

Seton Hall University

eRepository @ Seton Hall

---

Seton Hall University Dissertations and Theses  
(ETDs)

Seton Hall University Dissertations and Theses

---

Fall 2020

## Practicing What They Preach: A Case Study Exploring the Experiences of Instructional Designers as Educators of an Online Teaching Certificate Program

David Uibelhoer  
david.uibelhoer@shu.edu

Follow this and additional works at: <https://scholarship.shu.edu/dissertations>



Part of the [Higher Education Commons](#), [Instructional Media Design Commons](#), and the [Online and Distance Education Commons](#)

---

### Recommended Citation

Uibelhoer, David, "Practicing What They Preach: A Case Study Exploring the Experiences of Instructional Designers as Educators of an Online Teaching Certificate Program" (2020). *Seton Hall University Dissertations and Theses (ETDs)*. 2829.

<https://scholarship.shu.edu/dissertations/2829>

**Practicing What They Preach: A Case Study Exploring the Experiences of Instructional  
Designers as Educators of an Online Teaching Certificate Program**

by

David Uibelhoer

Submitted in partial fulfilment of the requirements for the degree of

Doctor of Philosophy

Department of Higher Education Leadership, Management and Policy

Seton Hall University

November 2020

© 2020 David Uibelhoer



COLLEGE OF EDUCATION AND HUMAN SERVICES  
**SETON HALL UNIVERSITY**

We certify that we read this thesis written by David Uibelhoer in the Fall Semester 2020 and, in our opinion, it is sufficient in scientific scope and quality as a dissertation for the degree of Doctor in Philosophy.

\_\_\_\_\_ (Date)

Robert Kelchen, Ph.D.

Research Mentor

\_\_\_\_\_ (Date)

David Reid, Ph.D.

Reader, Member of Dissertation Committee

\_\_\_\_\_ (Date)

Natalia Kouraeva, Ed.D.

Reader, Member of Dissertation Committee

## **Abstract**

The rapid integration of online education has led to faculty challenges in teaching online. Research shows that faculty online professional development that focuses on pedagogical inquiry can lead to better teaching of online courses. This qualitative case study was conducted to explore the experiences of a team of eight instructional designers who developed a four-course online teaching certificate program at a large public research university. In addition, this study sought to better understand how instructional designers describe university support for leading this faculty online professional development initiative and determine whether their expertise in online pedagogy can lead to improved online course development and teaching by faculty learners. Data for this study was collected through course document analysis and semi-structured interviews to gain insight into the collaborative course development process and facilitation of the program. I analyzed the data and determined that the instructional design team consisted of a diverse group of practitioners who took upon a shared role in the decision-making process within the program. Their various specializations within the field of instructional design allowed for the co-development of four courses focusing on the fundamentals of designing and teaching online courses, the basic concepts related to accessibility in online courses and the benefits of using “universal design” for developing course materials, strategies for engaging students in online courses, and considerations for academic video production in online teaching.

Key findings included a perceived lack of university wide support for the program, the discovery that training in technological tools was secondary to the pedagogical best practices emphasized throughout the program. The team used instructional design methodology incorporating adult learning principles to deliberately design learner-centered courses, giving faculty learners in the program the experience of being an online student before considering their

role as an online instructor. Discourse and shared reflection upon the learning experiences within the program transformed faculty perceptions about online education and brought recognition to the value of instructional design in the course development process. Positional parity, a centralized instructional design team of specialized professionals, and experiential learning design empowered instructional designers to be partners and leaders of a successful online teaching certificate program.

The following themes emerged from this study: diversity, collaboration, time constraints, university priorities and structure, establishing trust, and relationship building. Study recommendations included: (a) greater recognition of the pedagogical expertise of instructional designers (b) positional parity within instructional design teams can help to foster collaboration and teamwork, thereby leading to more effective online leadership initiatives, (c) instructional design teams should be centrally located and preferably situated within academic reporting lines to prevent misconceptions about their roles in higher education, and (d) experiential learning design in online professional development can transform perceptions about online education and subsequently improve the quality of online teaching.

*Keywords:* instructional design, instructional designers, higher education, collaboration theory, experiential learning theory, adult learning theory, faculty online professional development, online teaching

## Dedication

First and foremost, I would like to dedicate this dissertation to my brilliant and beautiful wife, Geetha, for your patience and unwavering support which ultimately allowed me to achieve this lifelong goal. Thank you so much for the sacrifices you have made for our family so I could complete and earn my doctorate. To my son, Ryder, please know that your smile and joyful zest for life truly helped push me through the final stages of this journey.

I would also like to dedicate this to my mother, Laura, and father, Richard, for all their love and support throughout my life. To my brother Mike, for teaching me that sometimes it is okay to go against the grain. To my grandfather Anthony, who always taught me to work hard and never look at the clock. All I have ever wanted to do was make you all proud.

To my mother-in-law, Uma, and father-in-law, Suresh, who have always treated me like a son of their own. Thank you for all your love and generosity. To Surendraiah, I know you are looking down and proud of this accomplishment. This is for the both of us!

To all my family and friends. Thank you for all for your love, guidance and support over the years which helped make me who I am today.

Lastly, I would like to dedicate this to those trying to find their way as academic professionals and who may be interested in pursuing this rewarding career path in the future.

Welcome in on our little secret and always feel free to reach out and connect!

## **Acknowledgments**

There are several people that deserve acknowledgement throughout my doctoral journey, and I wish to thank all of those who helped me complete my doctoral degree in Higher Education Leadership, Management & Policy. First, I would like to express my deepest appreciation to my doctoral advisor and mentor, Dr. Robert Kelchen, whose patience, guidance and encouragement has been invaluable to me throughout my graduate studies. Thank you for serving as the perfect role model for what an educator should stand for; you are a true paragon. Additionally, I would like to thank Dr. David Reid and Dr. Natalia Kouraeva, who also served on my committee and helped to guide me throughout this endeavor. Thank you to all the faculty members within the Higher Education program (and beyond) who have motivated me to peruse research and scholarship, especially Dr. Rong Chen, Dr. Joseph Stetar, and the late Dr. Gerard Babo. I would also like to acknowledge my colleagues within the program and especially the members within my dissertation group for their support and motivation throughout this process.

Last but certainly not least, thank you to all who participated in this study and who took the time from their busy schedules to share their experiences. Without your insights and experiences, this study could not have been possible.

**List of Tables**

Table 1. “Old vs. New” Teaching Paradigms .....	24
Table 2. Participant Demographics .....	68

## List of Figures

Figure 1. Kolb’s Cycle of Experiential Learning.....	35
Figure 2. Bloom’s original taxonomy (Bloom & Krathwohl, 1956) and Anderson and Krathwohl’s Revised Taxonomies (Anderson & Krathwohl, 2001) .....	36
Figure 3. ADDIE instructional design model (Gagne, et al, 2005) .....	38
Figure 4. The Dick and Carey Model Systems Approach Model (Dick & Carey, 1990).....	40
Figure 5. The ARCS Model (Song & Keller, 1999).....	43
Figure 6. Gagné’s Nine Events of Instruction (1985).....	44
Figure 7. Backward Design Model (Wiggins & McTighe, 1998) .....	45
Figure 8. An emerging model of change agency in instructional design (Campbell, Schwier & Kenny, 2007).....	55
Figure 9. Organizational chart of the OID .....	80

## Contents

Abstract .....	i
Dedication .....	iii
Acknowledgments .....	iv
List of Tables .....	v
List of Figures .....	vi
CHAPTER I .....	1
Background of the Study .....	2
Statement of the Problem .....	4
Purpose of the Study .....	5
Significance of the Study .....	6
Summary .....	7
Organization of the Dissertation .....	8
CHAPTER II .....	10
Methods of Literature Research .....	10
Theoretical Framework .....	11
Review of the Literature .....	15
The Historical Evolution of Instructional Design .....	15
Significant Learning Theories in Instructional Design .....	17
Significant Models of Instructional Design .....	35
Instructional Designers in Higher Education .....	46
Challenges & Gaps Within the Literature .....	57
Synthesis of the Literature Review .....	63
Summary .....	65
CHAPTER III .....	66
Research Design and Methodology .....	66
Participant Selection and Research Site .....	67
Data Collection .....	70
Data Analysis .....	72
Role of the Researcher .....	73
Validity .....	75
Limitations .....	76
Summary .....	77
CHAPTER IV .....	78
Instructional Design Team Background .....	78
Online Teaching Certificate Program Background .....	80
Analysis of Research Question 1 .....	82
Themes: Research Question 1 .....	83
Analysis of Research Question 2 .....	99
Themes: Research Question 2 .....	100
Analysis of Research Question 3 .....	112

Themes: Research Question 3.....	113
Summary .....	126
CHAPTER V .....	128
Summary Discussion .....	128
Implications for Practice .....	131
Recommendations for Future Research .....	135
Conclusion .....	136
REFERENCES .....	139
Appendix A.....	152
Appendix B.....	153
Appendix C.....	156

## CHAPTER I

### **Practicing What They Preach: A Case Study Exploring the Experiences of Instructional Designers as Educators of an Online Teaching Certificate Program**

Instructional design is a field of practice that primarily focuses on the design, development, and implementation of learning experiences (Saba, 2011). As online education continues its growth throughout higher education, greater attention has been given to instructional designers and the efforts they bring to improve the quality of online courses and programs (Brown et al., 2020). Instructional design as a practice continues to evolve as ideas about effective learning and instruction continue to adapt to rapid technological innovation in the changing world around us. Due to the increasing demand for online learning in public higher education, more and more faculty are being asked to develop and teach online courses. This has resulted in greater collaboration amongst faculty subject matter experts [SMEs] and instructional design teams who specialize in online course design and best practices in online teaching.

Today, there are over 13,000 instructional designers working throughout U.S. higher education (Intentional Futures, 2016), a figure which projects to increase by at least 13% over the next decade (Kim, 2015; Mancilla & Frey, 2020). This is especially true at large public institutions where most online students are enrolled. While the roles of instructional designers in higher education primarily serve faculty needs, designers also identify with students and improving the quality of learning experiences as a primary motivating factor for the work they do (Kumar & Ritzhaupt, 2017). Even before the global pandemic forced almost all institutions to go online, the steady increase of online courses and program offerings has only furthered call for a paradigm shift towards more learner-centered education (Fink, 2013; Ko & Rossen, 2017; Lengel, 2013). Some research has positioned instructional designers as transformative agents of change within higher education, tasked with changing both faculty and organizational

perspectives about online learning (Campbell, Schwier, & Kenny, 2009; Tracey & Boling, 2014). This is undoubtedly a heavy burden that requires patience, skills, and strategies.

Much of a designer's ability to affect change in public higher education comes from the collaboration and the fostering of positive working relationships with other instructional designers (Brown, et al., 2013; Ferguson, 2018; Koszalka et al., 2013). Some instructional design teams at large public institutions have recently developed online teaching programs designed to educate faculty in evidence-based best practices in online course development and teaching. The primary goal of these professional development initiatives is to raise awareness to the differences between traditional face-to-face teaching and effective online teaching in order to improve the quality of online courses being taught. The small body of research exploring these programs indicates that they often vary amongst institutions in both length and rigor (McQuiggan, 2012). In addition, the level of university-wide support for many of these initiatives is often limited, resulting in many faculty members being unaware of these professional development opportunities (Legon & Garrett, 2018). As such, the value that instructional design teams bring through these initiatives is often misunderstood or unknown altogether by many within higher education (Sharif & Cho, 2015).

### **Background of the Study**

Reports tracking online education throughout higher education have shown rapidly increasing growth over the past several years, even before the global coronavirus pandemic (Seaman, Allen & Seaman, 2018). Latest data from The National Center for Education Statistics' Integrated Postsecondary Education Data System (IPEDS) shows more than 6.9 million students, representing over 35 percent of all students at degree-granting postsecondary institutions, have taken at least one online distance education course (NCES, 2019). The steady increase in demand

for online learning in higher education, along with the continual decline in traditional student enrollments have led many universities to look towards online education as a means of generating revenue and growth (Legon & Garrett, 2018). Indeed, even with the impact of COVID-19 yet to be fully determined, many higher education institutions believed that their futures depend upon the ability to provide quality online learning experiences (Hart, 2018; Mykota, 2013).

As institutions continue to expand their online course and program offerings, more faculty will be required to teach online. The most recent *Inside Higher Ed's Survey of Faculty Attitudes on Technology*, shows that while less than a third of faculty members taught an online course in 2013, almost half (46 percent) did before the pandemic forced emergency remote teaching throughout higher education (Jaschik & Lederman, 2019). Despite the rapid increase of faculty teaching online, research indicates a significant amount of low-quality online courses being developed, leading to continued skepticism about the quality and value of online education (Protopsaltis & Baum, 2019). Baran (2018) notes that the most important factor required to improve online courses and programs is positive attitudes and beliefs towards teaching in online environments by faculty. Recent research has shown that online teaching professional development is key to transforming faculty attitudes and beliefs about online education (Baran, 2018; Prestridge & Tondeur, 2015). Faculty who are inexperienced in teaching online can benefit from training in best practices for online course development and facilitation, which can help instructors to feel more prepared to teach within this environment and can improve online pedagogical practices (Baran, 2018; Baran & Correia, 2014; McMurty, 2013; Saroyan & Trigwell, 2015).

As online teaching is a new experience for many faculty members, it is essential that they receive the necessary support in reimagining their course content and teaching practices.

Professional development that promotes faculty pedagogical inquiry is essential for this to occur (Baran, 2018). The successful transformation to online teaching often requires a reexamination of traditional pedagogies utilized by faculty. Faculty must be introduced to new and unfamiliar online teaching methodologies that often differ from traditional teaching, as well as be provided with opportunities to learn best practices for successful online facilitation aided by technology (Baran, 2018; Martin et al., 2019; Moskal, Thompson & Futch, 2015).

### **Statement of the Problem**

The rapid integration of online education has led to faculty challenges in teaching online. Major issues include the changing roles of the instructor in the online environment, transitioning from face-to-face teaching to online, time-management, and teaching styles (Kebritchi, Lipschuetz, & Santiago, 2017). Institutional leadership plays a central role in enhancing the quality of online education by providing support for faculty, yet they face a dilemma in providing comprehensive online professional development that ensures faculty understand the effective use of technology, the needs of online learners and issues of online pedagogy (Kebritchi, Lipschuetz, & Santiago, 2017; Schmidt, Tschida & Hodge, 2016). To date, studies indicate uneven levels of institutional support for faculty online professional development, as a lack of resources and faculty autonomy considerations have been found to be barriers preventing this (Fredericksen, 2017; Kebritchi, Lipschuetz, & Santiago, 2017; Legon & Garrett, 2020; Magda, 2019). This has placed institutions in the difficult position of deciding whether the benefits of quality online education justify greater investment in design expertise despite these issues (Legon & Garrett, 2019).

Recent research indicates that online course development aided by using instructional design principles has had a positive effect on student access (particularly for underprepared and/or disadvantaged students) and student-instructor interactivity and engagement: key factors in measuring quality of online education (Protopsaltis & Baum, 2019). In addition, research over the last decade has shown a variety of positive examples associated with the design and development of online courses aided by instructional design pedagogical support. This includes findings indicating higher levels of student satisfaction and improved learning outcomes in online courses (Bailey et al., 2018; Burns, 2013; Christensen & Spackman, 2017; Legon & Garrett, 2018; Protopsaltis & Baum, 2019; Reneland-Forsman, 2013).

Baldwin and Ching (2015) found that faculty who have utilized instructional designers for both technological and pedagogical training and support believed that it not only saved them time with course development, but led to effective instructional materials which improved the quality of their online courses. Chen et al. (2017) posited that instructional design faculty development programs have the potential to shift perceptions about online teaching for many faculty members, as they encourage empowerment and motivation to improve their online courses through collaboration with instructional design teams. Yet, few studies to date have considered what aspects of these programs are most effective in transforming faculty teaching practices.

### **Purpose of the Study**

The purpose of this study was to learn from the experiences of a team of instructional designers who have developed and taught a four-course online teaching certificate program. This study sought to explore narratives about how these experiences affect faculty online professional development, the quality of online education at the university, and their professional

identity within higher education. There has been limited research exploring online teaching programs led by instructional design teams in higher education to this point. Exploring instructional designer experiences during this period of transformation in higher education is critical to understanding their evolving role and perspectives within universities seeking to improve the quality of online education. The research questions guiding this study are as follows:

1. How do instructional designers describe their experiences developing and teaching an online certificate program within a large public university?

The sub questions added to clarify the main research question include the following:

2. How do instructional designers in the program describe their support from the university regarding the program?
3. In what ways, if any, can instructional designers in the program improve online course development and teaching by faculty learners?

### **Significance of the Study**

While an emerging body of literature has begun to explore instructional designers in higher education over the past decade and a half, the focus has primarily been on their backgrounds, roles and competencies in supporting faculty with technology (Kenny et al., 2005; Koszalka et al., 2013; Miller & Stein, 2016; Puzziferro & Shelton, 2008; Richey, Fields & Foxon, 2001). Some researchers have begun calling attention to the leadership efforts of instructional designers who specialize in best practices in online teaching and learning (Brigance, 2011; Drysdale, 2018; King, 2017; Shaw, 2012). However, little research has explored the recent work of dedicated instructional design teams who are developing and teaching in programs aimed at improving the quality of faculty online teaching (Kebritchi, Lipschuetz, & Santiago, 2017; Magda, 2019).

This study has significance to a variety of stakeholders in online learning, including instructional design teams working in higher education, faculty who are interested in learning more about online teaching best practices, and institutional leadership seeking to improve the quality of online education. For effective change to occur in online learning environments, faculty must develop the skills to reform traditional teaching practices (Baran, 2018; Dede et al., 2009; Kearney & Maher, 2013). Studying online teaching programs aimed at guiding faculty in online pedagogy through the effective use of instructional design can help other institutions to lead better faculty professional development initiatives. Additionally, conducting research into these experiences from the instructional designers' perspective allows an opportunity for these practitioners to elaborate upon the skills and knowledge they bring to higher education and online course development. This could help to reduce confusion amongst stakeholders as to their roles and responsibilities and minimize conflict between instructional designers and faculty SMEs (Sharif & Cho, 2015).

### **Summary**

In order to effectively teach online, research has stressed the importance of training faculty in online best practices (Abdous, 2011; Baran, 2018; Horvitz, et al. 2015; Martin, et al. 2019; Schmidt, Tschida, & Hodge, 2016). Few studies have explored instructional designer experiences as experts in online pedagogy who apply theoretical and evidence based “best practices” to their training and teaching of online faculty professional development (Castro-Figueroa, 2009; Halupa, 2019; McGuire, 2017). The pedagogical role of the instructional designer in higher education is important to research, as it can lead to improvements in the quality of online teaching and course/program development. Additionally, it could help to bring

greater recognition to the value of instructional design during this period of transformation in higher education.

### **Organization of the Dissertation**

Chapter 1 begins with an introduction and background of the study. The overall purpose and need for the study were described, along with the study's significance. Next, the design of the study was explained, and the research questions were introduced. It should be noted here that key terms will be defined for clarification purposes throughout the study when they are first mentioned. For example, the terms instructional design and instructional designer were defined (within the context of this study) in this chapter.

Chapter 2 begins with a discussion and review of the literature on collaboration theory, as it serves as the theoretical framework that this study is guided by. Next, a historical overview of the major learning theories and models impacting the field of instructional design is discussed in order to understand how instructional design has evolved into what it has become today. Recent literature on instructional designers in higher education is then explored to consider the evolution of the profession in higher education over the past twenty years and reflect how this relates to faculty professional development in online teaching today. This includes research exploring instructional designer competencies, backgrounds, roles, and emerging trends. Recent themes and challenges are next discussed in order to better understand the current environment, uncover gaps within the research and synthesize the findings to this study.

Chapter 3 includes a description of the qualitative methodology, including data collection, and analysis used. Chapter 4 provides the results and analysis derived from the research and identify relevant a priori and emergent themes from the case study. Chapter 5 provides a summary of the findings and review identified themes in order to interpret the how the

findings relate to the current literature and theoretical framework. Implications for future practice and recommendations for further research will also be considered.

## CHAPTER II

This chapter presents an examination and discussion of the topics within the literature that are relevant to the study. The theoretical framework of this study is based upon collaborative theory, which was developed by Colbry, Hurwitz and Adair (2014). Other topics discussed in this literature review include the historical evolution of the instructional design field as well as the emergence of instructional design in higher education. In addition, the backgrounds, competencies and roles, instructional designers possess in higher education today are discussed. Next, the literature exploring current challenges instructional designers face in higher education is reviewed in order to consider the need for this study.

### **Methods of Literature Research**

A variety of resources were used to research the literature, including a review of articles, books, conference papers, peer reviewed journals and dissertations. The following databases were utilized to conduct this literature review: Academic Search Premier/EBSCO, Dissertations and Theses Global, ERIC, Google Scholar, LearnTechLib, Rutgers University Libraries Databases, Seton Hall University Databases, Sage Research Methods, and Science Direct. Key terms searched included: instructional design, instructional designer, instructional design in higher education, instructional designers and faculty, instructional design teams, collaboration, online learning, online pedagogy, online learning theory, online professional development. From these findings, the search expanded to include studies related to instructional designer roles and skills, instructional design learning theories and models, instructional designer professional standards, and instructional designer issues and challenges in higher education. Bibliography mining and cited reference searching was utilized throughout the literature review process to ensure that an exhaustive and up-to-date review was conducted.

## **Theoretical Framework**

The theoretical framework of this study is based upon collaborative theory (CT), an interpersonal theory of collaboration (Colbry, Hurwitz & Adair, 2014). CT encompasses how team-based collaboration works irrespective of a hierarchical authority structure. In CT, Colbry, Hurwitz and Adair (2014) define collaboration as “any on-going interpersonal interaction not characterized by a significant power imbalance with the express purpose of achieving common goals” (p. 67). In this case study, each team member is equally responsible for the online course development and teaching within the program, with the common goal of improving the quality of faculty online teaching practices through this shared initiative. As such, grounding this study within a theory that strongly aligns with the compositional makeup of the team strongly supported the research questions and goals of the study.

Bennett and Gadlin (2012) explored the collaboration efforts of highly successful teams and found that trust, shared vision, the strategic identification of team members and purposefully building the team, managing conflict while still promoting disagreement, and sharing credit and authorship as critical factors. In addition, the researchers state that taking an interdisciplinary approach towards team building has become more critical to the success of team-based projects as this leads to diverse contributions and sharing of ideas. The findings from the literature review in this study indicate that the instructional design field is an interdisciplinary profession where many designers come from a variety diverse professional backgrounds, which makes taking this approach towards collaborative teamwork possible (Bowman et al, 2019; Ferguson, 2018; Intentional Futures, 2016).

Given and Kelly’s (2016) research on collaborative group mentorship found that exposure to diverse perspectives within a group or team-based environment is vital to successful

participation amongst the team. Moreover, they concluded that a diverse demographic profile is the “greatest strength of the group model” as it allows for “a broad range of information sharing opportunities beyond what individual team members typically encounter” (Given & Kelly, 2016, p. 9). Still, a balance between diversity of views and shared perspectives is important. The researchers note that there must be enough common ground for teams to be able to relate to one another.

Many studies conducted over the past fifteen to twenty years have explored the collaborative approach to online course development in higher education (Chao et al., 2010; Diamond, 2011; Moallem, 2003; Reeves, Herrington & Oliver, 2004; Voogt et al., 2015; Xu & Morris, 2007; Zundans-Fraser & Bain, 2016). Research dating back to 2000 has shown that faculty members have considered collaborative online course development to be a valuable learning experience and an active model of faculty development. Collaboration with instructional designers in online course development has been shown to result in positive outcomes for both faculty and students (Kumar & Ritzhaupt, 2017). Yet several challenges in the collaborative process persist, including increased workloads, time constraints, difficulties keeping projects on schedule, limited resources and a lack of reward/incentives (White, 2000).

Xu and Morris (2007) studied a course development team of faculty, a project manager, and instructional designer. Their findings indicated significant advantages in combining the experience of instructional designers and faculty SMEs, but warned that role overlap can cause both group cohesiveness and conflict simultaneously. The researchers note that it is critical to prevent barriers to communication in the collaboration process and suggest a clear delineation of roles and responsibilities between instructional designers and faculty. Remarking on the differences between traditional pedagogy and online pedagogy, the researchers suggested a

greater need for faculty development initiatives to focus on familiarizing instructors with the characteristics of the online environment and helping them to develop online pedagogy. This is a role and responsibility that instructional design teams must take upon themselves in order to develop trust and inspire change when working with faculty.

Chao, Saj and Hamilton (2010) conducted a case study in which they interviewed collaborative teams of instructional designers and faculty tasked with developing four different courses utilizing instructional design standards to meet quality. This study highlighted an important distinction between levels of collaboration required to effectively support new course development and revision-based course development. While all participants in the study viewed collaboration as a positive experience, collaboration on new course development was found to be especially important, considering the amount of time it took to fully develop a course from the ground up. Participants noted how important the relationship building process was during course development, which required an open exchanging of ideas, expectations and reflections during the process. Study participants agreed that quality standards needed to be made clear at the onset in order to avoid conflict during the process and that quality standards should be flexible and in close examination for their effectiveness and applicability when considering large-scale production of online courses.

