign of the course. This forward-looking approach demonstrates his commitment to ongoing improvement and refinement of his course materials and instructional strategies, ensuring that future iterations of the course will continue to evolve and align with best practices in education.

Roles and Responsibilities of Instructors and Instructional Designers. Based on conversations with Alex, his course design process was supported by the course design workshops and some consultations with instructional designers and educational technologists via Zoom or email. Alex described his experience working with instructional designers as excellent. He sees the roles and responsibilities of the instructor as the lead in the course design process and the instructional design team as the support partners to show him options to design and set up the course. Alex sees the responsibilities of the two parties as identified in Table 6.4.

> "Whenever I need help, I email teaching and learning services. They get back to me quickly and tend to find the right person to support me" (Interview, Nov.16, 2021).

Table 6.4

Instructors and instructional designers' roles and responsibilities as seen by Alex

Instructor's Roles and Responsibilities	**ID's Roles and Responsibilities**
Role: Primary Responsibilities: • Decide course topics • Design course structures • Create course subject content • Set up the course on LMS • Deliver the course • Communicate the course content effectively to students	Role: Supportive Responsibilities: • Provide ideas and suggestions related to course design • Guide to looking for available resources related to course design • Provide technical support and help review course setup on LMS

Ellen: Building a Community Radio Course Online

Ellen is a part-time instructor of journalism who developed a theoretical course on community radio online. This section describes her experiences in doing so, including her background, her beliefs about teaching and online learning, her experience with the course design workshops and the course design, and her perceived roles and responsibilities of instructors and instructional designers in the course design process.

About the Instructor and Her Motivation to Teach Online. Ellen started teaching in higher education in 2021. She teaches undergraduate courses in communication. Before being an instructor, she was a Ph.D. student and worked as a teaching assistant at the university for more than five years. Ellen's role as a teaching assistant provided her with valuable opportunities to deliver lectures and gain insights into students' learning expectations. These experiences allowed

her to engage directly with students, better understand their educational needs, and fine-tune her instructional approach accordingly. Moreover, before her tenure in Canada, Ellen had accrued substantial teaching experience on an international scale. This diverse range of teaching experiences equipped her with a wealth of pedagogical knowledge and cultural sensitivity, which she undoubtedly brings to her teaching practices in her current educational context.

Ellen's initial appointment at the university involved teaching a single course, specifically the Community Radio course. Notably, this course marked her inaugural teaching experience at the institution. However, due to the outbreak of COVID-19, she was required to adapt her course delivery to an online format. To replicate the structure of the in-person course, she devised a structured online format. This format entailed setting specific access dates for students to retrieve video lectures and other course materials every week.

Ellen opted for an asynchronous teaching approach for her course. Under this framework, students were granted the flexibility to independently view the course lectures at their convenience. Additionally, Ellen conducted live sessions via Zoom each week to address students' inquiries and facilitate discussion activities. The decision to avoid synchronous lectures stemmed from concerns about potential internet connectivity issues that could impede the learning experience for students. She considered online teaching and learning "one-way information" (Interview, Nov.12, 2021), and there was a lack of interaction with students. Also, she mentioned it took her extra time to prepare for an online class because "there are too many options online to present the learning materials and to choose from different ways to run activities for students" (Interview, Nov.12, 2021). Meanwhile, she recognized that online classes allow students to choose where and how they want to take the course. Also, students would benefit from online learning because "they gain digital literacy skills besides the course content" (Interview, Nov.12, 2021). According to Ellen, more advanced technology helps students manage their coursework better. For example, she set up the intelligent agent, a tool that automatically contacts learners based on their inputs on learning management, to help remind students about upcoming assignments. Ellen believes the future courses will be "a mixture of in-person and online classes, and both instructors and students should accept it" (Interview, Nov.12, 2021).

Beliefs about Teaching. Ellen sees teaching as a way to share her knowledge with students. She likes to see how students learn from her and see them achieving learning goals. She also likes to communicate with students and help students connect with the broader professional community. In teaching, Ellen sees the instructor's role as guiding students to learn and the role of the students to receive the knowledge and connect with the learning community. She used video lectures and PPT slides in her classes to present course content to students.

About the Instructor's Experience with Course Design. This section describes Ellen's experience with the workshop-supported instructional design process.

Taking the course design workshop. Ellen participated in the Course Design Fundamental Workshops during the summer of 2021 while concurrently developing her online course scheduled for the fall of the same year. Her primary motivations for enrolling in these workshops were twofold: first, to explore various options for constructing effective online courses, and second, to familiarize herself with the available features and functionalities of the university's LMS.

Before engaging in the workshops, Ellen had already commenced preparations for her course content. However, the workshops played a pivotal role in augmenting her course development process. During the workshops, she actively engaged with the instructional

designers' presentations, collaborated in group activities, and documented reflections on her experiences. These workshops not only enriched Ellen's understanding of online course design but also stimulated her creativity, leading to the generation of novel ideas for her course. She adeptly integrated these newfound concepts into her course preparations, enhancing the overall quality and efficacy of her online instructional materials. Ellen's proactive engagement with the workshops demonstrates her commitment to staying informed about best practices in online education and continually refining her teaching methods.

Goals for the course. Ellen's goals for the course were to build her first online course and set it up properly on the LMS. Also, to make the course engaging for students.

About the Course. Community Radio is a fourth-year undergraduate course for students interested in the topic. It uses asynchronous and synchronous elements to deliver learning content to students. The course has about 16 students registered each semester.

The course introduces key concepts related to community radio. The main objectives of the completed course are:

- Distinguish between community radio and commercial radio, community radio, and public service broadcasting
- Describe the role community radio plays in creating cultural identities, political representation, and informing their communities in various contexts
- Create and edit radio segments for community radio
- Evaluate a community radio

Graded assignments include:

- Bi-weekly discussion, in which students write a 300 to 350-word reading reflection and comment on one of their peer's work
- Audio segment assignment, in which students must create an audio segment of up to 5 minutes on given topics
- Written Assignments
    - The paper proposal, in which students explain their initial ideas for a community radio study and provide a theoretical framework to support their ideas
    - The final paper, in which students write an essay that presents the results of their community radio study
- Presentation on community radio, in which students must prepare a 5-7-minute presentation with PowerPoint slides about their community radio study

The course is structured into 13 units, each following a consistent format. At the outset of each unit, a weekly plan is presented, outlining the objectives and activities for that specific week. Subsequently, the unit proceeds to deliver the core content through pre-recorded lecture videos. Alongside the lecture videos, students are provided with access to the corresponding lecture slides and the required readings, facilitating comprehensive engagement with the course material. The unit culminates by furnishing students with clear instructions for completing graded assignments. This section also includes a submission folder, enabling students to submit their assignments as per the specified guidelines. This structured and uniform unit design ensures a systematic and organized learning experience for students throughout the course.

The course uses pre-recorded lectures, video and audio materials, and readings to present learning materials to students. The course provides discussion forums to provide students with opportunities to interact with their peers. Students have the chance to comment on each other's work and share thoughts.

Going through the Course Design Process. Ellen's course design process began with her initial preparations involving the subject matter content for her lectures. The process unfolded in several major phases, each contributing to the comprehensive design and delivery of the course. Major phases of the process include establishing the course outlines, designing the course interface and structure in the LMS, designing learning activities, entering course materials into the LMS, and implementing the course.

Establishing Course Outline. Ellen said that she started to create her course outline before taking the course design workshops. However, she used the workshop content, such as how to write learning objectives and allocate weights for assignments, to adjust her original plan. According to Ellen, she might not apply the workshop content directly to her course but use it as a way to stimulate her thinking about the course.

> "That is another way of learning. It is not just the content instructional designers presented, but it helped you to think more about your course in different ways. And you need to pick something to accommodate your course" (Interview, Nov.12, 2021).

Design of the Course Interface and Structure in the LMS. Ellen took a workshop to learn about the features of the LMS before designing the course structure. Ellen designed the course structure independently. She set weekly modules for the course and used a consistent structure for each week.

Design of Learning Activities. After designing the course structure, Ellen designed course learning activities. These included:

- Course lecture content. Ellen recorded lecture videos with PowerPoint slides to present the course content to students. According to Ellen, recording her lectures took much longer time than in-person lectures. When creating lecture slides, Ellen applied the tips she learned from the course design workshops, used multimedia such as images and videos, and tried avoiding too much content on each slide. Ellen also ensured the lecture slides were accessible and downloadable to all the students.
- Assessments include both non-graded and graded learning activities. Ellen designed discussion activities to check students' understanding of the course content. Ellen took the suggestions from the course design workshops. She decided to create bi-weekly discussion activities instead of weekly discussions to ensure students had enough time to complete the activities without feeling pressured. Ellen prepared detailed instructions on how to complete the discussion activities. She set the discussions to the way students have to post first before viewing others' work, which was also the idea she learned from the course design workshops. She was concerned about students' familiarity with the course LMS when doing the discussion activities, so she included technical contact information in the activity instructions.

  Ellen applied insights from the course design workshops to enhance her teaching approach. She introduced practice opportunities through weekly brainstorming activities in Zoom breakout rooms, promoting problem-solving related to lecture topics. Additionally, she instituted an informative assessment task where students searched for relevant sources related to course content and shared them with peers. Ellen also revamped her graded assignments based on workshop suggestions, replacing a final exam with a final research project, comprising a proposal, presentation, and written report. In the last month of the course, she limited learning activities to allow students ample time to concentrate on their final projects, aligning her instructional strategy with these workshop-informed improvements.

Communication with students refers to the ways Ellen used to interact with students. Ellen learned how to communicate with students from her previous experience as a teaching assistant and from the course design workshops. She used an intelligent agent to send emails automatically to students to remind them of the upcoming assignment deadlines. And she used course announcements to introduce the weekly course schedule. Also, she used Zoom to meet with students if they had questions related to the course.

Entry of Course Materials into the LMS. Before taking the workshops, Ellen worried about setting up the course on the LMS, but she gained confidence after taking the workshops and believed she could do it on her own. After the course materials were ready, she entered the content and learning activities into the LMS herself.

Implementation of the Course. Once the course was set up, Ellen delivered the course through LMS by releasing one module per week in the Fall 2021 semester without any additional assistance.

Use of Technology. Ellen used the following technologies during her course design process:

- The Learning Management System to create, deliver and manage the course content online. Tools included:
    - Discussion forums for students to post reflections and comment on others' work
    - Announcement board to post a weekly schedule
    - Intelligent agent to send assignment reminders to students automatically
- Recorded videos to present course lecture content
- PowerPoint slides to present course lecture content
- Zoom to run breakout room activities and answer students' questions
- Email to communicate with students

Ellen took several workshops to learn the features of LMS and related technology tools. She resolved most of the technical issues when preparing for her course. Ellen rated her ability to use technology as a medium.

Challenges. The challenges Ellen faced during the course design process included:

Being a new instructor in higher education. As a new instructor who was preparing her first online course, Ellen had many uncertainties about writing course outlines and creating adequate learning activities for students without overwhelming them. The lack of course design experience cost her extra time to prepare for the course. Also, she was unfamiliar with the university's policy on sharing course materials online and the standards of designing a course. Her experience of taking the workshops helped her gain confidence.

Lack of strategies for engaging students in online classes. Engaging students in theoretical concepts was challenging, particularly in an online environment. Ellen found it difficult to ascertain whether students had indeed watched the video lectures and completed the assigned readings. In response, she employed discussion activities to assess students' comprehension of the course material.

Accommodating general course design suggestions with a specific discipline. Ellen also said that the course design suggestions and concepts she learned from the workshops covered most general design ideas and strategies, which might not apply to her subject content specifically. She would prefer to know more examples of accommodating those design ideas and strategies to her discipline.

Changes in Teaching Beliefs and Practices. Ellen's core teaching philosophies remained unaltered following her course development experience. Nevertheless, she acknowledged a boost in her confidence when it came to establishing and overseeing courses

through a Learning Management System (LMS). This newfound assurance empowered her to integrate a broader spectrum of interactive learning activities, enabling students to hone their skills and reinforce their understanding in both online and traditional classroom settings. Moreover, Ellen continued to apply the insights gleaned from course design workshops, effectively presenting her course content to ensure an enriched learning experience for her students.

Roles and Responsibilities of Instructors and Instructional Designers. Ellen's participation in the course design workshops proved to be a positive and beneficial endeavor. She attested to the workshops' value, stating that they equipped her with an array of strategies and creative ideas to design and develop her courses. Ellen further emphasized that she had the autonomy to discern how best to implement these ideas in her instructional practices, underscoring the adaptability of the workshop's insights to her specific teaching context.

> "I am familiar with this subject, I was able to find interesting topics for students, but I needed to see options I can use (to share the course content) with students." (Interview, Nov.12, 2021).

She sees the roles of the workshops as "reassuring and affirming" (Interview, Nov.12, 2021) for the instructor. Ellen sees the specific responsibilities of the two parties as identified in Table 6.5.

Table 6.5

Instructors and instructional designers' roles and responsibilities as seen by Ellen

Instructor's Roles and Responsibilities	ID's Roles and Responsibilities
Role: Primary Responsibilities: • Select subject matter topics and prepare course learning content • Make decisions on strategies for presenting and delivering the course • Design course structure • Create course assignments • Deliver the course	Role: Support Responsibilities: • Provide ideas and suggestions about course design • Provide options on available technology tools • Connect instructors with related resources or services needed • Share the university's course standards with new instructors

Lia: Preparing the First Online Course as a New Instructor

Lia is a part-time instructor who developed an online course on the history of neuroscience. This section describes her experiences in doing so, including her background, her beliefs about teaching and online learning, her experience with the course design workshops, her experience with the course design, and her perceived roles and responsibilities of instructors and instructional designers in the course design process.

About the Instructor and Her Motivation to Teach Online. Lia started her first year of teaching experience in higher education in 2021. She teaches undergraduate courses in neuroscience. Before becoming an instructor at the university, Lia did her Ph.D. studies and guest lectures several times. Lia found her teaching experience very rewarding because she has learned a lot about preparing the courses, teaching, and knowing how students learn. According to Lia, she is inspired by her professor and wants to be a teacher like her professor.

Lia is hired to teach only one course at the university. The History of Neuroscience course is also the first course she taught at the institution. Lia loves the subject matter and has

gained specialties in the topics of neuroscience history over the years. She decided to teach this course because there is no such course offered at the institution, and she would like to introduce the history of neuroscience as a special topic course to students. Due to the outbreak of COVID-19, the course needed to be delivered online.

Lia developed synchronous lectures for her course, leveraging the online environment to facilitate pre-planned discussion activities and active student engagement. She also demonstrated a preference for incorporating diverse technologies into her teaching approach.

However, the downside of online teaching and learning is about the students' engagement. She felt uncertain whether students were paying attention during the live class because she could not see students' facial expressions. According to Lia, in an online live class, instructors would not have the opportunity to speak with students after class because they log off quickly. She hesitated about whether instructors and students would be able to interact effectively. Lia tried to replicate the in-person classroom experience when transitioning to online teaching. In her words, "the more it feels like an actual classroom, the better it is going to be for everybody." This approach reflected her commitment to creating a virtual learning environment that closely resembled the dynamics and engagement found in a traditional brick-and-mortar classroom, thereby enhancing the overall educational experience for both herself and her students (Interview, Nov.18, 2021).

Beliefs about Teaching. Lia sees teaching as a way to share subject matter content with the students. In the classroom, Lia adopted a storytelling approach as her preferred teaching style, employing PowerPoint as the principal medium through which to convey course content. Her teaching methodology was further enriched by interactive elements. She adeptly employed breakout rooms to stimulate class discussions, fostering active student engagement. Additionally, to gauge and reinforce immediate comprehension, Lia integrated Poll Everywhere into her live classes, effectively incorporating instant quizzes to enhance the learning experience.

About the Instructor's Experience with Course Design. This section describes Lia's experience with the workshop-supported instructional design process.

Taking the course design workshop. In the summer of 2021, Lia enrolled in a series of course design workshops, a decision motivated by recommendations from her colleagues who had themselves found these workshops invaluable, especially in preparation for teaching her inaugural online course. Lia's apprehension about embarking on her first teaching endeavor fueled her desire to gather as much knowledge as possible before taking on this new challenge.

Her expectations for these workshops were twofold: firstly, to gain guidance on the initial steps involved in crafting a well-rounded course, and secondly, to determine the appropriate volume of content to be included in each class session. Throughout the workshops, Lia attentively absorbed the insights shared by the workshop facilitators, who were seasoned instructional designers. These discussions revolved around strategies for engaging students and showcased exemplary teaching practices.

Lia's active participation in a group activity further enriched her learning experience during the workshops. Here, the workshop facilitator assigned a topic and tasked learners with collaboratively fashioning a lesson plan. According to Lia, this practical exercise served as a beacon, illuminating the path to creating meaningful activities that harmoniously aligned with learning objectives and demonstrated effective methods for engaging students during instructional sessions. In essence, these workshops not only equipped Lia with pedagogical knowledge but also provided her with concrete examples of how to create impactful educational activities that resonate with learners.

Goals for the course. The course aims to help students recognize the importance of studying neuroscience history and learning lessons from it. For Lia, her goal was to prepare the right content for the course and engagingly communicate the content for students to absorb.

About the Course. "The History of Neuroscience" is a senior-level undergraduate course specifically tailored for students majoring in neuroscience. This course is designed to be delivered in a synchronous format, utilizing the institutional learning management system as the primary platform for content dissemination. Each semester, an average of approximately 13 students are registered for this course, who engage in a comprehensive exploration of the historical evolution of the field of neuroscience. The course introduces the origins of basic neuroscience concepts. The main objectives of the completed course are:

- Explain key concepts in neuroscience history from ancient history to the late 20th century
- Summarize fundamental paradigm shifts in the history of neuroscientific discovery
- Synthesize knowledge of historical discoveries with current perspectives in neuroscience to identify the significance of these historical discoveries
- Build a mini-lecture on a neuroscience history topic of your choice

Graded assignments include:

- Lecture worksheets: Students must answer questions about lecture topics and relevant readings three times during the semester.
- Blog post, in which students write a summary for a select topic related to the course
- Mini-lecture, in which students must select a neuroscience history topic of interest and then prepare a 25 to 30-minute mini-lecture and present it during the live class sessions
- The final paper, in which students must write a 10-12 pages comprehensive paper on the same topic they chose for the mini-lecture presentation
- A creative project in which students choose their way, such as drawing or writing poetry, to present one of the neuroscience concepts and show their projects to their peers

The course is structured into two parts. The first five weeks of the course will be instructor-led lectures. Then the second half of the course will be student presentations on various topics related to the history of neuroscience. Each unit begins with a brief overview of the week's content in the learning management system. It continues with an introductory quiz to set the stage for the learning topic. Then it continues with the lecture slides and reading materials. Each unit closes by listing the graded assignments and additional activities.

The course lectures are delivered live via Zoom every week, and the course uses readings and slides to present material to students. The course provides quizzes each week to provide students with opportunities to check their understanding of the conceptual knowledge of the course.

***Going through the Course Design Process*.** Lia started the course design process by writing the learning objectives. Major phases of the process include writing learning objectives, selecting topics and readings, designing the course structure, designing learning activities, entering course materials into the LMS, and implementing the course.

Writing Learning Objectives. Lia started the course design process by creating the learning objectives for the course and then considered the possible ways to assess those learning objectives. She got the suggestions about writing learning objectives from the course design workshop. She found it immensely helpful to design the course for the first time.

Selecting Course Topics and Readings. Lia worked on selecting course topics by reading some related textbooks. She used her knowledge and judgment to select interesting topics to cover in the course.

Designing the Course Interface and Structure in the LMS. Lia drew inspiration from the course design workshops, specifically the notion of "keeping the structure simple," which she conscientiously incorporated into the blueprint of her course. Furthermore, she sought to familiarize herself with the intricacies of the institution's Learning Management System (LMS) through dedicated workshops, ensuring a solid foundation in the technical infrastructure. In her quest for effective course organization, Lia actively engaged with her colleagues, consulting them for insights and examining their course structures as case studies. This collaborative approach allowed her to explore various successful methods for structuring and organizing her course, ultimately enhancing the overall learning experience for her students.

Lia put the synchronous class session information and the Zoom links on top of the course homepage to make it easy to access. She then divided her course content into two main modules, including lectures given by her and lectures given by students. Each main module has sub-modules categorized by weeks. The sub-modules followed the same structure. Each sub-module starts with a description of the key topics covered in the week and a memo to remind students what they need to do for the upcoming week, followed by the PowerPoint slides and then non-graded activities such as quizzes, and worksheets or Poll Everywhere activities. At the end of the sub-module, Lia created another sub-folder to organize all the weekly graded assignments.

Design of Learning Activities. After designing the structure of the course, Lia designed individual learning activities. These included:

- Course lectures aim to share learning content with students, including creating lecture content and slides. Before creating lecture content, Lia was concerned about preparing enough content to fit her three-hour class time each week. She learned from the course design workshop and her colleagues that she did not need to lecture for three hours. She could divide her lecture content into smaller chunks and add learning activities in between to make students engaged. Another concern she had related to communicating the content to students.

  > "… not just creating a course that had good content, but learning how to communicate the content in a way that students could absorb." (Interview, Nov.18, 2021)

  According to Lia, the course design workshops provided her with ideas on how much time students could pay attention during the class and showed her examples of ways to break the learning content. Lia took some of the suggestions from the course design workshops and created her lecture content independently. She created five lectures using a similar structure.

  Lia heeded the guidance offered in the course design workshops, particularly concerning the principles of employing multimedia, crafting effective layout designs, and ensuring content accessibility when creating instructional slides. Implementing these recommendations proved instrumental in her slide design process.

  In Lia's perspective, these principles were instrumental in achieving two vital objectives: firstly, they facilitated the creation of slide layouts that promoted clarity, ensuring that the course content was easily comprehensible to her students. Secondly, these principles played a pivotal role in maintaining students' engagement by directing their focus toward the slides, thus enhancing the overall effectiveness of her instructional materials.

- Assessments include designing non-graded learning activities and graded assignments. Lia learned from the course design workshops about writing learning objectives and aligning them with learning activities. She applied what she learned from the workshops by considering how to assess learning objectives before creating learning activities.
  For her synchronous classes, Lia decided to ask instant questions using Poll Everywhere to keep students engaged. She gave students participation marks if they answered questions. Lia did it to make the synchronous classes similar to face-to-face classes. According to Lia,

  > "The more it feels like an actual classroom, the better that is going to be for everybody." (Interview, Nov.18, 2021).

  She also created group activities via Zoom to allow students to work collaboratively to understand the course content. She asked them to write a summary of the reading materials as a group to help them improve their summarizing and writing skills.
  As for designing the graded assignments, Lia had concerns about communicating her expectations and giving instructions for the assignments. To address her concerns, she talked to her colleagues and asked for feedback on her assignment descriptions and instructions.
  Lia's previous student experience impacted her way of preparing the learning activities. For example, she did not want to add mid-term and final exams to her course because she did not have them as a student. Lia knew that it was important to consider students' backgrounds and give them enough time to provide good learning experiences. She tried to design assignments that fit various learning styles and enabled every student to do well. She asked students to choose media (blog posts, graphs) to present their course project.
  One major graded assignment in her course was students' mini-lectures on the selected topics. Lia provided detailed instructions on how to provide the mini-lectures and asked students to use her lectures as examples when structuring their mini-lectures. She also provided students with a list of topics and had one-on-one meetings with students before they started to prepare their presentations. Also, Lia learned from the course design workshops that it is good to provide students with an opportunity to practice assessing without being penalized before making them do the major graded assignment. She took the suggestion and gave students a chance to submit a draft to get feedback before submitting the final version of the assignment.
- Communications with students. Lia scheduled weekly office hours via Zoom to communicate with students. However, Lia mentioned that she communicated with students primarily via e-mail. Besides the office hours, Lia decided to have one mandatory one-on-one meeting with each student before selecting the topic for the final assignment. She found it helped students do well in their assignments and reduced the number of questions students had for her.

Entry of Course Materials into the LMS. After the materials were ready, Lia entered the course content and learning activities into the LMS independently. She consulted the resources provided on the teaching and learning services webpage when she had questions or issues related to adding or setting up activities on LMS.

Implementation of the Course. Once the course was set up, Lia launched the course by making all the course content available to students through LMS at the beginning of the Fall 2021 semester without any additional support.

***Use of Technology*.** During her course design process, Lia used the following technologies:

- A Learning Management System is used by the institution to create, deliver and manage the course content online. Tools included in the LMS:
    - Quiz tools to assess students' understanding of the course content
- PowerPoint slides to present course content to students
- Zoom was used to run synchronous class sessions and breakout room activities.
- Poll Everywhere to run polling and quiz questions and engage students in synchronous class sessions

Lia is comfortable with technology. She rated her ability to use technology as high because she learned to use most technology tools independently. This proactive troubleshooting approach enabled her to autonomously resolve most technical glitches, underscoring her self-reliance and competence in addressing technology-related issues.

Challenges. During the course design process, Lia faced the following challenges:

Lack of strategies for engaging students in online classes. Lia found it hard to know whether students were paying attention to the course content during synchronous class sessions because students kept their cameras off and logged off quickly after each class. Also, there was no good way to check whether students were doing well or not because she did not have lots of opportunities to speak with students after class.

> "Trying to get students to turn up for class is hard. The online environment creates a barrier for students to talk to professors. It is so easy just to be hands-off and not talk to the professor when they are struggling" (Interview, Nov.18, 2021).

Creating subject matter content as a new instructor. It is not a challenge related to online course design specifically. As a new instructor, Lia did not learn how to teach except by taking the course design workshops. She found herself lacking confidence in the subject matter content and felt stressed in creating the content. She was unsure how much content to include in her course and how to split the grades appropriately. According to Lia, the course design workshops gave her some general guidance in getting started. Also, she used her colleague's course as an example to create her course. It would be good for the course design workshops to cover more content on allocating weights and time for each learning activity.

Lack of guidance on seeking best practices for designing science courses. Lia found it challenging to craft engaging learning activities tailored to the field of science. She observed that some of the recommendations offered in the course design workshops appeared to be more aligned with the pedagogical needs of disciplines within the social sciences and humanities, which presented a potential misfit for her specific teaching context in the sciences.

> "It seemed easier to get students in humanities to engage because there is room for opinion, and students would want to chat about it. However, if you are teaching data-heavy subjects such as hormones or biochemistry, students are too afraid to ask any questions. They are like deer in the headlights" (Interview, Nov.18, 2021).

Lia said it would be good if teaching and learning services could offer course design workshops specifically for science majors.

Changes in Teaching Beliefs and Practices. In her role as a first-time instructor, Lia was grateful for the invaluable insights gained from her course design experience. She underscored the significance of this journey in equipping her with the essential knowledge and skills required for effective teaching. Lia attributed a pivotal aspect of her newfound proficiency to the course design workshops, which emphasized the importance of commencing the course design process with the formulation of clear and concise learning objectives.

> "Before I took the course design workshops, I was sure I would create the course content first, and that ended up being the last step" (Interview, Nov.18, 2021).

Also, she found this experience with designing an online course changed her thoughts about what to consider when preparing a course:

> "It is not just creating a course that had good content, but how to communicate the content in a way that students could respond to and absorb the learning content" (Interview, Nov.18, 2021).

Roles and Responsibilities of Instructors and Instructional Designers. Lia described the course design workshops as valuable and exceptional in guiding the design of her first online course. She also suggested making the course design workshops mandatory for every new hire instructor at the institution.

> "They helped not so much the course content, but how to organize the content, how to create good breakout activities that were not too difficult, and how to facilitate each activity... provide tips and tricks on how to not fall on your face the first time we teach" (Interview, Nov.18, 2021).

Lia's approach to course design reflects her commitment to taking on the primary responsibility for this endeavor. She views the instructional design team as a valuable source of guidance and a provider of thought-provoking insights to enrich her decision-making process.