In a reflective analysis of a collaborative design process for an online course by a team of five designers and educators, Brown et al. (2013) found that ongoing professional dialogue, peer support and the academic development of faculty by the instructional designers through evidence based best practices led to successful course implementation. The researchers indicated three main benefits that derived from this collaborative effort: 1) the “multiplicative effect” of diverse ideas and expertise and experiences of educators from different educational backgrounds, 2) the

collaborative pedagogical and social support structure provided by designers, and 3) enhanced and strengthened professional relationships and pedagogical expertise that developed and endured beyond the duration of the course (p. 447).

In a study which found instances of poor team collaboration, Zundans-Fraser and Bain (2015) explored the collaborative experiences of a design team of seven individuals tasked with developing a higher education program. Study findings from a semi-structured interview protocol indicated the absence of significant collaboration and cooperation amongst the team, leading to poor program design. The researchers concluded from the interview responses that the lack of a shared program design framework led to limited communication amongst the team. In addition, they noted that any design processes discussed were idiosyncratic and reliant on one or two members of team, as opposed to the entire team which led to feelings of isolation amongst the other team members. The researchers in this study also pointed to a perceived lack of institutional support and recognition of the time and work conducted by the team as reasons for poor outcomes.

Despite many positive findings related to the collaborative partnership between instructional designers and faculty in higher education, a study by Jaschik and Lederman (2017) found that only one in four faculty members indicated working with instructional designers in course development, whether face-to-face or online. The researchers suggest this may be due to a lack of sufficient access to instructional designers at some institutions, but findings from this study and others also point to misconceptions by faculty about what instructional designers can do (Dempsey et al., 2007; Intentional Futures, 2016; Legon & Garrett, 2018; Richardson et al., 2019; Ritzhaupt & Kumar, 2015; Rubley, 2016)

The literature suggests that more research is needed on the delineation of roles between instructional designers and faculty when collaborating in online course and program development (Halupa, 2019; Intentional Futures, 2016). There has been a call for instructional design teams to establish professional development in online pedagogical best practices since many faculty members lack this training. The lack of sufficient training in pedagogical best practice has led to confusion by faculty and potential conflict when collaborating with instructional designers (Castro-Gigueroa, 2009; McGuire, 2016; Moskal, 2012; Halupa, 2019). This is an area of expertise in which instructional design teams can and should fulfill as they are uniquely equipped with the pedagogical knowledge to guide faculty in online best practices. To date, very few studies have explored the work of instructional design teams who have taken upon this responsibility.

### **Review of the Literature**

A review of the literature revealed that instructional design is a rapidly evolving and quite often misunderstood field. This is precisely why studies exploring the experiences of instructional design practitioners is needed (Afsaneh (2014); Hart (2018); Sharif & Cho, 2015; You (2010); Xu & Morris, 2007). This review of the literature attempts to shed light on the metamorphosis taking place in instructional design over the past twenty years since instructional design emerged in higher education. However, in order to understand the value instructional designers bring to higher education, a review of the history of instructional design and its evolution is necessary.

### ***The Historical Evolution of Instructional Design***

To understand the evolving role of instructional designers in higher education today, it is necessary to review some of the key developments impacting the field over time. This

specifically refers to the evolution of the science of learning and advancements in technology, as the literature indicates that these are some of the biggest impacts within the field. In beginning this exploration, a definition of what the field encompasses first seems appropriate. The Association for Educational Communications and Technology (AECT, 2019), a professional association of instructional designers, educators, and professionals related to the field of instructional design, define the field as:

Encompassing the analysis of learning and performance problems, and the design, development, implementation, evaluation and management of instructional and non-instructional processes and resources intended to improve learning and performance in a variety of settings, particularly educational institutions and the workplace. Professionals in the field of instructional design and technology often use systematic instructional design procedures and employ instructional media to accomplish their goals. Moreover, in recent years, they have paid increasing attention to non-instructional solutions to some performance problems. Research and theory related to each of the aforementioned areas is also an important part of the field. (Reiser, 2018, p. 5)

This broad and cumbersome definition has led some researchers to analogize the field to other professions in the attempt to clarify. Smith and Ragan (2005, p. 4), for example, described instructional designers as being similar to an engineer in terms of their work, stating, “Both plan their work based upon principles that have been successful in the past – the engineer on the laws of physics, and the designer on principles of instruction and learning. Both the engineer and the instructional designer have established problem-solving procedures that they use to guide them

in making decisions about their designs.” These “established problem-solving procedures” are instructional design models that are based upon theories of learning that have guided the practice over time (Ertmer & Newby, 2008). As such, this literature review will begin by exploring the significant and emergent learning theories in instructional design and then consider some of the most popular instructional design models utilized in the field over time.

### ***Significant Learning Theories in Instructional Design***

Instructional design is noted within the literature as a process of enhancing learning by applying research-based instructional principles to teaching (Reiser & Dempsey, 2011; Richardson et al., 2018). Designers are expected to possess a wide range of knowledge and skills to implement teaching and learning strategies to any subject (Reiser & Dempsey, 2011). In order to meet these expectations, the literature indicates that instructional designers are expected to be knowledgeable and skilled in a variety of matters, including the implementation of learning and instructional models and theories; application of various technologies; evaluation skills; and cross-cultural competencies (Anglin & Morrison, 2000; Christensen & Osguthorpe, 2004; Kenny et al., 2005; Kumar and Ritzhaupt, 2017; Richardson et al., 2019).

Researchers note that learning theories provide the foundation for the selection of instructional strategies which allow for the reliable prediction of their effectiveness (Ertmer & Newby, 2013; Khalil & Elkhnder, 2015). Theories of learning impacting the field of instructional design can be traced back to the military and World War II, when several psychologists and education specialists (i.e. early instructional design pioneers) were tasked with creating training materials, including films, in mass for thousands of soldiers. Training assessments, developed by these early instructional design pioneers, greatly aided the military in their screening of candidates for positional placement. These initiatives led to a significant increase in the

percentage of military personnel who would go on to successfully complete various training programs within the military, including Air Force flight training programs (Reiser, 2001). The success of these initiatives, aided by advancements in technology, raised significant interest in the science of learning and instruction (Reiser, 2001).

Despite these rising interests, researchers note that almost all faculty members who teach in higher education are SMEs who lack any formal training in the learning sciences and instructional design, despite routinely designing instructional materials themselves (Baran, 2018; Khalil & Elkhinder, 2015). In contrast, instructional designers are formally trained to use instructional design models which traditionally derive from the major learning theories of behaviorism, cognitivism and constructivism (Ertmer & Newby, 2013; Khalil & Elkhinder, 2015). As such, researchers posit that instructional design practitioners serve as the “link” between the design of instruction for educational practice used by faculty and the evolving theories of human learning (Ertmer & Newby, 2013). In order to illustrate how learning theories have influenced instructional design methods and teaching over time, the literature exploring the primary learning theories and some of the major instructional design models is explored in the following sub-sections.

**The Behaviorist Movement.** Behaviorism is theory of learning that is based upon the notion that all behaviors are acquired through one's conditioning. Behaviorist theory posits that a person's conditioning occurs through interaction with the environment while responses to environmental stimuli shape our actions (Krapfl, 2016). During the 1950's, the field of instructional design was just beginning to take form in educational contexts when B. F. Skinner, a behavioral psychologist, began considering how learning was accomplished in conjunction with instructional materials. He and other behaviorists at the time contended that learning was characterized as being reactive to an environment the learner was placed within, as opposed to taking an active role in discovery within the environment itself (Ertmer & Newby, 2013). Skinner's (1938) theory of operant conditioning described the process of learning through reinforcement and punishments for behavior; by forming an association between a certain behavior and the consequences of that behavior, one learns. Learning, he argued, could be accomplished in small, incremental steps if learners received immediate feedback, positive reinforcement and reward (Reiser, 2001).

Utilizing the technological advancements of his time, Skinner developed a mechanical device that allowed learners to conduct individually guided study as opposed to the traditional group lecture methods of the time (Molenda, 2010). The device came to be known as a 'teaching machine' which utilized an instructional format that he would term as programmed instruction, or "the technology of teaching" (Molenda, 2010, p. 57). Molenda (2010) notes that the programmed instruction movement was a radical shift from the traditional procedures for teaching during this time period. This movement served as a precursor to later instructional design and online distance education models of teaching and learning, as it promoted the foundational roots of self-directed learning aided by technology.

The procedure for creating programmed instruction required an analysis of the tasks that learners were intended to master beforehand so they could be incorporated into the mechanical device. This would require breaking down learning tasks, or ‘objectives’ into manageable steps to ensure when a task was mastered, so feedback could be provided. Assessment questions would be created to elicit the desired response by the learner through reinforcement (i.e. an indication of a correct answer). Norman Crowder would later create a more flexible programmed lesson design with multiple branches that would serve as remedial sequences if a learner answered a question incorrectly (Molenda, 2010). The psychologists and educators involved in these initiatives and others during this time period would continue to research, test and develop practices of programmed instruction concentrating on the analysis, design and evaluation of instruction to solve educational issues (Reiser, 2001; Halupa, 2019). Earlier behaviorist work focusing on learning objectives eventually led to the development of taxonomies which categorized levels of learning objectives to help educators measure degree of student knowledge (Bloom et al, 1956), From this, the concept of criterion-referenced testing was developed (Reiser, 2001). Reiser (2001) notes that criterion-referenced testing was a method of assessment which could be used by educators to measure a student’s knowledge against predetermined standards. These early behaviorist concepts and ideas helped to create the field of instructional design, a term originally coined by Robert Gagné in the 1960’s (Reiser, 2001).

Ertmer and Newby’s (2013, p. 49) study comparing critical features of learning theories from an instructional design perspective indicate the following behaviorist assumptions or principles that still have a direct relevance to instructional design in higher education today:

- An emphasis on producing observable and measurable outcomes in students (behavioral objectives, task analysis, criterion-referenced assessment)

- Pre-assessment of students to determine where instruction should begin (learner analysis)
- Emphasis on mastering early steps before progressing to more complex levels of performance (sequencing of instructional presentation, mastery learning)
- Use of reinforcement to impact performance (tangible rewards, informative feedback)

**The Cognitive Movement.** The literature indicates a shift from behaviorist learning principles occurred during the 1960's, as research began to promote the concept that the human mind had a significant role in the learning process (Ertmer & Newby, 2013). This led to the beginning of the cognitivist movement. Winne (1985) noted how in cognitive learning theory, the learners' thoughts, beliefs, attitudes, and values are all influential within the learning process. The cognitive processes in learning includes thinking, problem-solving, concept formation and information processing (Ertmer & Newby, 2013; Hilbert, 2015; Reiser 2016). Cognitivist learning theory was regarded as a stark contrast from earlier behaviorist principles of learning which suggested human behavior can be explained in terms of conditioning and without appeal to personal thoughts or feelings (Ertmer & Newby, & Reiser, 2016). The cognitive shift in ideas about learning led to the development of several instructional design models. However, these instructional design models were rarely used in higher education at the time (Halupa, 2019).

In the early 1970's. Jerome Bruner's curriculum development project titled, *Man: A Course of Study*, argued that human learning was driven "by active minds that are continuously seeking to make sensible meaning out of their everyday experiences" (Molenda, 2010, pp. 69-70). Richey et al. (2011) posits that Bruner's work began the cognitive movement within educational environments and had a decisive impact on instructional designers creating instruction in American school systems. Research notes that due to the emphasis on the learner's

mental capacity, cognitive theories are typically considered more appropriate than behaviorist principles for use in explaining complex forms of learning including reasoning, problem-solving and information-processing (Ertmer & Newby, 2013; Schunk, 1991).

Cognitivist theory asserts that the memory system is broken into three stages for information processing, storage, and retrieval: sensory, working and long-term memory (Reynolds, 2018; Richey, Klein, & Tracey, 2011). Sensory memory entails the initial processing of information. Important information is then filtered into working memory for use. If the information is frequently utilized within one's working memory, it can be stored into long-term memory. Organization of information via schemas, or constructs of concepts stored in long-term memory, can lead to more efficient recall of important information when needed (Reynolds, 2018). The ideas about how information is processed and stored through learning led to the formulation of strategies for enhancing storage and retrieval of data from memory. Some of these strategies include rehearsal, chunking (breaking down and/or grouping material into manageable parts), and mnemonics (Reynolds, 2018).

Cognitive learning theory expanded the scope of instructional design practice as it began shifting the focus to the learner in the design process (Ertmer & Newby, 2013). The focus of the designer in the cognitive approach was on "changing the learner by encouraging him/her to use appropriate learning strategies" (Ertmer & Newby (2013, p. 52). This moved instructional design beyond focusing just on observable behavior to a more system-based approach towards considering learners. The specific principles in constructivist theory that have a direct relevance to instructional design according to Ertmer & Newby (2013, p. 55) include:

- Emphasis on the active involvement of the learner in the learning process learner control, metacognitive training (e.g., self-planning, monitoring, and revising techniques)

- Use of hierarchical analyses to identify and illustrate prerequisite relationships (cognitive task analysis procedures)
- Emphasis on structuring, organizing, and sequencing information to facilitate optimal processing (use of cognitive strategies such as outlining, summaries, synthesizers, advance organizers, etc.)
- Creation of learning environments that allow and encourage students to make connections with previously learned material (recall of prerequisite skills; use of relevant examples, analogies)

**The Constructivist Movement.** A growing interest in constructivist learning theory began emerging in higher education during the late 1980's to early 1990's with rising concerns about traditional passive styles of teaching and learning (Bednar, 1991; Ertmer & Newby, 2013; Driscoll, 2005; Amineh & Asl, 2015). Philosophers and educationalists such as Piaget, Vygotsky, and Dewey argued that teaching and learning is a complex interactive social phenomenon constructed between educator (who provides the social environment for learning to occur) and the learner who is tasked with solving an issue or problem. Learning is equated with developing meaning through experiences, as opposed to simply acquiring knowledge from an instructor. According to social constructivist theory (a sub-genre of constructivism), individuals bring different background knowledge, experience, and interests to the learning situation, and make unique connections in building their knowledge. As such, both faculty and students play a role in facilitating and generating knowledge (Maxwell, 1995). Students are encouraged to question each other's understanding and explain their own perspectives in order to enhance knowledge. Thus, constructivist learning theory involved a dramatic change in the focus of

teaching and represented a paradigm from traditional instructor-based teaching methods to student centered-teaching and learning (Ertmer & Newby, 2013; Richey, Klein, & Tracey, 2011).

This major pedagogical shift greatly impacted the field of instructional design. Lebow's research on constructivist instructional design principles summarizes the differences between earlier behaviorist and cognitivist viewpoints stating, "Traditional educational technology values of replicability, reliability, communication, and control... these contrast sharply with the seven primary constructivist values of collaboration, personal autonomy, generativity, reflectivity, active engagement, personal relevance, and pluralism." (Lebow, 1993, p. 7). Hare (2005) states that student, or learner-centric instructional design is an approach in which faculty must build their courses around the experiences of their students. Fink (2013) asserted that traditional teacher-centered instructional methods (see Table 1) reflect the "old paradigm" of learning that has repeatedly been found inferior to the learner-based "new paradigm" of instruction. This shift to a learner-centered paradigm empowers students to take a shared, active role in the class, but it can be challenging for faculty to acclimate to this shift of teaching perspectives. A comparison of the "old vs. new" teaching paradigms is indicated below:

*Table 1. "Old vs. New" Teaching Paradigms*

	<b>Old Paradigm</b>	<b>New Paradigm</b>
Knowledge	Transferred from faculty to students	Jointly constructed by students and faculty
Student	Passive vessel to be filled by faculty's knowledge	Active constructor, discoverer, transformer of knowledge
Mode of learning	Memorizing	Relating
Faculty purpose	Classify and sort students	Develop students' competencies and talents

Student growth, goals	Students strive to complete requirements, achieve certification within a discipline	Students strive to focus on continual lifelong learning within a broader system
Relationships	Impersonal relationship among students and between faculty and students	Personal relationship among students and between faculty and students
Context	Competitive, individualistic	Cooperative learning in classroom and cooperative teams among faculty
Climate	Conformity, cultural uniformity	Diversity and personal esteem; cultural diversity and commonality
Power	Faculty holds and exercises power, authority and control	Students are empowered; power is shared among students and between students and faculty
Assessment	Norm-referenced (that is, grading on the curve); typically use multiple choice items; student rating of instruction at end of course	Criterion-referenced (that is, grading to predefined standards); typically use performances and portfolios; continual assessment of instruction
Ways of knowing	Logical-scientific	Narrative
Epistemology	Reductionist; facts and memorization	Constructivist; inquiry and invention
Technology use	Drill and practice; textbook substitute; chalk-and-talk substitute	Problem solving, communication, collaboration, information access, expression
Teaching assumption	Any expert can teach	Teaching is complex and requires considerable training

---

Old v. New Teaching Paradigms, Note: From “Creating significant learning experiences: An integrated approach to designing college courses” by Dee Fink (2013, p. 22)

Instructional designers in higher education apply constructivist principles by working with faculty to create learning activities which require learners to solve complex and realistic problems (authentic learning), examine these problems from multiple perspectives, and take

ownership of the learning process and develop an awareness of their role in the knowledge construction process (active learning) (Driscoll, 2005). The goal is to get learners to think like an expert in a specific domain area by encouraging them to construct their own understandings of the topic/environment and then validate (or reconsider) their findings through social negotiation with peers. Ertmer & Newby (2013, p. 61) state the following constructivist principles that have a direct relevance for instructional designers in higher education:

- An emphasis on the identification of the context in which skills will be learned and subsequently applied (anchoring learning in meaningful contexts)
- An emphasis on learner control and the capability of the learner to manipulate information (actively using what is learned)
- The need for information to be presented in a variety of different ways (revisiting content at different times, in rearranged contexts, for different purposes, and from different conceptual perspectives)
- Supporting the use of problem-solving skills that allow learners to go “beyond the information given” (developing pattern-recognition skills, presenting alternative ways of representing problems)
- Assessment focused on transfer of knowledge and skills (presenting new problems and situations that differ from the initial instruction)

Wilson’s chapter on constructivism’s impact on instructional designers in *Current Trends in Instructional Design* (2017), notes that many theories have been developed or evolved from within the constructivist paradigm are currently influencing instructional design practice in online education. These include constructivism and the theories and principles of adult learning which are reviewed next.

**Connectivism.** The emergence of the internet in the mid-90's brought forth new methods of delivering both real-time (synchronous) and any-time (asynchronous) online technologies to teach students in new ways (Miller, 2014). The continued growth of distance education initiatives during the 2000s led to an explosion in the development and use of online technologies to deliver educational content. The emergence of Web 2.0, a general category of internet technologies and content development that leans on the contributions of many individual users to create value, led to the creation of online distance learning universities. In its continued growth, the number of traditional universities making use of online technology also evolved (Miller, 2014).

Web 2.0 technologies are characterized by rich media, a dynamic nature, social networking elements, and distributed contributions (Dinger & Grover, 2019). Examples of web 2.0 features include social networking sites or social media sites (e.g. Facebook, Twitter), blogs, wikis, folksonomies (i.e. "tagging" of keywords on websites and links), video sharing sites (e.g. YouTube and Kaltura) hosted services, web applications ("apps"), collaborative platforms and mashup applications. The need for training in emerging technologies for online course content creation led many institutions to hire instructional design professionals to train faculty in LMS management and the creation of online and hybrid courses for learning.

The rise of digital learning through the World Wide Web in the early 2000's led to a new learning theory called connectivism, a learning model that acknowledges major shifts in the way knowledge and information is received and shared (Siemens, 2005). Connectivism was introduced in 2005 by two publications, George Siemens' *Connectivism: Learning as Network Creation* (2005), and Stephen Downes' *An Introduction to Connective Knowledge* (2005). Downes (2005) suggests that knowledge acquisition in the internet age is composed of

connections and networked entities which has empowered learners to think and interact in new ways. This viewpoint of epistemology forms the framework for connectivism, a learning theory developed by George Siemens in 2005, which posits that knowledge is distributed across a series of networks in a complex, changing environment due to technological and social software developments. Through these developments, learning today consists of forming a diverse network of connections and recognizing attendant patterns within these connections so new knowledge can occur (Siemens, 2005). Siemens, one of the early MOOC pioneers, states that the increased profile of online networks as means of human organization led to significant changes in how learners access information and develop knowledge as well as how learners dialogue with both instructors and each other in learning environments (Siemens, 2008).

Siemens (2008, pp. 5 - 6) listed a set of connectivism principles that serve as the basis for application in instructional design contexts in e-learning:

- Learning and knowledge rests in diversity of opinions
- Learning is a process of connecting specialized ‘nodes’ or information sources
- Learning may reside in non-human appliances
- Capacity to know more is more critical than what is currently known
- Nurturing and maintaining connections is needed to facilitate continual learning
- Ability to see connections between fields, ideas, and concepts is a core skill
- Currency (accurate, up-to-date knowledge) is the intent of all connectivism learning activities
- Decision making is itself a learning process. Choosing what to learn and the meaning of incoming information is seen through the lens of a shifting reality

While acknowledging that technological tools play a role in the distribution of knowledge and learning, more important is the mental shift that educators must make to effectively guide learners in a diversely networked environment. According to Siemens, (2008) the role of the educator serves two purposes in connectivism theory, first, as subject matter experts with advanced knowledge of a domain and secondly, as guides who foster and encourage learner exploration. In other words, the instructor shifts from lecturer to facilitator. Noting that the availability of open online education resources, the increased complexity of technological choices, and the ongoing dialogue regarding different pedagogical models places substantial pressure on educators, Siemen's notes that the critical role of the instructional designer is "to be an educator to educators" in seeing through this transformation (Siemens, 2008, p. 18).

Proponents of connectivism relate the theory explicitly to the transformative possibilities brought forth by emerging technologies and argue that previous existing learning theories cannot sufficiently explain learning environments such as Web 2.0 (Bell, 2011; Clará & Barberá, 2013; Driscoll, 2018). Critics on the other hand, deem connectivism as a phenomenon or pedagogy instead of an established theory of learning and note that little empirical research currently exists which test its guiding principles in action (Driscoll, 2018; Bell, 2011). At the very least, connectivism has appeared to begin a dialogue about the transformative possibilities for teaching and learning through the application of emerging technologies.

**Adult Learning Theory.** Given the flexibility that online learning offers, there is little surprise that more adult learners have been drawn to the virtual classroom. This has brought forth significant research in adult learning theories, though research exploring adult learning (and sub-theories within adult learning) has existed for much longer. Adult learning theory (Andragogy) refers to the practice of teaching and educating adults (Knowles, Holton, & Swanson, 2005).

Originally articulated by Malcom Knowles (1975), adult learning theory has evolved to include research over the past twenty years exploring faculty's increasing role as adult learners in the process of online course development and online teaching. Adult learning theory is based on the following learner assumptions:

- The learner has an independent self-concept and who can self-direct their own learning
- The learner has accumulated a reservoir of life experiences that is a resource
- The learner has learning needs closely related to changing social roles
- The learner is problem-centered and interested in immediate application of knowledge
- The learner is motivated to learn by internal rather than external factors (Knowles, 1984; Merriam & Bierema, 2014; Collay, 2017)

The literature showed that adult learning theory has been used in several faculty development efforts and frameworks. Researchers point out that it is most important for faculty program developers, such as instructional designers in higher education, to appreciate the fact that faculty are adult learners with their own issues, demands of time, past experiences, and various levels of motivation for learning new approaches. (McQuiggan, 2012; Meyer & Murrell, 2014). By applying principles of adult learning theory into their professional development initiatives, instructional designers can help faculty transition from initial feelings of confusion and anxiousness of teaching online, to reflecting upon their prior experiences, beliefs and attitudes, to eventually feeling capable of changing their teaching approach altogether (Meyer & Murrell, 2014).

***Transformative Learning.*** Mezirow's (1991) theory of transformative adult learning is based upon learning experiences that cause a shift in an individual's perspective, leading to a change (Mezirow, 1991). This change in perspective leads to a revised interpretation of the meaning of the experience (Mezirow, 1991). Mezirow (1991) originally argued that transformations occurred through 10 phases:

- A disorienting dilemma
- A self-examination
- A critical assessment of assumptions
- Recognition that one's discontent and the process of transformation are shared and that others have negotiated a similar change
- Exploration of options for new roles, relationships, and actions
- Planning a course of action
- Acquisition of knowledge and skills for implementing one's plan
- Provisional trying of new roles
- Building of competence and self-confidence in new roles and relationships
- A reintegration into one's life on the basis of conditions dictated by one's (changed) perspective

Mezirow (2003) would later condense the stages to four, stating that transformative learning is achieved through:

- Disorienting dilemmas
- Critical reflection
- Rational dialogue
- Action

In a synthesis of research related to transformative learning in the online environment, Henderson (2010) found that critical reflection, discourse, trusting relationships, and support are the main components in fostering progression towards transformative learning. Transformative learning was later used as the theoretical framework guiding McQuiggan's (2012) action research study on faculty online professional development. She found that within online faculty professional development that opportunities for faculty to talk with experienced online colleagues, explore examples of online courses and reflecting on their preparations to teach online were the most effective strategies in supporting change. In addition, she recommends that faculty professional development programs for online teaching should be intentionally designed to inform faculty about changing their traditional face-to-face teaching practices (McQuiggan, 2012).

Meyer & Murrell (2014) note that the transition to teaching online often serves as a disorienting dilemma to many faculty members who have never taught online before and must adapt traditional teaching practices to meet demands of the online environment. Professional development for faculty as adult learners preparing to teach online presents a unique opportunity for faculty learners to consider their roles as educators, share experiences, and learn about different perspectives (critical reflection). Through reflection of prior beliefs and assumptions, discussion of new information (rational dialogue) and empathy toward other perspectives, faculty may change their perspectives about teaching online, student learning, and/or their role as an instructor, leading to transformative action (Meyer & Murrell, 2014).

***Self-Directed Learning.*** Another interesting adult theory used by some educators and instructional designers is self-direction or self-directed learning theory, formally developed by Alan Tough (1971) in the 1970's (though deriving from research by Houle and later Knowles). Self-directed learning is supported by the pedagogical approach of connectivism and has been postulated by some researchers to be a crucial skillset for the 21<sup>st</sup> century online adult learner (Conradie, 2014). Used in instructional design as a process in which learners plan, carry out and evaluate their learning experiences, self-directed learning again implies a shift of responsibility for learning planning from the educator to the learner, with the learner effectively controlling the learning process and the instructor serving as facilitator.

Merriam, Caffarella and Baumgartner (2007) describe the three main goals of self-directed learning as: a) to enhance the ability of learners to be self-determined in their studies; b) to foster transformational learning; and c) to promote emancipatory learning and social action. Skiff and Beckendorf (2009) describe self-directed learning as the learner's process in identifying learning needs, discovering learning resources, implementing learning tactics and strategies, and then evaluating learning outcomes. Self-directed learning requires a high level of self-motivation and autonomy (Yen and Liu, 2009) which makes it suitable for online environments. Turker and Zingel, (2008) highlights the importance of instructional design to support self-directed learning, stating it could be a viable strategy for managing different learning styles in addition to guiding learners to discover the value of something on their own.

***Experiential Learning.*** Experiential learning is a method of engaging in the learning process whereby students “learn by doing” and then reflect upon the experience (Kolb, 1984). New learning is accomplished through “transformation of experience” (Kolb, 1984, p. 38) which can lead to a change in perspective. Some forms of experiential learning have been found to include: service learning, cooperative education, clinical education, fieldwork, student teaching, practicums and internships (Moore, 2010).

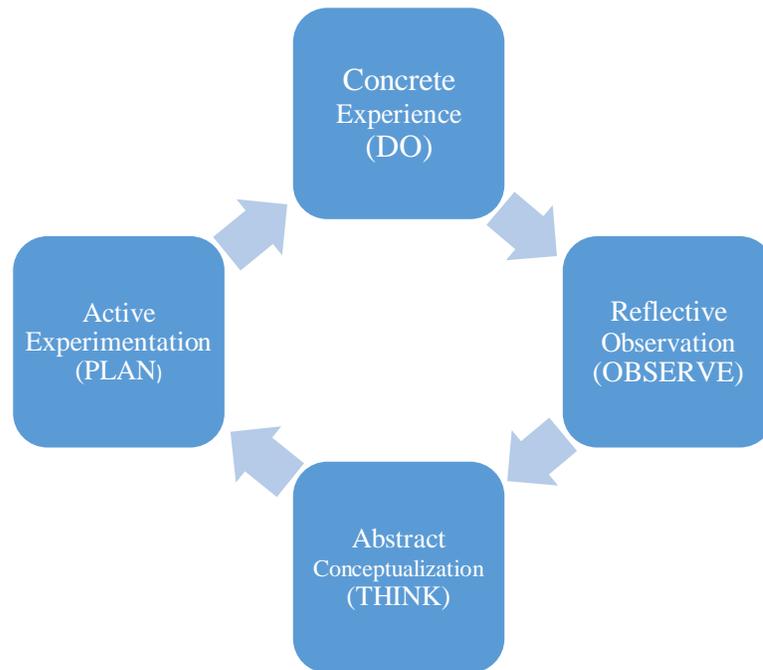
Kolb’s (1984) cycle of learning illustrates the experiential learning process (see Figure 1). This process includes an integration of:

- Knowledge – concepts, facts and information acquired through formal learning and prior experience
- Activity – application of knowledge to a “real world” scenario
- Reflection – analysis and synthesis of knowledge and activity to create new knowledge

The cycle of learning can be applied various learning styles and actively engages the learner in activities that appeal to a variety of learning styles, which enhances the learning process.

With the expansion of online education leading to an increased emphasis on student access, diversity, retention and life-long learning, experiential learning models are particularly relevant today (Healy, & Jenkins, 2000). Experiential learning can reflect problem-based, case-based and/or project-based learning models that include real-world problems and examples. These models are often used as a way of bringing student engagement into online instruction by instructional designers (Bates, 2014). Well-designed experiential learning programs can promote academic inquiry through leadership, career development, interdisciplinary learning and civic engagement (Allen, 2011). Incorporating experiential learning theory into instructional design

allows designers to develop courses and programs which empower learners by challenging them in practical ways as they move through the series of planned learning cycles.



*Figure 1. Kolb's Cycle of Experiential Learning (Kolb, 1984)*

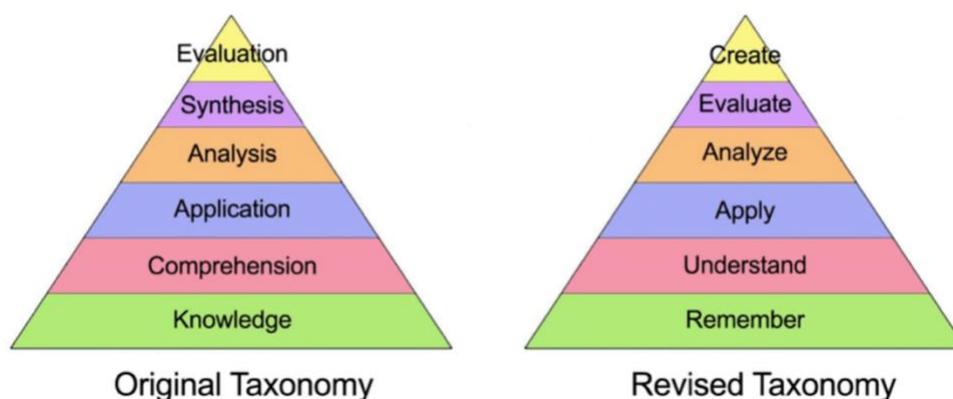
### **Significant Models of Instructional Design**

The instructional design shift brought forth by the emergence of cognitivist theory led to the development of what was termed the systems approach for instructional design practitioners to use in developing effective learning experiences (Reiser, 2001). The systems approach was defined in research by Molenda (2010) and Richey et al., (2011) as an analysis of issues occurring within a current system, the implementation of a new procedure, and the subsequent evaluation of the new procedure which determines whether or not the new procedure improves the outcomes of the current system. This led to the development of several models that would help to guide instructional design practice over time and have a “profound influence upon the

general foundation of most instructional projects today” (Richey et al, 2011). Some of the major instructional design models discussed within the literature are explored next.

### ***Bloom’s Taxonomy***

Both behaviorist and cognitivist movements led to the development of taxonomies which emphasized the study and evaluation of steps in the learning process as described by the theories. Benjamin Bloom’s Taxonomy of educational objectives handbook: Cognitive domains (1956) served as an assessment aid for educators and a framework for categorizing educational goals (Bloom et al, 1956). Bloom, along with co-collaborators Max Englehart, Edward Furst, Walter Hill and David Krathwol theorize in the taxonomy that learning objectives could be classified according to learner behavior and the desired outcomes (behaviorist principles). Bloom’s original taxonomy, as can be seen in Figure 2, consisted of six major categories of increased complexity within a hierarchy. These included knowledge, comprehension, application, analysis, synthesis, and evaluation (Bloom et al., 1956). Bloom’s Taxonomy has been applied by generations of K-12 teachers and college instructors in their teaching and remains an important part of instructional design practice today.



*Figure 2.* Bloom’s original taxonomy (Bloom & Krathwohl, 1956) and Anderson and Krathwohl’s Revised Taxonomies (Anderson & Krathwohl, 2001)

Bloom's taxonomies were later revised by Lorin Anderson and David Krathwohl (2001) to reflect a greater emphasis on cognitive skills and learning behavior that would begin to take hold. Anderson and Krathwohl's (2001) revision of the original Bloom's Taxonomy (Bloom & Krathwohl, 1956) can be seen in Figure 2. According to Moskal (2012), Bloom's taxonomies called for instruction to include a more conscientious, scaffolding approach to reaching higher learning objectives. Scaffolding is a technique for course design suggested by instructional designers that involves breaking down or 'chunking' learning objectives into manageable steps while providing instructor support throughout the learning process (Fink, 2013). The concept of learning objectives sparked by these early instructional design pioneering efforts are still used currently in education to identify the main goals of the course and select appropriate activities to elicit learning. Bloom and his colleagues also initially recommended the design of assessments as a tool to measure desired outcomes within a course (Reiser, 2001).

Gustafson and Branch (2002b) explain that some of the most important instructional design models were developed in the mid-1970's during the cognitivist movement, including the ADDIE model and later the Dick & Carey's Systems Approach model. These two models were found to be the most frequently mentioned within this review of the literature. These models and other influential instructional design models that helped to shape the field of instructional design are discussed next.

### *The ADDIE Model*

Research consistently points to the ADDIE (analysis, design, development, implementation, and evaluation) model as the most influential model within instructional design (Gustafson & Branch, 2002b; Boling et al., 2011; Branch & Kopcha, 2014). ADDIE is a model that guides the course development process towards a completed goal that serves the needs of both learner and teacher (Gagné et al., 2005). ADDIE was originally created in 1975 by researchers at Florida State University as a model for the U.S. Army (Branson et. al, 1975). Today, it is used in various instructional design professions, including higher education. Figure 3 shows the models systemic process.



*Figure 3.* ADDIE instructional design model (Gagne, et al, 2005)

The ADDIE model is frequently referenced for its five major steps in systematic problem solving (Gagné et al., 2005). Gagné (2005, p. 22) describes the five steps, or phases of ADDIE in greater detail:

The first phase, *analysis*, is concerned with identifying the particular needs and gaps in a given project. Here the instructional designer will perform an

instructional analysis to determine the target cognitive, affective and motor skills goals Phase two, *design*, is concerned with advancing a plan to guide the development of instruction. At this phase, the instructional designer works closely with the subject matter expert (SME) to develop a course blueprint, used to guide the project development. At the *development* phase, the instructional designer prepares the materials that will be used in the learning environment. During the *implementation* phase, the instructional materials are tested, adjusted, and subsequently launched. In the last phase, *evaluation*, the instructional designer evaluates whether the needs outlined at stage one were met. However, evaluation can occur at several different points between the development and implementation phases.

The ADDIE model is still highly relevant to the instructional design philosophy and is used by instructional designer's when working with faculty in the development and design of online education courses and programs throughout higher education.

### ***Dick & Carey Systems Approach Model***

While derived from ADDIE and still rooted in behaviorist principles, the Dick & Carey Systems Approach Model (DC&C), originally developed by Walter Dick, Lou Carey and James Carey in 1978 was credited in the literature as being the most popular instructional design model used in schools and educational environments (Carey, 2010; Gustafson & Branch, 1997).

Although the ADDIE model would evolve over time, the DC&C model was the first model to acknowledge the need to revise design throughout the development process, not just after the fact. The model is a procedural system including ten major process components (nine basic steps

in an iterative cycle and a culminating evaluation of the effectiveness of the instruction). Figure 4 illustrates the model.

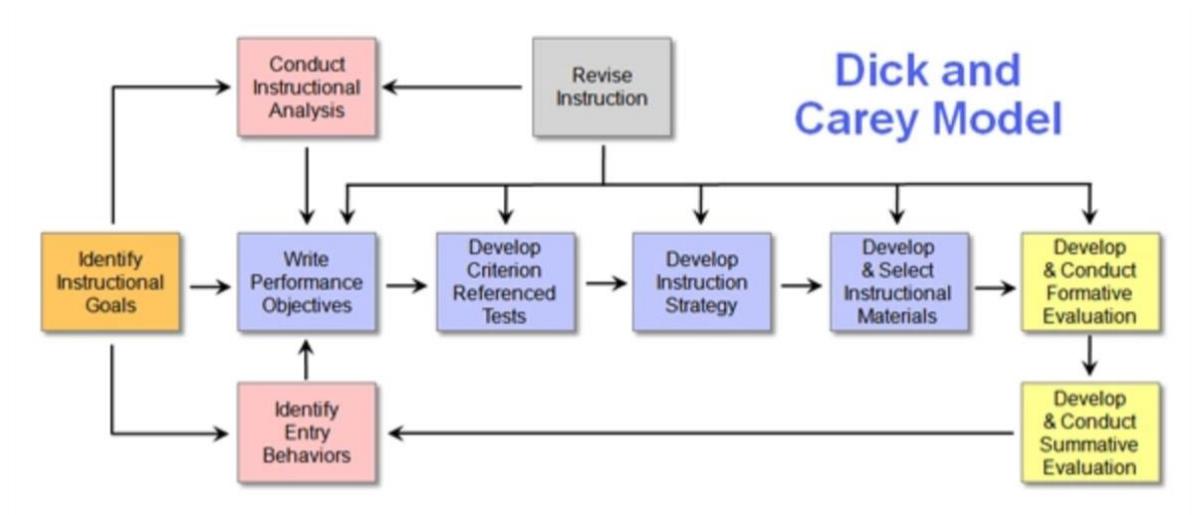


Figure 4. The Dick and Carey Model Systems Approach Model (Dick & Carey, 1990)

The ten components of the DC&C model (Dick & Carey, 1990) include:

- **Assess Needs to Identify Goal(s):** Educators must determine what it is they wish learners to learn through assessment, experience, analysis, practical requirement, and or/descriptive goals.
- **Conduct Instructional Analysis:** The entry behaviors required of learners must be determined; i.e. skills, knowledge, and attitudes.
- **Analyze Learners and Contexts:** The learners' current level of skill and attitudes are determined as is the environment in which learners will learn and use new skills.
- **Write Performance Objectives:** The teacher writes specific outcomes of student learning. These outcomes outline the skills to be learned, the conditions under which skills are shown, and criteria for success.

- **Develop Assessment Instruments:** The assessments utilized by the instructor should parallel the learners' ability to show what was described by the learning objectives. Measurement of the desired behaviors is represented by the assessment.
- **Develop Instructional Strategy:** The teacher will identify strategies to be used that best elicit learning. Strategies include pre-instructional activities, how information will be presented, as well as how students will practice and receive feedback before testing. An emphasis on current learning theories and research is placed on strategy selection within the context of learning.
- **Develop and Select Instructional Materials:** The artifacts of instruction are presented, such as a learner's manual, tests, and all other materials of instruction (i.e. modules, learning activity packages, or "handouts", interactivities, resources, etc.).
- **Develop and Construct Formative Evaluation of Instruction:** Data is collected on how to improve upon instruction through evaluation of the preliminary learning. Evaluations in the form of one-to-one evaluation, small group evaluation, and field evaluation are performed. The results of these evaluations provide valuable feedback on how to improve instruction.
- **Revise Instruction:** The results of the evaluation shed light on the validity of the instructional analysis and assumptions of learners' behaviors and characteristics. The instructional strategy is reviewed and altered accordingly to be more effective. This step can also be seen as the first step when repeating instruction.
- **Design and Conduct Summative Evaluation:** This evaluation determines the overall value of the instruction and typically does not involve the creator of

instruction (i.e. conducted by the program director, department dean or committee).

Thus, it is separate from the design process

The DC&C model assumes the development of assessment instruments prior to the formulation of instructional objectives, but more importantly, views the process from a systems perspective, acknowledging the interrelated parts of the course development process and their effects on one another (Carey, 2010). The iterative and reflective nature of the model can be effective when instructional designer's work with faculty in considering new teaching strategies during course development. While aspects of this model are still relevant in today's instructional design methodology, its complex nature has led designers to consider simpler and more versatile models.

### ***ARCS Model***

In 1983, American educational psychologist John Keller suggested that instructional design should be influenced by learner motivation. Keller developed what is known as the motivational design model or ARCS (attention, relevance, confidence, satisfaction) model (Figure 5) in which instructional designers could apply to determine what learning activities will encourage learners to accomplish tasks (Song & Keller, 1999). Keller believed that the design of learning activities should focus on the learner's abilities, skills and prior knowledge which can impact learning performance (Keller, 1983).

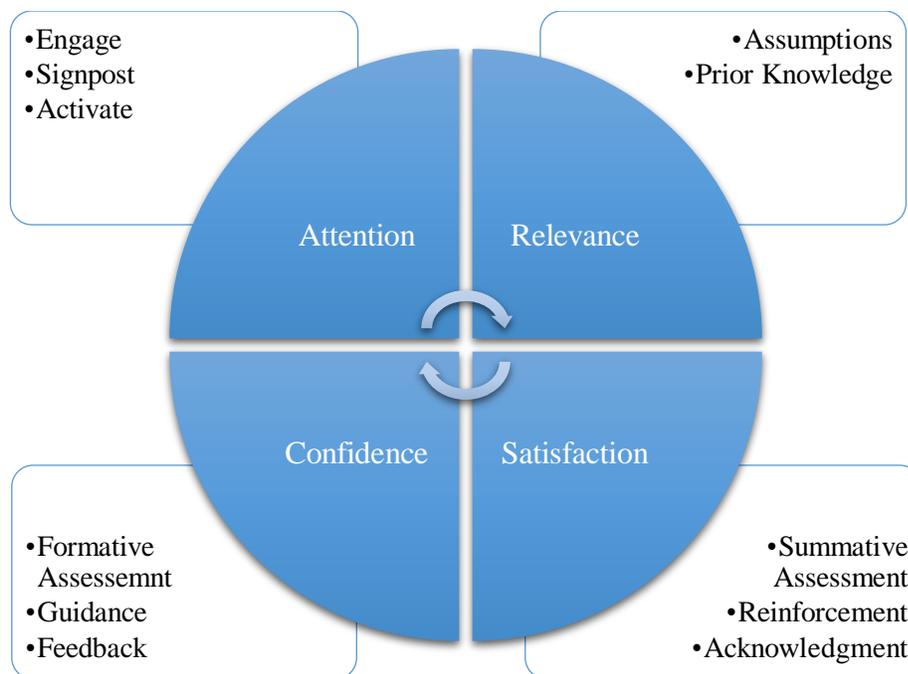


Figure 5. The ARCS Model (Song & Keller, 1999)

### ***Robert Gagne's Nine Events of Instruction Model***

Another instructional design pioneer largely influenced by the cognitivist movement was educational psychologist Robert Gagné who studied the conditions of learning and methods of effective instruction. Effective instruction, according to Gagné, consisted of learning activities that involved “sensory perception, working memory, encoding and storage in long-term memory, and retrieving information from long-term memory” (Richey et al., 2011, p. 112). In 1985 Gagné developed what he termed his Nine Events of Instruction (Figure 6), a systematic method for

approaching the design of instruction.

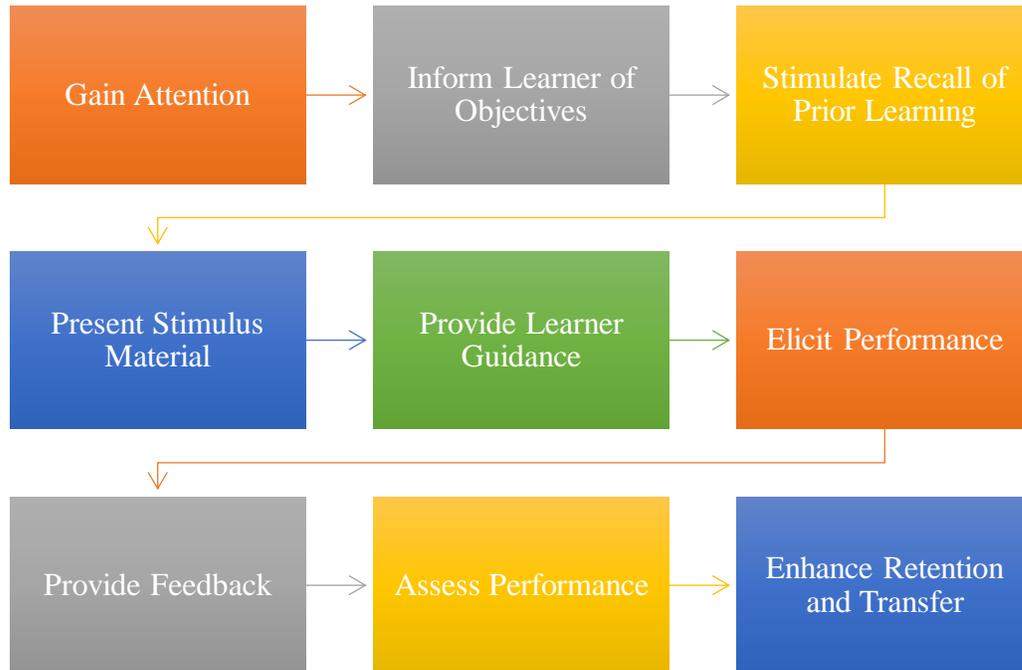


Figure 6. Gagné's Nine Events of Instruction (1985)

### ***Wiggins & McTighe Backward Design Model***

Backward design is a process or model originally developed by Wiggins and McTighe (1998) for designing instructional materials where the instructor or instructional designer starts off by focusing on the desired outcome of a class first, rather than beginning the course planning process. The design process begins by asking what learners should be able to understand and do after completing the course. The designer works “backward” from that end goal and plans and develops supporting instruction and learning experiences based on the desired course outcomes (Wiggins & McTighe, 1998). The key component to the backwards design process is alignment between the three stages (see Figure 7) of course development: identifying outcomes, developing assessment, and planning of learning activities (Fink, 2013).

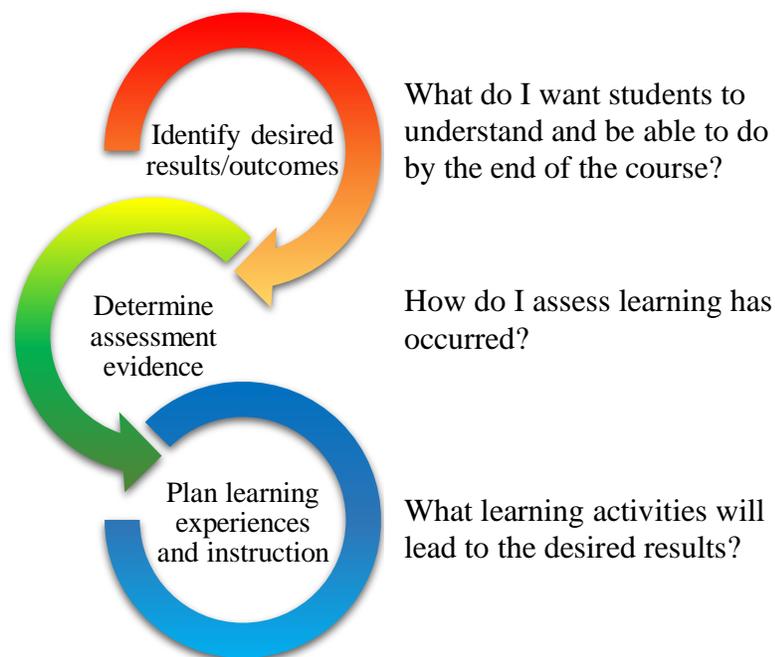


Figure 7. Backward Design Model (Wiggins & McTighe, 1998)

Instructional designers in higher education often use the backwards design model when working with faculty in new online course development or to transition face-to-face courses to the online environment. The model takes a learner-centric approach that forces the instructor to consider what learning experiences promote understanding and what activities will lead to the achievement of the desired outcomes and assessments. In addition, this process can help an instructor to determine what knowledge and skills are essential to the course.

All of the instructional design models discussed throughout this literature review reflect an iterative instructional design process where the formative evaluation of each phase may lead the designer and instructor back to any previous phase to make adaptations since these phases can sometimes overlap and be interrelated. This provides flexible guidelines for course development that are aimed at improving instruction before, during, and even after the course is implemented. Summative evaluation typically occurs after the course has been implemented, to assess the overall effectiveness. The systemic design process of these models (and many similar models

developed overtime) have greatly aided instructional design practitioners in the analysis and design of courses in the past and are still well entrenched in instructional design practice to this day.

### **Instructional Designers in Higher Education**

The movement of courses online at the beginning of the 21<sup>st</sup> century led to the rise of instructional designers in higher education, a new profession which combined instructional technology and teaching to help faculty conceptualize how to best teach and deliver educational content in this new medium (Halupa, 2019). Since then, the use of instructional designers has grown considerably to help institutions meet the increasing needs of online education, but also face-to-face instruction, as teams of designers began forming within developing teaching and learning centers at large public institutions (Halupa, 2019).