To further elucidate, Lia's perspective aligns with the delineation of responsibilities outlined in Table 6.6, which clarifies the distinct roles and duties of both herself, as the course designer and instructor, and the instructional design team. This collaborative dynamic allows for a well-balanced and mutually beneficial partnership in shaping the course design process.

Table 6.6

Instructors and instructional designers' roles and responsibilities as seen by Lia

Instructor's Roles and Responsibilities	**ID's Roles and Responsibilities**
Role: Primary Responsibilities: • Create subject matter content • Decide course structure • Write course learning objectives • Design learning activities • Set up the course in LMS • Look for available resources for course design and teaching	Role: Support/Guide Responsibilities: • Explain course design principles and teaching strategies for instructors • Provide resources, ideas, and suggestions related to course design and teaching • Provide contacts and connections to existing support services at the institution

Cindy: Communicating Effectively with Students Through Structured Online Course

Cindy is a part-time instructor who developed an online capstone course for the business program. This section describes her experiences in doing so, including her background, her beliefs about teaching and online learning, her experience with the course design workshops, her experience with the course design, and her perceived roles and responsibilities of instructors and instructional designers in the course design process.

About the Instructor and Her Motivation to Teach Online. Cindy has more than 25 years of teaching experience in higher education. She teaches undergraduate business courses. Before teaching in universities, she worked in healthcare and specialized in institutional food

service management. Also, during her Ph.D. studies, she worked as a teaching assistant and taught several classes at the university.

Cindy is hired as a teaching faculty and focuses on teaching only at the institution. She spent much time working with her students. Among the courses that Cindy teaches is the capstone course for business discipline. Before she designed the online course, she taught the course in person. Cindy sees the teaching of the capstone course as a way to interact with students and see their growth. One of the significant challenges of teaching the capstone course is finding time to communicate with students individually. To address the challenge, Cindy spent time emailing students to answer their questions and remind them of assignment deadlines.

Cindy moved her course online due to the COVID-19 pandemic, with no prior experience in online teaching until the summer of 2021. She found the experience enjoyable, appreciating the convenience of pre-recorded lectures for students. Reusability of content for multiple years appealed to her as a time-saving strategy, affording her more personal interaction time with students. Surprisingly, she felt that the online environment allowed her to get to know her students better, although she acknowledged the extra hours required for lecture preparation.

Beliefs about Teaching. Cindy's perspective on teaching is deeply rooted in her belief that it catalyzes student growth and development. She derives immense satisfaction from engaging with her students and witnessing their progress, considering her role as an educator to be profoundly impactful in shaping their lives. She wholeheartedly believes that her work has a meaningful influence on her students' journeys. Cindy positions students at the centre of the learning experience, with instructors serving as facilitators whose primary mission is to assist students in attaining their educational objectives. This learner-centric approach underscores her commitment to fostering a dynamic and supportive educational environment.

Cindy's teaching methodology extends beyond traditional lectures. She actively engages with students individually or in small groups to provide personalized guidance and support for their learning and course projects. Consistent communication via email serves as a means to keep students informed about important course updates and deadlines. She also occasionally incorporates live lectures to enhance student engagement. In the context of her online course, Cindy thoughtfully pre-records all lectures and delivers them through the learning management system, ensuring accessibility and flexibility for her students.

About the Instructor's Experience with Course Design. This section describes Cindy's experience with the workshop-supported instructional design process.

Taking the course design workshop. In the summer of 2020, Cindy initially enrolled in online course design workshops. During this period, her participation primarily involved attending the workshop presentations, with minimal engagement in the associated activities. Then in Summer 2021, Cindy decided to retake the workshops and completed all the reflection exercises for the workshop. She took the workshops because she wanted to be a better teacher and learn new teaching methods effectively. During the workshops, she listened to instructional designers' presentations, did exercises that shared teaching ideas with her peers, and reflected on each workshop. According to Cindy, her big takeaway is to know how to write learning outcomes with the help of Bloom's Taxonomy and how to communicate those learning outcomes to students. She also got the idea of using multimedia to present learning materials and integrating different technical tools into the course. Cindy also mentioned that taking the workshops gave her more confidence in her teaching.

Goals for the course. Cindy's goals for the course were to prepare all the pre-recorded lectures and to create an engaging learning environment for students.

About the Course. Strategic Management is a fourth-year undergraduate capstone course for commerce students with a concentration in international business. The course uses both asynchronous and synchronous formats to deliver the learning content. The course has about 44 students registered each semester.

The course analyzes and evaluates the organization's corporate and business strategies and applies acquired functional skills to strategic decision-making. The main objectives of the completed course are:

- To apply key strategic concepts when analyzing a firm
- To apply conceptual frameworks and models to analyze and evaluate practical business problems
- To demonstrate applied business research skills through empirical business research
- To articulate strategic perspectives that link the internal and external environment, the state of an industry, and the capabilities and positioning of the firm
- To integrate the functional knowledge acquired in previously taken business courses to evaluate the business function
- To assimilate and evaluate the cross-functional and interdependent nature of strategic business decisions
- To apply business writing skills by constructing a comprehensive professional report and slides
- To demonstrate oral competency by presenting the key elements of their projects in a formal presentation
- To develop team skills by working and contributing to an interdependent, collaborative, and professional team environment

Graded assignments include:

- Group assignments, in which each student must work in a small group of four to conduct analysis tasks and submit reports
- Group presentation, in which each student must work in a small group of four to do an oral presentation on the strategic analysis of one firm. Each group must submit presentation slides and speaker's notes.
- Final group report, in which students must work individually to integrate the group assignments and the group presentation content and write a report on the chosen topic
- Final exam, in which students must complete an in-person exam. The exam takes 90 minutes with multiple choice questions on key strategic concepts from the course.

The course delivers 50% asynchronously and 50% synchronously via the institution's LMS. The course takes 13 weeks to complete. For the first seven weeks, instructors present the course lectures using the asynchronous format. Then, the rest of the course focuses on students' course projects. The course is structured by the types of learning content on the LMS. The course starts with important information such as the course outline, academic integrity form, and group work guidelines. It continues by providing a unit that includes all the assignment instructions and rubrics. It is followed by a course resources unit and links to live sessions. Then it continues with a unit that contains all the course lectures and slides. The course closes by listing the submission links to all the assignments and exams.

The course uses pre-recorded lectures, slides, and readings to present material to students. It provides virtual meetings for students to work in small groups, and it has online quizzes to test students' knowledge of the course and get familiar with the final exam format.

Going through the Course Design Process. The course design process started when Cindy re-examined course learning outcomes. Major phases of the process include establishing course learning objectives, designing the course interface and structure in the LMS, designing learning activities, entering course materials into the LMS, and implementing the course.

Establishing Learning Objectives. After taking the course design workshops, Cindy worked on the course learning objectives. According to Cindy, the course design workshops made her learn a lot about how to write the learning objectives to make them specific and measurable and how to tie the learning objectives to course deliverables. Also, she thought more about the endpoints of the course that she wanted students to achieve and how to help students get there.

Designing the Course Interface and Structure in the LMS. Cindy took several workshops about the LMS and digital tools available on the LMS before setting her course interface and structure. She chose the course structure by herself. Cindy organized her course by the types of learning activity. For example, she put all course video lectures and slides in sections, all the graded assignments and related rubrics in one section, and channels of communication in another. Cindy considered LMS as a place to hold the course materials and communicate with the students.

Design of Learning Activities. After deciding on the course structure, Cindy designed individual learning activities. These included:

- Course content. Cindy pre-recorded lectures to present the course content to students. She also provided lecture slides to accompany the lecture videos. She recorded course lectures in a quiet place at home to ensure the sound was good. She wanted students to access the lectures at anytime, anywhere.
- Assessments include both non-graded and graded learning activities. Cindy had most of the course activities prepared before starting the design process. There are assignments that she could not change or re-design for her course because they are used in all the sections of the same course in the business department, and they are required to be consistent across the course sections. When designing the course for online delivery, she mainly focused on re-examining the activities to ensure they were connected to the course learning objectives. Cindy mentioned she used “a more intentional process to design the activities” (Interview, Nov.4, 2021) after learning from the course workshops. For each learning activity, Cindy provided a description and a marking guide to ensure students knew what to do and expectations. Cindy set up small group discussions to encourage students to interact with others and work on projects in small groups. She made the discussion activities live and scheduled live sections with each group to discuss their group project. Additionally, Cindy used the quiz tool on LMS to administer the final exam. She was concerned about plagiarism for the exam. She scrambled the exam questions and answers to each question and set a tight timeframe to complete the exam to minimize students’ chances of cheating.
- Communication with students refers to the ways Cindy used to interact with students. She emphasized the value of interacting with students. Cindy tried to increase students’ online engagement by setting up weekly meetings with students in small groups and giving students more personal time to talk about their assignments and course projects. She sent weekly emails to summarize students’ questions, clarify some learning concepts for students, and tell them what to do for the next week. She believes it is helpful to check in with students regularly to keep students on track in the online learning environment.

> "Touching base with your students regularly, so they do not feel like they are living out there in a vacuum" (Interview, Nov.4, 2021).

Entry of Course Materials into the LMS. After the materials were ready, Cindy entered the course content and learning activities into the LMS by herself.

Implementation of the Course. Once the course was set up, Cindy delivered the course through the LMS in the Winter 2021 semester without additional assistance.

Use of Technology. Cindy used the following technologies during her course design process:

- The Learning Management System creates, delivers, and manages the course content online. Tools included in the LMS:
  - The quiz tool to administrate the final exam of the course
  - The scheduler tool enables students to self-select their project groups
- Recorded videos to present course lecture content
- PowerPoint slides to present course lecture content
- BigBlueButton to run group discussion activities and meet with students

On issues involving technology, Cindy consulted with the instructional designers and educational technologists from the teaching and learning services. For example, when she set up the BigBlueButton tool for group activities for the first time, she did not know how to set it up so she contacted the instructional designer, and they helped her set up the activities.

Cindy rated her ability to use technology as medium to low. She believes technology tools require practice with them. The workshops helped her become more comfortable and confident in integrating technologies into her courses.

Challenges. The challenges Cindy encountered during the course design process included:

Online Testing is a Bit Problematic. Cindy found it challenging to prevent some students from checking textbooks for answers during online exams. She said that the online testing might "put the honest students at a disadvantage by being honest. Because their exam marks fell exactly where I would expect them to, however, the much weaker students' marks were way higher than their other work would have indicated" (Interview, Nov. 4, 2021). When asked about making changes to the online exams, Cindy was concerned that it would take too many resources to make the change without knowing its effectiveness.

Lack of Guidance on Preparing the Right amount of Learning Content. Cindy said that she spent more time rethinking the amount of the learning content to assign each week in an online environment compared to the face-to-face classes. She wanted to ensure students spent adequate time learning content without overwhelming them. However, she found it hard to accurately track how much time students spent on each learning content and whether there was a correlation between the time spent and the learning results.

Contradictions between Designing New Assignments and Using Existing Assignments. According to Cindy, the department provided several sessions of the same course each semester, and she was responsible for designing one of the course sessions. Each course session used the same assignments to "keep things as equal as possible across the sessions" (Interview, Nov.4, 2021), which gave her little room to design new assignments.

> "A lot of times, you base them (assignments) on what previous instructors have done. If you have something that is working, well, you do not tend to seek out to help change it" (Interview, Nov.4, 2021).

Changes in Teaching Beliefs and Practices. After taking the course design workshops and the experience of developing an online course, Cindy mentioned the change "from subconsciously creating learning activities to a more intentional process" (Interview, Nov.4,

2021) when designing the course. She started to think more about the learning outcomes at the beginning of the course design and used the learning outcomes to connect the learning assignments. Cindy perceived that delivering courses online allowed her to have more chances to interact with students individually, which helped her get to know more about her students and support students' learning. Also, she became more confident in using technologies in her course.

Roles and Responsibilities of Instructors and Instructional Designers. Cindy had a positive experience with the workshop-supported course design process. She found the workshops to be valuable to help her rethink her course activities as well as help her become confident in integrating technologies. Based on conversations with Cindy, she sees the roles and responsibilities of the instructor as the leader in the instructional design process and the instructional design team as support. The specific responsibilities of the two parties are identified in Table 6.7.

Table 6.7

Instructors and instructional designers' roles and responsibilities as seen by Cindy

Instructor's Roles and Responsibilities	ID's Roles and Responsibilities
Role: Primary Responsibilities: • Prepare course content and learning activities • Design course structure • Try the technology tools and practice with them before integrating them into the course	Role: Support Responsibilities: • Introduce different content and tools for designing courses • Help with technology • Provide support when something is not working.

The Activity System of the Workshop-Supported ID Process

This section describes the general activity system of the workshop-supported course design process by combining all six participants into a single case. Specifically, it describes the subject of the activity, its object, the tools and rules used to perform the activity, the community involved in the activity and the division of labor within it, the challenges that arose in the process, and the change and development represented. The section closes with a presentation of the activity system for the workshop-supported course design.

Subject

The subject of this activity system is the instructor. Among the six instructors, two are full-time teaching faculty, three are part-time teaching faculty, and one is hired as a research faculty. All the instructors spent significant time preparing for their courses. They love teaching at the university and enjoy interacting with students. The instructors hold a dual perspective on the value of teaching, finding significance in both the act of imparting knowledge to students and witnessing their progress and development. When it comes to pedagogical strategies, all these educators employ a blended approach, encompassing both traditional lectures and interactive activities as a means to enhance student engagement in the learning process.

All six instructors started teaching online in recent years. Five out of six participants taught their first online courses during the Pandemic. They were open to online teaching and learning and admitted its benefits. However, most of them expressed a lack of strategies to ensure students' engagement in online learning environments. Instructors hold varying perspectives on online courses. Some view them as a one-way learning method, which makes it challenging for the instructors to know students' progress. Conversely, a subset of instructors

perceive online courses as an avenue for diverse and flexible communication with students, offering opportunities for more personalized engagement. They view online teaching as a means to establish individual connections with each student, fostering a sense of community and enhancing the overall learning experience.

When preparing online courses, instructors are generally comfortable integrating digital tools into their course content. However, most instructors tend to mimic traditional in-class teaching methods and utilize technologies as substitutes to re-create a "classroom-like" learning experience.

Object

All six instructors in Case 3 taught online due to the pandemic. They had three to five months to prepare their courses. All of them took the instructional design workshops before teaching their first online course. Instructors took the workshops to improve their skills in designing and teaching online courses and learn more about the resources available at the university. New instructors such as Alex, Lia, and Ellen who recently joined the university, wanted to know about how to get started with course design from the workshops. Regarding the course goals, all six instructors wanted to prepare courses with engaging learning environments for students and ensure the learning content is presented effectively using technical tools.

Tools

Instructors used three types of tools to carry out the workshop-supported course design activities: physical, virtual, and cognitive tools.

- Physical tools included
    - Tools for recording course lectures: Laptops, headphones, and microphones
    - Subject matter content materials such as textbooks
- Virtual tools
    - Tools for producing the course content, such as PowerPoint slides, Word files, images, videos, and audio
    - Tools for presenting the course content and learning activities, such as the e-portfolio, Poll Everywhere, e-proctoring software, learning management system, and the applications embedded in the LMS including quizzes, discussion forums, announcement, intelligent agents, scheduler, HTML 5 package, and survey
    - The tools for communication are Zoom, BigBlueButton, and email.
- Cognitive tools
    - Content they learned from the course design workshops
    - Instructional designers' Suggestions and ideas related to pedagogy and technology

Rules

The instructors followed the rules during the workshop-supported instructional design course design process: 1) All the participants followed their departmental guidelines when preparing their courses. For example, some departments require instructors who teach the same course but in different sections to use the same course syllabus and content. 2) The course format (whether fully online or HyFlex) was selected based on the class size and the availability of the resources. Instructors chose to deliver the course synchronously or asynchronously. 3) The university policy about online courses and faculty's intellectual property is that faculty members retain the rights to their course content. Also, designing and developing the course for online delivery is part of the instructors' teaching responsibility. Instructors have full control over the course on LMS. Additionally, instructors need to comply with the accessibility policy when

presenting course content. For example, instructors are expected to comply with the Accessibility for Ontarians with Disabilities Act (AODA), Web Content Accessibility Guidelines (WCAG), and institutions' online course quality indicator documents. 4) The institution has supported and recommended technology tools and LMS. Instructors had to adapt them to comply with the privacy and security regulations.

Community

In this activity system, the instructors' community consisted of 1) the instructional designers who facilitated the course design workshops, 2) the colleagues of the instructors, 3) teaching assistants and student partners, 4) students.

Division of Labor

Each of the six instructors viewed themselves as leaders in the course design process and took full ownership of their course preparation. This includes seeking out available resources for course design and teaching, writing the course learning objectives, choosing teaching and learning strategies, preparing the learning content, making design decisions regarding the course structures, creating course learning activities, setting up the course on LMS, and communicating the course content effectively to students.

The instructors described the roles of the instructional designers as supportive. While instructors did not work directly with instructional designers during the course preparation, they valued their assistance in offering resources and suggestions related to course design principles, teaching strategies, and available technology options. Also, they valued the instructional designer's support in facilitating access to existing resources within the institution. They appreciated being made aware of the institution's standards concerning course design and development. Two participants mentioned that the workshops played a reassuring and affirming role for the instructor in empowering them when preparing their courses.

Challenge

The following challenges in the activity system had impacts on participants' activities in preparing for their online courses:

Applying General Course Design Suggestions to a Specific Course

All six instructors valued the course design suggestions and the best practices for creating online courses they received from the workshops. However, the instructor's motivation for applying the suggestions varied when preparing their courses. Some were related to departmental policy. Cindy mentioned her department required all the graded assignments to be consistent across the same course taught by different instructors. Cindy liked the idea of creating assignments with more interactive elements but she had to follow the departmental rules and keep the graded assignments the same. Lia, Alex, Ellen, and Jenny mentioned some of the best practices in the workshops were good ideas but did not apply to their specific discipline. As Lia said, discussion activities or debate activities were good for students to interact with each other and share their opinions. But for an introductory course in Science when most of the knowledge was fact-based, there was not a lot of room for students to share their opinions. Also, instructors tended to apply design suggestions that benefit their students. Jenny mentioned she tried the suggestion of creating a weekly video message about the course to keep students engaged, but she noticed her students did not watch those weekly videos.

Balancing between Instructor's Time and the Implementation of Course Design Suggestions. All six instructors mentioned they got good course design suggestions about organizing course structure, designing learning activities, and communicating with students. They wanted to apply the suggestions to their courses. However, implementing the suggestions

required instructors' effort and time, which created challenges for some of them. Cecilia learned about creating interactive activities using H5P, but she did not have time to explore the features and types of questions that could be created in H5P. She used quizzes instead. In the same vein, Alex mentioned he got ideas about creating questions to check students' understanding between lectures and he liked the ideas. However, he did not have enough time to prepare extra questions for the activity because his primary work at the institution was to do research. So, he skipped the activity and planned to incorporate it once he re-designed the course.

Lack of Resources and Strategies for Engaging Students in the Online Environment. It is one of the objects of the course design activity mentioned by all the instructors in Case 3. Four of the six instructors faced challenges in designing engaging learning activities and checking whether students were engaged. Specifically, Jenny, Cecilia, and Lia adapted activities used in previous face-to-face classes to online activities using technical tools such as H5P and Poll Everywhere. However, they found students seemed not as involved in the activities and had lower levels of energy in participating in classes compared to face-to-face classes. Cecilia mentioned there was a lack of strategies to create oral interactions among students to learn foreign languages in an online environment. Jenny, Ellen, and Lia found it challenging for them to check whether students were engaged with the learning content or the live lectures. Unlike face-to-face classes where they could check if students were engaged by observing their facial expressions and behaviors, most of the students turned their cameras off during the online lectures. Instructors did not have multiple ways to check whether students read or watched the learning materials provided in LMS.

The Lack of Resources and Strategies for Avoiding Plagiarism in Online Testing. It is another concern raised by three instructors. They worried that students would use resources such as Google translate or websites like CourseHero to aid them when taking the tests, which causes unfairness among students and hinders their learning. Cecilia and Alex chose to use a proctoring system to help avoid cheating whereas Cindy created multiple versions of exam questions to minimize students' collaboration during the exams. Meanwhile, they also had privacy and security concerns about using the proctoring system in exams. Instructors needed more strategies to avoid cheating or suggestions on designing alternative exams to help them achieve their course goals.

Instructors' Lack of Experience in Teaching and Designing Courses. Three of the six instructors mentioned being new in higher education created challenges for their course design because they were unsure where to start when preparing the course and how much learning content was adequate for students each week. They initially lacked confidence in designing their courses. Therefore, rather than focusing on designing their courses, they had to spend extra time learning how to design course syllabi, how to write learning objectives, and how to assign weights for assignments from their colleagues and the workshops. Alex and Lia consulted with their colleagues about the course assignments when preparing course content. Alex, Lia, and Ellen mentioned the course design workshops helped them gain confidence in the process and gave them direction on what to do when designing the course. The instructors recommended all the new instructors take the workshops before preparing their courses.

Change and Development. All six instructors were about to design their first online course at the time they participated in the workshops. All of them indicated they got course design ideas from the workshops and applied them in preparing their courses. For example, five instructors mentioned they started writing clear learning objectives with action verbs for all the courses they teach. They made more efforts to align the learning activities with the learning

objectives (Cecilia interview, Nov.8, 2021) and ensure the learning content is communicated to students clearly through detailed and structured instructions (Jenny interview, Nov.19, 2021) in the online environment. Cindy mentioned her ways of designing changed from "subconsciously creating learning activities to a more intentional process" (Interview, Nov.4, 2021). According to Lia, "It is not just creating a course that had good content, but how to communicate the content in a way that students could respond to and absorb the learning content." (Interview, Nov.18, 2021). Additionally, Jenny and Cecilia started to provide chances for students to get familiar with the LMS and submit practice assignments before letting them do graded assignments. Instructors also worked on making learning materials accessible for learners by providing learning content using multimedia and consciously selecting font sizes, colors, and images when creating lecture slides.

For new instructors who started teaching their first course in higher education, Lia, Ellen, and Alex mentioned the course design experiences changed their previous thoughts on where to start when preparing courses. As Lia mentioned: "Before I took the course design workshops, I was sure I would create the course content first, but that ended up being the last step." (interview, Nov.18, 2021). Ellen and Alex pointed out they considered more about students' needs at the beginning of designing the courses and they prepared more practice activities for students. Three out of six instructors mentioned they applied some strategies and ideas they learned from the online course experiences to teach their face-to-face classes. Jenny, Alex, and Ellen used some online interactive activities in their face-to-face classes to help students practice their knowledge and skills and keep them engaged. Also, Cecilia and Jenny mentioned they kept providing clear and detailed instructions to ensure the learning content was presented to students effectively.

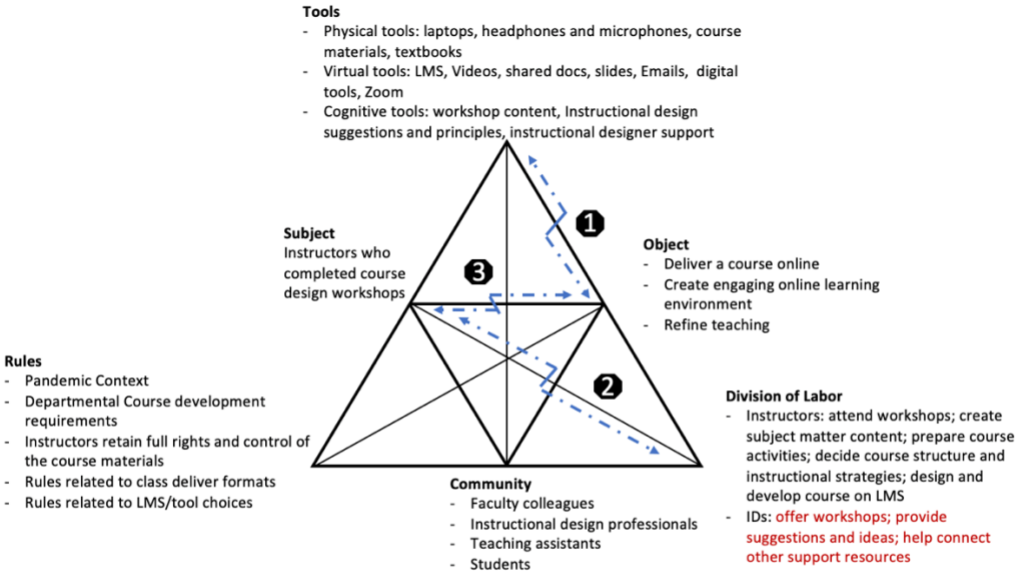
Five out of the six instructors stated they gained confidence in designing and delivering online courses. After having the workshop-supported course design experiences, instructors knew they were supported by the institution, which encouraged them to explore new teaching tools and strategies.

> "Knowing the support is there encourages me to try some of the different features. I am willing to take on something new each time because I know TLS will support me" (Interview, Nov.19, 2021).

Interestingly, Cecilia and Cindy were more open to online teaching and learning, because they had more interactions with individual students online through chats, online meetings, and discussions compared to face-to-face classes. Figure 6.4 shows the activity system for workshop-supported instructional design support.

Figure 6.4

The activity system for instructional design support



- **Tension 1. Tools –Objects:** The cognitive tools available were not sufficient for achieving instructors' objects on engaging students and avoid plagiarism in online learning environment.
- **Tension 2. Subject – Division of labor:** Instructional design suggestions provided in the workshop conflicted with instructors' time or prior teaching experiences, which made them hard to be fully applied.
- **Tension 3. Subject – Object:** New instructors are required to put extra time and efforts on designing courses to achieve their goals.

Chapter Seven. Discussion of Findings and Cross-Case Analysis

This chapter presents the key findings of the study. It begins by using the results from each case discussed in Chapters four, five, and six to answer the research questions. A comparative analysis is then conducted to identify similarities and differences among cases, leading to a synthesized response to each research question.

This study explored the experiences instructors had working with instructional designers to design and develop online courses while incorporating instructional design principles, technology tools, and instructional techniques. The research data was collected from 15 instructors at two higher education institutions in Canada. The key themes and sub-themes extracted from the data help answer the three research questions:

1. How do instructors work with instructional designers to design online courses?
    a. How do instructors describe the course design process?
    b. What challenges did instructors face in the course design process?
    c. What are the perceived roles and responsibilities of the instructional designers and instructors in the course design process, as indicated by the instructors?
2. Using the framework of Activity Theory, characterize how instructors engage in course design activities.
    a. What instructional design suggestions (cognitive tools) were provided to the instructors?
    b. How did instructors incorporate these suggestions into their course design practices and what are the key factors influencing their course design decision-making?
3. How do instructors perceive the impact of instructional design support on their course design and teaching practices?

Answer to Research Question One. How do Instructors Work with Instructional Designers to Design Online Courses?

This question focuses on understanding the instructor's account of the vital components of working with instructional designers in the process of designing online courses. The research data reveals several key themes including the course design process, course design activities, the nature of collaborating with instructional designers, and challenges encountered throughout the process. These themes contribute to answering research question one and shed light on the dynamics and experiences of instructors working with instructional design support modes.

Course Design Process

Instructors start the course design process differently depending on the types of instructional design support they receive. In Case 1 and Case 2, instructors were required to apply for ID support and were then selected by the institutions to receive this service, whereas instructors in Case 3 self-enrolled in the ID workshops. In Case 1, the online course design tasks fell outside instructors' regular teaching responsibilities. However, in Cases 2, and 3, online course preparations were part of their teaching responsibilities. In Case 1 and Case 2, instructors worked closely with designated instructional designers throughout the course design process, whereas instructors in Case 3 did not work directly with instructional designers, but rather participated in instructional designers-led workshops.

Instructors in Case 1 choose to design courses for online delivery because they want to design asynchronous online courses and take advantage of emerging technologies to create engaging learning content and increase the enrollments of the courses. In Case 2 and Case 3

instructors move their courses online due to the Pandemic. They focus on adapting their courses to the online learning environment quickly while maintaining students' engagement.