Research suggests that instructional designers working in higher education come from diverse backgrounds, though the vast majority have some type of experience in the facilitation of learning (Intentional futures, 2016; Shaw, 2012; Smith, Hessing & Bichelmeyer, 2006). In 2016, *The Instructional Designer in Higher Education Report* by The Online Learning Consortium (OLC) professional association and Intentional Futures, a consultant firm specializing in education and technology, surveyed over 800 instructional designers on their backgrounds. 67 percent indicated being female with an average age of 45 years old. 87 percent of respondents stated they had a graduate degree, with one third reporting a doctorate. In questions related to previous work experience, survey respondents indicated a variety of different fields including education, business, healthcare, and engineering. Despite the diverse makeup of instructional design backgrounds, research indicates that one of the most frequently listed job requirements

listed by institutions seeking to hire designers today is the need to for effective collaboration (Kang & Ritzhaupt, 2015; Sugar et al, 2012).

**Professional Standards.** Researchers have examined the development of competency-based professional standard models used to identify the knowledge, skills, abilities, and behaviors needed to be an effective instructional designer. The literature indicates that the instructional design standards published by International Board of Standards for Training, Performance and Instruction (IBSTPI) were found to be the most useful for instructional designers in general because of their comprehensiveness. Larson and Lockee (2009) note that the IBSTPI standards create a shared language for the instructional design field. Richey et al. (2011) deem the standards as being a critical and necessary means for measuring job skill performance in the instructional design profession.

Considered to be widely accepted within the industry and internationally validated (Munzenmaier, 2014), the evolution of IBSTPI competencies derived from other competencies developed by research foundations consisting of worldwide professional organizations from various employment sectors. The first instructional designer competencies were drafted from 1979 to 1983, though at the time, instructional design practice was mostly focused within business and industry (Richey, Fields, & Foxon, 2001). Today, the IBSTPI competencies are used within various employment sectors including business, the military, healthcare and academia.

The original IBSTPI competencies were modified in 2013 to address the needs for specialization and professionalization of instructional designers in face to face and online learning settings in education and identified competencies specific to instructional designers in education. (Koszalka et al., 2013). The instructional design standards consist of 22 instructional

designer competencies, divided into five domains, and supported by 105 performance statements (Koszalka et al., 2013). The five domains include:

- Professional Foundations
- Planning and Analysis
- Design and Development
- Implementation and Evaluation
- Management

The 22 instructional designer competencies are broken into two levels of expertise: essential and advanced. The essential level included the skills, knowledge, and attitudes an instructional designer should already have mastered, including effective communication; selecting and using analysis techniques for determining instructional content; and developing instructional materials. The advanced level included competencies an instructional designer is expected to master over time, such as, conducting needs assessments; designing learning assessments; and applying research and theory to the discipline.

A review of the IBSTPI competencies reveals that effective communication in visual, oral, and written form is the first instructional designer competency listed, with effective collaboration being one of its defined performance statements. The IBSTPI standards classify collaboration though as an advanced instructional designer competency overall. Ferguson (2018) notes that learning to be an effective collaborator is a skill which requires experience as the context in which designers collaborate is continuously changing. ‘Soft skills’ such as oral and written communication, collaborative skills, organizational skills, and leadership skills were found to be rated higher than technological (multimedia) competencies in a survey of eLearning professionals conducted by Ritzhaupt and Martin (2014). In addition, Klein & Jun’s (2014) study

surveying over 80 instructional designers indicated that collaboration and partnering together were in the top five most important skills of a designer. The research from this study concludes that instructional designers would benefit from “work in a team environment where the ideas of others may spark their own creativity” (Klein & Jun, 2014, p. 44).

Park and Luo (2017) investigated the competencies essential for online higher education by analyzing the competencies and job tasks of instructional designers developing and designing online curriculum/programs at a four-year public research university. Utilizing the IBSTPI model as a framework, they found that the current professional standards did not truly reflect their leadership characteristics in education and research. In response, they propose the development of a refined competency model for instructional designers in online higher education (Park & Luo, 2017). The researchers noted that instructional designers are expected to not only provide support to faculty, but also educate them about effective design principles and pedagogical practice (Park & Luo, 2017). This requires collaborative initiatives by instructional designers in educational research, publishing in the field of instructional design or online education, educating faculty about optimal design, mentoring junior instructional designers, and conducting workshops, seminars and training programs (Park & Luo, 2017). Some of the literature exploring the evolving roles of instructional designers in higher education is considered next.

**Roles of Instructional Designers in Higher Education.** Research that has explored instructional designer roles in higher education have indicated that they ‘wear several hats’ depending on the situation (Sugar and Betrus, 2002), and oftentimes tip-toe the line between leading and supporting initiatives. Drysdale (2018, p. 37) notes the variety of roles instructional designers perform within higher education, stating “instructional designers seem to do a little bit of everything: technology, pedagogy, teaching, training, designing, and developing.” While a variety of roles and responsibilities was clearly indicated within the literature over the last 20 years, a noticeable shift from support roles to leadership in online initiatives was also discovered.

Early on, Bichelmeyer, Misanchuk and Malopinsky (2001) conducted a case analysis on adapting a master’s degree course on instructional design to the online environment in which they explored the experiences of the instructional designers. Their findings reported the following roles as identified by the designers:

- Team development
- Appropriateness of technology
- Establish minimum technology standards and provide technology training
- Develop intellectual property policies

Sugar and Betrus (2002) explored the roles of designers and noted that the field is characterized by constant change. They state that at its core the essential role and responsibility of designers should be to prescribe instructional heuristics (rules of thumb) to faculty based on tried and proven methods in design. They attempt to further categorize these core responsibilities of designers into five archetypes: designer as problem-solver, designer as artist, designer as user, designer as counselor and designer as performer (Sugar and Betrus, 2002).

A year later, Cox and Osguthorpe (2003) conducted a study on the general field of instructional design to consider how instructional designers in various fields spent their time on the job. The survey findings indicated that the majority (53%) of the designers' time was actually spent on administrative "organizational tasks", which the study termed as, project management, supervising personnel, meetings, academic research, and marketing/sales, as opposed to time performing "instructional designer tasks" which the researchers identified as the development (29%), design (21%), analysis (20%), implementation (17%) and evaluation (14%) of online learning experiences. While participant selection consisted of various working environments within this study including education, government, and corporate instructional designers, these findings do illustrate the variety of roles designers serve and hint at the challenge of generalizing what they do.

Kenny et al., (2005) conducted a meta-analysis on the current literature addressing instructional designer roles at the time. Their findings illustrate the technological focus required of designers at the start of the 21<sup>st</sup> century, but also touch on the project management and team building roles that would start to occur. Common roles identified from this analysis included:

- Communication
- Proofreading and editing
- Media development
- Graphic design
- Project management
- Team building
- Technology Training of faculty and students

Citing the need for “foundational transformation of the instructional design process” in education to better align with designer roles and values, Hoakanson and Miller (2009, p. 23) propose a series of archetypes for instructional design teams. The archetype roles include artist (playful experimentation), architect (holistic conceptualization), engineer (scientific realization) and craftsperson (experienced evolution). The various archetypes proposed in this study imply a need for instructional design teams to consist of designers with diverse skillsets who can apply their own set of values and expertise to the field while each serving as a “check and balance for the other roles” (Hoakanson & Miller, 2009, p. 23).

Sugar and Moore conducted a detailed case study (2015) specifically focusing on the activities and specific roles of one instructional designer at a large public university. The designer’s activities were documented over the course of one year through collected daily logs and semi-structured interviews which uncovered 115 distinct activities broken down into three main categories: support, design and production. These activities were then categorized into seven specific roles based on the Sugar and Betrus (2002) and Hoakanson & Miller (2009) studies. They included: architect, engineer, craftsperson, artist, counselor, manufacturer, and trainer. The significant finding was that the designer spent less than half of the time actually designing instruction, an indication of the various roles designers find themselves involved in (Sugar & Moore, 2015).

Miller and Stein (2016) reported on the identified roles of instructional designers at universities in New Jersey. The findings from this study begin to indicate a greater range of skills and an emphasis on quality standards in pedagogy. These roles included:

- Technology and online pedagogy training
- Moving courses from one learning management system (LMS) to another

- Creating online courses with faculty SMEs
- Producing video and other multimedia
- LMS and instructional technology support
- Training faculty to teach more effectively using technology
- Supporting students using the LMS
- Ensuring courses meet accessibility standards
- Assist faculty in assessment development to minimize cheating

In 2016, Intentional Futures also (2016) surveyed 863 instructional designers who provided additional insight into common duties. Four major roles were identified:

- Designing online instructional materials and courses
- Project management
- Training of faculty in both technology and pedagogy
- Faculty support

The report findings also indicated a strong need for designers to possess leadership and pedagogical skills. For example, 73% of the designers indicated they lead project management efforts, campaigns to promote instructional design services and serve as a liaison between academic administration, faculty, and IT daily, while about half (51%) said they also focus on training others in the use of online pedagogy at least once a day (Intentional Futures, 2016).

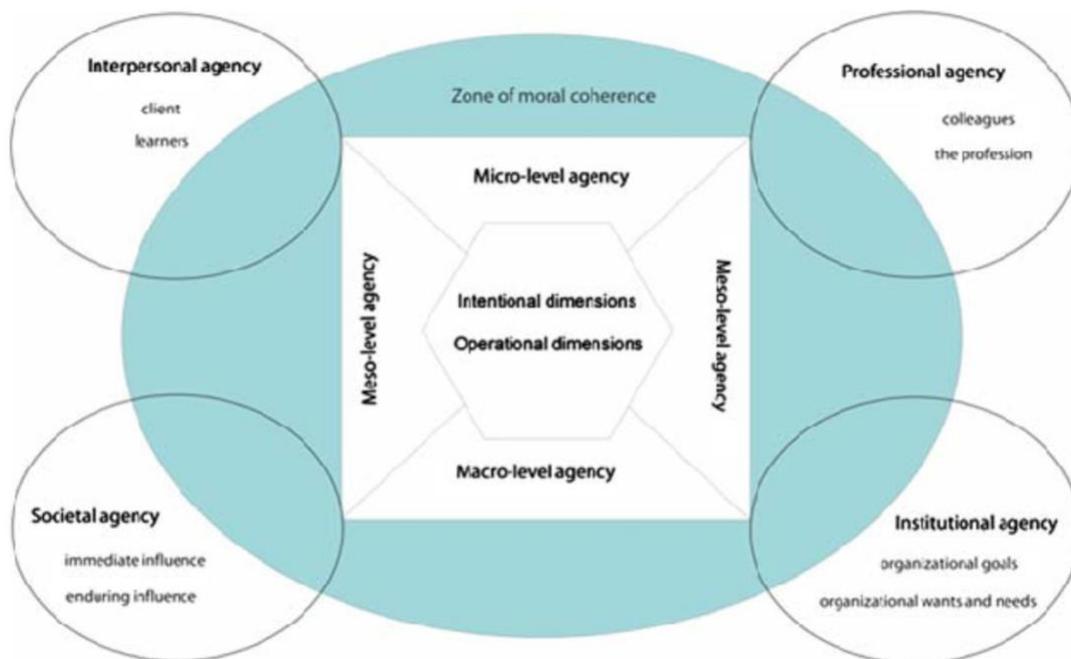
Research has also begun to focus on how designers are contributing more to scholarly research efforts in higher education than ever before (Linder & Del Stritto, 2017). A recent national study performed by Oregon State University's Ecampus Research Unit, explored the research preparation and engagement in research that instructional designers are conducting in higher education. The results based on a sample of 311 instructional design professionals

responding to a 60-item online survey indicated that over 70% had engaged in research activities within the last year with about half (49%) currently engaging in scholarly research on teaching and learning. These findings illustrate efforts made by instructional designers to meet faculty on an academic level in order to develop respect and build trust.

Beirne and Romanowski noted in their 2018 white paper summarizing the evolving field of instructional design in higher education that there is still much to be defined regarding the role of instructional designers in higher education today. Where instructional designers and instructional design teams fit within a particular institution and how they can be best utilized to improve online learning remain ongoing questions in the literature. Over the past decade, there have been studies calling for instructional designers to take upon a greater leadership role in online education. These studies are explored next.

**Instructional Design Leadership in Online Educational Initiatives.** The concept of instructional design as a leadership practice in online education is seen in the literature as a critical step towards advancing the quality of online courses and programs (Drysdale, 2018). Schwier, Campbell, and Kenny (2007, p. 2) originally explored instructional designers as leading agents of change within higher education, positioning the designers as “active, moral, political and influential change agents in higher education.” They proposed a “multivariate agentic model of instructional design” that includes interpersonal, professional, institutional, and societal dimensions (See Figure 8). The model stresses the importance of moral commitments, i.e., the designer’s responsibility to others, as well as their profession as a means of enacting significant social influence within universities. They describe change agency in instructional design contexts as a “dynamic and crucial role in shaping [institutional] structures and processes whether they [designers] are aware of doing this or not” (Campbell et al, 2009, p. 647). These contributions,

while difficult to quantify, suggest a significant responsibility and leadership influence that may yet to be fully realized within higher education.



*Figure 8.* An emerging model of change agency in instructional design (Campbell, Schwier & Kenny, 2007)

Brigance (2011) called for instructional designers to be perceived and positioned within the university as collaborative leaders in online education with faculty, rather than support. She recommended that both designers and faculty play equal roles in the development process. Designers should focus on leading design elements and pedagogical expertise while faculty focus on subject matter expertise. This collaborative partnership places both designer and instructor as equal partners and could help to forge stronger ties between faculty and designers in online learning initiatives.

Shaw (2012) examined the idea of instructional designers as leaders in higher education by comparing their roles to that of other leadership roles in higher education. In his research, Shaw (2012) comments that instructional designers are uniquely positioned as leaders of online

learning due to their unique skills and backgrounds which focus on problem solving, critical thinking, adaptability, community professional engagement, and evaluating the health and progress of organizations (Shaw, 2012). As such, he recommends that university leadership promote instructional design teams as being leaders of online professional development that focuses on both technology and pedagogy. He concluded that this may open more doors for meaningful collaboration between faculty and instructional design teams (Shaw, 2012).

Drysdale (2018) conducted a study to uncover which organizational structures in higher education most positively influenced the ability for instructional designers to lead online learning initiatives. His findings indicated that the centralization of instructional design teams helped to clarify roles, improve faculty perceptions and bring forth recognition to their work in online professional development. Drysdale also points out that the scale of instructional design teams needs to be proportional to the size of the university to ensure that instructional designers have the time and opportunity to meet university needs. He further recommends that instructional design teams be positioned within academic reporting structures so that instructional design teams can become more closely aligned with faculty in collaborative efforts.

**Faculty Development and Instructional Design.** McQuiggan (2012) conducted one of the few literature reviews exploring instructional designer faculty development programs. Noting the variation in professional development initiatives, McQuiggan's (2012) review uncovered how programs differed in length and how some programs were voluntary, while others mandatory, such the University of Central Florida, who requires all faculty who teach online to participate in a 70 – hour faculty development course. McQuiggan (2012, p. 29) finds in her review that regardless of length or rigor, very few faculty professional development models adhered to an adult education framework. She calls for a greater focus on this in the

future, stating that, “professional development programs to prepare faculty to teach online are needed, not only to learn the technical aspects of teaching online but, more importantly, to consider new and different ways of teaching.”

In one of the very few studies found exploring the development of instructional design faculty development program developed by a team of instructional designers, Chen et al., (2017) explored a Boise State University initiative called the eCampus Quality Instruction Program (eQUIP) which positioned dedicated instructional designers in the leadership role. The goal of the program was to make faculty feel empowered and motivated to work with designers to improve their online courses by learning instructional design skills. In exploring the 51 online courses developed, the researchers found scalable change in culture, perception and processes of collaboration in individual course design when designers were positioned within this role (Chen et al., 2017). This research indicates potential for improving online learning initiatives when dedicated instructional design teams are empowered to elicit change.

### **Challenges & Gaps Within the Literature**

There remain significant challenges addressed within the literature that directly impact instructional design efforts in higher education. Survey results from Intentional Futures (2016) report identified the top barriers to growth and success faced by instructional designers in higher education. The three biggest challenges were identified as a lack of faculty buy-in, limited resources, and challenges with institutional leadership and initiatives (Intentional Futures, 2016). These challenges are highlighted by researchers throughout the literature and will be explored next within the context of faculty professional development led by instructional designers.

### **Quality Concerns: Faculty Online Professional Development & Online Teaching.**

While online learning initiatives developed by instructional designers can foster new growth and expand learning opportunities, many challenges persist. One significant challenge resides within the professional development of faculty who must transform many of their traditional teaching methods in the online environment. Online professional development for faculty in higher education often goes unmandated and tends to vary by institution. Additionally, many online professional development initiatives lack sufficient training for instructors who may not have a background in pedagogy or methods of designing online instruction (Ciabocchi, Ginsberg, & Picciano, 2016; Drysdale, 2018; Protopsaltis & Baum, 2019; Magda, 2019). This has led to ongoing concerns regarding the efficacy of online teaching and the quality of online courses which many still view as inferior to face-to-face education (Protopsaltis & Baum, 2019; Allen & Seaman, 2016, 2018).

When starting out teaching online, faculty often rely on traditional pedagogical approaches, formed over years of developing expertise in face-to-face classrooms that are not always suitable for the online environment (Baran, Correia, & Thompson, 2011; Kreber & Kanuka, 2006). Rethinking strategies for how to effectively teach and engage learners online can be challenging and frustrating for faculty who in many respects must transition from being teacher to learner. If higher education institutions are to be successful in implementing quality online learning programs, research indicates that a greater emphasis needs to be placed on providing effective pedagogical training for faculty to succeed in online teaching and course development (Baran, 2018). While the literature indicates that instructional designers are up to this task, significant barriers persist.

**Faculty Resistance and Lack of Buy-In.** An unresolved gap in the literature is how to resolve friction between faculty and instructional designers when they are charged with leading online professional development efforts. Faculty have expressed uncertainty about the benefits of collaboration with instructional designers and the incorporation of technology in teaching, while instructional designers report frustration with not being valued as educators by faculty members when leading these initiatives (Seaman, Allen & Seaman, 2018; Rubley, 2016). Castro-Figueroa (2009, p. 24) noted that faculty are unfamiliar with interacting with professionals who are not faculty on instructional matters and warns that instructional designers may “overlook the critical importance of the subject matter expert”.

In a study of instructional designers in Canada, Campbell (2009) noted the importance of the designers found in building trust between themselves and faculty SMEs by setting clear goals and guidelines as to expected responsibilities at the beginning of the collaborative process to avoid later conflicts. Faculty in higher education are used to having autonomy over course development and often believe they can create their online courses the same way they would a traditional face-to-face course, but research has shown that successful online course development requires collaboration between faculty and instructional designers who have knowledge of the pedagogy involved in designing courses in the online format (Brown et al., 2013; Outlaw et al, 2017; Stevens, 2013). Effective strategies for overcoming this significant challenge needs further exploration.

**Inconsistent University Support.** A major barrier to the instructional designer/faculty relationship is a lack of consistent support provided by university leadership. In 2017, Kebritchi, Lipschuetz, and Santiago performed a literature review examining issues and challenges for teaching successful online courses in higher education. Their findings highlight a lack support by institutions in providing professional development opportunities for instructors, including pedagogical training and technical support for the content development and delivery of online courses. (Kebritchi, Lipschuetz, & Santiago, 2017).

Additional research has surveyed online leadership to determine why these uneven levels of support occur. In their annual *Changing landscape of online education* (CHLOE) report, Eduventures has surveyed over 180 U.S. chief online officers (COOs) about their online learning policies, practices, and future plans. Despite positive findings - including the vast majority indicating that team based instructional design support is considered a crucial component to quality course development and student performance - only 33 percent of institutions reported requiring instructional design input into online initiatives. When respondents were asked why institutions did not require faculty to work with instructional designers, two major reasons were reported: lack of resources and “sensitivity to issues of faculty independence and academic freedom” (Legon & Garrett, 2019, p. 24). The report concludes that, “Institutions must decide whether the benefits to students of consistency and adherence to design standards that implement the full potential of their learning management system (LMS) and other online tools outweigh considerations of faculty autonomy and justify greater investment in design expertise.” (Legon & Garrett, 2019). In the 2020 edition of the survey, the researchers indicate that only a small increase in the ratio of COOs said that faculty are working with instructional designers (Legon & Garrett, 2020).

Further research indicated a lack of uniform services offered to support faculty in developing skills in online pedagogy. Within the context of regional public universities, the American Association of State Colleges and Universities (AASCU) and The Learning House, an organization committed to helping colleges manage their online education programs, recently surveyed Chief Academic Officers (CAOs) at some AASCU member institutions to determine how these universities are supporting faculty in online skills development. The report showed that while the vast majority (79%) of leaders surveyed said they provide “full” support in learning management system (LMS) training, only a slight majority (56%) said they fully provide faculty instruction in online pedagogy (Magda, 2019). More concerning is the fact that less than half (45%) of surveyed AASCU institutions said they require LMS training and just over one-third require faculty-led pedagogical training before faculty teach online. The report, while acknowledging that faculty autonomy and contracts can sometimes prevent the mandating of such training, conclude that the percentages of offered and required development opportunities appear low when considering how abundant online learning has become within these institutions (Magda, 2019).

**Limited Resources.** As mentioned in the CHLOE surveys, a possible reason for the lack of institutional support is a lack of funding. Research has found that while higher education administrators may recognize the value instructional design teams bring to online learning, but limited resources for staffing may hinder the necessary growth needed for institutions to empower them (Fredericksen, 2017). This challenge certainly merits further consideration as online learning continues to rise.

**Positioning Within the University.** An emerging area of research on instructional designers in higher education is where they are positioned within the university as a reporting unit. This begs the question of whether governance plays a significant role on the professional identity of instructional designers and the influence and impact they have within an institution. Few studies to date have explored the repercussions that organizational positioning may have on instructional design teams, faculty and the process of developing and supporting faculty in online teaching and learning professional development, though a few recent reports and studies have begun indicating that positioning may impact how instructional designers are perceived and respected within the university.

Miller and Stein (2016) reported on the findings from an instructional design symposium which questioned how the organizational positioning of instructional designers impacted their roles. They found a strong consensus by a group of 32 instructional designers that positioning within an academic reporting line made a significant difference in terms of gaining faculty trust and buy-in. Despite this, most designers at the symposium reported being positioned within the financial/administrative side and found that their pedagogical expertise was not fully realized by the university because of this.

Drysdale's study (2018) exploring the organizational structures influencing leadership over online learning initiatives for instructional designers in higher education indicated a strong variation in instructional design team makeup and in whom they report to amongst institutions. This variation was not only by institution type, but also within similar institutional structures (Drysdale, 2018) indicating that gaps remain in the literature as to why this is occurring. His research findings showed that designers often felt significant disempowerment, role misperception and challenges in advocacy and leadership due to how they are often positioned

within universities. Positional parity between designers and faculty, brought forth by positioning instructional designers within academic reporting lines and centralized instructional design teams most positively influenced the ability for designers to lead strong initiatives (Drysdale, 2018).

The current gaps in the literature as indicated by the research is the lack of studies looking into leadership initiatives conducted by instructional design teams in higher education. There has been calls in the literature for more research into instructional designer leadership (Brigance, 2011; Drysdale, 2018; McQuiggan, 2012; Shaw 2012,). Despite growing prominence, few studies have examined instructional designers influence in pedagogy and curricular decisions (Drysdale, 2018; Fong, 2017; Legon & Garrett, 2017). This study hopes to contribute to the small amount of literature considering these gaps by exploring the online certificate program developed and led by an instructional design team.

### **Synthesis of the Literature Review**

In reviewing the literature exploring the field of instructional design and instructional designers in higher education, there appears to be more questions than answers. The field appears heavily influenced by evolving theories of learning and the technological advancements which have created new ways to learn and deliver instruction. The learner-centered pedagogical movement taking place in higher education over the past fifteen to twenty years has led to new opportunities for instructional designers to take upon a leadership role in online faculty professional development. The systematic models developed over time have provided instructional designers with the tools they need to help faculty improve their teaching in a variety of contexts. While some of earlier instructional design models have faded away, new models have been developed and others revised to withstand the test of time as reliable strategies for developing effective instruction. As more faculty begin to teach online and more instructional

designers are hired, it has become important to consider the role of instructional design teams in developing online professional development initiatives and explore the strategies they are using to transform faculty perspectives about online education.

The literature suggests that instructional designers in higher education are beginning to become recognized for the important contributions they are making to teaching and learning, though institutional support appears to be varied as many universities are challenged with how to best situate designers within their institution. An effective strategy appears to be situating instructional designers within a centralized department within an academic reporting line, as this could lead to better collaborative relationships with faculty and remove the stigma of designers primarily being technological support. The literature is clear that institutions need better pedagogical support for faculty to improve the quality of online teaching and that instructional designers have proven to be up to this task.

In one of the few studies exploring the perspectives of instructional design teams within the literature, Fong et al. (2017) conducted a research study focusing on learning more about instructional designers and their professional development needs. In a survey of over 100 instructional designers and online learning directors, they found that the most important factor in preparing instructional designers for their work in higher education was shared experiences of other designers in their team. In addition, they found that collaboration with team members and learning more about the latest research and applications of adult learning theory in practice was most valuable to their professional development. In order to continue understanding the evolving role of instructional design in higher education, more studies need to focus on the experiences of the designers themselves and the initiatives they collaborate on to improve the quality of teaching and learning.

## **Summary**

This chapter provided a review of the literature on the evolving field of instructional design and its emergence in higher education. The major learning theories and models that have guided the practice were discussed along with the evolving roles they serve. The findings from the review of literature highlight the value that instructional designers and collaborative instructional design teams currently bring to online pedagogy, yet few studies have explored the experiences of instructional design teams in the development of online faculty professional development programs. These experiences and the insights from the designers themselves helps to support the research questions in this study.

Chapter 3 outlines the research methodology for this study.

### CHAPTER III

The purpose of this study is to explore the experiences of instructional designers leading an online teaching and learning initiative. In this study, I focused on the experiences of an instructional design team tasked with the management, development and teaching of a four-course online teaching certificate program. Additionally, I explored their views on university structure and support to consider how this impacts participant perspectives on their professional identity.

The following central research question (RQ1) and sub questions (RQ's 2 & 3) that guided this study are as follows:

1. How do instructional designers describe their experiences developing and teaching an online certificate program within a large public university?
2. How do instructional designers in the program describe their support from the university regarding the program?
3. In what ways, if any, can instructional designers in the program improve online course development and teaching by faculty learners?

This chapter begins with a discussion of the research design and methodology. Next, I discuss participant selection procedures and introduce the research setting. Then, I discuss the methods of data collection and analysis used. I conclude this chapter by discussing the role of the researcher, validity, reliability and ethical considerations.

#### **Research Design and Methodology**

A qualitative research methodology with a case study design was used for this study of eight instructional designers within the online teaching certificate program. Qualitative research is concerned with the understanding of how people interpret their experiences and what meaning

they attribute to those experiences (Merriam & Tisdell, 2016). For this study, I wanted to better understand how a team of instructional designers interpreted their experiences within the program and how they felt it helped to improve online education. According to Merriam and Tisdell (2016), qualitative case studies can provide in-depth analysis of a bounded system, or a case - including an individual, team, program, and/or organization. As such, a case study design is appropriate for this study because the focus of this research was on the analysis of team experiences within the program of interest.

## **Participant Selection and Research Site**

### ***Population***

The population for this study consisted of the eight team members within the instructional design unit that were currently working within the program. While eight participants is a small population size, it is justifiable within this case study as I was specifically interested in researching the online teaching certificate program developed and taught by this instructional design team within this particular setting.

### ***Sample Selection***

Purposive sampling (Creswell, 2012) was used to select the participants for this study. According to Creswell (2012), subject selection in qualitative research should be purposeful; therefore, it is useful to select participants who can best inform the research questions and enhance understanding of the phenomenon under study. For this study, the eight instructional designers were selected through purposeful sampling to understand how their experiences working as a team within the program was seen and understood through their direct efforts and willingness to share these experiences in a reflective manner. Creswell (2012) noted that the sample should be sufficient as to allow for an in-depth analysis of the phenomenon under

investigation. The selected sample consists of all of the instructional designers who were currently employed and working within the program, thereby allowing for a rich analysis of the all of the experiences involved in the development and teaching within the program of interest.

Each participant agreed to partake in the study. In advance of the study, participants were provided with an informed consent form they were asked to read and sign (see Appendix B). In addition, each participant was asked a series of brief demographic questions to which they responded (see Table 2).

*Table 2. Participant Demographics*

<b>Pseudonym</b>	<b>Approx. Age</b>	<b>Gender</b>	<b>Self-Identified Race/Ethnicity</b>	<b>Education Level/Type</b>	<b>Years of ID experience</b>
Yankee	30	M	White	Master's of Ed. in Instructional Design from a Private University	3
Hollywood	60	F	Latina (Puerto Rican)	Master's of Ed. in Instructional Design from a Public State University	9 years (higher ed); 34 years total corporate/education
Leo	40	M	White	Doctoral student at a Private State University	3
Westy	50	F	White	Doctoral, Ed.D. from a Public State University	14
Harrison	50	F	White	Master's Ed. Computing	19
Nova	30	F	White	Master's Ed./Doctoral Student Ed.D. State University	4
Highlander	40	F	Latina (Cuban)	Master's of Ed. Instructional	3

				Design from a State University	
Litmus	30	M	White	Master's, Fine Arts	6

Study participants indicated variety of professional experiences prior to joining the team. For example, one designer was a corporate trainer before working in higher education, two were K-12 teachers, one in a community college instructor, and another taught writing courses at a public university. Many of the study participants indicated they had different roles within higher education before becoming an instructional designer. One study participant indicated they worked in IT support, while another was an administrator at a medical school. The number of years of experience working in the field of instructional design field indicated by study participants ranged from 3 years to 34 years (including corporate and education), with the mean number of years being 8. Study participants ages ranged from 30-63. In all, the sample population consisted of a diverse group of participants in many respects.

### ***Setting***

Like other forms of qualitative research, case study research seeks to explore, understand and present the participants' perspectives by getting close to them in their natural setting (Creswell, 2012). To accomplish this, the participants for this study were interviewed at the site of the department within their institution. The institution itself resides within a Carnegie Classified 4-year or above large public doctoral research university in the northeastern United States. The university has three campuses located throughout the state with additional facilities elsewhere and employs over 8,500 full and part-time faculty. Since 2015, the university has offered 11 fully online programs at the graduate and undergraduate levels and a variety of

graduate certificate programs. Today, the university boasts a total of 26 fully online degree programs, indicating a sizeable amount of online faculty.

## **Data Collection**

### *Instrumentation*

Data collection in case study research typically draws upon multiple sources of information to obtain a holistic view of the case of interest. While noting that not all sources will be relevant for every case study, Yin (2016) suggested the following: documents, archival records, interviews, direct observations, participant observations, and physical artifacts. According to Merriam (2009), qualitative case study researchers should utilize three data collection techniques: conducting interviews, observation and document analysis. For this study, an interview protocol was the main instrument of data collection, though observation and document analysis also played a significant role.

I began the data collection process for this study by looking at the program's webpage on the department website, where I learned about the specific course offerings within the program. I then looked at course syllabi to get a better idea about the courses including course level objectives, course structure, and learning activities and assignments. I also reviewed some of the learner feedback surveys within the courses. Review of learner feedback was important to gaining a general idea about how learner's felt about the courses and designers teaching in the program. Reviewing these course materials allowed me to develop a better understanding about the overall program. I also took field notes of my findings and observations throughout the research process, which along with a priori themes identified from the literature review, were helpful in organizing and constructing the interview protocol which served as the main instrument of data collection.

The approval for conducting this research was provided by the university director of online learning before data collection began (see Appendix A). The director provided insight into which designers would be suitable for participation in the study, along with approval to review any relevant course/program materials deemed useful for analysis. After confirming with the director, I personally invited each designer to participate in the study. Study participants were provided with a letter of informed consent to review prior to conducting the study (see Appendix B). Once the consent form was read and agreed upon, semi-structured interviews (see Appendix C) which lasted between 40-77 minutes were conducted. The interviews took place face to face in a conference room at the site of the institution over the course of about three weeks.

### ***Interview Protocol***

The interview protocol (see Appendix C) was designed with semi-structured questions to ensure relevant information was obtained from all participants through predetermined questions while still maintaining flexibility. According to Patton (2014), this method makes the interviewing process more systematic and comprehensible while still allowing for the study participants to freely express their views and perspectives on their experiences in their own words. The aim of structuring and conducting the interviews in this manner was to give study participants the freedom to take the questions in any direction they chose while still confining the focus to the program of interest. The goal was to allow participants to freely express their views and perspectives on developing and teaching the program (Creswell, 2012).

The interviews were recorded with a digital recording device and field notes were taken during the interviews to record participant observations on site during the interview process and to facilitate critical reflection after (Maharaj, 2016). To ensure confidentiality, participant names and the institution itself were not identified throughout the study. Pseudonyms were assigned to

each participant and the university itself was only described in terms of institution type and regional location. Digital audio files of each interview were saved and stored on a password protected USB memory device in a locked file cabinet at my home. All digital audio files, interview transcripts, demographic information, course documents and field notes will be retained for at least three years after which they will be destroyed once it has been determined that no further analysis is needed.

### **Data Analysis**

According to Merriam (2016, p. 202), data analysis in qualitative case study research is an inductive process of making meaning out of the data which involves “consolidating, reducing, and interpreting what people have said and what the researcher has seen and read.” After conducting each interview, I would immediately began writing field notes and memos to note findings, track my own reactions and observe patterns. Birks et al. (2008) stated that analytic memos can serve to enhance qualitative research approaches because the memos allow researchers to develop a more intense relationship with their data. The constant comparison of my data analysis allowed me to deduct meaning from my findings and identify emergent themes. This process of discovery, verification and refinement would continue throughout data collection and subsequent analysis as the collection of data and analysis is a simultaneous process in qualitative research (Merriam 2016). Organizing and refining my data in this way made the coding and categorizing of my findings more manageable in the long run, as I was able to identify reoccurring patterns much easier.

Before the interviews were transcribed, a preliminary list of *a priori* codes was created. The starting priori codes are based on the findings within the literature, and the theoretical framework guiding this research study (Gilson & Little, 2016). After the interviews were

completed, transcriptions were made, reviewed and notated. Participants had an opportunity to review and elaborate on completed transcriptions, though few actually did so. Some of the findings from the transcriptions led me to reach out to study participants for additional clarification and expansion upon answers. Once complete, I began to arrange the categories of connected topics, patterns and ideas within the transcripts by coding them into major groups and subgroups. I utilized QSR International's NVivo 12 qualitative data analysis to enhance the process of organizing, storing and analyzing the data (Gilson & Little, 2016).

The NVivo software provided a data display of information to help determine the categorization and identification of recurrent themes in the data. Miles and Huberman (1994) indicated that the data display allows a researcher to “draw valid conclusions and take needed action” (p. 91). While the software was helpful for organizing and storing data for review, Denzin and Lincoln (2005) note that the researcher is always the primary analyst. As such, I often relied on my own instincts when coding and categorizing themes. By the end of the analysis process, I felt a sense of saturation within certain categories of themes (Merriam, 2016). Ultimately, this process enabled me to see the “trees from the forest” and I was able to converge codes into more comprehensive categories (Merriam and Tisdale, 2016, p. 208). These categories became the findings of the study in which the conclusions were drawn from.

### **Role of the Researcher**

In order to qualify my ability to conduct this research, it is important that I am transparent about my own relevant experiences which may influence how the data was interpreted (Creswell, 2013). As a practicing instructional designer within the institution being studied, the researcher conducting this case study has had both direct and indirect working relationships with most of the study participants. While acknowledging this potential for bias, I did not have in-depth

knowledge of the course development and teaching philosophies or varied perceptions of the designers working in the program at the time of the study. The primary goal of this study was to better understand the *emic*, or insider's perspectives of their experiences as designers teaching within this program in order to make meaning from these experiences. Efforts to remain unbiased and objective by my findings were made throughout the data collection and analysis. For example, in order to remain unbiased and objective when analyzing the research data, I journaled my introspections and reactions after each interview and debriefed with trusted colleagues/mentors. Additional efforts to remain unbiased can be found in the validity and reliability section.

Over the past decade, I have worked in variety of support and administrative roles in higher education. Early faculty support roles in my career led to a supervisory role where I was largely responsible for managing a support staff team which provided services to over 70 full and part-time faculty members. Providing faculty with training in rapidly evolving technological tools became a major area of focus in this role, and eventually this led to an opportunity in online course development for new graduate certificate programs that were being created.

In learning more about the role of instructional design in higher education, I began to discover that designers were performing more than just technological support for the faculty they served. Many were assigned to work one-one-one with faculty in a variety of collaborative ways. Not only were these designers researching how to use the latest technological tools in education, they were brainstorming with faculty in how to translate face-to-face courses to the online domain and working together to develop engaging new learning experiences for students. This was an eye-opening revelation to me, as I began to discover the potential of the designer/faculty instructor partnership in creating engaging learning experiences. No longer did I look at the

instructional design profession as just technological faculty support. Instead, I saw instructional design as an emerging profession within higher education; a role where the designers were becoming subject matter experts in their own right in online teaching and learning.

My previous experiences as a student, researcher, faculty support manager and instructional designer have served as motivation to the focus of this research study. In June of 2018, I began a new position as an instructional designer at a large public research university in the northeastern United States. This role afforded me the opportunity to put into practice many of the things I discovered when researching what instructional designers were doing at other institutions. Additionally, it opened my eyes to new initiatives being developed by designers to improve online education, including the recently developed online teaching certificate program that serves as the focus of this study.

### **Validity**

Validity refers to how closely the research findings represent the reality of the phenomenon studied (Merriam, 2016). Common strategies for ensuring validity in qualitative research include triangulation, member checking, and researcher reflexivity to establish trustworthiness (Merriam & Tisdale, 2016; Stake, 1995; Yin, 2003). Methodological triangulation was performed in this case study by using multiple sources of data to converge lines of inquiry (Stake, 1995; Yin, 2009). This included the aforementioned program/course document review, participant interviews and my observations as a researcher. Triangulation of various sources of information helped to confirm relevant information about the program.

Member checking traditionally refers to sharing either a brief summary of the findings or sharing the entirety of findings with the research participants (Lincoln & Guba, 1985). Throughout this study, participants were provided opportunities to review transcripts and/or

clarify statements to ensure that the findings were taken within the proper context. Additionally, in instances when a particular finding wasn't completely clear to me during the interview process, I would probe for additional clarification and meaning.

Researcher reflexivity entails self-awareness to the researcher's role and potential biases. As previously mentioned, this was conducted throughout the research process through journaling and debriefing. In addition, I reviewed and refined the interview protocol by pilot testing the questions with a colleague who did not participate in the study. The pilot interview helped me to identify flaws, limitations, potential biases, and weaknesses in the interview design. For example, it was discovered during the pilot test that some of the questions about the program could be construed as leading questions, so these questions were reworded or removed entirely.

### **Limitations**

The limitations of this study include the following. The participant voices and descriptions of their experiences do not represent all instructional designer experiences. While this research study provided some interesting information regarding instructional designers and their experiences in developing an online teaching certificate program, this study was limited in the fact that it only considered the experiences of one team of instructional designers at one public research university. This limitation means that this study cannot be generalizable to all instructional designers.

A second limitation to this study is that it did not provide a first-hand investigation of the experiences of faculty learners in the online certificate program. The primary focus of this study was to explore the experiences and perspectives of the instructional designers who developed the program, though it must be acknowledged that researching faculty learners' experiences and perspectives could provide a more holistic picture of the program.

A third limitation is interviewer bias. As an instructional designer working at the university being studied, bias could manifest itself in assumptions about instructional designers or in the analysis of the data. While every effort was made to avoid potential bias, this limitation still must be conceded. To avoid any potential bias, the interview protocol was pilot tested, triangulation of data and member checking was performed, and I consistently made myself aware of my own personal feelings through reflective memos and debriefings which were taken throughout the research process in order to maintain self-awareness of the personal biases I may have.

### **Summary**

The goal of this chapter was to outline the research methods used to help answer the research questions. A discussion of the studies procedures, participants, and methods of data collection indicated the specifics of how this study was conducted. A case study methodology was used to help explore the experiences of instructional designers in order to better understand how instructional designers can improve online teaching faculty professional development initiatives. All study participants shared their experiences as designers and educators of an online teaching certificate program at their institution. The goal of Chapter IV is to provide the study results and demonstrate that the methodology described within this chapter was conducted.

## CHAPTER IV

This purpose of this qualitative study is to give a team of instructional designers within a large public research university the opportunity to describe their experiences developing and teaching a four-course online teaching certificate program and offer a description of how they believe those experiences affect faculty online professional development, the quality of online education, and their professional identity within higher education. Collaboration theory provided the framework for exploring how instructional designers can examine their own experiences as a team to develop strategies for improving online educational practices and perceptions about the value of instructional design online education.

This chapter presents the study's findings and provides explanations about the emergent themes which arose from the interviews. In this chapter, I first discuss the background of the instructional design team and the online teaching certificate program to provide context for the research questions that follow. Next, I provide an analysis of each research question's findings, followed by a description of the themes which emerged. In general, an analysis of the interviews revealed a diversity of experiences, yet common views on what makes a successful team and program. I found that study participants shared similar views regarding university support and concerns about university priorities, though they had mixed perspectives about how to resolve the challenges they perceived. In addition, participant insights into their teaching experiences revealed strategies for effective faculty online professional development. Lastly, I conclude this chapter with a summary of the findings.

### **Instructional Design Team Background**

The office of instructional design (OID) team organizational chart (see Figure 9) indicates a team which consists of a department director/supervisor, a senior instructional

designer who also serves as the project manager for the online teaching certificate program, four other senior instructional designers and three instructional designers. The “senior instructional designers” earned this title designation through their tenure with the university; an exception being Hollywood, an instructional designer hired approximately two years ago. Hollywood’s vast experience in instructional design as a corporate trainer earned her this role and title in the more traditional sense. The three “instructional designers” on the team were hired approximately two years ago as well, but came to the team with less instructional design experience than Hollywood. Interestingly, two of the three had more experience in the field than some of the longer tenured senior instructional designers. Appendix two illustrates the demographic information for the instructional designers on the team.

The differences in title between “senior instructional designer” and “instructional designer” were found to have no impact on the level of responsibility or input the designers had for the purposes of the online teaching certificate program. When asked, Yankee, one of the senior instructional designers made this clear:

*We have 50% responsibility in the courses, regardless of [instructional design] title.*

Besides their work in the program, the OID offers pedagogical and technological support across all online and hybrid educational initiatives throughout the university. The team resides within a larger department that includes a media team, a 24/7 LMS support team, and a smaller team dedicated to researching game mechanics for education and learning. The OID team formed in 2017, when three independent instructional design staff units within the university merged to create a centralized team.

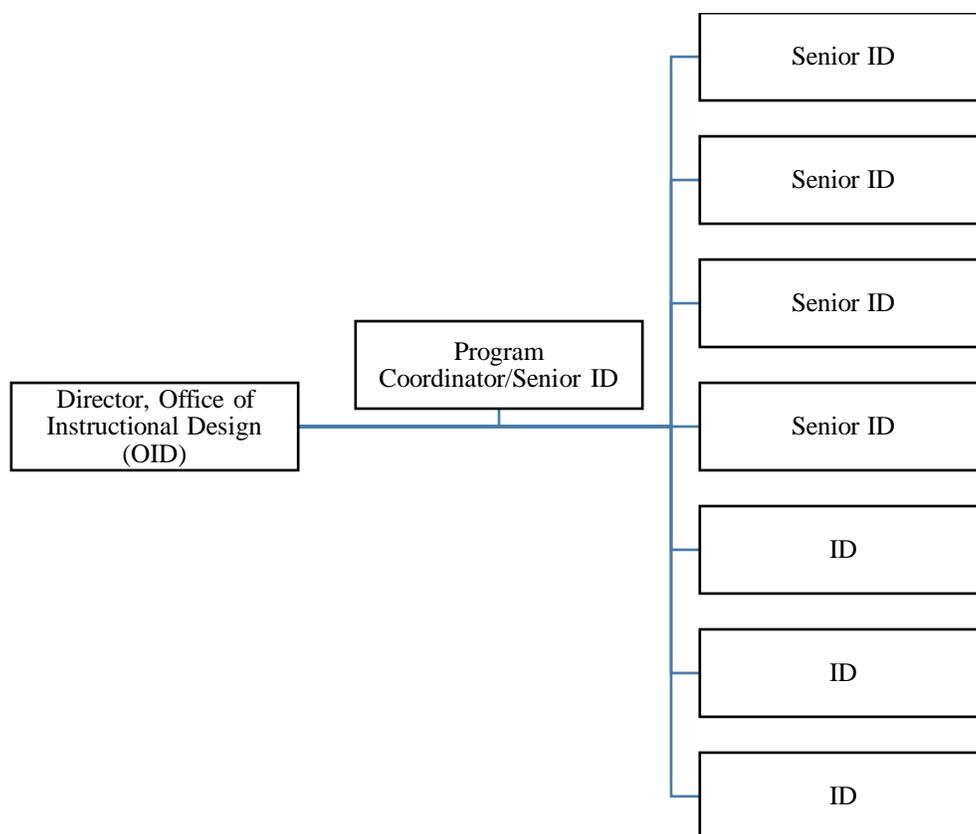


Figure 9. Organizational chart of the OID

### Online Teaching Certificate Program Background

In 2011, a University faculty member developed and taught a course titled, *Fundamentals of Online Teaching* to help early adopters of online teaching. Around 2014, an instructional designer developed a second course focusing on accessibility concerns in online course development. A faculty/staff bulletin emailed throughout the university marketed these professional development offerings. According to the program coordinator, enrollment in these courses was very low.

In 2016, the online professional development course offerings expanded to four and became a fully online certificate program taught by part-time instructors at the university. Marketing for the program grew to a full page on the department website, as well as promotion during an annual conference. Word of mouth about these courses began to spread, as the part-

time instructors, many of whom also taught at other institutions, began telling their colleagues about the program. Calls from instructors at other institutions who were interested in taking these courses started coming into the department, as many other schools were not offering a similar professional development initiative. This led to the decision that the program would be made available to both university and non-university faculty, staff, and graduate students who were interested in online teaching. A fee structure was initiated to minimize dropouts and give the program a sense of value. University enrollees were required to pay a \$100 fee per course and participants outside of the university would be required to pay \$300 per course. This fee structure remains the same to this day.

In 2017, the increase in online courses and programs throughout the university led to the hiring of additional instructional designers within the OID. Since many of these designers had teaching experience in their backgrounds, they took upon the tasks of redesigning the online certificate program and teaching the courses as part of their workload. Their various specializations within the field of instructional design allowed for the co-development of four courses focusing on the fundamentals of designing and teaching online courses, the basic concepts related to accessibility in online courses and the benefits of using “universal design” for developing course materials, strategies for engaging students in online courses, and considerations for academic video production in online teaching.

As of this study, approximately three hundred instructors have fully completed the four-course certificate program, with enrollments steadily rising each year. Each course currently runs at a minimum of two times per academic year, with select courses also running in the summer based on demand. The steady growth of the program is a testament to the dedicated work of the OID team in leading this initiative. I felt a need to explore this program further to give a voice to

the designers who created and taught within it, as this could provide useful strategies for other universities who are considering implementing (or improving upon) similar initiatives to improve online education.

In the following section, I provide an analysis of each research question's findings, followed by a description of the themes which emerged from the study.

### **Analysis of Research Question 1**

1. How do instructional designers describe their experiences developing and teaching an online certificate program within a large public university?

#### ***Findings***

The study found that all instructional designers interviewed reported generally positive experiences in course development and teaching within the online teaching certificate program. Study participants explained that their diverse professional backgrounds and specializations in the instructional design field helped them to take ownership of specific courses within the program. This led to the development of a comprehensive online teaching program for instructors seeking to learn more about current best practices in online education.

Team collaboration was found to be a key factor in the growth and evolution of the certificate program. Shared leadership in the decision-making process, both at the course and program level was a significant factor in the development process. In addition, co-teaming in course development and teaching helped the designers to forge strong bonds, continuously improve courses, and helped with managing workloads. Positional parity made each instructional designer in the study feel like they had an equal voice and stake in the success of the program.

Most study participants said the biggest challenge associated with the program overall was time. For example, several of the participants expressed difficulties balancing all their other

job responsibilities as instructional designers while also teaching and continuously updating course offerings. Study participants also indicated that time was the biggest concern expressed by faculty learners in the program. Some study participants provided suggestions for managing time and considerations for faculty who are skeptical about the time factor involved in developing quality online courses.

The three major themes of diversity, collaboration and time that emerged from the data analysis are explored in the following section.

### **Themes: Research Question 1**

#### ***Diversity of Experiences***

The following subsections will discuss the findings that diversity played in shaping the experiences of the instructional design team in the development of the online teaching certificate program. Research on collaborative team-based models has indicated that diversity within the makeup of the group is a vital aspect to success (Given & Kelly, 2016). I will primarily discuss how the diverse perspectives and specializations brought by each member of the team combined to empower the group to take upon equal leadership roles.

**Diversity of Perspectives.** Throughout the interviews, all study participants discussed how the diversity of experiences within the team led to varied perspectives amongst the group. While acknowledging this could potentially lead to differences in opinion, all study participants felt this helped to make the team stronger overall, which in turn led to a better online teaching certificate program. Participants in this study demonstrated high levels of professionalism in a variety of backgrounds, including training, technology and education. This mirrored the findings from previous literature on instructional designers (Intentional Futures, 2016; Shaw, 2012). All

designers interviewed spoke highly about the diverse professional experiences and talents their colleagues possessed, and how their unique perspectives made the team better.

Harrison, one of the most experienced designers on the team (19 years) illuminated the general sentiment of the team when describing how fortunate she felt to be working with this group:

We all learn from each other, and we are fortunate to have a team this big with so many talented people... there's no slackers here, man, everyone is passionate about what they do.

Hollywood, the designer who had the most experience in the instructional design field on the team (9 years higher education, 25 years as a corporate instructional designer) noted how the diverse perspectives and talents each team member brought to the team made the program stronger:

All of these people bring something to the table that I don't have...So we all bring different perspectives and skills to the program. So, for the designers in our program, it's really sort of a melding of the minds; I think our program is successful because we have some very talented people.

I asked study participants about how the inevitable difference of opinion or disagreements brought forth by different perspectives impacted the team decision-making process in terms of the program. The designers said the majority opinion of the overall team would be the deciding factor on program level decisions, though two designers added that in the event of a split decision, the team would ask the department director to make the final call. This finding seems to indicate a strong effort to keep the decision-making process as equal and as fair as possible to all members within the team. This finding aligns with the goal of minimizing

significant power imbalances amongst team decision making found in collaborative theory (Colbry, Hurwitz & Adair, 2014).