Instructors across the three cases described the general course design process during the interviews. The general design process includes: meeting with the design team for the first time or taking the course design workshops, preparing course subject matter content, designing the course layout and structure in LMS, designing learning activities, entering the course into LMS, and implementing the course. The ways and tasks instructors work with instructional designers vary depending on the types of instructional design support they receive.

1. Starting Point. Getting access to the ID support
    a. Having the first meeting with the design team (Case 1 and Case 2)
    During the first meeting, Case 1 and Case 2 instructors communicate their course ideas and support needs with the design team. The design team explains the workflow of the course design projects and the roles and responsibilities between them and the instructors. Then the instructors and the design team discuss the feasibility of the course ideas. In the end, the instructor and the design team come up with a course design plan and agree on the tasks and timeline for each course.
    b. Taking the course design workshops (Case 3)
    In Case 3, instructors begin the course design process by taking the course design workshops. During the workshops, instructors receive course design-related content presented by instructional designers. Instructors do not work with the instructional designers directly in the course design process, but some of the instructional designers' ideas and suggestions have impacts on instructors' course design activities.
2. Course Design Process
    a. Writing course learning objectives (Case 1 and Case 3)
    One instructor in Case 1 and all instructors in Case 3 said writing course learning objectives was one of the crucial parts of their course design. Instructional designers introduce the concept of writing measurable and observable learning objectives and aligning learning objectives with learning activities. They also provide lists of verbs that could be used to compose learning objectives for the instructors. Instructors take time to write course learning objectives before creating any learning activities. Interestingly, none of the instructors in Case 2 mention their activities on writing learning objectives. The reasons might be related to the nature of the express service that focuses on instructors' urgent needs, and the priorities of the tasks are given to those activities that help instructors save time in preparing their courses.
    b. Collecting and preparing subject matter content (All three cases)
    Most of the instructors in Case 1 and Case 3 prepare subject matter content after receiving the design support, whereas instructors in Case 2 begin to prepare subject matter content before the first meeting with the design team.
    Instructors across all three cases decide on the subject matter content to cover in the course without additional support from instructional designers. Instructors typically re-use subject matter content from the same courses they taught previously. Also, they read textbooks and articles related to the subject matter content when selecting course topics and content. Some instructors collect the course content from their colleagues who taught the same course before or work with their colleagues together to decide the subject matter content.
    c. Designing course layout and module structures (all cases)

A dominant pattern is that instructors work closely with instructional designers (Case 1 and Case 2) or get suggestions and templates from instructional designers (Case 3) across three cases when designing course layouts and module structures. Instructors have ideas on how they want to display the course content in LMS, focusing on creating easy-to-follow course structures and visually appealing course pages. Instructors in Case 1 exchange ideas about designing the course homepage, navigation, and layouts for each unit with the instructional designers. Instructional designers provide suggestions and show course format examples. Then instructors decide on the course structure and layouts, and the instructional designer designs the structure and layouts based on the instructors' decisions. Similarly, instructors in Case 2 exchange ideas with the instructional designers, and then instructional designers provide examples and suggestions on course formats and structures. Most instructors decide their course formats and structures and design the course layouts and home pages in LMS by themselves. Jake and Mike have instructional designers help create the course structure. Whereas in Case 3, instructors receive suggestions and examples during the workshops and then independently design their course structure and layouts.

d. Design course learning activities (all cases)

Three activities are mentioned when instructors design learning activities for their courses: presenting course content, designing and developing learning assessments, and making plans to interact with students.

i. Presenting course content

Most instructors across three cases use lecture slides and recorded videos to present primary course content. Some instructors in Case 3 prepare course orientation modules to help students get familiar with the course navigation and structure based on the suggestions from the course design workshops. When developing lecture slides, instructors prepare the subject matter content independently. Then, some work with the instructional designers to improve the accessibility of the slides by using slide templates, applying font and color suggestions for the texts, and inserting alt-texts for images and tables. Some instructors in Case 1 asked instructional designers to clear the copyrights of the images and media used in the slides. Also, instructors in Case 1 and Case 2 work with instructional designers to create interactive slides by integrating animations and multimedia.

Around half of the instructors in Case 2 and Case 3 preparing course lectures decide to do weekly synchronous lectures via Zoom. Those instructors work independently on presenting the course content and do not expect much support from the instructional designers except for technical issues. For those who record videos to present course lectures, Luis and Kathy in Case 1 have videographers from the design team come to their office and record the lectures for them, whereas other instructors record lectures by themselves using their own devices. Most of the instructors apply instructional designers' advice on making videos into smaller chunks. After finishing recording, instructors share their videos with the instructional designers to check the qualities such as sound quality, video resolutions, and the accuracy of the video narrations. The design team review and edit the videos and then send them back to instructors. Instructional designers in

Case 1 upload the videos whereas other instructors upload the videos to the course by themselves.

ii. Designing and developing learning assessments

Another dominant pattern is that instructors work closely with instructional designers (Case 1 and Case 2) or take suggestions from instructional designers (Case 1, Case 2, and Case 3) when designing and developing learning assessments across three cases. Instructors independently prepare the subject matter content for the learning assessment and seek instructional designers' ideas and suggestions for presenting or communicating the assessment content to students. Specifically, instructors look for instructional designers' input on designing learning assessments that facilitate students' learning and interactions with their peers. They also seek suggestions on minimizing cheating when administrating exams online. Additionally, instructors rely on instructional designers' insights on selecting and integrating digital tools to present the learning activities effectively. Instructional designers provide instructors with instructional materials or training on how to use digital tools. Moreover, instructional designers build the learning assessments in the LMS to help save instructors' time in preparing the course.

iii. Making plans to interact with students

In general, Instructors communicate with students to answer course-related questions and check in on students' learning progress. They use discussion forums, e-mails, zoom, and surveys to communicate with students. Five instructors across three cases mentioned online environment enables them to increase one-on-one interaction with students.

A strong pattern is found that most of the instructors in Case 1 and Case 2 make their communication plan to interact with students without additional support from instructional designers, except for Emma in Case 2, who works with the instructional designer in selecting communication tools and setting up the tools in her course. All the instructors in Case 3 take some advice on facilitating communication, selecting proper communication tools, and getting feedback from students from the workshops when preparing their communication plan.

e. Entering the course into LMS (all cases)

Instructors in Case 1 do not have editing access to enter any course content into LMS. Instead, they prepare all the course materials and send them to the design team. Instructional designers enter the course content into LMS. In contrast, instructors in Cases 2 and Case 3 have full access to add or remove content from LMS. All instructors in Case 2 and Case 3 upload lecture content, slides, and reading materials on their own. In Case 2, instructional designers help set up some learning activities such as quizzes, databases, and discussion forums for the instructors. Once the course content is ready in LMS, instructors, such as John and Kathy in Case 1, and Anne and Emma in Case 2 review the course content to ensure the accuracy of the content. Instructional designers check the content they entered for Jake and Mike in Case 2 to ensure the course content is displayed properly in LMS. Emma in Case 2 and Jenny, Cecilia, and Alex in Case 3 use students' feedback as indicators to revise their course content during the course implementation.

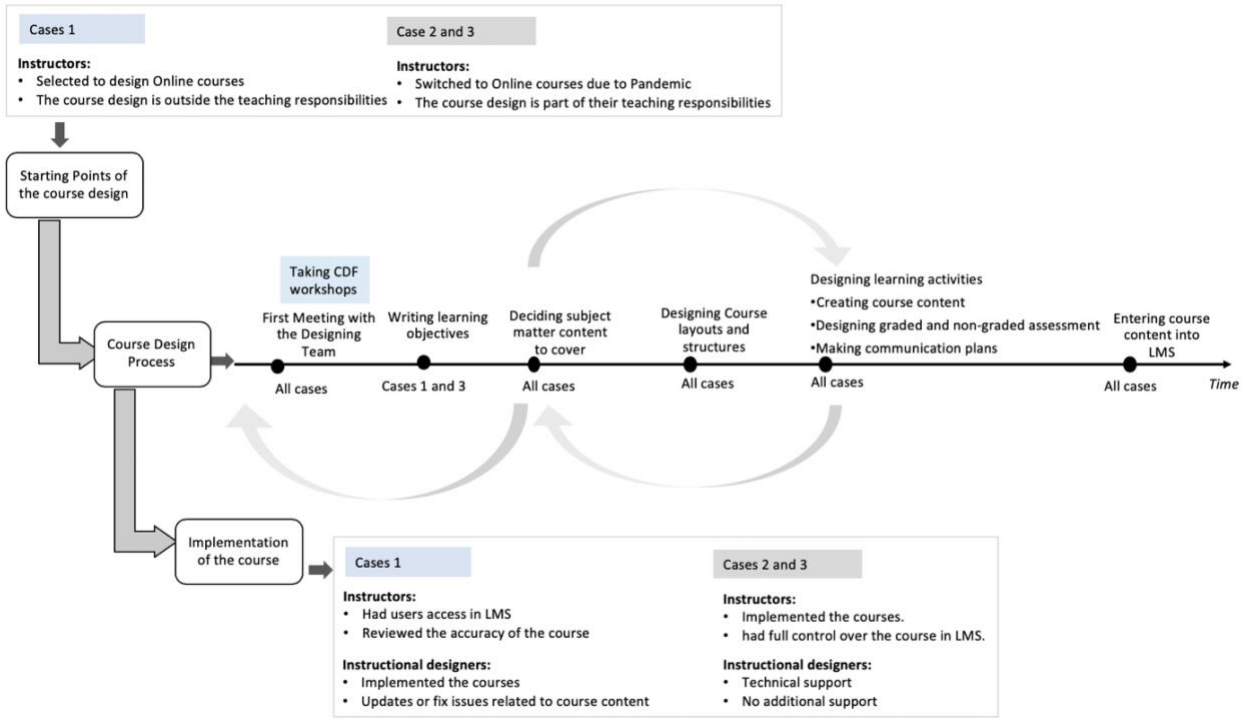
Noteworthy, most of the instructors across three cases do not mention any formal evaluation process to ensure the quality of the course before implementing the course,

which is different from the instructional design process described in previous studies (Carré, 2015; Curtis et al., 2017) and the general models of instructional design (Smith & Ragan, 2005; Seaman et al, 2018).

3. Implementing the course (all cases)
   Instructors in Case 1 contact the course coordinator from the design team to help implement the course or make any changes to the course. The course coordinator sets up course start/end dates and the assignment deadlines at the beginning of each semester. However, in Case 2 and Case 3, instructors implement the course on their own and occasionally contact instructional designers or educational technologists when they experience any technical glitches. Figure 7.1 reveals the generic process of the course design activity across three cases.

Figure 7.1

The course design process across all three cases.



Course Design Challenges

Balancing Instructors' Workload and Effective Course Design. The research data reveals a strong pattern. 8 out of the 15 instructors across the three cases expressed their desire to design visually appealing courses and provide interactive learning activities to students. However, they face challenges due to commitments such as research, administrative tasks, or teaching multiple courses. These commitments hinder their ability to allocate sufficient time for course development. Although instructors appreciate the concept of designing authentic assignments that foster students' knowledge applications, they find it difficult to have adequate time to provide meaningful feedback on students' assignments, particularly when they teach courses with over 100 students. Consequently, instructors have to prioritize the design aspects (such as revising existing learning activities rather than redesigning them, and using multiple choice questions as assignments) that require less time and effort to ensure they complete the course design on time.

Bridging Instructors' Needs and ID Support. A strong pattern is observed in two out of three cases and among 8 out of 15 instructors. In many instances, instructors are motivated to develop engaging learning activities and want to use a specific technical tool for this purpose. However, the tool is not supported or available at the institution, which forces instructors to consider alternative activities instead. In other instances, instructors have access to a particular digital tool but require guidance in exploring its use. Unfortunately, no one at their institutions, including instructional designers whom they sought assistance from, could provide instructors with specific suggestions or support. This hinders instructors' ability to design new learning activities for the course. Moreover, instructors in Case 2 raised a noteworthy concern regarding the ongoing availability of ID support. Instructors have expressed their desire to continuously enhance their course design. However, they noted that the instructional design support is limited to a specific time frame. As a result, instructors are left to work on course revisions or improvements independently, which hinders their motivation to explore innovative instructional strategies or tools.

Contradictions between Design Suggestions and Instructors' Teaching Practices. A weak pattern was observed in two of the three cases and 6 out of the 15 participants. When it comes to presenting course design suggestions to instructors, instructional designers often rely on academic papers and resources. However, there are instances when instructors choose not to apply one or more of these research-based suggestions. While many instructors admit that these suggestions are good for some online courses, they do not feel that they are suitable for their courses. In some cases, adopting these suggestions would have meant breaking department policies about keeping assignments consistent across the same course taught by different instructors. In other cases, instructors lack the necessary guidance to apply these suggestions to their courses. Sometimes, they do not fully understand the suggestions or cannot visualize them without a concrete example in their specific disciplines. Additionally, instructors feel that some suggestions would not work with their students based on prior experience and feedback. Seeing the direct benefit of a particular suggestion to their students motivated instructors to apply particular suggestions.

Navigating Diverse Perspectives in Course Design. It is an interesting pattern that emerged in Case 1, as instructors observed the varying perspectives that instructional designers brought to solve certain design issues. For example, Luis raised concern about students sharing exam questions with others to emphasize its detrimental impact on students' learning. In contrast, the instructional designers prioritized protecting Luis's copyright of the exam materials. Similarly, when working with the instructional designer to create a course homepage image, Kathy noticed the different perspectives: she focused on the image's intended meaning, while the designer focused on its attractiveness. This observation underscored the importance of having clear communication to establish a shared understanding of design tasks between instructors and instructional designers.

Insufficient Pedagogical Content Knowledge for Teaching in the Online Environment. Instructors across three cases noted the challenges they encountered in the specific pedagogical content area when designing online courses:

- Lack of strategies and approaches to effectively engage students in the online learning environment. It is a strong pattern observed in all three cases, with 9 out of the 15 participants. Instructors expressed their need to find ways to engage students and ensure students' active participation in learning activities. Unlike in face-to-face classes where instructors can rely on visual cues such as body language and facial expressions to gauge

student engagement, online classes require different approaches. While instructional designers can offer suggestions, instructors often struggle to apply them. Their limited pedagogical knowledge in online teaching makes it challenging to visualize the implementation of these suggestions within their specific discipline.

- Lack of strategies and approaches to avoid plagiarism in online testing, which pertains to instructors' concerns regarding students sharing exam content with others or resorting to unauthorized resources when taking exams. A weak pattern is observed in all three cases with 5 out of the 15 participants. Instructional designers provide potential solutions such as using proctoring software, generating multiple versions of tests, and randomizing test questions, to address the issue. However, despite this assistance, instructors still feel the lack of strategies and guidance when it comes to ensuring the credibility of online testing or designing alternative exams tailored to their disciplines.
- Being a new instructor of online course design and online teaching and learning. A weak pattern is observed in two of the three cases with 7 out of the 15 participants. Approximately half of the instructor participants are new to online teaching and learning. Notably, instructors in Case 2 and Case 3 were compelled to transition to online teaching solely due to the pandemic. Three of the instructor participants were new not only to online teaching but also to university teaching when they designed the courses. Five instructors from two cases expressed challenges in determining the starting point and the content scope when preparing courses for online delivery. To address this concern, they adapted existing course content from their face-to-face courses, including the materials or resources shared by their colleagues, and then selected digital tools to transform and present the course in the online learning environment. It may not be an effective approach, as online teaching and learning often require different pedagogical strategies and activities (Kebritchi et al., 2017).

The challenges identified by instructors in this study are consistent with those discussed in previous research exploring online teaching and learning (Lase & Zega, 2021) and course design and development (Chiasson et al., 2015). The alignment between the findings of this study and prior research underscores the importance of addressing those challenges to enhance the effectiveness of online course design and delivery. Table 7.1 summarizes the challenges found in three cases.

Table 7.1

Cross-Case Challenges

Challenges	**Cases**	**Participants (%) N=15**	**Pattern**
Instructors' workload vs. effective course design	Cases 1, 2, 3	53.3%	Strong
Instructors' needs vs. instructional design support	Cases 1, 2	53.3%	Strong
Applying design suggestions vs. instructors' teaching practices	Cases 1, 3	40%	Weak
Diverse perspectives of instructors and instructional designers	Case 1	13.3%	Interesting

Insufficient pedagogical content knowledge for teaching in the online environment	Cases 1, 2, 3		
• Engaging students in online learning		60%	Strong
• Avoiding plagiarism in online assessments		33.3%	Weak
• Being new to online teaching		46.7%	Strong

Perceived ID Roles and Responsibilities

All instructors across three cases consider the roles of instructional designers as supportive, aiming to assist them in achieving their course goals. In Case 1, instructors consider instructional designers' role to facilitate and help to transfer their visions to the tangible course content and enter and administrate the course content into LMS. They do not expect instructional designers to comment or make changes to course subject matter content. According to Luis, the instructional designers "were not necessarily experts in pedagogy" (Interview, Oct.11, 2021). Instructors in Case 2 also consider instructional designers as support to help them save time in designing courses. They appreciate instructional designers' efforts in providing customized suggestions specifically for their courses and their technical support on using LMS. Similarly, instructors in Case 3 see the instructional designers' roles as support to connect them with available course design resources and bring design ideas for them to consider.

Instructors across all three cases choose to work with instructional designers mainly for four reasons:

1. Enhancing course engagement, particularly focusing the learner-content interactions
2. Effectively integrating digital tools into the course
3. Communicating course content effectively to students through formatting and structuring course layouts
4. Saving instructor's time in preparing learning activities within online environments

When asking to describe IDs roles and responsibilities in course design process, instructors emphasised IDs roles in being a consultant in selecting instructional techniques and digital tools, experts in designing course layouts and structure, and technologists to assist entering course materials into the LMS.

Consultant in Selecting Instructional Techniques and Digital Tools. In all three cases, instructional designers offer suggestions and present various options when it comes to choosing instructional strategies and digital tools that can enhance student engagement in the online learning environment. These suggestions help instructors in envisioning potential learning content. Also, instructors and instructional designers brainstorm ideas to design interactive learning activities or explore ways to adjust existing activities to suit the online environment. Across the three cases, instructors independently make decisions regarding which instructional design suggestions they want to implement during the course design process.

Experts in Designing Course Layouts and Structure. Most instructors acknowledge the expertise of instructional designers in formatting and selecting technologies to effectively present course content in the online environment. They emphasize the essential role played by instructional designers in providing suggestions on structuring and presenting course content online for students. However, when it comes to preparing subject matter content, most instructors do not seek support from instructional designers. Instructors in all three cases mentioned they do

not consider instructional designers as pedagogues and do not expect any subject matter content-wise suggestions from them.

Technologist to Assist Entering Course Materials into the LMS. When developing the course in LMS, instructors in Case 1 send all the course materials to instructional designers. Then instructional designers enter the course content in LMS. Then, instructors review the content once the development is completed. Whereas in Case 2 and Case 3, instructors enter parts of the course content in LMS independently. But they ask for instructional designers' help to build complex learning activities such as quizzes, databases, and discussions to save their course preparation time. In all three cases, instructors reveal that they rely on instructional designers to support setting up various digital tools in LMS effectively.

From the elaboration of these reasons for working with instructional designers provided by the participants in the three cases, a portrait of the roles and responsibilities of instructional designers emerges. The role varies slightly, depending on the nature of the service sought by the instructional designer: full-service instructional design (Case 1), Express Service (Case 2), or workshops (Case 3). Table 7.2 shows the roles and responsibilities of the instructors and instructional designers as perceived by the instructors across three cases.

Table 7.2

Roles and responsibilities perceived by instructors Cross-Case

Instructor's Roles and Responsibilities	**Cases**	**Instructional Designer's Roles and Responsibilities**	**Cases**
***Roles*:**		***Roles***:	
• Primary role, own the course.	Cases 1, 2, 3	• Support role • Equal role, focus on format design	Cases 1, 2, 3 Case 1 (Luis) Case 2 (Emma)
Responsibilities:		***Responsibilities:***	
• Prepare course subject matter content	Cases 1, 2, 3	• Provide pedagogical and technical suggestions on designing online courses	Cases 1, 2, 3
• Decide course topics and prepare to teach the course online	Cases 1, 2, 3	• Check course materials such as copyright and accessibility.	Cases 1, 2, 3
• Write learning objectives	Cases 1, 3		
• Communicate ideas about creating course content and activities with the design team	Case 1, 2	• Understand instructors' discipline and ideas about the courses.	Cases 1, 2
• Decide course layout, structure, and tools used to present course content	Cases 1, 2, 3	• Provide suggestions on course layouts, formats, and structures	Cases 1, 2, 3

• Choose teaching and learning strategies and design learning activities	Case 1, 2	• Provide pedagogical and technical suggestions on designing learning activities	Cases 1, 2, 3
• Set up the course in LMS	Case 2, 3	• Set up the course content in LMS	Cases 1, 2, 3
		• Provide technical support	Cases 1, 2, 3
		• Take care of Administrative tasks while implementing the course	Case 1
		• Oversee the course project and coordinate the tasks within the design team	Cases 1, 2
		• Connect instructors with services and resources	Case 3

Power Dynamics between Instructors and Instructional Designers

In this study, *power* is defined as a dynamic social process that impacts perceptions, interactions and actions among individuals, which creates inequalities that affect achieving the desired results (Boonstra & Bennebroek Gravenhorst, 1998). Although this study focused only on instructors' perspectives on their perceptions of IDs, the results provided insights into how power dynamics influence the implementation of ID suggestions and shape the outcomes of the online course design activity.

The Working Relationships. The ways instructors work with instructional designers vary depending on the type of instructional design support services. In Case 1 and Case 2, instructors have assigned instructional designers to support them throughout the course design process. In Case 3, instructors do not work directly with the instructional designers in the course design process. However, instructional designers' ideas and suggestions in the course design workshops have impacts on their course design activities.

All instructors across three cases have positive working relationships with instructional designers. They appreciate the support and suggestions they received from the instructional designers. Instructors in Case 1 and Case 2 indicate their appreciation of instructional designers' efforts on their courses, their patience in responding to their requests, and their support in bringing various possibilities to make their courses effective online. Although instructors in Case 3 do not work directly with the instructional designer, they feel affirming and comfortable about designing their courses because they know they would get resources and support if needed.

Power Distributions. The power distributions between instructors and IDs are imbalanced. All instructors across three cases consider themselves as the primary role in the course design process and take full responsibility for the course. IDs play a secondary and supportive role that help instructors reach their goals. Instructors refer to the courses as "their courses", they have the freedom of choosing content for the course, and they own all the content of their courses. They have full control over the course vision, objectives, and subject matter content. They are not comfortable having IDs provide suggestions on their subject matter content. Instructors characterize ideal relationships as respectful ones, which instructional

designers respect instructors' teaching approaches and stay by their side to help make the courses visually appealing, whereas instructors take control of the course content. Also, onstructors perceived subject matter content to be more important aspects of the course compared to the course structure and navigations.

When communicating with one another, instructors have more control of the flow of the interaction because they decide when and what to ask IDs for help. During the course design process, IDs provide instructional and technical suggestions to instructors, however, they do not have any decision-making powers. Instructors independently make decisions regarding which ID suggestions they want to implement to their courses.

Answer to Research Question 2: Using the Framework of Activity Theory, Characterize How Instructors Engage in Course Design Activities.

The Activity in Course Design

The second generation of the Activity System model (Engeström, 1987) is used to present instructors' course design activities supported by different instructional design support approaches. In the conclusions of the individual cases, activity systems emerging from instructors' experiences were presented. Table 7.3 compares the three resulting activity systems.

Table 7.3

Comparisons of activity systems across the three cases

Activity Elements	Case 1	Case 2	Case 3
Subject	• Faculty status: Tenure-tracked faculty (N=3) • Teaching experience: I have more than ten years of teaching experience and taught the same course face-to-face before. • Teaching beliefs: Teaching is to share knowledge and to help students build skills. • Choose to design online courses. Open to online teaching and learning. • Challenge: cannot see students' facial expressions or have immediate interactions with them	• Faculty status: Tenure-tracked faculty (N=4) and part-time instructors (N=2) • Teaching experience: Most instructors taught at the university for more than 7 years. Their priorities are research rather than teaching. • Teaching beliefs: Same as Case 1 • Switched to online due to the Pandemic. Open to online teaching and learning. • Challenge: Same as Case 1	• Faculty status: Tenure-tracked faculty (N=1), Full-time teaching faculty (N=2) and part-time instructors (N=3) • Teaching experience: Many had fewer than 5 years of teaching experience. • Teaching beliefs: Same as Case 1 • Switched to online due to the Pandemic. Open to online teaching and learning. • Challenge: Same as Case 1
Object	• To develop a visually appealing asynchronous online course	• To prepare a course for online delivery using both synchronous and	• To prepare a course for online delivery using both synchronous and asynchronous formats.

	• To improve students' engagement with the learning content using interactive learning activities • Instructors' object: Stay up-to-date with technologies and strategies for teaching	asynchronous formats. • To adjust existing content and use digital tools to present it online • To prepare a well-structured course in LMS • To ensure students' engagement (student-content, student-student interactions) using various tools • Instructors' object: save time in transferring the course online. To explore different options for using technical tools.	• To mimic in-class teaching and use technologies to present a classroom-like online class. • To provide students with good learning experiences and ensure students' engagement online. • Instructors' object: to know different options or strategies in integrating digital tools, to know more about the process of designing a course for online delivery and prepare to teach online.
Tools	• Physical tools: laptop, headphones, microphones, subject matter materials, textbook • Virtual tools: PowerPoint slides, images, videos, audio, LMS, and tools embedded in LMS. • Communication: Adobe connect, e-mail • Cognitive tools: suggestions related to pedagogy and technology provided by instructional designers, instructional design principles and strategies.	• Physical tools: Same as Case 1 • Virtual tools: Same as Case 1 • Communication tools: Zoom, e-mail • Cognitive tools: Same as Case 1	• Physical tools: Same as Case 1 • Virtual tools: Same as Case 1 • Communication tools: Zoom, e-mail • Cognitive tools: Same as Case 1
Rules	• University policy on online courses: o The development of the course is outside the instructor's	• University policy on online courses: o The development of the course is part of the	• University policy on online courses: o The development of the course is part of the instructor's

	regular teaching responsibility. o Instructors retained full right to the course content o Instructors had user access to the course in LMS. o Instructional designers administrated the course in LMS each semester o Check the copyright of the sources used in the online courses • Followed the instructional design process proposed by the design team and signed an agreement including the course product, timeline, and budget. • Selected technical tools that were integrated into the Institution's LMS or digital tools that passed security and privacy checks at the institution.	instructor's regular teaching responsibility. o Instructors retained full right to the course content o Instructors had full control of the course in LMS. o Complying with the accessibility policy when presenting course content • Instructors' work requirements are based on their faculty status. • Had a fixed amount of supporting time from the instructional design team. Needed to select course design tasks to work with the design team. • Selected technical tools that were integrated into the Institution's LMS or digital tools that passed security and privacy checks at the institution.	regular teaching responsibility. o Instructors retained full right to the course content o Instructors had full control of the course in LMS. o The Course format (whether synchronous online or HyFlex) was decided based on class size and availability of the resources at the institution o Complying with the accessibility policy when presenting course content • Instructors' work requirements are based on their faculty status. • Departmental guidelines on keeping consistency among the same course that was delivered in different sections by different instructors. • Instructors participated in instructional design workshops voluntarily and instructional design resources could be accessed by every instructor. • Selected technical tools that were integrated with the Institution's LMS or digital tools that passed security and privacy checks at the institution.
Community	• Instructional designers (learning experience designers), educational	• Instructional designers (learning experience	• Instructional designers • Colleagues of the instructors

	technologists, course producers • Videographers and graphic designers • Programmer • Course coordinator • Teaching assistants • Instructional design interns • Students	designers), educational technologists, course producers • Videographers • Teaching assistants • Students	• Teaching assistants • Student partners • Students
Division of Labor	Instructors • Prepare subject matter content • Communicate their course ideas with the design team • Decide on course structure, teaching, and learning strategies Instructional designer: • Enter content into LMS • Administrate course in LMS • Support instructors to make changes to the course	Instructors • Prepare subject matter content • Communicate their course ideas with the design team • Decide on course structure, teaching, and learning strategies Instructional designer: • Provide suggestions • Set up activities on LMS using different tools • Provide instructions on how to use digital tools	Instructors • Prepare subject matter content • Learn to design and develop courses from the workshops and their colleagues • Decide on course structure, teaching, and learning strategies • Design and develop courses in LMS Instructional designer: • Provide instructional design-related content and suggestions • Help connect instructors with the right resources

Commonalities and Differences Across Activity Systems. This section compares and contrasts the activity systems, one element at a time.