**Diverse Specializations in Instructional Design.** Many designers talked about having specific roles within the field of instructional design on the team. This was an interesting finding, not necessarily highlighted in the previous literature. Six out of eight participants described how their expertise in a specific area of instructional design led to their primary roles within the team and program.

For example, Yankee, a designer with three years of experience who teaches the Academic Video Production course explained how his specialization in media led to his hiring and served as his primary role with the team.

I was brought in, specifically hired, as the media instructional designer. So, during my interview, I had to show a portfolio of multimedia that I had produced for courses in general. And I was hired specifically to meet that need for the department at the time. The [Academic Video Production] course itself was reimagined to be more hands-on and practical...So my involvement, I like to think, was important to the process, because I have that experience with video editing and doing the more practical side of things, and the application of the objectives of this course. So that was where my insight, in particular came into play.

Westy, an instructional designer with over a decade of experience in education noted that she began her career as a special education teacher. She discussed how her expertise in accessibility helped to improve the Universal Design and Accessibility course in the program:

Nova had already developed most of the course before I became involved. I became involved with the program because of my background in inclusion and was brought along

to help redesign the course – we are always updating [the course]. I helped with creating a new final project meeting the requirements of accessibility.

Hollywood, also shared her views about what she felt her professional experience brought to the team and program. In addition, her insights reflected her corporate instructional design training and her use of instructional design models, as she discussed strategies for working with faculty to design learning experiences utilizing Bloom's Taxonomy (Anderson & Krathwohl, 2001).

I know from working in the corporate sector, I understand what employees might need to be successful. So, I do try to help faculty prepare their students for success in the workplace in my course. And this starts with considering what students need to learn in order to succeed [in the workforce]. And this [the course development process] begins with [working with faculty by] aligning your course activities to your learning objectives. This [alignment] needs to be clear to the students, you know? How is this course going to help me? How will it help me to get a job?

All interview participants indicated that their participation in the program was required as part of their job responsibilities on the team and that each were assigned a course based on their specified interests in instructional design. This requirement for the entire team was an interesting finding and perhaps hints at the recent shift in responsibilities of instructional designers when compared to earlier reports which found only about 50 percent of designers stating that they focused on training others in the use of online pedagogy (Intentional Futures, 2016).

**Taking Ownership.** Five out of the eight designers interviewed for this study indicated they had only ever worked within one specific course in the program. The three designers who had worked in more than one course advised that this was before the team expanded. I asked participants why most designers only worked within one course, considering the program generally focused on the online best practices they should all be well-versed in as instructional designers. While I received a variety of responses to this question, all respondents indicated in one way or another that there were specific areas of interest within the field that they preferred.

For example, Litmus, one of the senior instructional designers on the team, had been an instructional designer since 2013. He also taught courses for the university writing program. As one of the instructional designers tasked with developing and teaching the student engagement course, he shared his perspective on why he preferred working in this specific course:

I feel like I'm in my lane [teaching the student engagement course] and wheelhouse where I am comfortable and where I am good. So, I'll leave the other courses to people who are good at those... I don't want to say that I have some expertise that others [designers on the team] don't. It's just that engaging learners is a topic that I felt particularly close to and interested in. It seemed-- I mean, like, the touchy-feely human aspect of education is what's compelling to me, so I guess I was excited to introduce that... I don't know the first thing about video production so I wouldn't-- or, I mean, other than the basics, I don't feel qualified to teach that. I could probably get there, but I feel like everyone is able to specialize and teach the subject that they're closest to. And I think that's great, and I think that's a good model.

Another designer, Highlander who joined team three years ago, previously taught in the academic video production course. After the team expanded to its current size, she explained

how she preferred working in the fundamentals of online learning course as she believed that suited her strengths as an instructional designer:

I honestly don't like being on camera and I enjoy teaching fundamentals more. We have other designers on the team who like to teach that course, so it works out...They do a good job with that course and I feel we do a good job here [teaching fundamentals of online learning] so it just works.

The program coordinator, Nova, is an instructional designer on the team who also teaches within the program. Before joining the team four years ago, she previously worked as a K-12 teacher. Understanding the diversely talented and experienced team within the program that she oversaw, she explained to me how she wanted to ensure that each designer felt they were equally important to the success of the program. This, she stated, required giving designers more freedom to take control over decisions in the program. This included talking with each member of the team about what course they preferred to work within so they could develop a sense of ownership over the course that they were designed and taught. Nova explained this in greater detail:

So that was a decision that I made [aligning designers with their specialized interest]. The way that it had been done previously before I took it on was that each course, each of the four courses was taught once a year. And it was just sort of like, sometimes you would teach one. Sometimes you would teach the other. Nobody really had ownership over them. And they were pretty tightly managed in terms of content by my predecessor. And so, with that in mind, I also wanted to give people [the team] more ownership and control over the courses that they taught, and things that aligned with their interests. And so, after

sort of talking to people and figuring out what people cared about and wanted to do, I sort of said, okay, this is your baby now. This one is yours.

The culmination of individual perspectives and specializations manifested through the diverse experiences of the designers appeared to bond the team. In addition, the decision to align designers with their specialized interests while providing them the freedom to take ownership of course design and facilitation was found to improve collaborative efforts in the program which I will present in the next subsection.

### ***Collaboration***

All study participants shared the view that collaboration was essential to both the individual courses and the growth and overall effectiveness of the program. The following subsection will explore how the collaborative model used helped to meet demand while improving the quality of courses offered.

**Co-collaboration and Teamwork.** Participants indicated that each of the courses in the program were developed and taught by at least two instructional designers. Naturally, designers on the team with similar interests would gravitate towards a specific course. Together they would share the course development workload and manage instructor responsibilities in the course, such as weekly lesson planning, facilitating the discussion boards, providing substantive feedback on all assessments, and responding to learner needs which often arose outside of the scheduled virtual office hours. The co-collaborative model used in course development and teaching were described by the majority of study participants as a key factor in effective course development and improvement. In fact, seven out of eight designers indicated that co-collaboration was the biggest factor, while one designer mentioned time-management as the most significant factor. Litmus shared his perspective in how critical co-collaboration was:

It's not something [developing and teaching the student engagement course] I would have preferred to do alone, at all. In fact, it wouldn't have come together, and it wouldn't have been nearly as good as I think it turned out to be without their contributions.

Two designers specifically discussed how teamwork and partnering together helped to improve their course each time it ran. They advised this was especially important considering that courses were often revised to address changes in the online teaching and learning landscape.

The designers elaborated on this:

I think that having collaboration allows us to become intimately familiar with that course, and also to make improvements, because we're able to see trends over several sections of the course. (Highlander)

The three of us that worked on it, we are very committed to it, and we continually try to improve it. We keep experience notes from-- and no two courses are the same, because we're constantly tweaking. (Hollywood)

Co-collaboration also allowed the team to offer courses more frequently to meet enrollment demand. Nova, explained:

When I took it over [managing the program], I, one, wanted us to be teaching them more often because they always filled. And I thought there was more demand and more room to meet that demand if we worked together.

Five out of eight designers mentioned that working on courses together allowed for them to manage their other instructional designer roles and responsibilities within the university while ensuring that the courses were still running smoothly. Two designers explained this perspective in detail:

Having a co-teacher is super helpful, and where I may-- perhaps I fall off the grid for a day or two in the week because I'm tied up in meetings or doing other things I need to get done. The co-teacher in the course is still available to provide assistance where needed. So there's full coverage in the course, and I think it's still getting the amount of attention it needs. (Yankee)

It's good that we are co-facilitating these courses, because that I think changes the workload dramatically. So, we team teach and we just share the tasks which helps me to get my other stuff done as well. (Harrison)

When considering the co-collaborative model used in the program, I came to find it served another purpose as well. Designers in the study noted how faculty often remarked about the fact that two designers co-taught the course and how they liked having more than one instructor in the course. This was also noted in a few of the survey responses I reviewed during course document analysis. When discussing co-collaboration with the designers, Leo suggested he used co-facilitation in the course to illustrate the value of designer/faculty collaboration in online course development as well:

They [faculty] do bring that up [the co-collaboration] sometimes and I tell them how it has made our course better and how it saves us time, you know? And they often say, you know, "boy, I wish I had someone co-teach my course with me". And I tell them, hey, that's what we're here to help to do. Okay, fine, I might not be actually be teaching your course with you, but I can help you to make your course run smoother, we can discuss tools to help your teaching become more engaging to your learners. And that can make the teaching load feel easier... And often they agree.

In discussing team collaboration within the program, four out of the eight participants brought up the challenge of university resources raised in the literature (Fredericksen, 2017). Many of the designers in the program acknowledged how fortunate they were to work at a university with the resources to invest in such a large, centralized instructional design department. Hollywood, for example, expressed gratitude for the investment the university had made, while noting that these decisions usually come down to university finances:

I feel very fortunate to be able to work with my teammates on this [course/program] You have to have the resources that we have [at the university]. This is an enormous, huge institution with lots of -- with that ability and those resources... and it all comes down to cost. In the end, it always all comes down to cost.

Harrison described how this program would not have been possible at the institution where she previously worked (a smaller private university) while suggesting that institutions need to begin investing more resources into improving online education:

There was only four of us [instructional designers] and there just simply wasn't enough of us to go around to put something like this together. That's why I'm glad this program supports faculty outside of the university as well. But universities need to think about that [investing more in online professional development/instructional designers] going forward, you know? Something needs to be done because the quality [of online courses] isn't quite there yet.

Some of these participant responses prompted me to ask them if they felt that their program would continue to expand its offerings or focus certain expansion efforts on specifically addressing faculty at other institutions who had less resources. This question was met with a resounding "no" by all who were asked. This leads into the next theme indicated by study

participants as the biggest challenge of developing and teaching within the program: time, which the following subsection will explore.

### *Time*

Most designers in the study said that finding the time to plan, develop and teach within the program was the biggest challenge they faced. Participating in the program was a significant commitment that directly impacted their other job responsibilities as instructional designers. Designers stated that each course was offered at different times during the year, so enough coverage remained on the team. Still, many said they still felt the pressure to get other work done while working in the program. Nova, the program manager, acknowledged this was a significant challenge, but explained it was essential to creating an effective program:

It's a huge time commitment for us because of the level of quality that we sort of hold as our standard [within the program]. We give an enormous amount of feedback. We really try to create a really positive, in-depth experience [for faculty learners]. And even though each person is only teaching it five to six weeks, maybe twice a year, it's a lot. And it takes a lot of your time away from the other things that you do [as instructional designers].

**Course Revisions.** Several interview respondents reflected on how time consuming it was to revise courses in the program, which happened often. Designers said that course revisions were so frequent because team was always striving to make the courses better. Oftentimes, these revisions were based on learner feedback. Yankee discussed how revisions based on learner feedback impacted his course:

The academic video production course, in particular, we've revised a lot. We are currently making it six weeks because there is a-- for some folks, it's considered a pretty steep

[technological] learning curve, learning the video editing software. And this is a barrier that is not experienced in the other courses in the certificate program. If you can't figure out how to splice a video clip or record something properly, you hit a wall, basically. So, it has a much more technical learning curve that, in the feedback, we've gotten about the course, has always been kind of a pain point [with faculty learners] because its time consuming. And figuring out how to address that need of giving people enough time to learn it in just five weeks can be difficult. So that's why we expanded that particular course to six weeks so we can get over the technological hurdles first and then focus on how to teach with the tools thereafter.

In the Fundamentals of Designing and Teaching Online course, some faculty learners expressed concerns about having enough time to complete the final project. This also led to substantial revision within the structure of this course. Highlander, one of the designers who was responsible for the revisions explained this in greater detail while also providing insight into the pedagogical process used within the course design:

So, one of the issues we had with that course was that the final project-- the students felt that they didn't have enough time to do it at the end, and to receive feedback from their peer reviews and from us. So, we redeveloped the course so that they now have the final two weeks to focus strictly on the final project, whereas the first three weeks is focused on the course map, the design process and the pedagogy behind that. We decided the best way to have the students do the final project was giving them enough time to do so, and also having enough practice with the learning management system.

**Instructor Commitment.** Interview participants also discussed how the commitment to providing quality instruction was a demanding and time-consuming task. When teaching in the

program, the designers still had their other instructional design responsibilities to consider as well. It was up to each team member to manage their time balancing their other roles while teaching in the program. Hollywood specifically described how challenging it was for her and her colleagues to be teaching within the program while managing other instructional design responsibilities:

We juggle a lot of different responsibilities [as instructional designers] and it can be overwhelming at times [balancing these responsibilities along with teaching in the program], because there is only so much time in the day.

When participants were asked how much time per week they were expected to allocate towards teaching in the program, no consensus was found. One designer, Yankee, paused at first when asked this question and then said, *“it’s not that...measured or calculated”*. The designers said it was understood amongst the team that when other colleagues were teaching a course within the program that much of their time would be dedicated to that. Designers said they would inevitably have to manage other responsibilities during those weeks teaching by either blocking off time or seeking coverage from other team members if other work responsibilities began to pile up. Fortunately, the courses ran at different times throughout the year, so adequate coverage was possible. Still, many expressed concerns with balancing their other responsibilities and seemed as if they did not want burden other team members with their other work. The lack of any clear expectations regarding the amount of time to focus on teaching meant that many designers worked above and beyond during those weeks. Highlander elaborated further on this point:

There’s too much to do and not enough time [regarding the program and other responsibilities while teaching the program]. Teaching the certificate program is time-

consuming. I do find myself, while teaching the certificate program, usually working more than our standard 37 and 1/2 hours. Working from home or even just spending extra time here. You constantly have to stay on top of what the students' needs are [when teaching in the program], and checking in on emails and things like that over the weekend to make sure you're addressing anybody who needs help, since a lot of them are completing most of their work over the weekend, since they usually work full time.

Some of the asynchronous tools used to create student engagement in online courses also had time-consuming challenges that the designers would first need test out in a class in order to determine whether its value outweighed the time and effort needed for implementation. For example, Leo, another instructional designer on the team who worked alongside Yankee in the Academic Video Production course, explained his struggles with finding the time to provide each student in his course with substantive feedback in the weekly discussions where they used a tool called Flipgrid:

We have weekly discussions each week in the course and instead of using a discussion board, we felt it would be better to have students use Flipgrid to provide video responses to the discussion prompts. We (as instructors) would provide video feedback [via Flipgrid] to each student as well each week. This took hours to do and although it was a fun way to provide feedback and it's a great tool, it was challenging to find the time to provide engaging commentary to each classmate this way.

Ultimately, the two designers said they decided that posting fewer responses highlighting key takeaways each week was a better use of their time and a strategy they would share with faculty learners in the program as well who were considering using the tool for discussions in their own classes.

While the designers said developing courses and teaching in the program was one of their favorite aspects of their job, they acknowledged that it took a significant amount of time and effort. Harrison described how she felt teaching in the program was a full-time job in and of itself, stating”

No matter what, teaching is a full-time job. Teaching is a lot. Whether it’s for five weeks or 16 weeks [a full semester], it’s not easy to do what we do.

Yet, by being placed in the role of an online instructor themselves, the designers in this study could also relate to the challenges that many faculty members faced regarding time management expectations and the balancing of a variety of workloads and responsibilities (Griffith & Altinay, 2020). In addition, the comments and challenges raised by the designers related to time and a lack of university support, which is discussed in the following section, mirror the concerns raised in the literature regarding faculty and their barriers to effective online teaching (Al-Senaidi et al, 2009; Baran, 2018, Ciabocchi, Ginsberg, Piacciano, 2016;). I asked study participants how they justified the time investment to faculty learners who also juggle a variety of responsibilities. I received some interesting and insightful responses. Harrison had this to say:

Oh yes, this comes up all the time, and when faculty take the program they begin to go through the course design process in fundamentals of online teaching, they realize that it takes even more time than they may have thought. They say, “This is more than teaching face to face” and we say yes it is, but the time commitment [up front] is really learning how to teach online and gaining somewhat of an understanding of the technology, but the technology can help you leverage your feedback and peer instruction. And it starts to become easier and dare I say, fun?

Leo said he would relate his own experiences to faculty learners who were worried about the time commitment by explaining how taking the time to build a quality online course was a personally rewarding experience that justified the commitment as it made teaching “exciting again”:

When we first built the course and then did a substantial course redesign about two years later [in the program] it did take a while and was a lot of work, but after it was finished its [the course] like a well-oiled machine that runs itself in many ways. And I really learned a lot throughout [the process] and felt a sense of pride in how much better the course was. And for the next few times the course ran, the classes were so much more engaging and I was more engaged teaching the course, so it justified the commitment. It made me excited to teach [the course] again, and that’s what I tell faculty [who are concerned about the time commitment], especially faculty who have been teaching [face to face] a long time.

Harrison highlighted the differences she felt existed between online course development and the teaching process and traditional course development and face-to-face teaching, which she believed justified the time commitment. Her perspective seemed to mirror the literature indicating the shifting pedagogical role of faculty as facilitator.

Online [course] design is not organic. You’re not in that traditional role of teaching anymore, you are facilitating, so the work comes upfront in [learning’ the course design, but once that’s done, that’s where the fun begins because once it makes sense [the pedagogical shift in perspective to the instructor] you can see how there are different ways to reach your students and the foundation [the course design] is already in place. So, then you can think of exciting ways to share information with your learners... And

also, if you're still teaching face to face [classes] you can begin to rethink how you can use some of the tools you are learning online to make those classes better as well, flip the classroom, right? So, now more time is spent doing activities together in class instead of you just being up there lecturing the whole time.

### **Analysis of Research Question 2**

2. How do instructional designers describe their support from the university regarding the program?

#### ***Findings***

After learning about the study participants' experiences in the course and program development process, I was next interested in hearing perspectives on the level of university support for the team and program. The study found that all designers indicated very little university-wide support for their program outside of the division they worked within. Unaware at the time of this study of the global pandemic making online education a necessity at most universities as interviews were conducted in September 2019, the designers appeared resigned to accept that online education would remain secondary to research and traditional education practices as these were the traditional longstanding priorities. In addition, participants indicated that the size of the university and the highly decentralized nature of the institution made gaining university-wide support quite difficult, if not impossible.

During this portion of the in-depth interviews, many of the study participants expressed frustration over the perceived lack of accountability for teaching at the university. Some participants even felt that the program and their professional identity was negatively influenced by this. I asked the designers if they had ideas for improving these perceptions throughout the university. Some discussed increasing outreach efforts on the department-level to raise

awareness about the program and their roles. Other designers felt that working with individual faculty learners within the program to develop faculty champions was key. Designers also discussed and debated the topic of mandating online faculty professional development before teaching online to improve the quality of online teaching and courses. Ultimately, they acknowledged the fact that they had little to no power in affecting this change on a university-wide scale. Despite these challenges, participants said they focused on making their program the best it could be given that was within their control, and they focused their efforts to improve online teaching with those faculty who expressed an interest in doing so.

The two major themes regarding university priorities and university structure that emerged from the data analysis are explored in the following section.

## **Themes: Research Question 2**

### ***University Priorities***

While all study participants acknowledged university support for their roles in designing online instructional materials and courses and providing general faculty support, they perceived university support for leading the online certificate program to be limited. Designers explained that it would be challenging to gain full support from the university because the university had not yet prioritized online faculty professional development or online education in general. Some felt this was because online education did not generate enough revenue for the university. In addition, some designers cited the long-standing institutional pressures faculty face at most research universities which naturally take precedence:

Being a research institution, the focus is research and attracting researchers who have a name for themselves and who can get grants to bring money to the school. (Highlander)

The faculty will tell you, what is the old saying, ‘publish or perish’? That’s the focus here as it is at most research universities. It’s hard to blame the faculty when this is the priority coming from the top and that’s what brings money in. (Leo)

Some designers did feel that the tide was slowly changing. While they still perceived online education to be undervalued by university leadership, they foresaw the growth and subsequent need for online professional development initiatives since online programs and courses were rapidly growing each semester. Rising demand meant increased competition from peer institutions as well, they argued. Competition and the revenue at stake would eventually shift leadership priorities over time, according to some of the designers. Two designers in the study expressed this perspective:

At some point the tide has to change. Look how big online learning has become [in public higher education]. Plus, it’s a competition thing. They have to recognize what our peers are doing. (Hollywood)

As demand for online learning grows, so will the amount of money coming in [to the university]. And that money has a way of shifting priorities in higher education. (Leo)

**Pedagogical Priority and Perceptions About Poor Teaching Practices.** Six out of eight designers interviewed discussed how the faculty who enrolled in the program were subject matter experts who had little to no prior training in pedagogy, a finding cited in the literature as a crucial need for online teaching professional development (Baran, 2018). Noting that the true value of the program lied within the pedagogy behind successful online course development and teaching, several of the designers expressed strong opinions about what they perceived to be a lack of value being placed on teaching at the university and higher education, in general.

Hollywood discussed in detail during her interview her perceptions about poor teaching in higher education, and why she felt that the pedagogical considerations within the program were so critical to changing faculty perceptions about learning:

We are teaching faculty how to teach [in the program]... And it's a matter of our culture respecting teaching and in higher ed., it's interesting. The K-12 faculty cannot teach without education or without a degree in education. But in higher ed., where I think it's even more critical to understand learning so that you don't waste adults' time. Adults, their time is precious. And if you're not a good teacher, you're going to be fumbling half the time to get them to learn, where you could be more efficient and get more learning done. (Hollywood)

Highlander explained that the pedagogical background the designers possessed, along with the various experiences they had in working with different types of faculty were significant reasons why their program brought such value to faculty learners who lacked the pedagogical proficiency:

[In this program] You're teaching the-- you're teaching pedagogy. A lot of it is pedagogy. The technical part anybody can learn, but the pedagogical part, that you do need to have a

background in. So you can learn that from experience in teaching other courses, and perhaps from your own training, but I think finding faculty like that might be far and few in between [at the university]...So from our point of view, being instructional designers and working with all different kinds of faculty, I feel like we offer the unique-- well, no, let me not say unique-- but we do offer the experience of having worked with so many different types of faculty and different kinds of situations that we can advise folks who are coming through and wanting to teach online about different issues, and challenges, and different ways of doing things. (Highlander)

Leo described examples of faculty lacking pedagogical expertise as seen from his experiences in the program. He felt as if there was little to no incentive for many faculty members to improve their teaching practices since their departmental leadership did not emphasize its importance. This reflected the challenges designers face in applying evidence-based methods of promoting learner-centered pedagogy since little value seemed to be attributed to these considerations:

They [faculty learners in the program] really struggle with grasping some of these [pedagogical] concepts because they don't understand things like scaffolding learning since they've never done it before; they don't understand how to design an assignment in a way that students will be able to understand what steps to take. They'll write a whole paragraph of instructions instead of chunking the content down. We work with faculty in this program to help them understand how crucial all of this is and oftentimes I'm not sure their superiors even notice, so why [should faculty] put forth the effort?

Despite the relative success of the program in terms of positive faculty-learner feedback and increased enrollment numbers leading to an expansion in the amount of course offerings each

year, many of the study participants felt that online professional development initiatives would remain undervalued unless a greater emphasis was placed on shifting the pedagogical practices of faculty. This seemed to mirror research calling for a shift from teacher-centered to learner-centered pedagogical practices in online education (Baran, 2018; Vovides & Lemus, 2019; UDL on Campus, 2020). Harrison reflected upon this:

Instructional design [initiatives] will never really be seen as a thing until teaching is seen as a thing. So unless people see that-- just like we were talking about the time and effort it takes to teach these certificate courses while we do our jobs, that right there says, even that isn't respected [on a university-wide level].

**The Great Mandate Debate.** During the interview responses discussing university-wide program support and perceptions about the quality of teaching, the topic of mandating online professional development arose. Designers in the study indicated mixed views when it came to imposing mandates on faculty to take the online teaching certificate program. While all designers felt that faculty should be required to take some sort of training before teaching online, some believed that the online certificate program itself may be too rigorous for every instructor to complete. I asked these participants why they felt this to be the case and discovered that each course took five to six weeks to complete. In addition, some participants mentioned the lack of incentives provided by the university for faculty to take such a time-intensive program. Some designers also noted that any department-level requirements could lead to faculty push back and even cited examples of this occurring.

Still, most designers in this study did feel that the online teaching certificate program should be mandated for faculty new to teaching online. Here are some examples of the findings in the words of the designers:

I do think it [the online teaching certificate program] should be mandated, for the same reason you'd need a different driver's license when you're going to ride a motorcycle versus driving a car. (Litmus)

I think our program should be [mandated]. For the quality of the courses, and based on what I've seen from faculty learners in the program, yes. (Highlander)

I am a huge professional development supporter. So regardless of the subject, professional development is so important. For our program it's no different. If faculty don't think that professional development is valuable, then they're sort of taking a stab at themselves. They're shooting themselves in the foot. We all have to keep learning and growing and changing. (Hollywood)

All of the designers acknowledged the fact that university-wide mandating would never occur at their university for reasons highlighted throughout the literature, including shared systems of governance (Drysdale, 2018) and faculty autonomy concerns (Legon & Garrett, 2018). Still, there was optimism that by making the program more widely known to department leaders, more faculty could be made aware of this professional development opportunity.