Subject. Instructor's perspectives are the focus of each of the three-course design activity systems. Across three cases, instructors' faculty status, prior experiences of teaching the course, teaching beliefs and teaching approaches, and understanding of online teaching and learning mediated instructors' course design activities.

Object. Two types of objects were mentioned in the individual activity systems:

- Course-related objects, which are the goals the instructor mentioned about what they wanted to produce for their courses. Course-related objects appear in all three activity systems. For example, all instructors across three cases aimed to have a course ready for online delivery at the end of the course design activity and all of them mentioned improving students' engagement as an object for the course designing activity.
- Instructor's personal goals, which relate to instructors' goals on improving course design and teaching skills and knowledge. Instructor's objects appear in all three of the activity systems. Examples of course-related objects include knowing different options of technological tools and strategies for preparing visually appealing courses.

However, some objects also differed across the cases. The differences appear to be linked to the type of instructional design service used in the case. This, in turn, affected the design activities in which instructors engaged. For example, in Case 1, all instructors designed complete asynchronous online courses and, through the design process, considered content and strategies suitable for that format. By contrast, in Case 2 and Case 3, instructors focused on switching to online in a short period. They did not design the course content specifically for the online environment, choosing instead to employ a combination of asynchronous and synchronous formats to optimize the delivery of the course content. Also, instructors in Case 1 had the object of designing interactive activities and spent more time working with instructional designers to create learning activities. By contrast, instructors in Case 2 had the object of having well-structured courses in the LMS, focusing their efforts and seeking instructional designers' support on that objective.

Tools. The types of tools used in the course design process were similar across the three cases. The choices of LMS and other digital tools varied among instructors but also depended on the LMS and tools provided by their institutions, and then the needs of the course content, instructors' familiarity with the tools, and the availability of support or resources for using the specific tools.

In addition to digital tools, all the instructors across the three cases said that they used pedagogical and technical suggestions from the instructional designers when designing courses. Examples of the suggestions include: Using smaller chunks of course content to reduce students' cognitive overload, considering universal design principles to foster course accessibility and inclusivity, designing easy-to-navigate course structures and keeping consistency within those structures, writing measurable learning objectives and aligning the assessments and content with the objectives, and considering multiple means to increase students' engagement in the online learning environment.

Rules. The rules that mediated instructors' course design activities varied in the three cases. One reason that rules differed resulted from the difference in institutions among the three cases, each of which has its policy related to designing and administering online courses. For example, instructional design service is provided by an external organization in Case 1 and Case 2, but it is part of the institution's teaching and learning services in Case 3. Rules also differed because of the service. For example, designing online courses is outside instructors' teaching responsibilities in Case 1. But in Case 2 and Case 3, it is within the instructor's teaching responsibilities.

Some commonalities arose across the three cases. One is pertained to the selection of digital tools. Each institution has its support digital tools that are compatible with the institution's LMS. Also, all the digital tools used in the courses need to pass the institution's security and privacy check. For example, instructors mentioned they did not use Google Docs as the tool in their courses because Google Docs uses a server from another country which is not secure for protecting students' privacy. Another commonality about rules is a requirement to comply with institutional policies related to accessibility (to provide equity, inclusive and diverse learning environment for everyone) and copyright of intellectual property (to protect all the original works and give credit to every contributed idea) when including materials in the learning content.

Community. Instructional designers, teaching assistants, and students directly or indirectly impacted instructors' course design activities across the three cases. Depending on the type of ID support provided, different individuals were involved in the course design process to

help instructors achieve their goals. For example, in Case 1 and Case 2, instructors worked with videographers and graphic designers to create lecture videos, edit lecture slides, and design graphics for course websites. By contrast, some instructors in Case 3 worked with students to develop subject matter content for the course.

Interestingly, only instructors in Case 3 mentioned they worked with their colleagues to co-design some learning activities or used the tools designed by their colleagues to help design their course. None of the instructors in Case 1 and Case 2 mentioned working with colleagues. Only with the instructional design team. Furthermore, the composition of the ID team varied between Case 1 and Case 2 because of the difference between full-service and express instructional design services. The ID team in Case 1 consisted of more team members than in Case 2, such as course coordinators and programmers in Case 1 whose services are not mentioned in Case 2.

Division of Labor. Instructors across the three cases mentioned they took full responsibility for designing and developing the courses. Specifically, instructors mentioned that their roles in the design process were to prepare the subject matter content for the course, decide course formats and structures, choose teaching strategies, and develop learning activities. Instructors considered instructional designers as support in their course design process. According to the instructors, the roles of IDs are to provide suggestions and show different options for designing courses and using technologies, as well as suggesting course layouts, structures, and techniques for content presentation. But instructors note that they make the final decision on these issues, rather than IDs. This contrasts with the view that instructional designers should work collaboratively with the instructors to make these decisions (Drysdale, 2019; Halupa, 2019). Also, as Jonassen (2012) mentioned, instructional designers are responsible for making final decisions on aspects such as selecting tools and instructional strategies and evaluating the quality of the project in the field outside higher education.

Depending on the ID service used, the division of labor varied regarding setting up the course in the LMS and implementing it there. In Case 1, instructional designers helped or entered all the course content into LMS for the instructor, and a course coordinator oversaw the course implementation in LMS each semester. In this service, instructors reviewed course content once it had been loaded into the LMS and would contact the ID team to make changes once the course was loaded. In Case 2 and Case 3, by contrast, instructors entered most of the course content into the LMS and also oversaw the implementation of their courses. At most, instructors received assistance and support from IDs in setting up activities in an LMS and only upon request.

The extent to which instructors worked directly with IDs also varied depending on the service. In Case 1 and Case 2, instructors worked directly with the instructional designers, which involved formulating requests, and ideas for courses, and sharing course materials with instructional designers. By contrast, instructors in Case 3 did not work directly with the instructional designers. Rather, instructors applied instructional design ideas learned in the workshops.

Tensions within Instructors' Course Design Activity Systems. The tensions in this study refer to the challenges encountered by instructors throughout the course design process. Challenges refer to the difficulties that instructors face while engaging in the course design process (OED, n.d.). In response, Instructors made necessary adjustments to their activities to ensure things worked in their courses. Table 7.4 summarizes the tensions raised across the three cases.

Table 7.4

Tensions raised in the course design process in three activity systems

Case 1	Case 2	Case 3
Tension 1: Tools—Object • The cognitive tools were not sufficient to achieve instructors' objectives of engaging students in the online learning environment and avoiding plagiarism in online exams.	Tension 1: Tools—Object • The cognitive tools were not sufficient to achieve instructors' objectives of engaging students in the online learning environment and avoiding plagiarism in online exams.	Tension 1: Tools—Object • The cognitive tools were not sufficient to achieve instructors' objectives of engaging students in the online learning environment and avoiding plagiarism in online exams.
Tension 2: Subject –Division of labor • Instructors liked the ideas and suggestions provided by instructional designers but did not have time to apply them in their courses • Instructors' teaching experiences conflicted or made it hard for them to visualize the feasibility of instructional designers' suggestions. Suggestions did not apply to their subject matters.	Tension 2: Subject – Division of labor • Instructional designers helped set up some learning activities for the instructor but their support was only available for one semester. When instructors needed to set up later courses, they did not have any support and had to learn course setup on their own.	Tension 2: Subject –Division of labor • Instructors liked the ideas and suggestions provided by instructional designers but did not have time to apply them in their courses • Instructors' teaching experiences conflicted or made it hard for them to visualize the feasibility of instructional designers' suggestions. Suggestions did not apply to their subject matters.
Tension 3: Subject –Community • Instructors and instructional designers had different perspectives on some course activities.	Tension 3: Subject – Object • Instructors wanted to design and develop good online courses but they could not find time to devote to the course design as they had other work commitments.	Tension 3: Subject -Object • Being new instructors in higher education requires them to put extra time and effort into learning how to design courses.
Tension 4: Rules – Tools • Institutional rules on technology privacy and security restricted the use of certain digital tools	Tension 4: Subject – Rule • The Pandemic Context forced instructors to switch to online. • Limited time to prepare the course • The amount of support available to instructors was not adequate to meet all instructors' needs	

The activity systems across the three cases highlighted two common tensions. The first tension revolves around the relationship between the "tool" and "object" nodes, symbolizing the cognitive tools employed by instructors in their course preparation. Instructors found these tools to be somewhat inadequate in achieving their objectives of fostering student engagement and preventing plagiarism within the online learning environment.

Traditionally, in face-to-face classrooms, instructors rely on non-verbal cues and real-time feedback from students to gauge their engagement and adjust their teaching accordingly. However, the transition to the online environment, often characterized by a grid of student video squares on the screen, impedes instructors' ability to observe students' facial expressions or engagement levels effectively. This challenge necessitates the exploration of alternative methods for engaging students and assessing their level of engagement. In response, instructors turned to digital tools such as discussion forums, educational games, and databases.

Collaboration with instructional designers played a pivotal role in addressing this challenge. Instructional designers provided valuable guidance and suggested innovative approaches, such as incorporating check-your-understanding exercises and opportunities for students to exchange ideas with peers, thereby enhancing the creation of an engaging online learning environment. Additionally, instructors leveraged one-to-one meetings on platforms like Zoom to individually connect with students, fostering engagement and personalized support.

This tension between traditional teaching cues and online tools underscores the adaptability and resourcefulness required to create effective and engaging virtual learning experiences.

Another example of the tension between tool and object nodes is instructors' lack of strategies for minimizing plagiarism in online testing. Instructors used technical tools such as e-proctoring software and cognitive tools such as instructional designers' suggestions of using alternative assignments, setting restricted time ranges for exams, and randomizing exam questions to reduce the likelihood of cheating and plagiarism, which instructors found helpful. However, instructors did not feel those tools on their own were sufficient to help them achieve their goals of administrating online exams effectively. They felt they could have done better by having additional suggestions from the instructional designers and tool options related to that matter.

The other tension observed is that between the subject node and the division of labor node, which relates to conflicts between instructors' previous experiences and work priorities, and reactions to ID suggestions. One of instructional designers' tasks is to provide suggestions and ideas to help instructors effectively prepare their courses. On the one hand, instructors in all three cases indicated that they appreciated the suggestions and ideas provided by the instructional designers. On the other hand, instructors found that, when trying to apply those suggestions to their courses, they needed to resolve conflicts. Although instructors agreed with the suggestions offered by instructional designers and believed those suggestions could improve their courses. However, instructors have difficulties in finding time to implement ID suggestions. Because of their commitments to research and other teaching, they had to postpone implementation of the suggestions.

In other instances, instructors' previous teaching experiences conflicted with the suggestions offered by instructional designers. For example, some instructors could not visualize how suggestions from instructional designers would benefit student learning. Some instructors did not believe that ID suggestions were feasible because the instructional designers lacked

subject matter expertise. Some instructors tried to implement specific ID suggestions but lacked instructions on how to do so. Five instructors in the study noted that instructional designers would provide general suggestions about ideas but did not provide details on how these suggestions would work in specific courses and instructors could not implement the suggestions in their courses. Additionally, instructors in Case 2 mentioned that instructional designers helped them create some learning activities but did not work with the instructors so that the instructors could develop similar activities by themselves when they no longer had access to ID services. Instructors had to spend extra time making changes to the activities and re-creating them when the ID support was no longer available.

Tensions existed in all three activity systems but were different. For example, tension existed between the subject and the object mentioned in Case 2 and Case 3. This tension indicates the contradictions between instructors' work priorities and their goals of designing an excellent online course. The tension between the subject and rules in Case 2 reveals the regulation of designing online courses during the pandemic and instructors' intention of preparing online courses. Moreover, the tension between rules and tools in Case 1 represents the conflicts between selecting the proper tools to make the course effective and complying with the institutional policy on the security and privacy of the selected tools.

Instructors raised these tensions as challenges that affected their course design process. Although instructors adjusted their activities in the course design process, the tensions did not seem to break the activity system. Instructors were satisfied with their course design process and the course online delivery. Instructors noted, however, that room for improvement exists in the ID services they received. For example, some instructors mentioned having more discipline-specific instructional design suggestions, some suggested having more examples to help instructors visualize different learning activity ideas, and others suggested having documented instructions on selecting and using digital tools.

Consolidated Activity System for ID in a University Environment. The consolidated activity system for course design in a university environment summarized the factors considered essential from all three cases and provided a guide for future research exploring the instructional design supported course design activities in higher education.

Subject. When looking at the course design activity system from the instructor's perspectives, factors such as instructors' teaching experiences, teaching beliefs, faculty status, experience with online teaching and learning, and their motivations for being involved in the course design activities have impacts on their choices and activities during the design process.

***Objects and Outcomes*.** Instructors have general goals of having a completed course product, making the course effective for learners, and improving their teaching in the online environment. Depending on the institutional rules and context, as well as instructors' time and workload, instructors put a different level of emphasis on different objects.

Tools. The ways tools (physical, virtual, and cognitive) mediated different ID-supported course design activities are similar. Suggestions and support provided by instructional designers are essential tools for instructors to make design decisions and develop their skills in implementing innovative instructional strategies and technology tools. Different institutions have different selections of virtual tools and types of ID services. Also, depending on the types of ID services, the extent to which the ID services mediated the course design activity varies.

Rules. Different rules that mediated the course design activities include the university's policies on online teaching and learning, policies on faculty's ownership of the course, rules on getting ID services, rules related to faculty's control over the course on LMS, and regulations on

the accessibility of the course content, faculty's status at the university, and rules on faculty's responsibilities of teaching and managing online courses.

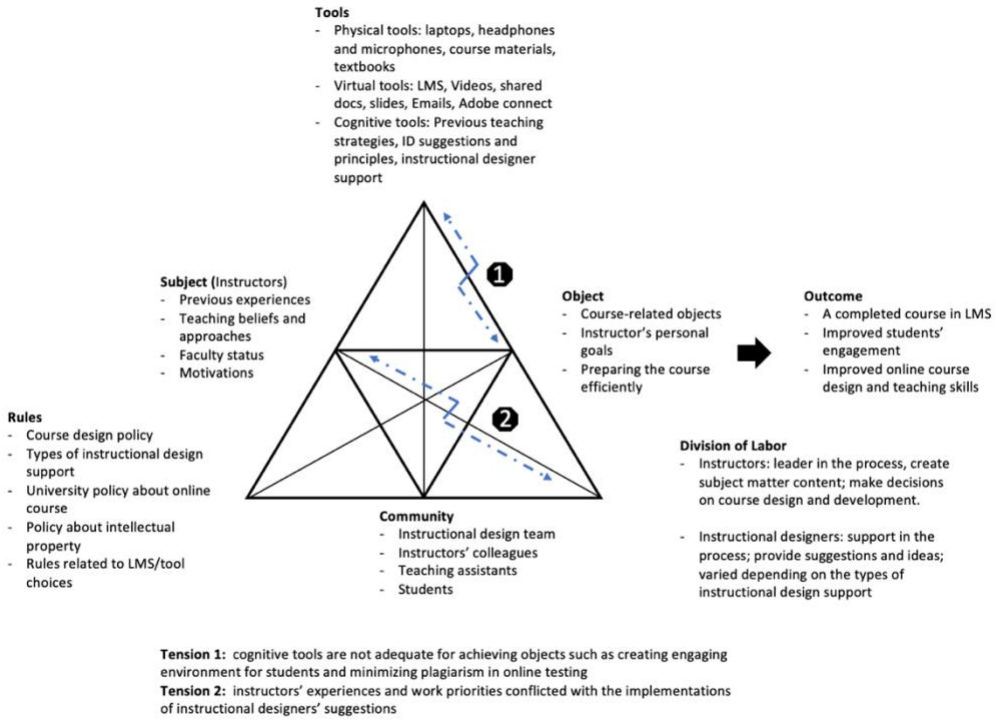
Community. The community includes primarily an ID team, which consists of instructional designers, educational technologists, project managers, graphic designers, videographers, instructors' colleagues, teaching assistants, and students. While students are not typically directly engaged in the course design process, their feedback significantly influences the design, and their learning experiences are the central focus of the design efforts.

Division of Labor. Compared to other elements within the activity system, the division of labour differs the most across different ID support modes. However, it is common among the three ID support activities that the instructors play the lead role. They create subject matter content for the courses and make course design and development decisions. The common task of instructional designers is to provide ID suggestions and ideas for the instructors to consider. Also, instructional designers play a crucial role in course structuring and organization. Instructional designers also provide various support, but the types of support depend on different ID support models.

Tensions. ID support services bring ID suggestions and ideas as tools to the course design process, and the types of support services result in different divisions of labor. Arrows 1 and 2 show the major tensions in the course design process. Arrow 1 is the possible tension between the tools and the object. Perhaps instructors are not knowledgeable about mediating tools, or the current tools are insufficient to help instructors achieve the objective. Arrow 2 is about the working relationships between the instructors and the instructional designers. Figure 7.2 presents the consolidated activity system for instructional design in a university environment.

Figure 7.2

Consolidated activity system



ID Suggestions (cognitive tools) Provided to Instructors

ID suggestions provided to instructors varied slightly across the three cases. Common ID suggestions that emerged across all three cases included guidance on designing course structure and format, selecting digital tools and multimedia, incorporating university design principles, considering students' cognitive skills, facilitating active learning to enhance learning engagement, and incorporating visual design. Suggestions related to teaching strategies, communicating with students, and evaluating courses were provided to instructors in Cases 2 and 3, while writing learning objectives were brought up by instructors in Case 1 and Case 3. Moreover, complying with the copyright policy was only mentioned by instructors in Case 1.

Instructors' decisions regarding the acceptance and integration of the ID suggestions into their course design vary across different suggestion topics. The analysis of instructors' narratives across three cases reveals three decision types: complete acceptance and implementation within the course, acceptance with selective integration into the course, and acceptance coupled with the decision not to implement in the course.

The complete acceptance and implementation within the course refer to instructors agreeing with the ID suggestions and applying them, either independently or in collaboration with instructional designers, to achieve their course design objectives. The recommendations regarding designing the course structure and format find widespread acceptance among the majority of instructors across the three cases. In Cases 1 and 2, all instructors and four instructors respectively, worked closely with instructional designers to create a user-friendly and consistent course structure. Meanwhile, in Case 3, instructors independently implemented the structuring suggestions. Moreover, suggestions concerning the consideration of learners' cognitive abilities are also well-accepted among instructors. For example, 8 out of the 15 instructors mentioned their adoption of chunking lecture content to mitigate cognitive overload for students.

The acceptance with selective integration to the course refers to instructors agreeing with multiple suggestions presented to them, while also needing additional guidance or support to determine how and to what extent these suggestions should be incorporated into their courses. For example, instructors across all three cases expressed their need for guidance when it comes to selecting effective digital tools for presenting course content and developing learning activities, as well as for choosing instructional strategies that enhance learning engagement and communication with students. In many instances, instructional designers present a range of tool options, or learning activities, offer detailed explanations of their implementation, and provide prototypes to help instructors visualize their choices. Instructors, in turn, select from these proposed suggestions and integrate them into their courses, either independently or in collaboration with instructional designers.

The acceptance coupled with the decision not to implement them in the course denotes instances in which instructors acknowledge or learn from the suggestions but deem them not applicable or feasible for their particular courses. As a result, they opt not to apply these suggestions. This situation occasionally arises when instructional designers propose recommendations related to transitioning to student-centered teaching approaches, realigning course content with learning objectives and course assessments, or introducing innovative learning activities such as incorporating alternative tests beyond traditional exams or adopting flipped class mode. Table 7.5 presents the specific ID suggestions within each topic, along with the instructors' inclinations towards acceptance and integrations, as highlighted by instructors about corresponding cases.

Table 7.5

ID suggestions provided to instructors

Topics	ID suggestions	Acceptance Level
Designing course structure and format (**Cases 1, 2, and 3**)	• Create a user-friendly course structure. (**Case 1, 2 and 3**) • Keep the simplicity and consistency of the course structure to enable learners to focus on the learning content. (**Case 1, 2 and 3**) • Use navigational aids such as menus and hyperlinks to provide students seamless access to different units within the course. (**Case 1, 2 and 3**)	Complete acceptance and Implementation
Selecting digital tools and multimedia (**Cases 1, 2, and 3**)	• Explore possible tools (such as quizzes, discussions, wikis, and databases) within the LMS and other applications that help effectively display course content and learning activities in the online environment and enhance the interactivity of students' learning (**Case 1, 2, and 3**).	Acceptance with Selective integration
Incorporating universal design principles (**Case 1, 2 and 3**)	• Foster the inclusivity and accessibility of learning. (**Case 2 and 3**) • Employ dual modes of content to accommodate diverse learning preferences, such as pairing text with video explanations. (**Case 1, 2 and 3**) • Enhance course accessibility by adding alt text for images using proper font color and size and using styled headings. (**Case 1, 2 and 3**)	Acceptance with Selective integration
Considering learners' cognitive skills (**Case 1, 2, and 3**)	• Provide introductory videos to gain learners' attention. (**Case 3**) • Break down course content into smaller chunks to prevent cognitive overload (**Cases 1, 2, and 3**) • Add practice activities amidst the learning content to enable students to check their understanding of the learning concepts. (**Case 1 and 3**) • Simplify the language used in the course by reducing complex terminologies to enhance students' comprehension. (**Case 1, 2 and 3**)	Complete acceptance and Implementation
Facilitating active learning (**Cases 1, 2, and 3**)	• Offer opportunities for students to familiarize themselves with the course structure and activity formats. (**Case 3**)	Acceptance with Selective integration

	• Provide practical opportunities for students to try what they have learned before formal assessments. (**Cases 2 and 3**)
	• Use collaborative work among students and encourage students to have discussions with peers. (**Cases 1, 2 and 3**)
	• Introduce innovative ideas for engaging students in online learning environments. (**Cases 1 and 3**)
	  o Use gamification techniques
	  o Share blog posts from professional fields to bridge theoretical knowledge with real-world applications
	  o Adopt the flipped classes model through pre-class tasks followed by in-depth discussions during class time
	  o Integrate problem-solving questions to facilitate critical thinking
	  o Use smaller assignments to scaffold complex ideas
	  o Explore alternative tests beyond traditional formal exams.
		Acceptance but with the decision not to implement
		
		Acceptance but with the decision not to implement

Implementing visual design (**Cases 1, 2, and 3**)	• Design visually appealing and interactive course web pages and lecture materials. (**Cases 1, 2 and 3**)	Complete acceptance and Implementation
Teaching strategies (**Cases 2 and 3**)	• Apply a learner-centered teaching approach. (**Case 3**) • Give students opportunities to reflect on their learning. (**Case 3**) • Help students connect new knowledge to their existing understanding. (**Cases 2 and 3**) • Provide clear instructional materials and assessment criteria. (**Cases 2 and 3**) • Use grading rubrics. (**Cases 2 and 3**) • Allocating proper weights and time for different learning tasks. (**Case 3**)	Acceptance but with the decision not to implement Acceptance with Selective integration
Communicating with students (**Cases 2 and 3**)	• Consider multiple means to communicate with students (**Cases 2 and 3**) • Send weekly messages to increase instructors' presence (**Cases 2 and 3**) • Spend time meeting with individual students. (**Case 2 and 3**)	Acceptance with Selective integration

Evaluating courses (**Case 2 and 3**)	• Collect feedback from students for continuous course evaluation and improvements. (**Cases 2 and 3**)	Acceptance with Selective integration
Writing learning objectives (**Cases 1 and 3**)	• Compose measurable learning objectives that adhere to Bloom's taxonomy. (**Cases 1 and 3**) • Ensure the alignment between learning objectives, course content, and learning activities (**Case 3**).	Acceptance with Selective integration
Complying with copyright policy (**Case 1**)	• Ensure the course materials adhere to copyright policy. (**Case 1**)	Complete acceptance and Implementation

Factors Influencing Instructors' Decisions on Employing ID Suggestions

The analysis results of the three cases revealed six factors that have a significant influence on instructors' decisions regarding the acceptance of ID suggestions – their course design objectives, time constraints and workload, teaching experience, the perceived complexity of implementing ID suggestions, and the availability of ID support.

Instructors' Course Goals. Instructors fully accepted ID suggestions that directly aligned with their course design needs and aided in achieving their course-related goals. A considerable number of instructors spanning the three cases shared a common goal of having a well-structured course and exploring effective ways for online course delivery. These goals prompted them to fully implement ID suggestions about course structure and formatting, along with considering students' cognitive capabilities when presenting course content in an online setting. Instructors actively sought ID input for aspects they identified as challenging to address independently. They leaned on instructional designers' expertise in course organization and format, as well as their insights into how learners learn, to tailor their courses effectively for the online learning environment.

Time Constraints. The amount of time an instructor has available for designing their courses plays a pivotal role in influencing their decisions regarding the adoption of specific ID suggestions. Instructors often lean towards incorporating ID suggestions that help them save time in preparing or delivering their courses. To illustrate, Mike in Case 2 used a template to create exam questions, allowing instructional designers to efficiently build the exams into the LMS. Rita and Emma embraced the idea of creating grading rubrics to communicate their expectations with students and substantially reduce the time required for grading papers during course delivery. Also, Jenny in Case 3 implemented the suggestion of creating time stamps to chunk video lectures, enabling her to save time that would otherwise have been spent re-recording the video lectures.

Instructors across the three cases expressed their willingness to incorporate more ID suggestions when they had time. This inclination intertwined with instructors' academic standing. For instance, instructors who are in tenured or tenure-track positions often have additional responsibilities of research and administrative tasks, which limit the time they can allocate to course preparation. As mentioned by Alex in Case 3, he wanted to spend time on writing effective learning objectives for his courses, but he still needed to find time to digest the ideas and work on them.

Teaching Experiences. Instructors with diverse teaching experiences approached ID suggestions differently. Instructors who have many years of teaching experience typically seek a

range of possible options from instructional designers to help realize their teaching or activity ideas. Conversely, novice instructors who are new to teaching in higher education require more guidance to get started with course design and delivery. New instructors like Emma and Gaby, as well as Alex, Lia, and Cecilia, in Case 2 and Case 3 respectively, said that they considered ID suggestions and associated ID support as valuable professional development opportunities, and they gained valuable insights into course design.

Experienced instructors explore various ID suggestions and then they select the ones that resonate most with their teaching experiences rather than relying on instructional designers to give them a solution. For example, Kathy from Case 3 mentioned the suggestion to increase discussion activities to enhance student engagement. Drawing from her previous experiences with similar activities, she figured that this particular recommendation did not align with her teaching style or classroom dynamics, leading her to reject the suggestions. On the contrary, novice instructors tend to make course design decisions based on ID suggestions. For instance, Lia and Alex from Case 3 mentioned they learned from the IDs where to start when preparing a course, how much learning content to be included in each class, and how to allocate weights for different assessments. This contrast in the approach to ID suggestions underscores the different decision-making processes between experienced and novice instructors.

The Perceived Complexity of Implementing the ID Suggestions. Complexity refers to the perceived level of difficulty individuals face when trying to understand and use the suggestions (Rogers, 2003). Instructors lean towards incorporating suggestions they deem easy to implement, and ones that do not need a significant time investment for mastering. For instance, more than half of the instructors across the three cases sought out ID suggestions aimed at facilitating the re-use of previously created learning content, rather than embarking on the more time-consuming task of creating new material. Also, instructors are inclined to accept suggestions that they believe they can manage independently without requiring external support. As Rita in Case 2 mentioned, she implemented a suggestion on using discussion activity to enhance student engagement because she had experiences using discussion forums and felt confident to modify the activity and monitor student responses. Furthermore, instructors expressed a preference for incorporating suggestions that allowed them to visualize the direct benefits of improving student learning outcomes and enhancing their ways of facilitating learning.

The Availability of ID Support. The availability of ID support significantly influences instructors' choices when integrating ID suggestions into their courses. The analysis of the three cases highlights that when it comes to suggestions related to creating engaging learning activities using various tools, the active involvement of instructional designers in providing hands-on support to set up the activities, offering prototypes or concrete examples that help instructors visualize ID suggestions, and explaining the benefits of the suggestions in details greatly enhance the likelihood of instructors incorporating the recommendations into their courses.

The specificity of ID support also has an impact on instructors' design decisions. For instance, some instructors have noted that they opted not to adopt certain ID suggestions because these suggestions were not directly applicable to their specific disciplines. ID suggestions that consider the discipline differences would enhance the implementation of such recommendations. Additionally, some instructors pointed out that while they appreciate receiving general ID suggestions for course design, they often encounter a lack of detailed information when seeking guidance on how to effectively integrate these suggestions. For example, both Luis in Case 1 and Jenny in Case 3 expressed their acceptance of the concept of using discussion activities to

maintain student engagement. However, when they incorporated the suggestion, they found themselves without sufficient guidance on managing the activity to ensure active student involvement. To better assist instructors in incorporating ID suggestions into their courses, more detailed guidance on the practical implementation of these suggestions is needed.

Incorporating specific suggestions related to adopting universal design principles for ensuring the inclusivity and accessibility of course materials, adhering to copyright policies, and implementing visual design improvements required high involvement from instructional designers. It also relies on instructors' willingness to collaborate by allowing instructional designers to review and edit their course materials, thereby ensuring the successful implementation of these suggestions.

Additionally, providing ongoing ID support is instrumental in enabling instructors to incorporate more ID suggestions into their future courses.

Instructors base their course design decisions on a holistic consideration of various factors. They customize the adoption of ID suggestions by aligning them with their daily practices and personal preferences when doing course design activities. This decision-making process also reflects how these ID suggestions, influence and shape the instructors' course design and teaching practices.

Answer to Research Question 3. How do Instructors Perceive the Impact of Instructional Design Support on Their Course Design and Teaching Practices?

This question aims to explore the mediating effects of ID support on instructors' course design activities, including receiving suggestions on instructional techniques, designing effective learning activities, and integrating digital tools. It helps understand how ID support influences instructors' course preparation methods, teaching practices, and the course outcomes.

Most instructors across the three cases indicated that their teaching approaches and beliefs mostly stayed the same. Still, the course design experience helps them reflect on their teaching and incorporate what they learned from the experience when preparing for their future courses.

Applying Innovative Course Design Ideas

A prominent and consistent pattern observed throughout the three cases is that all instructors actively integrated new ideas and recommendations acquired through the course design process into the courses they subsequently taught. This observation underscores their commitment to ongoing improvement and their receptiveness to innovative pedagogical approaches and strategies.

The most commonly adopted suggestions pertained to organizing course content and developing easy-to-navigate course layouts for students. In terms of creating easy-to-navigate layouts, instructors emphasized maintaining consistency in the course structure for each unit and providing links to the essential course content in more than one place in the course. Also, some instructors offered an orientation module to familiarize students with the course structure. Some instructors mentioned utilizing the online course they created as a template to structure their future courses. Others started to divide their lectures into smaller chunks, integrate multimedia elements such as video, audio, and images, and include practice questions within lectures to facilitate a better understanding of the learning content.

Another ID suggestion that has a significant impact on instructors is the strategies to effectively communicate/present course materials to students. For example, instructors acknowledge the importance of creating accessible learning materials by implementing practices such as adding closed captions for video lectures, providing alt-text for images and tables to

make it easier for screen readers to read, and carefully selecting appropriate font sizes and colors to cater to diverse student needs. It ensures all students can access and engage with course materials. Also, instructors recognized the importance of writing clear assignment instructions. The detailed assignment guidelines help reduce ambiguity and provide students with a comprehensive understanding of the task requirements. Additionally, instructors used multiple modes of delivery of the important course content, such as adding visuals to support text content or adding interactive components, to present it more dynamically and engagingly to accommodate different learning preferences.

Overall, it highlights instructors' increased willingness to embrace innovative course ideas to enhance student engagement and promote a more effective learning experience.

Embracing Online Teaching and Learning. A strong pattern is observed across all three cases, involving 12 out of the 15 instructors, where the instructional design support influences their attitudes towards embracing online teaching and learning and encourages them to explore digital tools for educational purposes. The availability of instructional designers to provide support and guidance in the course design process played a crucial role in encouraging instructors to explore and integrate new pedagogical ideas and digital tools in their courses. Another notable outcome was the instructors' increased comfort in entrusting others to contribute to their course development and recognizing the value that instructional designers bring to the table. For example, Kathy and Luis in Case 1 and Rita and Emma in Case 2 pointed out that, as a result of their work with instructional designers, they better trusted instructional designers' guidance related to structuring and presenting course content to learners. According to Mike from Case 2, instructional designers helped him better connect with his students. Julie and Cecilia in Case 3 mentioned they feel more comfortable trying out new tools and instructional techniques because they know they are supported.

Rethinking Course Design. The presence of ID support significantly shapes instructors' comprehension of course design, as evidenced by a subtle yet noteworthy pattern observed across the three cases. It is crucial to emphasize that this influence varies among individual instructors, with each deriving a distinct understanding from the ID support they receive. Instructors' interactions with instructional designers catalyze broadening their understanding of the fundamental principles underlying effective course design. While this pattern is subtle, it underscores the diverse and personalized impact of ID support on instructors' professional development and pedagogical expertise. For example, Kathy from Case 1 mentioned reconsidering the role of technology in facilitating student learning. She not only acknowledged technology as a tool for supporting students' learning but also recognized its potential to be an integral part of learning activities to foster deep learning. This shift in Kathy's perspective highlights the impact of ID support in expanding instructors' understanding of integrating technology tools. Also, Emma from Case 2 mentioned that she changed her mind from focusing on limitations and what she believed was not possible to explore innovative approaches and consider alternative solutions. The ID support helped her adopt a more creative way of designing courses.

Lia from Case 3 shared her shift at the starting point of the course design process. She mentioned that before participating in course design workshops, she believed she should first prepare the subject matter content before anything else. However, her perspectives shifted after the workshop. She learned the importance of starting with clear learning objectives and goals. This change allowed Lia to align course content and activities effectively with the desired learning outcomes.

Crafting Clear and Measurable Learning Objectives. A weak pattern is observed in Case 1 and Case 3 regarding the influence of ID support on writing instructional objectives and considering the alignments between learning activities and the learning objectives. John from Case 1 along with all instructors in Case 3 gained valuable insights from instructional designers in writing measurable learning objectives. As a result of the experience, they enhanced their ability to write learning objectives that are measurable with action verbs. It is noteworthy that none of the instructors in Case 2 mentioned activities related to writing learning objectives.

Fostering Interactions with Individual Students in the Online Environment. A discernible pattern emerged, albeit weak, across the three cases, involving 5 out of the 15 participants. These instructors held a collective perception that online courses presented unique and enhanced opportunities for engaging with individual students on a more personal level. They acknowledged the potential advantages of online learning in facilitating personalized interaction and made concerted efforts to allocate extra time for one-to-one meetings with their students. For example, Rita from Case 2 noted that online courses enable students to study from the comfort of their preferred locations, resulting in increased willingness to talk to the instructors. She also highlighted the convenience that students do not need to wait in line to talk to her during office hours, which gives them more flexibility to communicate with the instructors. Cecilia from Case 3 pointed out that digital tools used in online courses allow students to communicate with instructors in various ways, which accommodated students with different personalities. This finding contrasts with findings from previous studies, which raised instructors' concerns about the lack of opportunities to interact with students online (Crawley et al., 2009; Hart, 2018; Bowers & Kumar, 2015). Table 7.6 summarizes the impacts of instructional design support perceived by instructors in the three cases.

Table 7.6

Impacts of ID Support

Instructional design support impacts	**Cases**	**Participants (%) N=15**	**Pattern**
Applying innovative course ideas obtained from ID support	Cases 1, 2, and 3	100%	Dominant
Embracing online teaching and learning	Cases 1, 2, and 3	86.7%	Strong
Rethinking Instructional Design	Cases 1, 2, and 3	40%	Weak
Crafting clear and measurable learning objectives	Cases 1 and 3	40%	Weak
Fostering interactions with individual students in the online environment	Cases 1, 2, and 3	33.3%	Weak

Chapter Eight. Conclusions, Limitations and Recommendations for Future Research

This qualitative case study explored the experiences instructors had during the ID supported online course design and development process, with a focus on instructors account of the key steps of the design process, the challenges they encountered, and their perceived working relations with instructional designers. Presenting the instructor's course design experience using the activity system model (Engeström, 2015) enabled us to investigate how ID support functioned as tools to mediate instructors' course design decisions. This study gathered data from 15 instructors who had experiences with three different types of ID support modes. The results of the study offered insights into methods and strategies for improving ID support within higher education institutions, and ultimately helping instructors in the designing and developing high quality courses.

In this chapter, I first provided a summary of key research findings of the study. I connected each finding with the relevance previous literature. Then I discussed the practical and theoretical implications of the findings to the broader instructional design field. Also, I proposed practical considerations for providing instructional design support to higher education instructors. I concluded the chapter by discussing the limitations of the study and provided recommendations for future research.

Summary of Research Findings

This section contains detailed explanations of major themes used to answer each research question and sub question.

1. How do instructors work with instructional designers to design online courses?
    a. How do instructors describe the course design process?
    b. What challenges did instructors face in the course design process?
    c. What are perceived roles and responsibilities of the instructional designers and instructors in the course design process, as indicated by the instructors?
2. Using the framework of Activity Theory, characterize how instructors engage in course design activities.
    a. What instructional design suggestions (cognitive tools) were provided to the instructors?
    b. How did instructors incorporate these suggestions into their course design practices and what are the key factors influencing their course design decision-making?
3. How do Instructors perceive the impact of instructional design support on their course design and teaching practices?

Instructors' Actual Course Design Process

The first finding derived from the data was that of instructors' accounts for how they design online courses including the starting points, how they proceed, key design activities, and the points when they seek for ID support.

For the instructors interviewed in this study, all of them understood the standard ID (such as ADDIE) models to some extend by having the first meeting with the instructional designers or taking the ID workshop. Instructors in Case 1 were selected to design online asynchronous courses. Instructors in Case 2 and Case 3 were forced to switch to online teaching due to the Pandemic crisis. The courses include fully asynchronous, synchronous and asynchronous combined, and Hyflex formats. The course formats were pre-determined based on institutions' rules.

The starting point of the course design process was when instructors identified their design needs. In Case 1 and Case 2, instructors had their first meeting with the ID team to discuss their design needs and created plans to address them. In Case 3, instructors attended the ID workshops to seek insights on supporting their design needs. The primary focuses of instructors' needs were on designing the course layouts, and exploring strategies and tools to make learning engaging for the online environment. Instructors mentioned several major design tasks including preparing subject matter content and topics for the course, writing learning objectives, designing the course layout and structure, designing learning activities, planning methods of communication with students, entering the learning content into LMS, and implementing the course. Instructors often perform some of these design tasks simultaneously and employ an iterative process among tasks such as selecting learning content and tools, adapting or designing the learning content, developing learning content, and modifying the content.

The results showed that most instructors did not explicitly follow standard ID models when designing online courses. This finding is consistent with the previous studies (Bennett et al., 2017; Baldwin et al., 2018). However, the study also revealed that instructors who are new to teaching benefit from the standard ID models from using it as a guide to get started on designing their courses. The study highlighted the differences between the course design process of instructors and instructional designers. Instructors primarily relied on their pervious teaching experiences, self-efficacy in online teaching, and their teaching goals to identify the design needs of their courses. In contrast, in the analysis phase of the standard ID process often includes a thorough assessment of learners' learning needs and learning gaps (Reiser & Dempsey, 2018; Smith & Ragan, 2005). Also, while some instructors in Case 3 who were new to university teaching and John in Case 1, who worked closely with IDs, mentioned writing learning objectives as a main task in designing their online courses, no instructor in Case 2 mentioned it. This is different from previous studies that identified writing learning objectives is one of the major design tasks (Baldwin et al., 2018). Additionally, instructors did not mention preparing a plan for course evaluation, unlike instructional designers who would follow the ID process that includes planning for course evaluation (Gustafson & Branch, 2002; Kumar & Ritzhaupt, 2017). Instead, instructors relied on students' feedback to assess the effectiveness of the course, which is consistent with Bennett et al.'s (2017) study.

The study also found that instructional designers focused on assisting instructors with their urgent needs and providing support to help them achieve their course goals, rather than following each step of the systematic ID process. This result confirms that instructional designers in higher education primarily focus on assisting instructors in solving design problems (Bawa & Watson, 2017; Fong et al., 2017; Ritzhaupt & Kumar, 2015).

Most of the instructors interviewed in this study spent time selecting course subject matter content from existing materials at the beginning of the design process. They collected the course materials from their previous class and from their colleagues, then they evaluated the materials to determine whether they could be reused before creating new course content. Also, when creating learning activities, instructors tended to adapt the activities they were already familiar with from their face to face classes instead of creating new ones. Across three cases, instructors mentioned that they seek ID help in selecting tools that can help mimic their in-class activities in the online environment. This finding is consistent with previous studies on university instructors' course design experiences (Bennett et al., 2017; Baldwin et al., 2018).

Instructors believe that the primary difference between face-to-face and online courses lies in the way course content is presented to the learners. Similar to Bennett et al.'s (2017) findings, many instructors participated in this study did not consider their course preparation work as "design", instead they "constructed," "organized," and "administered" their course content online. This perception leads instructors to focus on the layout, navigation, and display of course content on the LMS. They also consider how to incorporate digital tools to engage when working with IDs on online courses. This finding highlights the value of IDs in designing course layouts and structures (Smith & Ragan, 2005; Xie & Rice, 2021). However, it also indicates the need to develop instructors' pedagogical understanding of online courses further (Baldwin et al., 2018; Schmidt et al., 2016).

Challenges in the ID-Supported Course Design Process

Instructors identified several challenges they encountered in their course design process, including balancing instructors' workloads and desired effective course design, building instructors' pedagogical content knowledge in online course designing and teaching, and bridging the gap between instructors' design needs and available ID supports.

Time Constrains, Workload, and Effective Online Courses. Creating high-quality online course requires a substantial investment of time and effort, which many instructors might not have due to their various responsibilities, such as research and administrative tasks at the university. This issue has been highlighted in previous studies that have also raised concerns about the time-consuming nature of course design tasks and the need for adequate time to complete them (Bawa & Watson, 2017; Curtis et al., 2017; Foster & Bauer, 2018; Hendrickson et al., 2013; Kálmán et al., 2020). Despite the challenge, most instructors in this study expressed their desire to create courses that fostered an optimal learning environment for students. They made some strategic decisions by prioritizing certain course design tasks that they perceived as cost-efficient and valuable in improving the quality of the course. For instance, they focused on tasks that they are familiar with or easy to implement, or that they could visualize as having a direct impact on student learning, or that could help them save time in teaching and grading later on. Nevertheless, the decisions were primarily based on instructors' judgement on what they could do with the available resources rather than the needs of their students. This approach might affect the course' overall quality. Additionally, instructors shared their intention to continue improving the course over time, which emphasizes the need and importance of ongoing ID support (Andrews & Hu., 2021; Baldwin et al., 2018; McGee et al., 2017).

Insufficient Pedagogical Content Knowledge in Online Course Designing and Teaching. Instructors considered their lack of knowledge and strategies to engage students in the online learning environment and prevent plagiarism in online testing as major challenges they faced when designing online course. These challenges have been identified in previous studies (Berry, 2018; Chiasson et al., 2015; Lase & Zega, 2021). In this study, instructors across three cases expressed their needs to know precisely how to use appropriate learning activities and instructional strategies to engage students online, and what technology to use. They also looked for effective ways to check and ensure students engagement, as instructors cannot use visual cues to monitor student engagements in the online learning environment. Previous studies have revealed that instructors found a lack of teacher-student interaction (Bowers & Kumar, 2015; Crawley et al., 2009; Hart, 2018). Interestingly, the case analysis results showed that the level of instructor-student interactions in online courses varied based on how much time instructors spent with the students. Five instructors across three cases found that the online environment facilitated their interactions with individual students because they spent less time lecturing. They had more

time to meet with individual students to discuss their work. Also, instructors mentioned that the online environment allowed students to communicate with them from comfortable places, and students were more willing to share their thoughts or ask for help online than they experienced in in-person teaching.

Instructors have raised concerns regarding the issue of plagiarism in online testing. The study builds upon the works of Rogers (2006) and Noorbehbahani et al. (2022), who had found similar results. The study also highlights the challenges that instructors face in selecting and incorporating effective technological tools to monitor online exams alongside protecting students' privacy. Some instructors mentioned the difficulty of balancing incorporating alternative assignments, while ensuring that they are graded efficiently.

Additionally, instructors often face difficulties when shifting from traditional face-to-face teaching to an online environment (Chao et al., 2010; Shearer et al., 2020; Singleton et al., 2019). New instructors, in particular may struggle due to their lack of prior experience in pedagogical aspects of teaching. Previous studies have shown that most of instructors in higher education do not have formal training in pedagogy and course design (Carliner & Driscoll, 2009; Singh et al., 2022). They usually rely on their own learning experiences and guidance of more experienced colleagues when prepare to teach (Hardré et al., 2010; Oleson & Hora, 2014). However, these experiences may not be applicable in the online setting (Kebritchi et al., 2017; Gibbons et al., 2014). Therefore, it is crucial to continue providing support and training to instructors in course design and delivery to ensure effective online courses.

Meeting Instructors' Specific Course Design Needs. In this study, instructors have identified several challenges regarding how the current ID support meet their course design needs. While instructional designers provided general guidance on ID principles and theoretical sound suggestions related to course design, instructors struggle to incorporate these suggestions into their courses without concrete examples. They also expressed the need for discipline-specific course design ideas and ideas that are aligned with their teaching preferences and address specific students' needs in their course context. This finding confirms the needs for providing discipline specific course-design ideas and sharing design examples to support instructors' course design practices (Chao et al., 2010; Chiasson et al., 2015; Stefaniak, 2017).

Instructors also face challenges with technologies and learning management systems (LMS). They need support not only in learning how to use these tools (Sugar & Luterbach, 2016; You & Teclehaimanot, 2010), but also in knowing different possible options and how to find the optimal ones to improve their courses effectively (Berry, 2018). Moreover, instructor's course design is not one-time efforts. Instructors tend to evolve their design over time, requiring ongoing ID support to be available at institutions (Halupa, 2019; Xie et al., 2021).

Consistency between the challenges identified in this study and previous research highlights the importance of addressing them to improve the effectiveness of online course design and delivery. Recognizing the difficulties faced by instructors during the course design process helps identify the areas that need improvement while providing ID support.

Instructional Designers' Roles and Responsibilities

This study aimed to expand on previous research on the roles and responsibilities of instructional designers (IDs) in higher education. It specifically looked at instructors' perspectives. The results revealed that instructors viewed IDs as support personnel to assist them in achieving their course goals. This finding aligns with Halupa (2019) and Kumar and Ritzhaupt's (2017) studies. However, it differs from the findings of Drysdale (2019), Richardson

et al. (2019), and Yusop and Correia's (2014) studies, which suggested IDs should be equal partner, collaborators, or leaders when designing online courses with instructors.

Instructors appreciate the efforts of instructional designers in looking into their course context and goals and providing customized suggestions based on them, as revealed by the data analysis results from Case 1 and 2. Across three cases, instructors mainly sought ID support to design the course layout and structure in a way that ensures a seamless learning experience for students. They also wanted to learn about different options of tools and strategies to effectively present course, engage students online, save time in course preparation, and connect to available teaching and learning resources at their institutions. These findings concur with previous studies on the benefits of instructors working with instructional designers to design online courses (Drysdale, 2019; Fong et al., 2017; Halupa, 2019; Richardson et al., 2019).

Power Dynamics between Instructors and Instructional Designers. Instructors often rely on IDs for advice on various tools and instructional strategies to use in their courses. However, they do not share the decision-making power with IDs. Instead, they get information from IDs, brainstorm with them, and decide on which tools or strategies to incorporate independently. This differs from previous studies that emphasized the collaborative working relationships between instructors and IDs (Drysdale, 2019; Halupa, 2019). Based on instructors' self-described experiences, this study revealed the power imbalance in the dynamic between instructors and instructional designers. It substantiated that the relationships between the two parties are not equal or collaborative (Drysdale, 2019; Richardson et al., 2019; Yusop & Correia, 2014), because instructors tend to assume leadership roles, retaining full control over their course content, and primarily reaching out to IDs for support when necessary. Some instructors do not consider IDs as experts in pedagogy, but only seek their assistance in presenting content online and enhancing engagement using digital tools. Only a few instructors asked for IDs to review alignments between subject matter content and learning activities, or provide suggestions on teaching techniques and grading rubrics. This finding highlights the gap between the perceived relationships between IDs and instructors in literature and the actual perceptions of instructors towards IDs (Mancilla & Frey, 2020; Kumar & Ritzhaupt, 2017).

ID Suggestions and Factors Affect Instructors' Implementation

ID theories and principles serve as a guide in creating instructional activities, assessment, and resources that align with best practices in pedagogy. They are closely linked to the quality of online courses (Chen & Carliner, 2020; Quality Matters.org, 2023; Xie et al., 2021). However, the usefulness of these ID theories and principles in actual course design relies on the acceptance and implementation by the instructors. This study adds to existing literature by identifying the specific ID suggestions instructors received from instructional designers during the course design process. Also, the study discloses the factors that affect instructors' implementation of particular ID suggestions.

The common ID suggestions mentioned by instructors in this study include guidance on designing course layout and structure, selecting digital tools and multimedia, incorporating universal design and visual design principles, considering students' cognitive skills, and facilitating active learning to enhance learning engagement. The results echoed previous studies that explored the available ID supports and the expertise of instructional designers in higher education (Beirne & Romanoski, 2018; Halupa, 2019; Kumar & Ritzhaupt, 2017), however the results differ from the studies that disclosed IDs' help that heavily on assessing learning needs and environment, design and evaluation phases of the instructors' course (Gustafson & Branch, 2002; Kumar & Ritzhaupt, 2017; Stefaniak, 2017).

In this study, instructors were found to make three types of decisions regarding the ID suggestions: accepting and implementing them to the course as proposed, accepting and implement only certain aspects of them to the course, or accepting the suggestions but ultimately deciding not to implement them. This result build upon previous studies exploring instructors "buy-in" of ID suggestions (Bennett & Albrecht, 2021; Chao et al., 2010; Gerin-Lajoie, 2015; Liu & Dempsey, 2017; Richardson et al., 2019; Stevens, 2013). Factors that influenced instructors' decisions include their course objectives, time constraints, previous teaching experiences, the perceived complexity of the design tasks, and the level of instructional designers' involvements in the design tasks. For instance, instructors are more likely to adopt ID suggestions that align with their course objectives. They may also opt to narrow their original objectives or partially achieve their goals and complete the rest later based on the ID suggestions. The study found similar results to those of Baldwin's (2017) study that instructors were satisfied with their course design efforts and the results of their online course. But, no specific standards were mentioned to assess the quality of their courses. Also affecting instructors' decisions were their previous teaching experiences, teaching beliefs, and time constraints. Several instructors across three cases mentioned that they had previously tried some suggestions provided by instructional designers. However, those suggestions did not work well in their classes or discipline. Another example mentioned by instructors was that they would like to try new ID ideas, but designing online courses is just one of many job tasks for them and rarely commands their full attention. Therefore, instructors do not have time to implement new ID suggestions. Similarly, instructors who are new to the university also found it hard to find time to implement new ID ideas.

Instructors often pick and choose which suggestion to implement based on how much they believe it will improve the course quality. For example, they may focus on designing a clear and easy-to-follow structure for the course, or using digital tools to engage students with the course content. Alternatively, they may choose to work on tasks that they perceived are quicker or easier to complete, such as revising an existing learning activity, in order to complete their online course development on time. Additionally, instructors found they were comfortable implementing ID suggestions when they knew they had instructional designers available to provide ongoing support and help them with some complex tasks. The findings highlight the importance of knowing instructors' background and design needs on providing effective ID support (Kumar & Ritzhaupt, 2017; Mancilla & Frey, 2020; McCurry & Millinix, 2017; Xie et al., 2021).

It is interesting to note that all of the instructors who were interviewed during this study found the ID suggestions to be valuable and believed that they represented best pedagogical practices. However, they did not implement some of the suggestions mainly because they were unable to see how they could incorporate them into their course, lacked the resources to create specific action plans based on the suggestions, or simply did not have enough time to do so. These reasons are different from those found in previous studies, where instructors did not take ID suggestions due to their misconception of the ID expertise or because they overlooked IDs suggestions due to instructional designers' lack of knowledge in the subject matter field of the course (Bennett & Albrecht, 2021; Dimeo, 2017; You & Teclehaimanot, 2010).

Perceived Impacts of ID Support

In general, instructors across three cases reported that their teaching methods and beliefs remained unchanged after working with instructional designers to create their courses. This finding is different from previous studies that revealed working with instructional designers can

change teaching approach of instructors (Campbell et al., 2009; Scoppio & Luyt, 2017). However, working with instructional designers help them reflect on their course design and teaching. For example, instructors applied the ID suggestions they received during the course design process to prepare and teach other courses including face-to-face classes. By working with instructional designers, instructors gained a better understanding of instructional design principles. Although instructors may not have fully implemented all the ID suggestions during the course design process, these suggestions served as valuable resources for their future course designs.

ID support expanded instructor's course preparation focus from subject matter content to consider incorporating innovative design ideas to create well-structured course that would make learning content accessible, enhance students' engagement, and increase teacher presence in an online learning environment. For novice instructors, the workshops and introduction to the ID process and principles were particularly beneficial as it offered them guidance to navigate the complex process of course design effectively. Similar results were found in Halupa's (2019) study.

Another notable change observed among instructors was an increased willingness to teach online and explore online teaching strategies. By having access to ID support, instructors have been able to explore new possibilities regarding instructional strategies and various digital tools with the knowledge that help is available if they encounter any difficulties. These findings align with previous studies that have indicated collaborating with instructional designers can help instructors recognize the benefits of teaching online and feel comfortable doing it (Baran & Correia, 2014; Chen & Carliner, 2020; Hixon, 2008).

Implications to Practice

This study provided an opportunity to understand ID supported course design and how ID suggestions were implemented from instructors' viewpoints. The findings shed light on the ways to enhance ID support in higher education and gain a better understanding the professional identity of instructional designers.

This section describes the implications of this study to the practice of instructional design. The implications address the following: instructors have diverse design needs that require different types of ID support, instructors recognize the benefits of receiving ID support, instructors view instructional designers as support personnel who assist them in achieving course design goals.

Instructors have diverse design needs that require different types of ID support

This study compared the processes and relationships between instructors and instructional designers across three different ID support modes. The study revealed that instructors' design needs varied based on their faculty statuses, teaching experience, and the time available for online course design. Novice instructors need support in starting and navigating the design process, and developing strategies to interact with students while experienced instructors require support in making specific learning activities interactives and exploring options of available tools. According to the study, providing instructors with different ID support to meet their diverse needs would increase the chance of effective online course design and high-quality courses (Martin et al., 2019).