Highlander discussed this:

I think becoming better online teachers really has to be something at the program level-- their chair has to basically mandate that, that they should improve their teaching skills. I think our bigger role is really making it more known-- is working with these program chairs and making it known that we're out there, and that we're here, and we're available to help. I still have faculty members coming to me saying that they didn't know we existed until recently.

On the other hand, not all designers felt the certificate program should be mandated including Nova, the program coordinator. She feared that requiring faculty to take the program could diminish the quality of the courses as faculty may just go through the motions to complete the process. She expanded on this:

I think that if this [program] was a requirement, like you have to check this box in order to be able to teach, even if it was stipended, it's like, I'm doing this because if I don't, I can't teach my course, I think that we would get a lot more sort of box checking attitude. And I think it would diminish the quality of the courses. I do think that there should be some kind of requirement, some kind of training or professional development requirement before you can teach online or hybrid, but I don't think our certificate program is it.

Harrison discussed how the length of the program and the lack of incentives plays a role into why there should be no mandate on the program. She stated:

No, I don't think our program should be mandated. Our teaching certificate course is really in depth. Each course is five weeks long, at least, and requires, I would say, seven to nine hours of work a week to really do it. And unless we had a really big pile of money to stipend people, I don't think that that's a fair burden to put on faculty.

Program level-mandates could even backfire and cause even more resistance to online professional development. She shared some examples of this happening:

When we have the groups that are mandated within the institution, who are specific, like for political science graduate students and the business school faculty, often there's push back, because they've been told this is something they have to do in order to teach online.

While there was no consensus on thoughts regarding mandating the program, all designers felt that department leadership must ultimately consider what is in the best interest of student learning when deciding upon online faculty professional development: Hollywood elaborated on this:

It depends. It's weird, because higher ed. is all about academic freedom. And oftentimes, academic freedom is interpreted as a free-for-all. So depending on the philosophy of the program directors, if the program directors are-- academic freedom is whatever you think should be taught, they will not push the faculty to teach in any way. Whatever happens in your classroom is your business...But when faculty come, when program directors look at their faculty in a more business model, are the students-- are we doing what we're supposed to be doing? Then that's where they start to see, okay, well, the students coming out of this particular course are not well prepared to deal with this other course. We've got to do something at this introductory level. Either professors have to have some [mandatory] training or something has to happen.

Designers acknowledged they had no power to influence decisions on mandates, and as such, their focus should remain on improving the quality of the program. If the program provided value to faculty who took the program, there would be no need to push for mandates or promote the initiative because the faculty who had positive experiences in the program would do so for them. Harrison discussed keeping the focus on program quality:

If you have no power, then there isn't that much you can do beyond just trying to offer - make your [program] offerings the best that they can be.

Leo talked about gaining faculty champions, i.e. faculty spokespersons who had positive experiences in the program who could promote it to other faculty who were considering

improving their online teaching practices. He said this happened quite often in his experiences, which led to the natural growth of the program through word of mouth:

I'm not sure we really need to promote the program more than what we do or force anyone to take it. The faculty who take the program do that for us. That's really how the program grew in the first place. If we continue to update the program offerings with quality content that is useful to faculty, we can have faculty champions who spread the word and then other faculty will want to sign up to improve their skills.

### *University Organizational Structure*

The organizational structure of the university, both in terms of its size and its systems of governance was another significant theme that arose during many of the interviews. Like many large universities, the institution where the designers in this study worked had campuses in multiple locations which made promotion and outreach efforts on a university-wide scale difficult to accomplish. Adding to this challenge was the fact that institutions of higher education are typically decentralized organizations which creates a distribution of power and responsibility (Ciabocchi et al, 2016). While this is beneficial in many ways, it can make change initiatives - such as the online teaching certificate program – quite challenging.

**Size and Decentralization.** Some of the designers seemed to express genuine frustration about how large and decentralized the university was and how this not only impacted university support of the program, but also internal outreach efforts and their identity as agents of change within the university. Highlander explained this bluntly:

Do I think it's possible? [gaining university-wide support] Not at all. We're too large and way too decentralized.

Leo discussed how even the instructional design support at the university is decentralized, despite the merging of instructional design units which formed the team. This was an interesting finding, though one which makes sense when considering the size of the institution.

This university is huge and very decentralized, even our instructional design support is decentralized. Yes, we have our team and we support the entire university, but some schools have [independent] instructional designers here and there as well. There are instructional designers whom I haven't even met. I'm not even sure if they all know about the program we have here [at TLT]. The university is spread throughout the state, so it's hard to reach everyone [regarding the program].

I asked why there were some other instructional designers spread throughout the university if the team was considered to be the centralized unit of support. It was believed that this was related to the different campuses spread throughout the state and the need by some schools to have one or two instructional designers on site to support their specific department. This finding seemed to indicate that some departments did place more value than others on providing dedicated instructional design support to their faculty.

Nova was forthright and passionate about why she felt that decentralized authority diminished the capacity for true change within the institution. She felt strongly, as did the team in general, that the program's true mission was to improve online learning experiences. Yet, many within the university remained unaware of the initiative.

Nobody knows we exist...The reason that I want people to know that we exist is because I think that the work we do benefits students. And I think that people, if they don't know we exist, their students' [learning] experience could be better. And it's not, because they don't know about us.

I asked if this was a perceived lack of recognition, but the designers wanted to be clear that they were not actively seeking praise throughout university for their efforts. Instead, they desired identification as pedagogical experts in online education so stakeholders could understand the value initiatives like the program have on ultimately improving student learning experiences – a goal they believed should be shared by all. Highlander shared her view on this being a marketing issue while also offering suggestions for how outreach could improve:

I wouldn't call it a matter of recognition. Really, it's more of a marketing problem than recognition. Recognition, to me, feels more like we want accolades or something. That's not the point at all. The point is that we're available to help, and that also needs to come from the directors and the program chairs, which is something that I think we can start focusing on at some point, and we've sort of been doing, working with the School of Public Health and working with different programs, where somebody on there and just corralling their instructors and saying, hey, these folks are here to help use their services. And look how we can help you make your course better. Because I think, at the end of the day, a lot of instructors do genuinely want to help their students to have a good experience and generally do want their students to succeed.

Several of the designers in the study felt program outreach and promotion was ultimately up to the team if overall university support was lacking. Five out of eight designers said the program served as a way for them to make stronger connections with faculty throughout the university, despite the barriers within the organizational structure. Yankee noted how pleasantly surprised faculty seemed to be when they learned of the support offered by instructional designers through taking the program. In addition, he noted that many learned about shared communities of practice, such as Quality Matters, a nationally recognized professional

organization consisting of faculty and instructional designers who train and empower faculty to evaluate courses against quality standards and provide guidance for improving the quality of online courses (Quality Matters, 2020). Yankee shared his experiences in greater detail:

I think that, outside of our bubble, not everyone quite gets what we do. I think this is a very niche kind of field...And it's important that we connect with people and get our name out there. Especially, in particular, because it's so big and decentralized, there are people I've spoken with who don't even know what we are and what we do. And they say, oh, you have a studio? Oh, you offer course design support? Oh, I can meet one-on-one with someone to go through my course? Or oh, you're-- we can submit my course for a Quality Matters review through your department? We offer so many different services that people just don't know about, so this program is one of the avenues that we can certainly connect with our audience with.

Still, many of the designers also acknowledged that it would take more than outreach and promotion efforts by the team to improve online education and faculty professional development initiatives like the online teaching certificate program at the university. Harrison discussed how ultimately any significant change would ultimately be up to university leadership:

I mean you'd have to have-- there'd have to be some provost, chancellor. You need somebody up high to be saying, you know, this institution has this list of online programs and degrees and this list of online courses. So that it becomes something that every area has to be able to communicate what they've got now and what they're aiming for, perhaps.

### **Analysis of Research Question 3**

3. In what ways, if any, can instructional designers in the program improve online course development and teaching by faculty learners?

#### ***Findings***

This study found that in order for the online teaching certificate program to be considered successful at improving online course development and teaching, transformational learning by faculty learners would need to be accomplished. The in-depth interviews uncovered that designers believed this occurred through the design of the program, which placed faculty in the position of considering online education through the lens of an online learner first, before subsequent examination, reflection, and application occurred thereafter as an instructor. Designers said they used evidence-based best practices in online pedagogy learned from their field, such as Kolb's experiential learning model (1984) to help faculty learners discover the value of the pedagogical approaches applied throughout the program. This would later help faculty to decide on appropriate strategies for use in their own courses once they concluded the certificate. Participants noted that many faculty members had to take a leap of faith and put their trust in what the designers were attempting to accomplish at the beginning of the program. But by the end, they would understand the "method to their madness".

This study found that many study participants had prior teaching experience before working in the program. As educators themselves, the designers sought to establish relationships with faculty learners in the program through shared experience. All study participants indicated it was critical to lead by example if they were to expect faculty to sacrifice the time and effort required to consider new pedagogical approaches for online teaching. The key finding to getting faculty learners to apply these strategies in their online courses was for the designers themselves

to be honest and upfront about which strategies truly worked for them. By not only” talking the talk, but walking the walk” designers said they gained respect from faculty learners as they were able to “practice what they preach”.

Additionally, designers sought to engage learners by having everyone share personal experiences throughout the course in the attempt to form a lasting community of practice that could lead to future collaborations after program completion.

Two interrelated themes emerged from the data analysis related to improving teaching and online course development through the program: Establishing trust and relationship building. I discuss these themes in the following subsections.

### **Themes: Research Question 3**

#### ***Trust***

Faculty buy-in has been found to be the most significant obstacle to effective instructional design (Intentional Futures, 2016; Seaman, Allen & Seaman, 2018) and the participants in this study were clear that developing trust with faculty learners in the program required that they be honest and up front about the realities of online teaching and course development. This meant that they wanted honest feedback regarding the amount of time it took to develop quality content, the effectiveness and reliability of technologies, and they wanted the designers to share both positive and negative experiences they had in online course development with other faculty and in their teaching of online courses themselves. Building trust also meant that the designers needed to provide faculty-learners with proof that the pedagogical practices, activities and tools used in the program actually worked.

The true aim of the program, according to the designers, was to help faculty learners understand that effective online teaching and course planning is often quite different from the

traditional teaching practices many were accustomed to using. This would require a shift in perspective and the ability to adapt to new approaches suitable for the online environment. This perspective transformation would require faculty to get out of their comfort zone as instructors and become learners themselves, according to the study participants. Harrison discussed the challenge of this during here interview, stating, “We’re really asking them [faculty learners in the program] to take a leap of faith.”

One way to develop trust in the concepts they were teaching was to clearly explain the differences between learning environments and how the online environment required more planning upfront since a lot of the content would be delivered asynchronously and be self-paced. In addition, the designers would need to demonstrate examples of how the learning environment required a shift in the way faculty would traditionally teach in a face-to-face class. Leo noted that a common misconception by faculty was that they could simply transfer their traditional teaching methods to the online environment:

Faculty often think they can just transfer over course materials and teaching practices used in their face-to-face courses, but the learning environment is different, so the role of the teacher needs to be different. And the guidance, instruction and assignments need to be clear since students aren’t in the classroom....It’s important that we can talk with faculty about how to teach and how to teach online, specifically, and what are the differences. How is it that they [faculty] can go from a face-to-face course where they may develop their content on the fly from week to week – “oh, these are my notes on what I’m going to be talking about” - to where if you’re in an online course, you can’t do that on the fly. The student has to have a clear view of what the course is about and what is the schedule – and everything is spelled out for them for what they need to do to

prepare. And so that's where the instructional designer needs to be upfront and help the instructor realize that there's lots more planning that's involved, how they need to come up with the specific goals for the student, and once you've done that, then you create that course map and then create that schedule for that course, that's all necessary in the online environment.

Explaining these differences and providing examples to faculty learners reinforced why these pedagogical considerations were so important, according to the designers. For example, the course map concept discussed by Harrison above was said to be an illustrative guide provided to faculty learners in the program to help show them the importance of aligning their class assignments and activities to the objectives within the course. Additionally, the course map was said to help faculty with calculating academic hours for their curriculum and planning the amount of time students would need to complete assignments. Providing faculty with resources to improve their teaching that the designers used themselves helped them to begin establishing trust.

**Evidence Based Best Practices.** All eight instructional designers participating in the study emphasized the online pedagogy, or methods and best practices of online teaching as the principal focus of the program and a key for gaining faculty trust. The phrase “best practices in online teaching” was often used during the interviews. The designers indicated they studied and researched online best practices as part of their educational and professional backgrounds. In addition, all study participants were involved in other shared communities of practice and committees where online best practices were the main topics of focus. Hollywood helped to clarify what the phrase “best practices” meant:

Online best practices are practices that have been proven over time to be effective in fostering quality online learning experiences for diverse learners.

The designers said they used an evidence-based approach to explain online best practices to faculty. Nova emphasized the value of combining teaching and instructional design perspectives to form evidence-based practices which designers could use to justify their use in online education

When you put those two things together (teaching and instructional design), then you get that mix of perspectives where we can provide that sort of evidenced based best practices. Here's the way you should do it. And then [as teachers] we can say, and here's what it looks like when you do it. Here's the use case. Here's the proof, the proof of concept or whatever.

Harrison explained how this was accomplished in her Student Engagement course by using an asynchronous discussion tool called VoiceThread for an introductory discussion activity that she hoped some faculty learners would apply later on in the course’s final assignment. VoiceThread allows instructors or learners to post discussion prompts in multiple formats,

including text, video, audio and via web-based URL links to other websites. Others partaking in the VoiceThread can post replies using the same formats. In turn, this tool has the potential for much more engaging discussions than standard text-based responses by each participant.

Harrison shared an example of a success story she had when using this tool in her course with great enthusiasm:

We would begin by having them use a new tool to introduce themselves in the class... So last semester I used VoiceThread. I provided instructions for how to access the thread and post a reply, but I didn't specify how replies should be provided – I wanted to see how diverse the responses would be. I created the initial introduction post via video, but left the rest up to them. As expected, some posted text-based replies back, but many did create short videos, and many even said how they enjoyed creating a short video and replying this way. One student actually posted a link to her webpage which contained her bio and research. I thought that was pretty cool! The following week I provided readings related to student engagement research in asynchronous online classes which included a mention about VoiceThread, as they [faculty] love the [evidence-based] data backing it up. Then later in the semester before the final assignment I polled the class on how we should share our final project ideas and like half the class suggested we create a VoiceThread. I was like, yes! (laughing) As you can see, there's a method to my madness!

Study participants emphasized different online pedagogical best practices based on the course they taught within the program, but all mentioned the importance of instructor presence when teaching online. Designers said this could be accomplished by posting weekly introductory videos to this class for each course unit or module, creating asynchronous and synchronous video

lectures throughout the course, participation and facilitation of course discussions via discussion boards, and holding virtual office hours. Four out of eight study participants also discussed how the Canvas LMS allowed instructors to provide audio and video feedback when grading assignments.

The designers who developed and taught in the Academic Video Production course mentioned how learning about the concept of chunking helped faculty learners realize that instructor presence didn't just mean recording hour long lectures in front of the camera every week and posting them to the LMS. Instead, it required faculty to consider how their content could be best delivered within the online environment and how this often differed from traditional face-to-face classes. Leo explained further:

Since many online courses are self-paced and asynchronous, we stress to faculty the importance of 'chunking' or breaking up your content into five, maybe ten-minute segments instead of long 45 minute plus lectures. God, did I hate that [long lectures] when I was in school, didn't you? This way the students can watch one part of the lecture, then move onto the next part when they are ready. We tell faculty, "discuss one key concept then stop recording. Then move onto the next key concept in your next video". We share research [with faculty learners] which shows that students retain more information when absorbing information in manageable segments this way. It's an eye-opening experience for many faculty who haven't taught asynchronously before, but eventually it clicks.

Most of the designers in this study also raised the importance of universal design for learning (UDL) during their interviews as an important best practice which helped to get faculty buy-in to the concepts taught in the program. UDL was such an important consideration within

the program that an entire course was devoted to it. Nova was one of the designers who taught the UDL course and summed up its importance during her interview:

The UDL course, I think and maybe I'm biased because it's my thing-- but people tend to find it fairly transformative in terms of broadening their perspective, because that's really the whole goal of the course is recognizing that we are limited to our own perspectives and experiences. And thinking about things from a universal design perspective means thinking about what are all the different ways that somebody could come at this beyond the way that I come at it. And shifting that perspective usually I think is pretty powerful for people taking the program.

UDL ties in the importance of taking a student-centered perspective to teaching and developing online courses (Vovides & Lemus, 2019; UDL on Campus, 2020). Designers provided examples of the student-centered focus which included teaching faculty how to create measurable learning objectives and select activities which aligned with the practical goals of the course. In addition, they recommended providing students a variety of ways to complete assignments. Litmus elaborated how reinforcing student-centered perspective could help faculty learners to become better educators:

We're there to remind faculty of the student point of view throughout [the program] so that they can better tailor their curriculum to suit their learners. Not necessarily to be better teachers, but to look at their material from the student point of view more effectively, which, hopefully, leads to them being better teachers.

Hollywood emphasized the point that taking a student-centered approach was particularly important for adult learners taking online courses and programs:

When we work with faculty in this program, it's often an eye-opening experience for them because oftentimes they forget to take a student-centered approach to course development. Adult learners want to know why it [what is being taught and what they are being asked to do in the course] matters to them and how it will help them to succeed.

**Authenticity.** Designers said they needed to be open about sharing both positive and negative experiences they had with faculty learners as this was the reality of online course development. Some designers acknowledged that had to be authentic in sharing their experiences if they were to gain faculty trust, because faculty would be able to tell if they were not being genuine. Two designers elaborated on this viewpoint:

You have to be honest with them [faculty learners] because they know it's not all sunshine and roses...how could they take what I'm saying seriously if I said that? A lot of these faculty have been doing it [teaching] a long time and they will just block you out if you take that approach. (Harrison)

The bottom line is that there's no one-size fits all approach [to online education] and something that may work in one class might not work in another. And we need to be upfront about that when teaching faculty because if we don't they will see right through it. What we can offer are suggestions and best practices that have been proven to work over time in a variety of courses and disciplines, so that they have a solid foundation [in online pedagogy] and can find something that may work for their course. Our experiences serve as a guide for what has worked. (Leo)

**Experiential Learning Design.** Designers stated the goal of the program and its actual design was intended to promote learning by doing. This philosophy can be dated back to 1915 by John Dewey, though none of the designers in this study specifically mentioned this during the interviews. Instead, they explained that when they set out to develop the program, they knew they needed to transform faculty perspectives about teaching if they were to be successful teachers in the online environment. The best strategy for this was to incorporate the adult learning perspectives of experiential learning (Kolb, 1984). Experiential education is a pedagogical approach used to encourage collective and critical reflection and development (Vince & Reynolds, 2007). The designers explained they believed this method would be the most effective way to get faculty to understand both the differences between face-to-face and online teaching and the student-centered perspective. Harrison helped to explain this was key to the programs transformative process when I asked how transformative learning occurred in the program:

Honestly, they [faculty] convert [transform] themselves. We are very deliberate in our design here [in the program]. First, we set up the courses so they are in the position of being an online student, so they get that perspective. Then we all discuss that perspective together in class. By seeing all we've done to build the course this way and how deliberate it is, they begin to get it [the rationale for the course design]. Then we can talk about it from the instructor point of view.

Analysis of the courses during the research process showed that the entire program followed this formula. Designers said experiential learning was reinforced throughout, so by the time they completed the program they would understand how online teaching required faculty to be

facilitators in the learning process, a nod to the learner-centered approach to pedagogy. Harrison elaborated more on this:

Online course design is not organic. It's not teaching, but facilitating. You aren't in front of the students, nobody's in a class, your online. Online learning is self-paced and often asynchronous. They [faculty] need to experience these things to really understand how different it is. So that's what we do [in the program].

Looking at the program design from this perspective was eye-opening, as I could begin to clearly understand how the program 'worked' and how trust was gained through this strategy for learning.

### ***Relationship Building***

Another key finding from this study was the importance of relationship building through the program. Designers felt establishing relationships through the experiential learning process was essential to changing perceptions about online education and help people to improve their teaching practices. In addition, sharing their own experiences as educators was found to be crucial to relationship building. Designers hoped that these relationships would last long after program completion to help expand program outreach and improve the quality of online learning.

**Engagement Through Shared Experience.** All of the instructional designers in the study mentioned the importance of student engagement in the online teaching certificate program and for online learning in general. Study participants unanimously agreed that the best way to engage faculty learners in the program was to share their own personal experiences both as designers and educators.

Westy described how she believed shared experience added authenticity to her teaching and enhanced learning in her course:

I always use my previous experiences and beliefs in this course and share that to the class. We are not only teaching theory and latest best practices [in our courses], but also teaching using our experiences which I believe makes the learning experiences more authentic [to faculty].

In addition to sharing their own experiences with the class, designers said they asked faculty learners to be open about sharing their own experiences, particularly in times of reflection within the online discussion boards. These reflective experiences helped to create a common ground between the instructional designers and the faculty learners and also helped to establish ongoing dialogue amongst peers so they could explore together strategies that worked (or did not work) for them. Harrison discussed how shared learning experiences allowed the class to critically examine what was being taught to them:

So having these group learning experiences gives us a forum to say what best practice is as we see it and then let them wrestle it to determine what strategies work best for them.

Many designers also noted how their prior experiences teaching within the program enabled them to provide additional means of support to new faculty learners. They explained this was because they had already been through the highs and lows of this transformative process with other students who had gone through the program and came out for the better after its completion. Some of these students would go on to help the designers even improve their course content. For example, Leo shared a strategy he and his fellow co-collaborator, Yankee used in the Academic Video Production course to help faculty who were new to recording lecture videos:

In the [Academic Video Production] course we teach, there is a learning curve with some of the tools we use. Since we can anticipate that some faculty will have trouble at first,

[Yankee] has actually recorded interviews with faculty who've taken the course who overcame these same obstacles, so they can share tips and strategies with current students and reassure them that they too will overcome this.

Yankee also reflected upon his own learning and perspective transformations through his experiences in the program:

Who am I to say that this is what you should do and this is how you should handle a student, or this is how you should present this information, if I don't have the opportunity to do it myself? And there are many things that you learn actually teaching a course, that maybe even I wouldn't have thought of three years ago, being in a position where I had never taught a course before.

**Practice What you Preach.** Designers said the only way to have faculty respect what they were teaching and apply it to their own teaching was to lead by example. The team discussed how faculty taking this program would receive a unique professional development opportunity since the designers not only taught these fundamental approaches to online teaching, they applied them to their own practice. Being able to practice what they preach brought validity to the concepts being taught, according to most interview participants. Leo expanded on this:

In order to talk to an instructor about best practices of teaching online – what to do with an online course – I feel that it's important for an instructional designer to be able to know what it's like. Running one of these online teaching certificate courses gives you experience with teaching an online class, so now you can relate this to the instructors—like “oh yes, I do understand the difficulty in setting up these discussion forums and how to manage them and go through and how to create an appropriate prompt to get people to

respond to it properly, because I did it.” And so, if someone hasn’t done that before and they come into our unit, now they’re going to get that experience.

Highlander discussed how this was essential to teaching within program:

The main thing is to practice what you preach. If you're teaching about something, then you need to make an effort to practice and actually model the behaviors and the philosophies that you're teaching.

Yankee explained his view of how this even helped him to become better at his own job:

I think it helps to practice what I preach. So being able to teach this program has definitely helped me become a better instructional designer, because it brought to the table for me things that I can then preach to faculty and say, when I-- and I think it's a respect thing too, when you're working with an instructor to say, well, when I taught my course, this is what I did, and it worked well.

Ultimately, many of the designers hoped that a sense of community and connection would form from the shared experiences within the program. While the program offered faculty learners with a solid foundation in online best practices, there was much more to be learned through their own experiences after completion, according to study participants. Two designers expanded on this:

Will it [the program] make you an expert on teaching online? Absolutely not. Will it make you an expert on course design? Absolutely not. That's just something you're going to have to gain with experience (Highlander)

I think the goal of the program really is to be a sort of jumping off point for faculty and the hope is that this motivates faculty to continue learning more about approaches to online education. I like to think of our program as a growing community of practice.

While not all do, some faculty continue to reach out after the program and that's really rewarding. (Leo)

### **Summary**

Throughout this chapter, the findings were presented from the qualitative data collected in the semi-structured interviews by the eight instructional designers in the online teaching certificate program. The following major themes emerged from the findings: diversity of experiences, collaboration, time, university priorities, university organizational structure, trust, and relationship building.

The findings from the case study revealed that the designers expressed positive overall experiences in course development and teaching within the program. I found that the designers' unique specializations in instructional design were an important component to the development of a comprehensive online teaching program since it focused on a variety of best practices within the field. I further discovered that positional parity amongst the group was important to team building and the overall success of the program since as it led to a shared decision-making process where designers took ownership of the courses.

This study found that the co-collaborative model used in the program was important for developing strategies for effective course design and facilitation. While time was a significant challenge to program development and facilitation, co-collaboration helped to ease workloads and allow designers to also focus on other responsibilities they had within the university. This co-collaborative model was discovered to be a strategy the designers used to help faculty understand the benefits of collaboration between faculty and designers in online course development.