The results found that instructors perceived designing and teaching online as an ongoing process. Instructors tend to complete small design tasks at a time and are continually looking to improve their courses over time (Schmidt et al., 2016). For example, instructors in Case 2, who only received instructional design services for a limited period, noted that they wanted to

continue working on their courses. This suggests that providing continuous ID support would be beneficial to support instructors' needs of continually improving their courses (Brown et al., 2013; Kumar & Ritzhaupt, 2017): ones that go beyond moving courses online and focus on improving existing online courses.

Also, the level of instructional designers' involvement in instructor's course design process varies depending on the type of ID support provided. In the standard ID process, instructional designers worked closely with instructors from the beginning to the end. However, in Case 3, instructional designers only focus on preparing the workshop content and spent time with instructors only when facilitating the workshops. In the more recent express ID support mode, instructional designers work with instructors on specific part of the course design rather than the entire design process, when instructors require assistance and have time to work on these tasks. The express ID support mode is particularly suitable for meeting the increased number of instructors' online course design requests during the post pandemic period (Singh et al., 2022).

Suggestions for Providing ID Support in Higher Education. The results of the study shed light into the provision of ID support in higher education. Firstly, the different types of ID support cater to instructors with varying teaching experiences and time availability for design tasks. Higher education institutions could enhance ID support by offering multiple ID support types to accommodate instructors' diverse course design needs. Secondly, as course design remains an ongoing process for many instructors, continuous ID support becomes pivotal. Providing ongoing ID support helps instructors to continually refine their course and improve their skills in designing and teaching online courses.

Instructors Recognize the Benefits of Receiving ID Support

Across the three cases, instructors have found instructional designers to be most beneficial in helping them to organize and structure course content effectively, get to know different possible options of instructional strategies and digital tools, and save time in incorporating best design practices to their courses.

Instructors in Case 3 claimed that the general ID workshops played a crucial role in helping them initiate and navigate the course design process. The customized suggestions offered by instructional designers were highly appreciated by the instructors in Case 1 and Case 2. Some instructors in Case 2 compared the customized instructional design support to the general workshops on course design and technology tools that were offered by their institutions. These instructors claimed that the general workshops often used a one size-fit-all approach, which did not provide clear guidance on how to utilizes the training content to a real course (Andrews & Hu, 2021). They commented that the individualized suggestions were more useful for their courses and tangibly made their courses better (Schmidt et al., 2016).

One area where instructional designers have made a significant contribution is in setting up learning activities in the learning management system (LMS), which help free up instructors to focus more on the instructional content. Also, instructional designers played a crucial role in helping instructors to verify content accessibility and ensure there are no copyright issues.

Problems arose, however, when instructors faced difficulties when implementing ID suggestions due to inadequate resources and support. For instance, general suggestions for designing discussion activities provided by instructional designers may not be customized for specific disciplines. As per the instructors in Case 3, some discussion activity ideas are not effective for science majors because they are more fact-based, whereas they are easy to implement for social science disciplines where there is more room for students to discuss.

Moreover, some instructors mentioned they got help from instructional designers to create learning activities using digital tools, but they did not learn to set them up. This became a challenge when they wanted to revise or recreate the activity, especially when the ID support was no longer available. There insights were shared by Schmidt et al.'s (2016) study.

Suggestions for Improving Current ID Support in Higher Education. The above-mentioned problems provide insights into developing instructional designers' skills and knowledge in supporting instructors: For one thing, instructional designers should provide discipline-specific suggestions. In addition to their foundational knowledge in instructional design and pedagogy, instructional designers could further develop their familiarities in discipline-specific teaching philosophy and practices. Some methods for acquiring specialized understanding involves observing instructors' teaching and taking related courses as students. These approach enables instructional designers to gain experience for tailoring their support to specific disciplines. For another, instructional designers could work on creating an online resource repository that includes examples of the learning activities based on ID suggestions. It would be beneficial to support instructors' implementation of the ID suggestions to their courses. Also, when setting up complex learning activities using digital tools, instructional designers should take on professional development tasks by providing instructors with hands-on learning opportunities and instructional resources related to the tools used for the activities. This will ensure that instructors have adequate support available to them.

Instructors View Instructional Designers as Support Personnel Who Assist Them in Achieving Course Design Goals

The three cases differed in the extent to which instructional designers were involved in the course design process, ranging from overseeing the design and development process of the course to assisting instructors to implement design ideas or training instructors on instructional strategies and on the use of technology tools. However, in each of the three cases, instructors did not often view them as equal partners or co-designer in their efforts. Instead, they perceived instructional designers as support personnel for their work. Instructors value instructional designers' roles in offering consultations regarding course design strategies, designing visually engaging and easy-to-navigate course layouts, and delivering customized technical support that emphasizes the optimal use of digital tools for effective teaching.

Indeed, in the second and third cases, instructional designers provided partial assistance to instructors in designing online courses. In Case 2, instructional designers helped instructors move their courses online by supporting them with design tasks that were requested by the instructors, such as setting up learning activities on the LMS, creating interactive lecture content. However, instructors still had to do most of the work, which include prepare subject matter content, make decisions of instructional strategies, and enter the course content into LMS. In Case 3 where instructional designers taught workshops, instructors had to incorporate the workshop content into their courses on their own, without assistance from instructional designers.

Power Distribution in the course design process. It is worth noting that in both of these cases instructors take the initiative to identify their design needs, seek ID suggestions, and decide whether to incorporate ID suggestions or make changes to their design practices. Instructional designers did not collaborate with instructors to make design decisions nor did they oversee instructor's course design procedure, but provided resources and suggestions based on instructors' needs.

In Case 1, where instructional designers were involved in the entire process of designing and developing the online course. However, even in this situation, instructors did not see instructional designers as equal partners but rather as the source of significant support for designing course structure and layouts. The reason behind this was that instructors considered the course content to be the most essential part of their courses, and they have full control over it. Instructional designers, on the other hand, mainly worked on effectively displaying the course content in the online environment.

This finding shed light on the professional identity of instructional designers in higher education. Although prior research has indicated that instructional designers and instructors should collaborate as equal partner to ensure the effectiveness of the course design process and achieve high-quality course outcomes (Campbell et al., 2005; Drysdale, 2019; Hart, 2018; Stevens, 2013). As Chen and Carliner (2020) observed, all of those studies were limited participation to instructional designers and did not include the perspectives instructors. This study provides insights into instructors' perspectives, which differs from that of instructional designers.

Also, when seeking advice from instructional designers, instructors have the final say in the decision-making process. Although designers may provide suggestions and recommendations that represent best practices in pedagogy, the authority to accept or reject them rests solely with the instructors. The relationship between instructional designers and instructors is more accurately described as a consultation rather than a collaboration, as the decision-making power is not equally shared between the two parties.

Implications to Research and Theory

This section describes the implications of this study to the research and theory of instructional design. Specifically, it explores the use of activity theory to explore instructors' course design experience, and differences between instructors' course design and ID process, the broader implications of instructors' perceptions of instructional design in higher education.

Using Activity Theory to Explore Instructors' Course Design Experience

The first implication to research and theory pertains to the use of activity theory to guide the exploration of instructors' course design experiences. This study utilized activity theory to provide a visual representation of instructors' ID-supported course design activity and to investigate the ID suggestions that mediate instructors' course design activity. ID suggestions, provided by instructional designers, are considered as cognitive tools in the lens activity theory.

The visual representations of the activity systems in each case provided insights into the means and motivations guiding instructors' interactions with ID support. The key elements in the activity theory framework played a crucial role in identifying and presenting essential factors that need consideration when exploring instructors' course design activities. For example, factors such as instructors' teaching background, academic status, and the availability of instructional designers emerged as important factors shaping their design experiences.

Regarding analysis, activity theory helped identify tensions and challenges in the course design process. For example, the results found the tensions between instructors' identified work priorities and pedagogical sound instructional design suggestions. Additionally, it highlights the discrepancies between the available tools and instructors' course design objectives aimed at engaging students. Exploring the mediation of ID suggestions in instructors' course design activities also help identify barriers and contradictions within the course design process. For example, instructors sought to incorporate ID suggestions (tools) concerning discussion as a

mean to enhance students' engagement (the object). However, these suggestions were not applicable to their disciplines (barriers), making them challenging to apply the ID suggestions.

The resulting activity system from the cross-case analysis indicates factors such as instructors' course objectives, time constraints, previous teaching experiences, their perceived complexity of the design tasks, and the level of instructional designers' involvements in the design tasks, affect instructors' acceptance and implementation of the ID suggestions. Institutions can use insights from the analysis to offer more tailored ID support to faculty members.

Understanding the Difference Between Instructors' Course Design and ID Process

This study offers insight into instructors' course design process and sheds light on how instructors adapted to online learning environments. The study results indicate that instructors typically started their course design with adjusting their existing their face-to-face course content and teaching strategies before creating new content. They sought instructional design support primarily to explore strategies that could bridge gap between online and face-to-face classes and to save time in completing some design tasks, enabling them to focus on the subject matter content-related tasks.

Instructors were introduced to instructional design models such as ADDIE and backward design (Dick et al., 2007; Gustafson & Branch, 2002; Martin et al., 2019; Smith & Ragan, 2005), which have been proven to be beneficial in creating high-quality course. However, the study found that instructors did not follow those design models closely, but completed some design tasks suggested in the ID models. For one thing, when designing courses within higher education, instructors often do not conduct a need analysis for leaners since their course goals and objectives are predetermined by the department or the university. Instructors' needs however, should be analyzed thoroughly before initiating the course design process. Moreover, none of the instructors in this study mentioned the evaluation phase in the course design process, instead they tend to consider students' feedback and performances as indicators of a course's success. It is still unknown whether following the ID models precisely results in a higher quality of the online course. This leads to a more fundamental implication of revising the ID models to better reflect the reality of instructional design work in the higher education context.

Understanding instructors' course design practices help inform future professional development practices for instructors and provide insights on providing ID support that meet instructors' design needs.

Instructors' Perceptions of Instructional Design in Higher Education

This implication builds upon previous two implications, which suggest that instructors consider instructional design as a supporter that helps them develop online course, and that each instructor benefits from different instructional design support that are tailored to their individual course needs. These two implications challenge the theoretical concepts of instructional design practices and the role of instructional designers in higher education, which have been the focus of many prior studies in the field of instructional design.

ID Support Mode. Many previous studies have focused on the traditional instructional design support, such as the one described in Case One. In this model, instructional designers play a critical role in designing and developing courses. They are involved in the process from the beginning and continuing until the course is formally launched to students (Carré, 2015; Curtis et al., 2017; McCurry & Mullinix, 2017; Stevens, 2013). Most descriptions of ID process in the literature assume that instructional designers work within this support mode (Dick et al., 2007; Martin et al., 2019). However, as noted by Bates (2022), since the pandemic, the number of

instructors requiring ID support had increased significantly. As a result, the standard ID support is no longer adequate to meet the demands of instructors. This requires the further investigation of various forms of ID support.

This study explored three different ID support modes and the types of work instructional designers performed in each. The study found that the relationship between instructors and instructional designers, and instructional designers' influence over the course design process varied across different ID support modes. This suggests that only studying course design experiences with standard ID support provides a limited view of instructional design in higher education. It restricts the representation of ID support in higher education. In fact, the work of instructional designers who primarily develop and teach workshops on technological and pedagogical knowledge likely differs from that of instructional designers who design and develop online courses.

Instructors in all three cases find several ID support services to be valuable in their course design process. These services include support in designing course layouts and structuring course content, suggesting ways to engage learners, ensuring the accessibility of the course content, and setting up learning activities properly on the LMS. Instructors also appreciate observing instructional designers perform these activities, so they can learn to do them independently. They view instructional designers as effective liaisons who connect their course ideas and content to their students in the online environment.

Previous instructional design literature has considered needs analysis (the assessments focusing on exploring learners' needs and their performance gaps) as an essential practice (Reiser & Dempsey, 2018; Smith & Ragan, 2005). However, research shows that instructional designers in higher education focus more on exploring the needs of instructors, who are considered as their clients, rather than the learners (Bawa & Watson, 2017; Fong et al., 2017; Ritzhaupt & Kumar, 2015). This contradicts the advocacy for needs analysis, as it is not as widely performed as the literature might suggest.

In Case 2 and Case 3of this study, the ID support sought by instructors might not necessarily require a needs assessment. For example, in Case 2, instructors only needed assistance with transferring existing courses, while in Case 3, instructional designers performed a needs assessment when preparing their workshops for the instructors. However, as far as the instructors are concerned, the workshops only helped with specific aspects of course design.

Despite its importance in the standard ID process (Reiser, 2001b), writing the learning objective was optional in all three cases. Assisting instructors in writing learning objectives is one of the services provided upon request (Cowie & Nichols, 2010; Pan & Thompson, 2009; Ziegenfuss & Lawier, 2008).

The representation of the ID process in the literature might not accurately reflect what actually happens when instructional designers work with instructors. The current process is an idealized version of a standard ID support as presented from the view of instructional designers. However, this study suggests that instructional designers may consider providing a menu of ID support that instructors can choose from according to their needs. The services may be bundled, but the designer customize them according to the specific needs of the instructors.

Role of the Instructional Designer. Many previous studies have suggested that the relationship between instructors and the instructional designers is a collaboration (Brown et al., 2013; Drysdale, 2019; Scoppio & Luyt, 2017; Schwier et al., 2007; Stevens, 2013; Sugar & Luterbach, 2016; Xu & Morris, 2007). However, as Chen and Carliner (2020) noted, those studies only examined the work from the viewpoint of instructional designers. This study

provides instructors' perspectives, which challenge some of the views held by instructional designers in various ways. While this is just one study, it helps to broaden the understanding of the relation between instructors and instructional designers in higher education.

First, this study challenges previous conceptions of the role of instructional designers. For one thing, it suggests that the level of instructional designers' influence on course design varies depending on the nature of the ID support and the extent to which instructional designers participate in the design and development of the course. In Case 1, which had a standard ID support, instructional designers significantly influenced courses because they worked with instructors closely at every stage of course design and even entered course materials into the LMS. However, instructional designers had less influence in the other two cases because their involvement was more limited. For instance, in Case 3, instructional designers who delivered ID workshops had limited influence on courses as they did not directly work on the courses nor made any design decisions with instructors. For another, this study suggests that the working relationships between instructors and instructional designers is more consultative rather than collaborative. This is true in all three cases, but more so in Case 2.

Second, in the course design process, instructors and instructional designers had different goals. The instructional designers were there to assist the instructors in achieving their desired goals of course design. However, instructional designers were not decision makers but rather offered options and suggestions on the design of the courses. In all three cases, instructional designers acted as consultants or resource personnel to instructors rather than co-designer. The instructors have complete control over the course design process, and make all decisions on design practices. In some cases, instructors did not want or expect suggestions from instructional designers on pedagogical content, which might result in their misconception of the roles of instructional designer. Whereas in other cases, instructors expect instructional designers to provide concrete design examples or sample learning activities that are specific for their course context, however, instructional designers might not have adequate resources to provide such support. This implies that instructional designers should continuously developing their skills and knowledge on providing discipline specific suggestions and understanding instructors' course design needs to better support instructors in higher education.

Guidelines for Instructional Designers Working with Instructors in Higher Education. The findings of this study shed lights into several potential guidelines for preparing further ID professionals to work in higher education.

1. Get to know the instructors and their course design practices.
    a. Recognize the differences between the ID models and instructors' course design process.
    b. Analysis instructors' course needs alongside their teaching philosophies and experiences to tailor support accordingly.
2. Recognize the unique roles of IDs in higher education and the power dynamic between instructors and IDs.
    a. Identify the supportive roles of IDs.
    b. Recognize the power imbalance exists between the two parties. Instructors have more powers in controlling the flow of the course design process, retaining ownership of the course content, and making design choices. IDs act as consultants who will provide different suggestions but do not have the decision-making power.
3. Enhance ID skills and knowledge for the specific context.

a. Expand beyond fundamental ID and pedagogy knowledge to develop discipline-specific teaching and course design expertise.
b. Keep developing expertise in crafting course layouts and structure to ensure the accessibility and inclusivity of course content.
c. Develop skills to propose multiple solutions for a given issue and personalize suggestions to align with instructors' specific needs.
d. Offer concrete and actionable examples to reinforce ID suggestions, facilitating instructors' implementation of ID suggestions.
e. Prepare to provide guidance and support in using of technologies effectively for enhanced teaching practices.

Limitations

There are several limitations to the study. First, the study used purposeful sampling and recruited participants on a volunteer basis. Instructors who volunteered to participate may represent a sample that views course design in a particular way. It might be that the most motivated instructors who actively interacted with the instructional design (ID) support and had positive experiences tended to participate in the study. The voices of instructors who did not have positive course design experiences or gave up on using the ID support are not reflected here.

Second, although the study aimed to explore ID services in higher education institutions, the results are limited to instructors' experiences with three types of ID services (standard, express, and workshop-based ID supports) provided at two universities in Canada. Instructors at other universities or who received other types of ID services may have different experiences. Also, the research data sources are limited to one semi-structured interview with each participant and the documents shared by the participants. Direct observations may bring additional insights into the studied phenomenon.

Third, my work experience as an instructional designer in higher education might have resulted in preconceptions during the data collection and interpretation process, especially when instructors' perceptions of ID differed from my own. To minimize this researcher bias, I bracketed my experiences, documented my assumptions related to the research topic, and took reflective notes.

Last, activity theory was employed in this study to create a visual presentation of an instructor's course design process. It primarily identified the various components involved in the process. However, it is important to note that the analysis of the tensions and contradictions of this study is limited to within a single instructor's activity system rather than among activity systems. Incorporating additional stakeholders, such as instructional designers and administrators, will help gain a comprehensive understanding of course design activities in higher education.

Recommendations for Future Research

Six recommendations for future research came out based on this study's limitations and results.

First, this study aims to explore instructors' experiences of ID-supported online course design in higher education. Specifically, the study focuses on three specific types of ID support modes (standard ID, express ID, and workshop-based ID support). It would be interesting to explore other ID support modes used at universities to assist instructors in designing courses. Such research would help us gain a more comprehensive understanding of the diverse ways in which ID support can be provided and how it can affect instructors' experiences. Also, this study

was conducted at two medium-sized universities in Canada. The context is crucial since instructors' experiences may vary depending on the location and institutional culture. It would be beneficial to investigate this phenomenon in universities in different regions to better understand instructors' experiences with ID-supported course design.

Second, this study involved 15 instructors with diverse pedagogical backgrounds who designed and taught one online course each. The findings of the study have revealed that different perspectives can shape course design practices and the level of acceptance of ID suggestions. Future research might narrow the focus to explore instructors' experiences based on specific factors, such as different disciplines or academic status, to provide further insight into the unique experiences of specific instructor groups. Also, this study used a general definition of online courses to contain all the courses that delivered at least part of their content via the internet synchronously or asynchronously (Bates, 2022). Future studies might examine instructors' design experiences with specific course formats, such as blended courses or asynchronous online courses.

Third, the study found that instructors were satisfied with their course design efforts and believed they had achieved their goal of creating an effective course. However, the results were based primarily on self-reported data from instructors through interviews. No specific standards were mentioned on how they assess the actual quality of their courses (Baldwin, 2017). Future studies could use additional methods, such as collecting students' feedback and observing the course delivery process, to gain insights into the actual effectiveness of the designed course.

Fourth, in this case study, the bounded timeframe started when instructors first met with IDs and ended with instructors' first-course implementation. Future research might consider doing a longitudinal study to extend the research timeline to follow instructors' experiences evaluating the course outcomes, redesigning the course, and receiving continued ID support after the first implementation.

Fifth, in this study, instructors shared their experiences regarding ID suggestions they received during the course design process and their level of acceptance of these suggestions. To gain deeper insights into the usefulness of ID suggestions in the course design process, future studies could compare the viewpoints of both instructional designers and instructors on the same ID suggestions. Previous studies have shown that instructors and instructional designers may value ID suggestions differently (Andrews & Hu, 2021; Mancilla & Frey, 2020; Kumar & Ritzhaupt, 2017). A comparison between the two parties could help understand the differences in how they prioritize various ID practices and the influence they bring to the course design process.

Sixth, this study used Activity theory to visually represent the activity system of instructors' course design activity system in higher education and examined the contradictions within the system. It helped in providing a structured view of various elements in the course design process. For future research, it would be beneficial to gain a deeper understanding of the complex course design activity systems by considering other stakeholders, such as administrators, colleagues of the instructors, and instructional designers. By comparing activity systems among different stakeholders, a comprehensive exploration of the tensions and challenges that may arise among the activity systems could be achieved.

Reference

Aga, F. J. (2005). Active learning versus the traditional lecture methods of teaching at higher education institutions: A case study of learners' preferences at the department of business education, Addis Ababa University. *The Ethiopian Journal of Education*, *25*(1), 49-78.

Al-Huneini, H., Walker, S. A., & Badger, R. (2020). Introducing tablet computers to a rural primary school: An activity theory case study. *Computers & Education*, *143*, 103648.

Albrahim, F. A. M. (2018). *Go hand in hand: A case study in the collaboration between faculty and instructional designers when developing online courses* (Order No. 28036476). Available from ProQuest Dissertations & Theses Global. (2442633850).

Aldridge, S.C., Clinefelter, D.L., and Magda, A.J. (2013). *Online learning at public universities: Building a new path to a college degree*. Louisville, KY: The Learning House, Inc.

Andrews, M., & Hu, X. D. (2021). A descriptive profile of online faculty training practices in the Illinois Community College system. *Journal of Educators Online*, 18(3), 108–119.

Arshavskiy, M. (2017). *Instructional Design for ELearning: Essential guide to creating successful eLearning courses* 2nd edition. YourElearningWorld.

Baldwin, S. J. (2017). *Adaptation and acceptance in online course design from four-year college and university instructors: An analysis using grounded theory* [Doctoral dissertation, Boise State University]. https://doi.org/10.18122/B28T4W

Baldwin, S. J., Ching, Y., & Friesen, N. (2018). Online course design and development among college and university instructors: An analysis using grounded theory. *Online Learning*, 22(2), 157-171.http://dx.doi.org/10.24059/olj.v22i2.1212

Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. *Psychological review*, *84*(2), 191.

Bao, W. (2020). COVID-19 and online teaching in higher education: A case study of Peking University. *Human behavior and emerging technologies*, *2*(2), 113-115. https://doi.org/10.1002/hbe2.191

Baran, E., & Correia, A. P. (2014). A professional development framework for online teaching. *TechTrends*, *58*, 95-101. https://doi.org/10.1007/s11528-014-0791-0

Bates, A. W. (2022). *Teaching in a digital age: Guidelines for designing teaching and learning* (3rd ed.). Tony Bates Associates Ltd. Retrieved July 30, 2023, from https://pressbooks.bccampus.ca/teachinginadigitalagev3m/

Bawa, P., & Watson, S. (2017). The chameleon characteristics: A phenomenological study of instructional designer, faculty, and administrator perceptions of collaborative instructional design environments. *Qualitative Report, 22*(9), 2334-2355. https://doi.org/10.46743/2160-3715/2017.2915

Beirne, E., & Romanoski, M. P. (2018). Instructional design in higher education: Defining an evolving field. *OLC outlook: An environmental scan of the digital learning landscape*.

Bennett, L., & Albrecht, A. (2021). Analyzing the instructional designer role A new framework to improve efficacy and dynamic partnerships. *Distance Learning*, *18*(4), 7-18.

Bennett, S., Agostinho, S., & Lockyer, L. (2017). The process of designing for learning: understanding university teachers' design work. *Educational Technology Research and Development*, *65*, 125-145. https://doi.org/10.1007/s11423-016-9469-y

Benson, A., Lawler, C., & Whitworth, A. (2008). Rules, roles and tools: Activity theory and the comparative study of e-learning. *British Journal of Educational Technology*, *39*(3), 456-467. https://doi.org/10.1111/j.1467-8535.2008.00838.x

Bernard, R. M., Borokhovski, E., Schmid, R. F., Tamim, R. M., & Abrami, P. C. (2014). A meta-analysis of blended learning and technology use in higher education: From the general to the applied. *Journal of Computing in Higher Education*, *26*, 87-122. https://doi.org/10.1007/s12528-013-9077-3

Berrett, D. (2016, February 29). Instructional Design: Demand growth for a new breed of academic. *The Chronicle of Higher Education* Retrieved September 13, 2020, from https://www.chronicle.com/article/instructional-design/?cid2=gen_login_refresh

Berry, S. (2018). Professional development for online faculty: Instructors' perspectives on cultivating technical, pedagogical, and content knowledge in a distance program. *Journal of Computing in Higher Education*, 31(1), 121-136. https://doi.org/10.1007/s12528-018-9194-0

Bichsel, J. (2013, June). *The state of e-learning in higher education: An eye toward growth and increased access* (Rep.). Louisville, Co: EDUCAUSE. Retrieved April 10, 2017, from: https://www.educause.edu/ecar

Bird J., Morgan C., & O'Reilly M. (2007). Exploring the tensions in education and instructional design in Australian Universities. In M. Keppell (Ed.) *Instructional Design: Case Studies in Communities of Practice* (pp. 19-35). Hershey, PA: Information Science Publishing.

Boonstra, J., & Bennebroek Gravenhorst, K. M. (1998). Power dynamics and organizational change: A comparison of perspectives. *European Journal of work and organizational psychology*, *7*(2), 97-120. https://doi.org/10.1080/135943298398826

Bowers, J., & Kumar, P. (2015). Students' perceptions of teaching and social presence: A comparative analysis of face-to-face and online learning environments. *International Journal of Web-Based Learning and Teaching Technologies (IJWLTT)*, *10*(1), 27-44. https://doi.org/10.4018/ijwltt.2015010103

Boz, T., & Allexsaht-Snider, M. (2023). Implementing and sustaining coding and robotics practices in rural elementary school districts: an activity theory perspective. *Journal of Research on Technology in Education*, 1–19. https://doi.org/10.1080/15391523.2023.2221870

Branch, R. M., & Dousay, T. A. (2015). *Survey of instructional design models* (5th ed.). Bloomington, IN: Association for Educational Communications & Technology.

Brown, B., Eaton, S., Jacobsen, D., Roy, S., & Friesen, S. (2013). Instructional Design Collaboration: A Professional Learning and Growth Experience. *Journal of Online Learning and Teaching*, 9(3), 439.

Brown, T. M. (2016). *Instructional design in higher education: Identifying the connection between theory and practice* (Order No. 10162671). The University of Alabama. Available from ProQuest Dissertations & Theses Global Closed Collection. (1830471447).

Brownell, S. E., & Tanner, K. D. (2012). Barriers to faculty pedagogical change: Lack of training, time, incentives, and… tensions with professional identity? *CBE—Life Sciences Education*, *11*(4), 339-346. https://doi.org/10.1187/cbe.12-09-0163

Campbell, K., Schwier, R. A., & Kenny, R. (2006). Conversation as inquiry: A conversation with instructional designers. *Journal of Learning Design*, 1(3), 1-18.

Campbell, K., Schwier, R. A., & Kenny, R. F. (2009). The critical, relational practice of instructional design in higher education: an emerging model of change agency. *Educational Technology Research and Development*, *57*(5), 645-663.

Carliner, S., & Driscoll, M. (2009). Who's creating the e-learning? Paradigms for content

creation that exclude the instructional designer. *Michael Allen's*, 43-56.
Carré, C. (2015). The challenge of designing blended courses: From structured design to creative faculty support! *Canadian Journal of Learning and Technology*, 41(4), 1-29.
Castro, M. D. B., & Tumibay, G. M. (2021). A literature review: efficacy of online learning courses for higher education institution using meta-analysis. *Education and Information Technologies*, *26*, 1367-1385. https://doi.org/10.1007/s10639-019-10027-z
Chao, I. T., Saj, T., & Hamilton, D. (2010). Using collaborative course development to achieve online course quality standards. *The International Review of Research in Open and Distance Learning*, 11(3), 106-126.
Chen, Y., & Carliner, S. (2020). A special SME: An integrative literature review of the relationship between instructional designers and faculty in the design of online courses for higher education. *Performance Improvement Quarterly*, 33 (4), 471-495. https://doi.org/10.1002/piq.21339
Cherry, K. (2012). *Psychology theories.* Retrieved November 3, 2020, from http://psychology.about.com/od/psychology101/u/psychology-theories.htm#s2
Chiasson, K., Terras, K., & Smart, K. (2015). Faculty perceptions of moving a face-to-face course to online instruction. *Journal of College Teaching & Learning*, 12(3), 231–240.
Chittur, D. (2018). *A phenomenological study of professors and instructional designers during online course development leading to enhanced student-centered pedagogy* (Order No. 10790356). Available from ProQuest Dissertations & Theses Global. (2035341879).
Choi, J. J., Robb, C. A., Mifli, M., & Zainuddin, Z. (2021). University students' perception to online class delivery methods during the COVID-19 pandemic: A focus on hospitality education in Korea and Malaysia. *Journal of Hospitality, Leisure, Sport & Tourism Education*, *29*. https://doi.org/10.1016/j.jhlste.2021.100336
Chongwony, L., Gardner, J. L., & Tope, A. (2020). Instructional design leadership and management competencies: Job description analysis. *Online Journal of Distance Learning Administration*, *23*(1), 1-18.
Chow, A. S., & Croxton, R. A. (2017). Designing a Responsive e-Learning Infrastructure: Systemic Change in Higher Education. *American Journal of Distance Education*, 31(1), 20-42. https://doi.org/10.1080/08923647.2017.1262733
Ciabocchi, E., Ginsberg, A., & Picciano, A. (2016). A study of faculty governance leaders' perceptions of online and blended learning. *Online Learning*, *20*(3), 52-73.
Cole, M., & Engeström, Y. (1993). A cultural-historical approach to distributed cognition. *Distributed cognitions: Psychological and educational considerations*, 1-46.
Corry, M., & Stella, J. (2018). Teacher self-efficacy in online education: A review of the literature: Association for Learning Technology Journal. *Research in Learning Technology*, 26. https://doi.org/10.25304/rlt.v26.2047
Cowie, P., & Nichols, M. (2010). The clash of cultures: Hybrid learning course development as management of tension. *Journal of Distance Education, 24*(1), 77-90.
Cox, S., & Scunthorpe, R. T. (2003). How do IDs spend their time? *TechTrends*, *47*(3), 45-47.
Crawley, F. E., Fewell, M. D., & Sugar, W. A. (2009). Researcher and researched. The phenomenology of change from face-to-face to online instruction. *Quarterly Review of Distance Education*, *10*(2), 165-176.
Creswell, J. (2013). *Qualitative inquiry and research design: Choosing among five approaches.* Thousand Oaks, London, New Delhi: SAGE Publications.
Crowley, C., Chen, H., & Cerver, M. G. (2018). A team-based collaboration used for the

development of transnational online distance education courses. *International Journal of E-Learning & Distance Education*, 33(2), 1-22.

Curtis, M. P., Kist, S., Van Aman, M. N., & Riley, K. (2017). Designing integrated courses in an RN-to-BSN program. *Journal of Continuing Education in Nursing, 48*(8), 369-372. https://doi.org/10.3928/00220124-20170712-09

Dang, T. K. A. (2017). Exploring contextual factors shaping teacher collaborative learning in a paired-placement. *Teaching and teacher education*, *67*, 316-329. https://doi.org/10.1016/j.tate.2017.06.008

Davis, D., Chen, G., Hauff, C., & Houben, G. J. (2018). Activating learning at scale: A review of innovations in online learning strategies. *Computers & Education*, *125*, 327-344. https://doi.org/10.1016/j.compedu.2018.05.019

Decherney, P., & Levander, C. (2020, April 24). The hottest job in higher education: instructional designer. *Inside Higher Ed*. Retrieved September 14, 2020, from https://www.insidehighered.com/digital-learning/blogs/education-time-corona/hottest-job-higher-education-instructional-designer

Denzin. N & Lincoln. Y (2011). *The SAGE handbook of qualitative research. Third edition*. Thousand Oaks, London, New Delhi: SAGE Publications.

Dick, W., Carey, L. & Carey, J. O. (2007). *The systematic design of instruction. Seventh edition.* Boston: Allyn & Bacon/Merrill.

Dicks, D., & Ives, C. (2008). Instructional designers at work: A study of how designers design. *Canadian Journal of Learning and Technology*, 34(2), 91–108.

Dimeo, J. (2017, November 1). Reasons why faculty members don't collaborate with instructional designers. *Inside Higher Ed*. Retrieved September 13, 2020, from https://www.insidehighered.com/digital-learning/article/2017/11/01/reasons-why-faculty-members-dont-collaborate-instructional

Donovan, T., Bates, T., Seaman, J., Mayer, D., Martel, É., Paul, R., Desbiens, B., Forssman, V., & Poulin, R. (2019). *Tracking online and distance education in Canadian universities and colleges: 2018*. Retrieved April, 12, 2023, from https://eduq.info/xmlui/handle/11515/37136

Doreleyers, A., & Knighton, T. (2020, May 14). COVID-19 pandemic: academic impacts on postsecondary students in Canada. *Statistic Canada*. Retrieved April 1, 2023, from https://www150.statcan.gc.ca/n1/pub/45-28-0001/2020001/article/00015-eng.htm

Drysdale, J. (2019). The collaborative mapping model: relationship-centered instructional design for higher education. *Online Learning*, *23*(3), 56-71.

Dwivedi, A., Dwivedi, P., Bobek, S., & Zabukovšek, S. S. (2019). Factors affecting students' engagement with online content in blended learning. *Kybernetes*, *48*(7), 1500-1515. https://doi.org/10.1108/K-10-2018-0559

Engeström, Y. (2001). Expansive learning at work: Toward an activity theoretical reconceptualization. [and] Contextualising a new approach to learning: some comments on Yrjo Engestrom's theory of expansive learning. *Journal of Education and Work*, 14(1), 133–156.

Engeström, Y. (2009). The future of activity theory: A rough draft. In A. Sannino, H. Daniels, & K. D. Gutiérrez (Eds.), *Learning and expanding with activity theory* (pp. 303–328). Cambridge University Press.

Engeström, Y. (2015). *Learning by expanding:* an activity theoretical approach to developmental research, *Second edition*. Cambridge University Press.

Ertmer, P. A., & Newby, T. J. (2013). Behaviorism, cognitivism, constructivism: Comparing critical features from an instructional design perspective. *Performance improvement quarterly*, 26(2), 43.

Esfijani, A. (2018). Measuring quality in online education: A meta-synthesis. *American Journal of Distance Education*, *32*(1), 57-73. https://doi.org/10.1080/08923647.2018.1417658

Ferrer, J., Ringer, A., Saville, K., A Parris, M., & Kashi, K. (2020). Students' motivation and engagement in higher education: The importance of attitude to online learning. *Higher Education*, 83(2), 317-338. https://doi.org/10.1007/s10734-020-00657-5

Fink, L.D. (2003). *Creating significant learning experiences: An integrated approach to designing college courses*. San Francisco, CA: Jossey-Bass.

Flaherty, C. (2018). A non-tenure-track profession. *Inside higher ed*, *12*. Retrieved April 11, 2023, from https://www.insidehighered.com/news/2018/10/12/about-three-quarters-all-faculty-positions-are-tenure-track-according-new-aaup

Fong, J., Uranis, J., Edward, M., Funk, C., Magruder, E., & Thurston, T. (2017). Instructional design and technology teams: Work experience and professional development. Retrieved May 20, 2023, from http://upcea.edu/IDResearch

Foster, K., & Bauer, L. B. (2018). Out of the shadows: Experiences of contract academic staff. *Canadian Association of University Teachers*. Retrieved September 13, 2021, from https://4163.cupe.ca/2019/01/14/caut-out-of-the-shadows-experiences-of-contract-academic-staff/

Fyle, C. O., Moseley, A., & Hayes, N. (2012). Troubled times: the role of instructional design in a modern dual-mode university?. *Open Learning: The Journal of Open, Distance and e-Learning*, 27(1), 53-64. https://doi.org/10.1080/02680513.2012.640784

Gacanovic, L. (2020, June 4). Instructional Designers Are in High Demand in Higher Education [Web log post]. Retrieved September 13, 2020, from https://clarityconsultants.com/blog/instructional-designers-are-in-high-demand-in-higher-education/

Gagne, R. (1985). *The Conditions of Learning* (*4th ed.*). New York: Holt, Rinehart & Winston.

Gagné, R. M., Wager, W. W., Golas, K. C., & Keller, J. M. (2005). *Principles of Instructional Design (5th ed.)*. Belmont, CA: Wadsworth/Thomson Learning.

Gerin-Lajoie, S. (2015). Being an instructional designer: a job requiring innovation and trust. *Canadian Journal of Learning and Technology*, 41(4), 1-28.

Gibbons, A. S., Boling, E., & Smith, K. M. (2014). *Instructional design models.* In Handbook of research on educational communications and technology (pp. 607-615). Springer, New York, NY.

Godsall, L., & Foronda, C. (2012). Instructional design as a change agent in a school of nursing. *Distance Learning*, 9(3), 1-10.

Gomez, F. C., Trespalacios, J., Hsu, Y. C., & Yang, D. (2022). Exploring teachers' technology integration self-efficacy through the 2017 ISTE Standards. *TechTrends*, 66(2), 159-171. https://doi.org/10.1007/s11528-021-00639-z

Goodyear, P. (2015). Teaching as design. *Herdsa review of higher education*, *2*(2), 27-50.

Gopaul, B., Jones, G. A., Weinrib, J., Metcalfe, A., Fisher, D., Gingras, Y., & Rubenson, K. (2016). The academic profession in Canada: perceptions of Canadian university faculty about research and teaching. *Canadian Journal of Higher Education*, *46*(2), 55-77.

Grajek, S. (2020, May 15). EDUCAUSE COVID-19 QuickPoll results: Fall planning for education and student support EDUCAUSE. Retrieved September 10, 2020, from

https://er.educause.edu/blogs/2020/5/educause-COVID-19-quickpoll-results-fall-planning-for-education-and-student-support

Gray, C. M., Dagli, C., Demiral-Uzan, M., Ergulec, F., Tan, V., Altuwaijri, A. A., Gyabak, K., Hilligoss, M., Kizilboga, R., Tomita, K., & Boling, E. (2015). Judgment and instructional design: How ID practitioners work in practice. *Performance Improvement Quarterly*, *28*(3), 25-49.

Grossman, P. L., Smagorinsky, P., & Valencia, S. (1999). Appropriating tools for teaching English: A theoretical framework for research on learning to teach. *American journal of Education*, 108(1), 1-29.

Gunn, C., & Cavallari, B. (2007). Instructional design, development, and context expertise: A model for cross cultural collaboration. In M. Keppell (Ed.), *Instructional Design: Case Studies in Communities of Practice* (pp. 127-157). Hershey, PA: Information Science Publishing.

Gustafson, K. L., & Branch, R. M. (2002). What is instructional design? In Reiser, R, A. and Dempsey, J.V. (Eds) *Trends and Issues in Instructional Design and Technology*. Columbus: OH, Merrill Prentice Hall.

Halupa, C. (2019). Differentiation of roles: instructional designers and faculty in the creation of online courses. *International Journal of Higher Education*, 8(1), 55-68.

Hardré, P., Cox, M., & Kollmann, S. (2010). Faculty performance standards: patterns within disciplines in the research university. *The Journal of Faculty Development*, *24*(3), 5-14.

Harris, B. N., McCarthy, P. C., Wright, A. M., Schutz, H., Boersma, K. S., Shepherd, S. L., Manning, L. A., Malisch, J. L., & Ellington, R. M. (2020). From panic to pedagogy: Using online active learning to promote inclusive instruction in ecology and evolutionary biology courses and beyond. *Ecology and evolution*, *10*(22), 12581-12612. https://doi.org/10.1002/ece3.6915

Hart, J. (2018). *Instructional Designers' Experiences with Faculty Subject Matter Experts in Online Higher Education Course Development Projects* (Order No. 10975726). (Doctoral dissertation, Capella University). Available from ProQuest Central; ProQuest Dissertations & Theses Global Closed Collection. (2136282034).

Hemer, S. R. (2014). Finding time for quality teaching: An ethnographic study of academic workloads in the social sciences and their impact on teaching practices. *Higher Education Research & Development*, *33*(3), 483-495. https://doi.org/10.1080/07294360.2013.841647

Hendrickson, R. M., Lane, J. E., Harris, J. T., & Dorman, R. H. (2013). *Academic leadership and governance of higher education.* Sterling, VA: Stylus.

Hixon, E. (2005). *Collaborative online course development: The faculty experience* (Order No. 3167808). Available from ProQuest Dissertations & Theses Global. (304986739).

Hixon, E. (2008). Team-based online course development: A case study of collaboration models. *Online Journal of Distance Learning Administration, 11*(4)

Hofer, B. K. (2001). Personal epistemology research: Implications for learning and teaching. *Educational psychology review, 13*, 353-383. https://doi.org/10.1023/A:1011965830686

Hodges, C. B., Moore, S., Lockee, B. B., Trust, T., & Bond, M. A. (2020, March 27). The Difference Between Emergency Remote Teaching and Online Learning. *EDUCAUSE REVIEW*. Retrieved September 10, 2020, from

https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning

Hood, M. (2013). Bricks or clicks? Predicting student intentions in a blended learning buffet. *Australian Journal of Educational Technology*, 29(6), 762–776.

Horvitz, B. S., Beach, A. L., Anderson, M. L., & Xia, J. (2015). Examination of faculty self-efficacy related to online teaching. *Innovative Higher Education*, 40(4), 305-316. https://doi.org/10.1007/s10755-014-9316-1

Intentional Future. (2016). (rep.). *Instructional Design in Higher Education*. Gates Foundation Retrieved October 13, 2022, from https://www.intentionalfutures.com/posts/instructional-design.

Jaschik, S., & Lederman, D. (2018). 2018 survey of faculty attitudes on technology: a study by inside Higher Ed and Gallup. Washington, DC. Gallup, Inc. Available at: https://www.insidehighered.com/system/files/media/IHE2018SurveyFacultyTechnology pdf.

Johnson, N., & Seaman, J. (2021). 2021 Ontario report: Tracking the impacts of the pandemic on digital learning in Ontario. *Canadian Digital Learning Research Association.* Retrieved April 9, 2023, from https://www.ecampusontario.ca/wp-content/uploads/2022/04/2021-CDLRA-Ontario-Report-March-2022.pdf

Johnson, N., Bates, T., Donovan, T., & Seaman, J. (2019). Tracking online education in Canadian universities and colleges: National survey of online and digital learning 2019 national report. *Canadian Digital Learning Research Association*. Retrieved April 9, 2023, from http://www.cdlra-acrfl.ca/wp-content/uploads/2020/07/2019_national_en.pdf

Jonassen, D. H. (2012). Designing for decision making. *Educational technology research and development*, *60*, 341-359. https://doi.org/10.1007/s11423-011-9230-5

Kaatrakoski, H., Littlejohn, A., & Hood, N. (2017). Learning challenges in higher education: an analysis of contradictions within Open Educational Practice. *Higher Education, 74*(4), 599–615. https://doi.org/10.1007/s10734-016-0067-z

Kahveci, A., Gilmer P.J & Southerland, S. A. (2008). Understanding chemistry professors' use of educational technologies: An activity theoretical approach. *International Journal of Science Education*, 30(3), 323-349. https://doi.org/10.1080/09500690601188638

Kálmán, O., Tynjälä, P., & Skaniakos, T. (2020). Patterns of university teachers' approaches to teaching, professional development and perceived departmental cultures. *Teaching in Higher Education*, *25*(5), 595-614. https://doi.org/10.1080/13562517.2019.1586667

Kampov-Polevoi, J. (2010). Considerations for supporting faculty in transitioning a course to online format. *Online journal of distance learning administration*, *13*(2), 1-12.

Kang, Y., & Ritzhaupt, A. D. (2015). A job announcement analysis of educational technology professional positions: Knowledge, skills, and abilities. *Journal of Educational Technology Systems*, *43*(3), 231-256. https://doi.org/10.1177/0047239515570572

Kaptelinin, V., & Nardi, B. A. (2006). *Acting with technology: Activity theory and interaction design*. MIT press.

Kebritchi, M., Lipschuetz, A., & Santiague, L. (2017). Issues and challenges for teaching successful online courses in higher education: A literature review. *Journal of Educational Technology Systems*, 46(1), 4-29. https://doi.org/10.1177/0047239516661713

Keller, J. M. (1987). Development and use of the ARCS model of instructional design. *Journal of instructional development*, *10*(3), 2-10.

Kenny, R. F., Zang, Z., Schwier, R. A., & Campbell, K. (2005). A review of what instructional

designers do: Questions answered and questions not asked. *Canadian Journal of Learning and Technology*, 31(1), 9–26.

Kentnor, H. (2015). Distance education and the evolution of online learning in the United States. *Curriculum and Teaching Dialogue*, 17(1), 21-34.

Kervin, L., Verenikina, I., Jones, P., & Beath, O. (2013). Investigating synergies between literacy, technology and classroom practice. *Australian Journal of Language and Literacy*, 36(3), 135–147.

Khan, M. A. (2021). The impact of COVID-19 on UK higher education students: experiences, observations and suggestions for the way forward. *Corporate Governance: The International Journal of Business in Society*, *21*(6), 1172-1193. https://doi.org/10.1108/CG-09-2020-0396

Kimmons, R., Veletsianos, G., & VanLeeuwen, C. (2020). What (some) faculty are saying about the shift to remote teaching and learning. *Educause Review*. Retrieved March 27, 2023 from https://er.educause.edu/blogs/2020/5/what-some-faculty-are-saying-about-the-shift-to-remote-teaching-and-learning#:~:text=1.,physical%20and%20mental%20well%2Dbeing.

King, T. (2017). *A multiple case study of faculty control over course design and its effect on faculty efficacy* (Order No. 10267347). Available from ProQuest Dissertations & Theses Global. (1889567491).

Kirkpatrick, D., & Kirkpatrick, J. (2006). *Evaluating training programs: The four levels.* Berrett-Koehler Publishers.

Knowles, E., & Kalata, K. (2007). A model for enhancing online course development. *Innovate: Journal of Online Education, 4*(2)

Kumar, S., & Ritzhaupt, A. (2017). What do instructional designers in higher education really do? *International Journal on E-Learning*, *16*(4), 371-393.

Kuutti, K. (1996). Activity theory as a potential framework for human-computer interaction research. *Context and consciousness: Activity theory and human-computer interaction***,** *1744, 9-22.*

Lase, D., & Zega, T. G. C. (2021). How can teachers engage students in online learning? A Conceptual Framework. *Technium Soc. Sci. J.*, *20*, 143.

Lederman, D. (2019). *Professors' slow, steady acceptance of online learning: A survey: inside higher ed*. Inside Higher Ed | Higher Education News, Events and Jobs. Retrieved May 1, 2023, from https://www.insidehighered.com/news/survey/professors-slow-steady-acceptance-online-learning-survey

Lederman, D. (2020, October 6). Faculty confidence in online learning grows. Retrieved February 02, 2021, from https://www.insidehighered.com/digital-learning/article/2020/10/06/covid-era-experience-strengthens-faculty-belief-value-online

Lee, M. C. (2010). Explaining and predicting users' continuance intention toward e-learning: An extension of the expectation-confirmation model. *Computers & Education*,54(2), 506–516. https://doi.org/10.1016/j.compedu.2009.09.002

Lei, J., & Lin, T. (2022). Emergency online learning: the effects of interactional, motivational, self-regulatory, and situational factors on learning outcomes and continuation intentions. *The International Review of Research in Open and Distributed Learning*, *23*(3), 43-60.

Lewin, C., Cranmer, S., & McNicol, S. (2018). Developing digital pedagogy through learning design: An activity theory perspective. *British Journal of Educational Technology*, *49*(6), 1131-1144. https://doi.org/10.1111/bjet.12705

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Newbury Park, CA: Sage.

Liu, Y., & Dempsey, P. (2017, June). Strategies for engaging faculty in instructional design. In *EdMedia+ Innovate Learning* (pp. 584-588). Association for the Advancement of Computing in Education (AACE).

Mackie, S. A., & Thongpravati, O. (2019). Identifying curricular tensions in a technology innovation doctoral programme. *Innovations in Education & Teaching International*, *56*(2), 130–139. https://doi.org/10.1080/14703297.2017.1329094

Mancilla, R., & Frey, B. (2020). A model for developing instructional design professionals for higher education through apprenticeship. *The Journal of Applied Instructional Design*, 9(2). https://doi.org/10.51869/92rmbf

Martin, F., Ritzhaupt, A., Kumar, S., & Budhrani, K. (2019). Award-winning faculty online teaching practices: Course design, assessment and evaluation, and facilitation. *The Internet and Higher Education*, *42*, 34-43. https://doi.org/10.1016/j.iheduc.2019.04.001

McCurry, D. S. & Mullinix, B. (2017). A concierge model for supporting faculty in online course design. *Online Journal of Distance Learning Administration, 20*(2), 1-6.

McGee, P., Windes, D., & Torres, M. (2017). Experienced online instructors: Beliefs and preferred supports regarding online teaching. *Journal of Computing in Higher Education*, *29*, 331-352. https://doi.org/10.1007/s12528-017-9140-6

McKenzie, J. (Ed.). (2020, February 24). Grey literature: What it is & how to find it. Retrieved September 13, 2020, from https://www.lib.sfu.ca/help/research-assistance/format-type/grey-literature

Merriam, S. B., & Tisdell, E. J. (2015). *Qualitative research: A guide to design and implementation*. John Wiley & Sons.

Miller, S., & Stein, G. (2016, February 8). Finding our voice: instructional designers in higher education. Retrieved September 13, 2020, from https://er.educause.edu/articles/2016/2/finding-our-voice-instructional-designers-in-higher-education

Mitchell, E. (2016). 3 key differences between white papers and scientific papers. Retrieved September 13, 2020, from http://blog.eoscu.com/blog/3-key-differences-between-white-papers-and-scientific-papers

Moskal, T. M. (2012). *Instructional designers in higher education* (Order No. 3546879). Available from ProQuest Dissertations & Theses Global. (1267747031).

Mott, J. (2010). The detection and minimization of cheating during concurrent online assessments using statistical methods. *Collegiate Aviation Review*, 28 (2), 32-46.

Motteram, G. (2019). Videoconferencing Tools as Mediating Artefacts in English Language Teacher Development in Challenging Contexts. *Journal of Educators Online*, *16*(1).

Murphy, E., & Manzanares, M. A. R. (2008). Contradictions between the virtual and physical high school classroom: A third-generation Activity Theory perspective. *British Journal of Educational Technology***,** *39*(6), 1061-1072. https://doi.org/10.1111/j.1467-8535.2007.00776.x

Mwanza-Simwami, D., Engeström, Y., & Amon, T. (2009). Methods for evaluating learner activities with new technologies: Guidelines for the Lab@ Future Project. *International Journal on E-Learning***,** *8*(3), 361-384.

Mwanza, D. (2001). Where theory meets practice: a case for an activity theory based methodology to guide computer system design. *In Proceedings of Interact 2001*: 8th IFIP TC 13 Conference on Human–Computer Interaction, Tokyo, Japan, July 9–13, 2001.

Naffi, N., Davidson, A.-L., Snyder, D. M., Kaufman, R., Clark, R. E., Patino, A., Gbetoglo, E., Duponsel, N., Savoie, C., Beatty, B., Wallace, G., Fournel, I., Ruby, I., & Paquelin, D., Akle, B., Baroud, F., Bates, T., Dede, C., Desjardins, …Winer, L. (2020). *Disruption in and by centres for teaching and learning during the COVID-19 pandemic leading the future of Higher Ed.* [White paper]. Observatoire international sur les impacts sociétaux de l'IA et du numérique (OBVIA). Retrieved June 12th, 2022 from https://www.docdroid.com/L0khasC/whitepaper-disruption-in-and-by-centres-for-teaching-and-learning-during-the-covid-19-pandemic-leading-the-future-of-higher-ed-21-08-2020-pdf.

Noorbehbahani, F., Mohammadi, A., & Aminazadeh, M. (2022). A systematic review of research on cheating in online exams from 2010 to 2021. *Education and Information Technologies*, *27*(6), 8413-8460. https://doi.org/10.1007/s10639-022-10927-7

Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis. *International Journal of Qualitative Methods*. https://doi.org/10.1177/1609406917733847

O'Malley, S. (2017, August 2). What do instructional designers do? *Inside Higher Ed*. Retrieved September 13, 2020, from https://www.insidehighered.com/digital-learning/article/2017/08/02/what-do-instructional-designers-do

Oblinger, D. G., & Hawkins, B. L. (2006). The myth about online course development: "A faculty member can individually develop and deliver an effective online course." *EDUCAUSE Review*, 41(1), 14-15. Retrieved April 10, 2017, from: http://www.educause.edu/ero/article/myth-about-online-course-development

Oleson, A., & Hora, M. T. (2014). Teaching the way they were taught? Revisiting the sources of teaching knowledge and the role of prior experience in shaping faculty teaching practices. *Higher education*, *68*(1), 29-45. https://doi.org/10.1007/s10734-013-9678-9

Origin Learning, O. (2015, May 26). *A brief history of instructional design* origin learning. Retrieved November 03, 2020, from https://blog.originlearning.com/a-brief-history-of-instructional-design/

Outlaw, V & Rice, M. (2015). Best practices: Implementing an online course development & delivery model. *Online Journal of Distance Learning Administration, 18*(3), 1-10.

Pan, C., & Thompson, K. (2009). Exploring dynamics between instructional designers and higher education faculty: An ethnographic case study. *Journal of Educational Technology Development*, 2(1), 33-51. https://doi.org/10.18785/jetde.0201.03

Park, S., & Oliver, J. S. (2008). Revisiting the conceptualisation of pedagogical content knowledge (PCK): PCK as a conceptual tool to understand teachers as professionals. *Research in science Education*, *38*(3), 261-284. https://doi.org/10.1007/s11165-007-9049-6

Park, Y., & Jo, I.-H. (2017). Using log variables in a learning management system to evaluate learning activity using the lens of activity theory. *Assessment & Evaluation in Higher Education*, *42*(4), 531–547. https://doi.org/10.1080/02602938.2016.1158236

Parscal, T., & Riemer, D. (2010). Assuring quality in large-scale online course development. *Online Journal of Distance Learning Administration*, *13*(2), 1-7.

Perry, D., & Steck, A. (2019). Changes in faculty perceptions about online instruction: Comparison of faculty groups from 2002 and 2016. *Journal of Educators Online*, *16*(2), n2.

Peruski, L., & Nushra, P. (2004). Webs of activity in online course design and teaching. *ALT-J, Research in Learning Technology*, 12(1), 37-49. https://doi.org/10.1080/0968776042000211520

Porter, S. (2017). *To MOOC or not to MOOC: How can online learning help to build the future of higher education?* Oxford, UK: Chandos Publishing.

Quality matters.org (2023). *QM higher education rubric*, 7th edition, 2023. Quality Matters. Used under license. All rights reserved. Retrieved May 10, 2023, from https://www.qualitymatters.org/qa-resources/rubric-standards

Rasheed, R. A., Kamsin, A., & Abdullah, N. A. (2020). Challenges in the online component of blended learning: A systematic review. *Computers & Education*, *144*, 103701. https://doi.org/10.1016/j.compedu.2019.103701

Reigeluth, C. M., Beatty, B. J., & Myers, R. D. (2017). *Instructional-Design Theories and Models: The Learner-Centered Paradigm of Education* (Vol. IV). New York: Routledge.

Reiser, R, A. and Dempsey, J.V. (2018). (Eds) *Trends and Issues in Instructional Design and Technology* (Fourth edition). Pearson Education.

Reiser, R. A. (2001a). A history of instructional design and technology: Part I: A history of instructional media. *Educational technology research and development*, 49(1), 53.

Reiser, R. A. (2001b). A history of instructional design and technology: Part II: A history of instructional design. *Educational Technology, Research and Development*, 49(2), 57–67.

Richardson, J. C., Ashby, I., Alshammari, A. N., Cheng, Z., Johnson, B. S., Krause, T. S., & Wang, H. (2019). Faculty and instructional designers on building successful collaborative relationships. *Educational Technology Research and Development*, 67(4), 855–880. https://doi.org/10.1007/s11423-018-9636-4

Richey, R., Klein, J. D., & Tracey, M. W. (2011). *The instructional design knowledge base: theory, research, and practice*. Routledge.

Ritzhaupt, A. D., & Kumar, S. (2015). Knowledge and Skills Needed by Instructional Designers in Higher Education. *Performance Improvement Quarterly*, *28*(3), 51-69.

Roberts, D. W., Jackson, K., Osborne, J., & Vine, A. S. (1994). Attitudes and perceptions of academic authors to the preparation of distance education materials at the University of Tasmania. *Distance Education*, 15(1), 70-93.

Rogers, C. F. (2006). Faculty perceptions about e-cheating during online testing. *Journal of Computing Sciences in Colleges*, *22*(2), 206-212.

Rogers, E.M. (2003). *Diffusion of innovations* (5th ed.). New York: Free Press

Rubin, H., & Rubin, I. (2012). *Qualitative interviewing: The art of hearing data*. Sage.

Russell, D. L., & Schneiderheinze, A. (2005). Understanding innovation in education using activity theory. *Journal of Educational Technology & Society*, *8*(1), 38-53.

Saldaña, J. (2021). *The coding manual for qualitative researchers*. Sage.

Saldaña, J., & Omasta, M. (2017). Analyzing documents, artifacts, and visual materials. *Qualitative Research: Analyzing Life*, *63*, 88.

Schmidt, S. W., Tschida, C. M., & Hodge, E. M. (2016). How faculty learn to teach online: What administrators need to know. *Online Journal of Distance Learning Administration*, *19*(1), 1-10.

Schuh, K. L., Van Horne, S., & Russell, J. (2018). E-Textbook as object and mediator: interactions between instructor and student activity systems. *Journal of Computing in Higher Education*, *30*(2), 298–325. https://doi.org/10.1007/s12528-018-9174-4

Schwier, R. A., Campbell, K., & Kenny, R. (2007). Instructional designers' perceptions of their interpersonal, professional, institutional and societal agency: Tales of change and community. In M. J. Keppell (Ed.), *Instructional Design: Case Studies in Communities of Practice* (pp. 1-18). Hershey, PA: Information Science Publishing.

Scoppio, G., & Luyt, I. (2017). Mind the gap: Enabling online faculty and instructional designers in mapping new models for quality online courses. *Education and Information Technologies*, 22(3), 725-746. https://doi.org/10.1007/s10639-015-9452-y

Seaman, J. E., Allen, I. E., & Seaman, J. (2018). *Grade increase: Tracking distance education in the United States, 2018*. Babson Survey Research Group. Retrieved August 2, 2022 from https://www.bayviewanalytics.com/reports/gradeincrease.pdf

Senn, S., & Wessner, D. R. (2021). Maintaining student engagement during an abrupt instructional transition: lessons learned from COVID-19. *Journal of microbiology & biology education*, *22*(1), 10-1128. https://doi.org/10.1128/jmbe.v22i1.2305

Shearer, R. L., Aldemir, T., Hitchcock, J., Resig, J., Driver, J., & Kohler, M. (2020). What students want: A vision of a future online learning experience grounded in distance education theory. *American Journal of Distance Education*, 34(1), 36-52. https://doi.org/10.1080/08923647.2019.1706019

Shift elearning. (2019). *A Quick, No-Nonsense Guide to Basic Instructional Design Theory*. Retrieved November 04, 2020, from https://www.shiftelearning.com/blog/bid/345615/a-quick-no-nonsense-guide-to-basic-instructional-design-theory

Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational researcher*, *15*(2), 4-14.

Simonson, M., Smaldino, S, & Zvacek, S. (2015). *Teaching and learning at a distance: Foundations of distance education*, (6th ed.). Charlotte, NC: Information Age Publishing.

Singh, J., Evans, E., Reed, A., Karch, L., Qualey, K., Singh, L., & Wiersma, H. (2022). Online, hybrid, and face-to-face learning through the eyes of faculty, students, administrators, and instructional designers: Lessons learned and directions for the post-vaccine and post-pandemic/COVID-19 world. *Journal of Educational Technology Systems*, *50*(3), 301-326. https://doi.org/10.1177/00472395211063754

Singleton, K., Evmenova, A., Jerome, M. K., & Clark, K. (2019). Integrating UDL strategies into the online course development process: Instructional designers' perspectives. *Online Learning*, 23(1), 206-235.

Smith, P. L., & Ragan, T. J. (2005). *Instructional design (3rd ed.)*. Hoboken, NJ: John Wiley & Sons.

Soffer, T., & Cohen, A. (2019). Students' engagement characteristics predict success and completion of online courses. *Journal of computer assisted learning*, *35*(3), 378-389. https://doi.org/10.1111/jcal.12340

Stake, R. (1995). *The art of case study research.* Thousand Oaks: Sage Publications.

Stefaniak, J. E. (2017). The role of coaching within the context of instructional design. *TechTrends*, 61(1), 26–31. https://doi.org/10.1007/s11528-016-0128-2

Stes, A., & Van Petegem, P. (2014). Profiling approaches to teaching in higher education: a cluster-analytic study. *Studies in Higher Education*, *39*(4), 644-658.

Stevens, K. B. (2013). Contributing factors to a successful online course development

process. *Journal of Continuing Higher Educat*ion, 61(1), 2-11. https://doi.org/10.1080/07377363.2013.758554

Sugar, W. A., & Luterbach, K. J. (2016). Using critical incidents of instructional design and multimedia production activities to investigate instructional designers' current practices and roles. *Educational Technology Research and Development*, 64(2), 285-312. https://doi.org/10.1007/s11423-015-9414-5

Tannehill, D. B., Serapiglia, C. P., & Guiler, J. K. (2018). Administrative or faculty control of online course development and teaching: A comparison of three institutions. *Information Systems Education Journal*, 16(3), 26-34.

Tate, E. (2017, May 3). Easing conflicts between instructional designers and faculty. *Inside Higher Ed*. Retrieved September 13, 2020, from https://www.insidehighered.com/digital-learning/article/2017/05/03/easing-conflicts-between-instructional-designers-and-faculty

Terantino, J. M., & Agbehonou, E. (2012). Comparing faculty perceptions of an online development course: Addressing faculty needs for online teaching. *Online Journal of Distance Learning Administration*, *15*(2), 1-27.

Todri, A., Papajorgji, P., Moskowitz, H., & Scalera, F. (2020). Perceptions regarding distance learning in higher education, smoothing the transition. *Contemporary Educational Technology*, *13*(1). https://doi.org/10.30935/cedtech/9274

Trigwell, K., & Prosser, M. (2004). Development and use of the approaches to teaching inventory. *Educational Psychology Review*, *16*(4), 409-424. https://doi.org/10.1007/s10648-004-0007-9

Tsai, Y.-H., Lin, C.-H., Hong, J.-C., & Tai, K.-H. (2018). The effects of metacognition on online learning interest and continuance to learn with MOOCs. *Computers & Education*, 121, 18–29. https://doi.org/10.1016/j.compedu.2018.02.011.

Underwood, J., & Szabo, A. (2003). Academic offences and e-learning: individual propensities in cheating. *British Journal of Educational Technology*, *34*(4), 467-477.

Usher, A., (2020). *The State of Postsecondary Education in Canada, 2020*. Toronto: Higher Education Strategy Associates.

Veletsianos G. (2020, September 06). *The 7 elements of a good online course*. Retrieved September 14, 2020, from https://theconversation.com/the-7-elements-of-a-good-online-course-139736

Voogt, J., Laferriere, T., Breuleux, A., Itow, R. C., Hickey, D. T., & McKenney, S. (2015). Collaborative design as a form of professional development. *Instructional science*, *43*(2), 259-282. https://doi.org/10.1007/s11251-014-9340-7

Vygotsky, L. S., & Cole, M. (1978). *Mind in society: Development of higher psychological processes*. Harvard university press.

Wagner, D. L., & Hulen, K. G. (2015). Collaborating with an instructional designer to develop a quality learner-engaged online course. *Journal of Nursing Education and Practice, 6*(4), 40-47.

Wakefield, J., Warren, S., & Mills, L. (2012, March). Traits, skills, & competencies aligned with workplace demands: What today's instructional designers need to master. *In Society for Information Technology & Teacher Education International Conference* (pp. 3126-3132). Association for the Advancement of Computing in Education (AACE).

Waltman, J., Bergom, I., Hollenshead, C., Miller, J., & August, L. (2012). Factors contributing to job satisfaction and dissatisfaction among non-tenure-track faculty. *The Journal of Higher Education*, 83(3), 411-434.

Wegner, E., & Nückles, M. (2015). Knowledge acquisition or participation in communities of practice? Academics' metaphors of teaching and learning at the university. *Studies in Higher Education*, *40*(4), 624-643. https://doi.org/10.1080/03075079.2013.842213

Westberry, N., & Franken, M. (2015). Pedagogical distance: explaining misalignment in student-driven online learning activities using Activity Theory. *Teaching in Higher Education*, *20*(3), 300–312. https://doi.org/10.1080/13562517.2014.1002393

Xie, J., A, G., & Rice, M. (2021). Instructional designers' perceptions of their roles in emergency remote teaching. *Distance Education*, 42(1), 70–87. https://doi.org/10.1080/01587919.2020.1869526

Xie, J., Rice, M. F., & Griswold, D. E. (2021). Instructional designers' shifting thinking about supporting teaching during and post-COVID-19. *Distance Education*, *42*(3), 331-351. https://doi.org/10.1080/01587919.2021.1956305

Xu, H., & L. V. Morris. (2007). Collaborative course development for online courses. *Innovative Higher Education 32*(1), 35–47. https://doi.org/10.1007/s10755-006-9033-5

Xu, W., & Zammit, K. (2020). Applying thematic analysis to education: A hybrid approach to interpreting data in practitioner research. *International Journal of Qualitative Methods*, *19*. https://doi.org/10.1177/1609406920918810

Yamagata-Lynch, L. C. (2010). *Activity systems analysis methods: Understanding complex learning environments*. Springer Science & Business Media.

Yin, R. (2018). *Case study research: design and methods*, Sixth Edition. Thousand Oaks, CA SAGE.

You, J. (2010). *A study of faculty members' perceived utilization of best practices in distance learning course design and delivery and the role of instructional designers* (Doctoral dissertation, University of Toledo) (Order No. 3423881). Available from ProQuest Central; ProQuest Dissertations & Theses Global Closed Collection. (761361141).

You, P., & Teclehaimanot, B. (2010, October). Instructional designers' role in assisting instructors in the implementation of best practices in distance learning course design and delivery in higher education: instructors' perspectives. *In E-Learn: World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education* (pp. 857-865). Association for the Advancement of Computing in Education (AACE).

Yusop, F. D., & Correia, A. P. (2014). On becoming a civic-minded instructional designer: An ethnographic study of an instructional design experience. *British Journal of Educational Technology*, *45*(5), 782-792. https://doi.org/10.1111/bjet.12112

Zheng, L., Chen, N.-S., Cui, P., & Zhang, X. (2019). A Systematic Review of Technology-Supported Peer Assessment Research: An Activity Theory Approach. *International Review of Research in Open and Distributed Learning*, *20*(5), 168–191. https://doi.org/10.19173/irrodl.v20i5.4333

Ziegenfuss, D. H., & Lawler, P. A. (2008). Collaborative course design: changing the process, acknowledging the context, and implications for academic development. *International Journal for Academic Development*, 13(3), 151–160. https://doi.org/10.1080/13601440802242309

Appendix A: Invitation letter

Send to All Potential Participants

SUBJECT: Please reply by **date**: Participating in a study that explores faculty's experiences of designing online courses

Dear [Name of the participant],

I want to invite you to participate in a study that explores the experiences of online course preparation activities.

The purpose of the study is to understand the experiences of tenure-track faculty when preparing online courses using the course design services provided by their institutions. The research results will provide insights to higher education administrators, faculty and instructional designers on how to strengthen the instructional design services for online courses in higher education.

Participation in the study involves a 45- to 60-minute interview on Zoom, plus showing some of the materials from your online course(s). Participation in the study is voluntary.

If you would like to participate or request more information, please reply to this message by date.

Thank you for your time.

I look forward to hearing from you.

Best regards,

Yuan Chen

PhD Candidate

Concordia University

Department of Education

yuan.chen@mail.concordia.ca

Appendix B: Follow-up letter

Send to All Participants who agreed to participate

SUBJECT: Please reply by ***date***: Scheduling your interview for the Concordia study of online course design

Dear [Name of the participant],

Thank you for your interest in participating in the study.

As noted in the Call for Participants to which you responded, the purpose of the study is to understand the experiences of tenure-track faculty when preparing online courses using the course design services provided by their institutions. Specific areas of questioning include your experiences with online teaching, course planning, and the course design support you received from your institutions.

As also noted then, participation in the study involves a 45- to 60-minute interview on Zoom, plus showing some of the materials from your online course(s). Participation in the study is voluntary.

To schedule the interview, please indicate your top 5 preferences for interview time.

Could you please let me know by ***date*** your preferences for scheduling the interview?

Thank you,

Best regards,

Yuan Chen

PhD Candidate

Concordia University

Department of Education

yuan.chen@mail.concordia.ca

- -

[Date examples]

Monday, M/D/2021 10am-11am
Monday, M/D/2021 11am-12pm
Monday, M/D/2021 2pm-3pm
Monday, M/D/2021 3pm-4pm
Tuesday, M/D/2021 10am-11am
Tuesday, M/D/2021 11am-12pm
Tuesday, M/D/2021 2pm-3pm
Tuesday, M/D/2021 3pm-4pm
Wednesday, M/D/2021 11am-12pm
Wednesday, M/D/2021 2pm-3pm
Thursday, M/D/2021 2pm-3pm
Thursday, M/D/2021 3pm-4pm
Friday, M/D/2021 10am-11am

Appendix C: Confirming Interview Dates and Times

Send to All Participants who replied to the Follow-up letter (Appendix B)

SUBJECT: Experiences of online course design Study: Confirming Your Interview

Dear [Name of the participant],

Thank you for agreeing to participate in the study on faculty's experience of preparing online courses using the course design services. Based on your preferred time and availabilities, the interview is scheduled:

Date: [Insert the date]
Time: [Insert the time] Eastern Daylight Time
Zoom link: [Insert the zoom link]

The interview will be conducted by Yuan Chen, and should last 45 to 60 minutes. Please note that the interview will be recorded, but the recording will only be used for this study. It will not be shared with anyone outside of this research.

If the interview time is no longer convenient for you, please contact me to reschedule.

Before the interview, please read the attached Information and Consent Form, sign it, and return it to me by email (yuan.chen@mail.concordia.ca).

Thank you for your time. I look forward to receiving your signed Information and Consent Form and to speaking with you.

Yuan Chen

PhD Candidate

Concordia University

Department of Education

yuan.chen@mail.concordia.ca

Appendix D: Interview guide

Study Title: Faculty's experience with online course design supported by instructional designers in higher education: An activity theory perspective

The purpose of the study is to understand faculty members' experiences of preparing online courses using the course design support services provided in dual-mode higher education institutions. The research results will provide insights to higher education administrators, faculty and instructional designers on how to strengthen the instructional design support services provided in higher education institutions.

Note: All the information collected from the interview will be confidential. Only the researcher will have access to the interview recordings.

1. Tell me a bit about yourself, your educational background and your previous professional and teaching experiences.
2. How did you become an instructor at [name of the institution]?
3. How do you feel about online teaching and learning? Compared to face-to-face classes, what do you think is different about online classes?
4. You recently designed an online course. Can you provide some information about it: title of the course, level, and the type of assistance you received?
5. Please walk me through the process of designing your online course design, from the moment you decided to teach the course online until the course started.
    a. If someone helped you with something or performed the task for you during the course design process, please identify who helped, the task they helped with and what they did.
    b. How were roles and responsibilities determined? What formal means did you use, if any, to document these roles and responsibilities?
    c. What guidelines or rules were you expected to follow when designing the course? How did you find out about these? To what extent did you actually follow them?
    d. When preparing your online course, what tools/technologies did you use? What support did you get for using the tools/technologies?
6. What problems did you encounter when preparing this course? How did you resolve them?
7. And what triumphs did you experience? What made it such a triumph?
8. What changes in your face-to-face teaching have you noticed since designing the online course?
9. What else would you like to share with me?
10. Would you mind if I contact you for some follow-up questions via e-mail to clarify some of the information you shared during the interview later?

Appendix E: Research consent form

Study Title: Tenure-track faculty's experience with online course design supported by instructional designers in higher education: An activity theory perspective
Researcher: Yuan Chen
Researcher's Contact Information: yuan.chen@mail.concordia.ca
Faculty Supervisor: Saul Carliner
Faculty Supervisor's Contact Information: saul.carliner@concordia.ca
Source of funding for the study: N/A

You are being invited to participate in the research study mentioned above. This form provides information about what participating would mean. Please read it carefully before deciding if you want to participate or not. If there is anything you do not understand, or if you want more information, please ask the researcher.

A. PURPOSE

The purpose of the study is to understand tenure-track faculty members' experiences of preparing online courses using the course design support services provided in dual-mode higher education institutions. The research results will provide insights to higher education administrators, faculty and instructional designers on how to strengthen the instructional design support services provided in higher education institutions.

B. PROCEDURES

If you participate, you will be asked to:
Sign this consent form after reading it carefully. Also, the researcher will explain the research purpose and the procedure to you prior to the interviews.
Participate in a 45 to 60 minutes in-depth interview via Zoom. The interview asks about your experiences and perspectives towards preparing online courses using the course design support services provided in your institutions.
Participants will be notified that the interview session will be recorded.
Share some course materials (such as lesson plans, course websites or e-mail correspondences) to illustrate points from the interview.
In total, participating in this study will take about 45 to 60 minutes via Zoom. The interview session will be audio recorded. Your participation is voluntary. You can withdraw from the study at any time. If you would like to withdraw from the study after the interview is done, please contact the researcher within the four weeks of completing the interview to ensure that your data will not be analyzed. For example, if you are interviewed on August 1, 2021, and you would like to withdraw from the study, please contact the researcher no later than August 29, 2021, to make sure your data will be removed.

C. RISKS AND BENEFITS

There are no foreseeable risks associated with participating in this research. Although few participants might feel uncomfortable being recorded while talking, please feel free to stop the interview if that's the case.
This research is not intended to benefit you personally, but you might gain better insight into the strategies and suggestions for developing online courses.

D. CONFIDENTIALITY

We will gather the following information as part of this research:
At the beginning of the research, your name and contact information will be identified.
All of your interview conversations will be recorded.

The researcher will ask your permission to see some of your course-related materials (such as course website, lesson plans, and activity plans).
We will not allow anyone to access the information except people directly involved in conducting the research. We will only use the information for the purposes of the research described in this form. No personal information will be kept after the study ends. We will not allow anyone to access the information, except people directly involved in conducting the research. We will only use the information for the purposes of the research described in this form. No personal information will be kept after the study ends.
The information gathered will be coded. That means the information will be identified by a code. Only the researcher will have a list that links the code to your name.
We will protect the digital format information by using a password-protected laptop. Only the researcher will have access to the research data. All of the paper-based information will be stored in a securely locked drawer at the research lab at Concordia University.
The results of the study might be published or presented in academic journals or conferences. It will be unlikely to identify you in the published results. However, if you have no problem with being identified, please indicate below.
[ ] I accept that my name and the information I provide appear in publications of the results of the research.
[ ] Please do not publish my name as part of the results of the research.
We will destroy the information five years after the end of the study.
F. CONDITIONS OF PARTICIPATION
You do not have to participate in this research. It is purely your decision. If you do participate, you can stop at any time. You can also ask that the information you provided not be used, and your choice will be respected. If you decide that you don't want us to use your information, you must tell the researcher within four weeks of completing the interview. For example, if you are interviewed on August 1, 2021, and you would like to withdraw from the study, please contact the researcher no later than August 29, 2021, to make sure your data will be removed.
There are no negative consequences for not participating, stopping in the middle or asking us not to use your information.
G. PARTICIPANT'S DECLARATION
I have read and understood this form. I have had the chance to ask questions and any questions have been answered. I agree to participate in this research under the conditions described.
NAME (please print) _____
SIGNATURE _____
DATE _____
If you have questions about the scientific or scholarly aspects of this research, please contact the researcher. Their contact information is on page 1. You may also contact their faculty supervisor.
If you have concerns about ethical issues in this research, please contact the Manager, Research Ethics, Concordia University, 514.848.2424 ex. 7481 or oor.ethics@concordia.ca.

Appendix F: A reminder letter

Note: Send to the participants one or two day before the interview

SUBJECT: Reminder about your ***date*** interview for study of online course design

Dear [Name of the participant],

Thank you for your interest in participating in the study.

This is to remind you that I will interview you on [add the date and time] at [provide the link to the online platform].

The interview will take about 45 to 60 minutes of your time. During the interview, you will share your experiences and perspectives on preparing the online courses and your experiences with the course design support services you received during the course preparation process. The interview will be recorded.

Please confirm if the time and date of the interview work for you. Feel free to contact me if you have any questions.

Thank you,

Best regards,

Yuan Chen

PhD Candidate

Concordia University

Department of Education

yuan.chen@mail.concordia.ca

Appendix G: A thank you note

Send to the participants one or two days after the interview.

Dear [Name of the participant],
Thank you for your participation in the study. Your participation is of great value to understand the experiences of current course design support services in higher education.
You mentioned some of the course materials during the interview. Would you mind sharing them with me? If you could send me any course files (such as your course plans and activity templates), that would help me better understand your course preparation experiences.
All of your responses will be kept confidential and used only for this study. You can also ask that the information you provided not be used, and your choice will be respected.
If you decide that you don't want us to use your information, please tell the researcher within the four weeks after completing the interview. For example, if you are interviewed on August 1, 2021, and would like to withdraw from the study, please contact the researcher no later than August 29, 2021, to ensure your data will be removed.
Thank you for your time. Feel free to contact me if you have any questions.
Best regards,
Yuan Chen
PhD Candidate
Concordia University
Department of Education
yuan.chen@mail.concordia.ca

Appendix H: A sample letter to review transcripts

Send to the participants once the interviews are transcribed

SUBJECT: Please reply by date: Reviewing the transcript of your interview for the study of online course design

Dear [Name of the participant],

Thank you for your participation in the study. Your participation is of great value to understand the experiences of current instructional design support services in higher education.

All of your interview responses are transcribed by the researcher. Attached, please find a copy of the transcript.

Please review the transcript and check its accuracy. If anything is missing or inaccurate, please correct it on the transcript. You can ask that the information you provided not be used at any time, and your choice will be respected.

As a reminder, all of your responses will be kept confidential and used only for the study.

If you have questions or need further clarifications of this request, please contact me.

Please return your reviewed transcript with any corrections by [date]. If I do not hear from you by [**same date**], I will assume that the transcript is correct as is and will begin analysis of it.

Best regards,

Yuan Chen
PhD Candidate
Concordia University
Department of Education
yuan.chen@mail.concordia.ca

Appendix I. Sample Codebook

Initial codes were created based on the theoretical framework, the literature review, and research questions.

Initial Codes	Description
Subject	Describes the background information of instructors involved in the ID supported course design process.
Tools	Physical and cognitive instruments instructors used to complete the course design tasks.
Object/Outcome	The results/products instructors hope to achieve at the end of the course design process.
Rules	The institutional policies and regulations, design guidelines, and other conventions that instructors have to consider when designing the course.
Community	The instructors' social contexts that influences their course design practices.
Division of labour	The distributions of tasks and responsibilities between instructor and instructional designers within the course design activity.
Course design process	Instructors' descriptions of the key steps and main tasks of their course design.
Challenges	The difficulties/issues instructors faced while trying to achieve their course design goals.
Types of ID support	Describes how and what tasks instructors were supported by the IDs.
ID suggestions	Refers to the solutions or recommendations instructional designers provided to instructors to help them reach their course design goals.
Course design decisions	Describes whether and how instructors make decisions based on ID suggestions.
Considerations	Described the factors that affected instructor's course design decisions.
Relationships	Describes instructors perceived working relations with IDs.
ID support Impacts	Refers to instructors' perceived usefulness of the ID support on their course design.

Codes came from the open coding results of the interview transcripts, documents, and other supplemental visual materials. Also, how these codes link to Initial codes.

Initial Codes	Codes	Description	Exemplary Quotes
Subject	**Past experience**	Instructors' Education Background information, past work experiences, past experience with teaching, prior experience with online teaching and learning and their past experiences as students that affect teaching and course design.	
	Teaching and research balance	Instructors described their workload allocations and their primary work focus.	
	Teaching beliefs	Instructors' understanding of their role as a teacher and their perceived value of their work.	C1P2: "I find satisfaction in teaching that I am able to bring the results of my research into my teaching." C1P2: "I am in contact with young people with new ideas all the time…"
	Teaching strategies	Instructors describe how they teach their courses.	
	Comparison between Online and f-2-f courses	Instructors describe the difference between f-2-f and online classes.	C1P1: "…that little push is the hardest thing to get during online teaching because you just turn off your computer and pretend it does not exist."
	Perceptions and experience of	Instructors described their definition of online courses, and	C1P1: "Online teaching and learning are a type of

	online teaching and learning	shared their thoughts on online teaching and learning.	that this generation will not be able to avoid".
	Technology attitude	Instructors' comfort level, thoughts on technology.	
Object	**Course Goal**	Instructors' expectations on the course design goals and results.	C1P1: "to work on the look and feel of the course" C1P2: "…present a classical course in a beautiful format and integrate technologies to share knowledge with students"
	Design Needs	Instructors' expectations on the assistances needed in the course design process.	C1P2: "…help with copyright clearance on the learning materials"
	Professional Development Goal	Instructors' expectations on improving their teaching skills and knowledge.	
Course Design Process	**Starting Point**	Describes the first step of the course design process.	
	Learning objectives	Instructors describe their experiences of writing learning objectives.	
	Interface and Structure design	Instructors outline course structure, and decide the appearance of the course within the LMS.	
Types of ID support	**ID support tasks**	Different tasks instructional designers/ID team available to instructors.	C1P1: "…support the design of the actual look of the course…" "…support where to put what content for each module…"

	ID suggestions	Suggestions or recommendations instructional designers shared to help instructors design their courses.	C1P2: "…following a consistent structure for each unit…"
	IDs and Instructor's divergent perspectives	Instructors and IDs have different thoughts and understanding on course design tasks.	C1P2: "for them [ID], it was an issue of copyright, and whereas for me, it was more like an ethical issue."
	Open to online teaching	Instructors embrace online courses more after they worked with IDs.	C1P2: "it is really nice to see the possibility of combining technology with the discipline…"
	Positive experience		"awesome experience"
	Delayed taking ID suggestions	Instructors might not decide to take the ID suggestions at the time the suggestions were provided, but later, they adopted them. Explanations were provided.	C1P2: "…I did not take the suggestion at the moment, but as I started teaching the course, I realized it was a good idea, so I ended up embracing it."
	Refused ID suggestions	Instructors decided not to take the ID suggestions and provided reasons.	C1P2: "I was hesitant to use it [tool suggested by ID] as I saw several technical glitches during the demo workshop."