I also discovered that the organizational size and structure of the university had a negative impact on program outreach and recognition of the instructional design team. In addition, the centralized nature of the team, while beneficial to the success of the program, created challenges with faculty outreach and even collaboration with other designers spread throughout the university.

Lastly, this study explored the perception by the designers that greater value needs to be placed on the quality of teaching in higher education. In order to transform perceptions about best pedagogical practices in online education, this study discovered that trust and relationship building through experiential learning was key. In chapter 5, I will further discuss the results of the study, the conclusions based on the findings and implications for future practice, and provide recommendations for future research

## CHAPTER V

This final chapter includes a summary discussion of the results of the study based on the research findings. Next, I focus on implications for practice. I conclude this chapter with recommendations for additional research in the field of instructional design in higher education.

### **Summary Discussion**

As the rise in demand for online education continues throughout higher education, more faculty must commit the time and effort needed to successfully teach online (Baran, 2018). With many universities having little choice but to offer fully online instruction during the ongoing global pandemic, faculty today must rapidly adapt their teaching to the online environment. Online faculty professional development is necessary since research points to concerns regarding the quality of online courses and the need for pedagogical training for educators who often lack this expertise (Baran, 2018; Ciabocchi et al., 2016; Fredericksen, 2017). Studies have suggested that instructional design teams are uniquely positioned to be leaders of online faculty learning initiatives in higher education (Brigance, 2011; Shaw, 2012; Drysdale, 2018). Yet, instructional designers in higher education are not widely recognized as leaders due to several challenges, including a lack of faculty buy-in, staffing issues, role perception, various reporting lines, and scalability of resources for instructional design teams (Drysdale, 2018, Fredericksen, 2017, Intentional Futures, 2016). I explored an instructional design team that experienced many of these challenges, yet still exhibited leadership competencies through collaboration and combined expertise in their field of instructional design to develop and facilitate what I found to be a successful online teaching program initiative.

The findings from the case study analysis presented in chapter 4 revealed that the diverse backgrounds, perspectives and specializations brought by each member of the team combined to

make a comprehensive program focusing on best practices in online education. This finding aligned with the viewpoints from Given and Kelly's (2016) research on collaborative group mentorship through exposure to diverse perspectives, which found diversity to be the greatest strength of group collaboration. In addition, I discovered that positional parity within in the program empowered each designer to take ownership over the specific courses they developed and taught. Since every team member shared equal responsibility and input into the courses within the program, they each shared credit and authorship, critical factors in the development of highly successful teams according to research by Bennet and Gadlin (2012).

The challenges of time and increased workloads discovered in this study mirrored many of the same challenges found in the literature exploring issues within the collaborative process (White, 2000). Yet, the co-collaborative model the team used in course development and facilitation was found to be a key factor in the successful design of the program because it helped designers manage their time as efficiently as possible. In addition, the co-collaborative model was an effective strategy for justifying to faculty learners the need for designer/faculty collaboration in online learning initiatives, as the challenges the designers faced in the program (time, increased workloads, and limited resources) were relatable to the challenge's faculty faced in online course development and teaching (Kebritchi, Lipschuetz, & Santiago, 2017). In sum, the study findings support previous literature exploring team-based collaboration models based on collaborative theory (Colbry, Hurwitz & Adair, 2014)

I found that the size and various locations of campuses within the university presented challenges in promoting the online teaching certificate program to the larger university community. This was not a significant concern to the team since enrollment was growing each year, but these challenges do seem to suggest that the size of design team may not be

proportionally scaled to match the overall size of the university, concerns previously raised within the literature (Drysdale, 2018). As such, many faculty members at the university may be unaware of the program and/or the value it could bring to their professional development. The designer perceptions about online education not being a priority of university leadership leads to the conclusion that securing additional resources necessary for departmental expansion would be rather difficult. It will be interesting to see how the recent impacts on online education brought forth by the global pandemic influence university leadership's views on online education going forward.

I discovered that trust and relationship building between designers and faculty learners was manifested through the experiential learning design of the program which aligns with Kolb's model of experiential learning (1984). This process began with faculty learners taking "a leap of faith" and experiencing online learning activities from the student perspective. The design of the program was found to place faculty in the role of the online student first to actively engage them in critical reflection on these experiences throughout the remainder of the class. Developing activities with collaborative asynchronous online tools such as Flipgrid and VoiceThread allowed everyone in the class to reflect and share experiences while discovering how tools such as these could be useful to apply within their own online classes. Since many of the designers in this study had prior teaching experiences themselves, they were able to share their own personal journeys transitioning their teaching practices to the faculty learners in the program. By "practicing what they preached" the designers were able to establish buy-in to many of the pedagogical practices and online tools they introduced. This was referenced by most of the study participants during the interviews, but also by many faculty learners who provided feedback within the course surveys that were reviewed. As such, I concluded that the designers were

effectively able to shift the perspectives of many faculty about online pedagogy in the program. These findings align with the adult learning principles associated with Meizrow's of transformative learning (2003) which emphasizes the importance of critical reflection and rational dialogue during disorienting experiences such as the faculty transition from face-to-face to online teaching. Moreover these findings align with prior research recommending the use of transformative learning principles as an effective strategy for the development of online professional development initiatives (McQuiggan, 2012; Meyer & Murrell, 2014).

### **Implications for Practice**

The findings from this study provide several implications which may impact instructional designers, online administrators and university leadership in online education and assist in the development of effective strategies for success in online faculty professional development initiatives.

#### ***Implications for Instructional Designers and Instructional Design Teams***

If instructional designers are to change faculty perceptions about online education, this study's findings suggest that they must be able to model the practices they support and not just train others in them. By leading initiatives such as the online teaching certificate program in this study, instructional designers can develop relevant online teaching experiences themselves which can be used to support the use of new teaching methods for faculty new to teaching online. These shared experiences could result in increased faculty buy-in and greater recognition for the pedagogical expertise of the instructional designer. Ultimately, it can help to establish and build greater collaborative efforts to enhance the quality of online learning.

The findings from this study indicated that the co-collaborative model used by the instructional design team served a two-fold purpose. One, it enabled the team members to work

together in tandem on the development and facilitation of the courses which was found to improve course quality, forge strong relationships between team members, and help to balance workloads. Two, and perhaps most importantly, the co-collaborative model used was found to be an effective method for instructional designers to show the value of collaborative partnerships with faculty in online course development. As such, I suggest that instructional design teams consider applying a similar co-collaborative approach to their online professional development initiatives if they are not doing so already.

As instructional design teams continue to expand within higher education, the need for specialized roles may become more important. As such, it is important for practicing instructional designers and novice designers seeking to join an established instructional design teams to consider what unique specializations they may want to focus on and highlight in their work portfolios. For example, the designers in this study described their unique specializations in various aspects of instructional design and how this brought value to their team and helped to make a comprehensive online program. These considerations may increase as the field continues to evolve.

This study's findings related to the background of the instructional design team and their experiences show that collaborative instructional design teams should not only possess diversity in professional experience and instructional design specializations, they should also reflect the diversity to support the inclusion of all online learners. The design team studied was highly diverse in many respects, and certainly supported and respected diversity throughout their work as instructional designers. Yet at the time of this study, there were no African American or Asian instructional designers developing courses or teaching within the program being studied. One of the primary benefits that online education provides is access to learning opportunities.

Instructional designers tasked with training faculty in online pedagogy should come from a variety of diverse backgrounds so they can relate to the experiences of a diverse student body. This is equally important when considering the diversity of faculty at various institutions when considering the dynamics of designer and faculty collaboration.

### ***Implications for Other Stakeholders in Online Higher Education***

While acknowledging university-level support for their roles in online course design and faculty support, the designers in this study described receiving very limited university-wide support for leading the online teaching certificate program. Instructional design teams leading faculty professional development should be recognized by university leadership for their pedagogical expertise in this role, as it is at the very least equal to the technological and administrative roles they serve throughout the university. University stakeholders should embrace and fully support this aspect of instructional design going forward as leadership in this role has never been more important.

Based on this study's findings that the design team perceived the quality of teaching to be undervalued and felt disempowered to effect significant change without leadership support despite their pedagogical subject matter expertise, I strongly recommend that university leaders consider positioning or restructuring instructional design teams within academic reporting lines under the provost to set oversight of online learning initiatives above divisions. By doing so, this would help to clarify the instructional designer role as online pedagogical expert instead of the commonly held misconceptions that they primarily provide technological and/or administrative support (Dempsey et al., 2007; Intentional Futures, 2016; Legon & Garrett, 2018; Richardson et al., 2019; Ritzhaupt & Kumar, 2015; Rubley, 2016). As discovered in this study, the technological skills designers possess was considered secondary to the pedagogical expertise

dedicated instructional designers pride their work upon. Housing instructional designers under academic reporting lines could also help further expand their roles as researchers and educators. If institutions are committed to bringing instructional designers and faculty together as partners in the collaborative online development and design process as online education continues to expand, then this marriage seems to make sense. Prior research exploring the organizational structures of instructional design teams uncovered that centralized instructional design teams residing within academic reporting lines experienced more positive role development, more opportunities for leadership, and experienced additional measures of professional advocacy for their roles as pedagogical experts by leadership (Drysdale, 2018).

Online learning administrators and university leaders should also evaluate the size and scope of their instructional design support at their institution to consider if their current team can meet the rapidly increasing and evolving demands of online education. This consideration is essential to providing effective and timely faculty online professional development and online course development support. One of the challenges identified in this study was the lack of program outreach and recognition of the instructional design team throughout the entire university. The design team studied was a centralized unit supporting the entire university, but they were located on only one of three campuses. One of the more surprising findings from the study was the fact that there were other decentralized instructional designers spread throughout the university within various departments, yet collaboration with the centralized design team studied was found to be limited and separate. This lack of alignment and collaboration between instructional design support has been found to lead to high levels of disempowerment, role misperception, and challenges in advocacy and leadership, as found in previous research on instructional designers (Drysdale, 2018). Based on this study's findings and prior research, I

conclude that large public institutions should consider housing a main centralized instructional design unit with smaller aligned subunits on each campus. This could help to improve coordination of outreach and support for large online professional development initiatives on a proportional university-wide scale.

Lastly, many of the designers in this study expressed hope that a sense of community and connection would form from the shared experiences they had within the program. While the program offered faculty learners with a solid foundation in online best practices, there was much more to be learned about online teaching after its completion. Institutions should provide incentives for faculty and instructional designers to continue this collaborative journey together. One suggestion could be to offer stipends for collaborative research and program initiatives co-developed by designers and faculty during the summer. Another option could be to offer reimbursement for professional development conferences, memberships, and external activities that foster continued professional growth. The designers on this team were each allotted a professional development stipend to enhance their skills as designers. More institutions need to consider the benefits of investing in the development of their staff.

### **Recommendations for Future Research**

Based on the results and conclusions drawn from this study, the following recommendations for further study are suggested. This case study focused on the experiences and perspectives of an instructional design team who developed and teach in an online certificate program within a large public research university. One opportunity for further research is to replicate the study at multiple institution types, for comparison. Replication of the study at other institutional types would provide further insight into the roles, initiatives, challenges and strategies used by instructional designers within different environments to consider how the

institutional makeup either empowers or inhibits the ability of the designers to influence online initiatives and develop a professional identity within the organization.

Additionally, while this study focuses on the perceptions of instructional designers who taught an online program, future research may consider exploring the perceptions of faculty to obtain a holistic view of the value of these types of initiatives at their institution. This study intentionally focused on the designer perspective due to a lack of exploration of designer experiences in this role, but feedback from faculty who have taken a similar program or courses could help to improve initiatives and designer/faculty collaboration even further.

The global coronavirus pandemic raises interesting questions about this will impact the future of higher education, with some speculating dramatic increases in blended learning and online education becoming a strategic priority at most, if not every institution (Kim, 2020). While it is impossible to forecast the future of higher education post pandemic, there is little doubt that technologies role as a supplementary teaching and learning method will become more prevalent. Studies exploring how this affects instructional designers and their work expectations going forward will be necessary and beneficial to understanding the ever-evolving roles of instructional design and its practitioners in higher education.

## **Conclusion**

Online faculty professional development led by instructional design teams can benefit both teachers and learners in several important ways. Instructional designers are using their backgrounds and experiences to facilitate the creation of engaging online learning experiences, creating inclusive learning environments that promote accessibility and offer choices to students with varying strengths and preferences of learning. By helping align educational activities with an evolving understanding of the conditions, tools, and techniques that enable learning in the

diversely networked society we live in today, instructional designers can help faculty transform teaching practices to reflect a more learner-centered focus required of educators in the digital age.

The findings of the study indicate that a team of instructional designers can effectively lead an online teaching certificate program in higher education when the university is willing to invest in specialized designers whose diverse talents complement one another. Research has found that while higher education administrators may recognize the value instructional design teams bring to online learning, limited resources for staffing may hinder the necessary growth needed for institutions to empower them (Fredericksen, 2017). If institutions are to meet the ever-rising demand for online learning (Seaman, Allen & Seaman, 2018) institutions must adjust their approaches, both in hiring and offering of professional development support for faculty (Baran, 2018).

This study found that teamwork, collaboration and the ability to share responsibility in the decision-making process on both course and program-level decisions had a positive effect on the team and program. The positional parity amongst team members in the program aligns with the shared leadership model emphasized in collaborative theory (Colbry, Hurwitz and Adair, 2014). In addition, positional parity between designers and faculty has been noted in the literature to be critical to empowering designers to be partners and leaders in online learning initiatives (Brigance, 2011; Drysdale, 2018). If instructional designers are to raise their status as leaders in online learning, more positional parity is needed in both instructional design teams and in their collaboration with faculty.

Recent studies pointing to the uneven levels of online faculty professional development support indicate a lack of pedagogical training for faculty in online best practices (Kebritchi,

Lipschuetz, & Santiago, 2017; Legon & Garrett). This study found that an effective online faculty development program should have a strong pedagogical focus that incorporates evidence-based best practices in online teaching. Since many faculty lack any formal pedagogical training before teaching online (Baran, 2018; Castro-Figueroa, 2009; McGuire, 2016; Moskal, 2012; Halupa, 2019) instructional design teams must use their expertise to guide faculty in this transformation. In addition, faculty must understand the importance of taking a learner-centered approach to online education. Instructional designers can transform faculty perceptions about learner-centered teaching in online professional development initiatives through experiential learning.

The ever-increasing need for instructional design training in higher education has become especially important with recent attention focusing on the quality of education college students are receiving (Baum & McPherson, 2019). Today, this is more important than ever, as online education has been thrust to the forefront due to the coronavirus pandemic, forcing almost all faculty to teach online with little to no preparation beforehand. While universities continue to institute hiring freezes, furloughs, and the threat of layoffs due to impacts from the coronavirus pandemic, these same institutions are posting new job postings for instructional design services to increase support and meet growing demand (Decherney & Levander, 2020). As the field continues its growth, instructional designers would be wise to seize this moment as a catalyst for higher education reform and use this opportunity to become leaders within this pedagogical transformation.

## REFERENCES

- Abdous, M. (2011). A process-oriented framework for acquiring online teaching competencies. *Journal of Computing in Higher Education*, 23(1), 60-77. <https://doi.org/10.1007/s12528-010-9040-5>
- Afsaneh, S. (2014). *Quality of online courses*. (Doctoral thesis, Universitat Rovira i Virgili, Tarragona, Spain). <http://hdl.handle.net/10803/277385>.
- Allen, I. E., & Seaman, J. (2016). *Online report card: Tracking online education in the United States*. <http://onlinelearningsurvey.com/reports/online-report-card.pdf>
- Amineh, R.J., & Asl, H. D. (2015). Review of constructivism and social constructivism. *Journal of Social Sciences, Literature, and Languages*, 1(1), 9-16. [10.17985/ijare.520666](https://doi.org/10.17985/ijare.520666)
- Anderson, L., & Krathwohl, D. A. (2001). *Taxonomy for learning, teaching and assessing: A revision of Bloom's Taxonomy of Educational Objectives*. Longman Publishing Group.
- Anderson, T., & Elloumi, F. (Eds). (2004). *Theory and practice of online learning*. Athabasca University. <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.131.9849&rep=rep1&type=pdf>
- Anglin, G., & Morrison, G. (2000). An analysis of distance education research: Implications for the instructional technologist. *Quarterly Review of Distance Education*, 1(3), 189-197. [https://www.researchgate.net/publication/234591126\\_An\\_Analysis\\_of\\_Distance\\_Education\\_on\\_Research\\_Implications\\_for\\_the\\_Instructional\\_Technologist](https://www.researchgate.net/publication/234591126_An_Analysis_of_Distance_Education_on_Research_Implications_for_the_Instructional_Technologist)
- Association for Educational Communications and Technology. (2019). *AECT: About us*. [https://www.aect.org/about\\_us.php](https://www.aect.org/about_us.php)
- Bailey, A., Vaduganathan, N., Henry, T., Laverdiere, R., & Pugliese, L. (2018). *Making digital learning work: Success strategies from six leading universities and community colleges*. The Boston Consulting Group. <https://edplus.asu.edu/sites/default/files/BCG-Making-Digital-Learning-Work-Apr-2018%20.pdf>
- Baldwin, S. & Ching, Y. H. (2015). Supporting online teachers with instructional design. *Proceedings of E-Learn: World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education* (pp. 537-542). Association for the Advancement of Computing in Education (AACE), Kona, Hawaii, United States. <https://www.learntechlib.org/p/152057/>

- Baran, E. (2018). Professional development for online and mobile learning: Promoting teachers' pedagogical inquiry. In Voogt, J., Knezek, G., Lai, KW. (Eds.), *Second Handbook of Information Technology in Primary and Secondary Education* (pp. 463–478). Springer International Handbooks of Education, Springer, Cham. [https://doi.org/10.1007/978-3-319-71054-9\\_31](https://doi.org/10.1007/978-3-319-71054-9_31)
- Baran, E., & Correia, A. P. (2014). A professional development framework for online teaching. *Techtrends: Linking Research and Practice to Improve Learning*, 58(5), 95-101. <https://doi.org/10.1007/s11528-014-0791-0>
- Baran, E., Corriera, A. & Thompson, A. (2011). Transforming online teaching practice: Critical analysis of the literature on the roles and competencies of online teachers, *Distance Education*, 32(3) 421-439. <https://doi.org/10.1080/01587919.2011.610293>
- Bates, T. (2014, December 10). A short history of educational technology. *Online Learning and Distance Education Resources*. <https://www.tonybates.ca/2014/12/10/a-short-history-of-educational-technology/>
- Baum, S., & McPherson, M. (2019). Improving teaching: Strengthening the college learning experience. *Daedalus*, 148(4), 5-13. [https://doi.org/10.1162/daed\\_e\\_01757](https://doi.org/10.1162/daed_e_01757)
- Bawa, P. (2016). Retention in online courses exploring issues and solutions: A literature review. *SAGE Open*, 6(1), 1-11. <https://doi.org/10.1177/2158244015621777>
- Bawa, P., & Watson, S. L. (2017). The chameleon characteristics: A phenomenological study of instructional designer, faculty, and administrator perceptions of collaborative instructional design environments. *The Qualitative Report 2017*, 22(9), 2334-2355. <https://nsuworks.nova.edu/tqr/vol22/iss9/4>
- Bednar, A. K. (1991, June). Abstract at the Least. *Performance Improvement Quarterly*, 4(2), 98-100. <https://doi.org/10.1111/j.1937-8327.1995.tb00679.x>
- Bell, F. (2011). Connectivism: Its place in theory-informed research and innovation in technology-enabled learning. *International Review of Research in Open and Distance Learning*, 12(3). <https://doi.org/10.19173/irrodl.v12i3.902>
- Bennett, L. M., & Gadlin, H. (2012). Collaboration and team science: from theory to practice. *Journal of investigative medicine: The official publication of the American Federation for Clinical Research*, 60(5), 768–775. Retrieved from: <https://doi.org/10.2310/JIM.0b013e318250871d>
- Bichelmeyer, B., Boling, E., & Gibbons, A. (2006). Instructional design and technology models; Their impact on research and teaching in instructional design and technology. Orey, M., McLendon, V.J., and Branch, R. M. (Eds.). *Educational Media and Technology Yearbook*, (Vol. 31, pp. 33-73). Littleton Co: Libraries Unlimited Inc.

- Bloom, B. S., Englehart, M. D., Furst, E. J., Hill, W. H., & Krathwohl, D. R. (1956). *The Taxonomy of educational objectives, handbook I: The Cognitive domain*. David McKay Co., Inc.
- Bowman, M., Ely, J. North, C. & Shortt, M. (2019). The diverse field of instructional design. *ESLTech Issues and Practices in Learning Technologies*. The Ohio State University Pressbooks Open Course Materials.  
[https://ohiostate.pressbooks.pub/6223ebook2019/chapter/chapter-2/#:~:text=Instructional%20design%20\(ID\)%20is%20an,of%20academic%20and%20professional%20backgrounds.&text=Instructional%20designers%20are%20often%20expect ed,learning%20theories%2C%20and%20learning%20technologies](https://ohiostate.pressbooks.pub/6223ebook2019/chapter/chapter-2/#:~:text=Instructional%20design%20(ID)%20is%20an,of%20academic%20and%20professional%20backgrounds.&text=Instructional%20designers%20are%20often%20expect ed,learning%20theories%2C%20and%20learning%20technologies)
- Branch, R. M., & Kopcha, T. J. (2014). Instructional design models: *Handbook of research on educational communications and technology*, (pp. 77-87). Springer.
- Brigance, S. (2011). Leadership in online learning in higher education. Why instructional designers for online learning should lead the way. *Performance Improvement*, 50(10), 43-48. <https://doi.org/10.1002/pfi.20262>
- Brown, M., McCormack, M., Reeves, J., Brook, D.C., Grajek, S., Alexander, B., Bali, M., Bulger, S., Dark, S., Engelbert, N., Gannon, K., Gauthier, A., Gibson, D., Gibson, R., Lundin, B., Veletsianos, G. & Weber, N. (2020). *2020 Educause Horizon Report Teaching and Learning Edition*. Louisville, CO: EDUCAUSE. Retrieved September 24, 2020 from <https://www.learntechlib.org/p/215670/>
- Campbell, K., Schwier, R., Kenny, R.F. (2009). The critical, relational practice of instructional design in higher education: an emerging model of change agency. *Education Technology Research and Development*. 57(5), 645-663. <https://doi.org/10.1007/s11423-007-9061-6>
- Castro-Figueroa, A. (2009). *Conflicts and communication: Instructional designer and subject matter experts developing interdisciplinary online healthcare content* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database. (UMI No. 3380482).
- Chen, K. Z.; Lowenthal, P. R., Bauer, C., Heaps, A., & Nielsen, C. (2017). Moving beyond smile sheets: A case study on the evaluation and iterative improvement of an online faculty development program. *Online Learning*, 21(1), 85-111.  
<http://dx.doi.org/10.24059/olj.v21i1.810>
- Chao, I. T., Saj, T., & Hamilton, D. (2010). Using collaborative course development to achieve online course quality standards. *Review of Research in Open and Distributed Learning*, 11(3), 106-126. <https://doi.org/10.19173/irrodl.v11i3.912>

- Cho, M. H., Demei, S., Laffey, J. M. (2010). Relationships between self-regulation and social experiences in asynchronous online learning environments. *Journal of Interactive Learning Research*. 21(3) 297-316.  
[https://www.researchgate.net/publication/277821070\\_Relationships\\_Between\\_Self-Regulation\\_and\\_Social\\_Experiences\\_in\\_Asynchronous\\_Online\\_Learning\\_Environments](https://www.researchgate.net/publication/277821070_Relationships_Between_Self-Regulation_and_Social_Experiences_in_Asynchronous_Online_Learning_Environments)
- Christensen, T. k., & Osguthorpe, R. T. (2004). How do instructional-design practitioners make instructional-strategy decisions? *Performance Improvement Quarterly*, 17(3), 45-65.  
<https://doi.org/10.1111/j.1937-8327.2004.tb00313.x>
- Ciabocchi, E., Ginsberg, A., & Piacciano, A. (2016). A study of faculty governance leaders' perceptions of online and blended learning. *Online Learning* 20(3), 52-73.  
<https://doi.org/10.24059/olj.v20i3.974>
- Clará, M. & Barberá, E. (2013). Three problems with the connectivist conception of learning. *Journal of Computer Assisted Learning*, 30(3), 197-206.  
<https://doi.org/10.1111/jcal.12040>
- Cox, S., Osguthorpe, R.T. (2003). How do instructional design professionals spend their time? *Tech Trends*, 47(3), 45-47. <https://doi.org/10.1007/BF02763476>
- Creswell, J. W. (2012). Educational research. *Planning, conducting, and evaluating quantitative and qualitative research*. Addison-Wesley.
- Dede, C., Jass Ketelhut, D., Whitehouse, P., Breit, L., & McCloskey, E. M. (2009). A Research Agenda for Online Teacher Professional Development. *Journal of Teacher Education*, 60(1), 8–19. <https://doi.org/10.1177/0022487108327554>
- Denzin, N. K. & Lincoln, Y. (2003). *The Landscape of qualitative research: Theories and issues* (2<sup>nd</sup> ed.). Sage.
- Diamond, R. M. (2011). *Designing and assessing courses and curricula: A practical guide*. John Wiley & Sons.
- Dinger, M., & Grover, V. (2019). Revisiting Web 2.0, in *Advanced methodologies and technologies in network architecture, mobile computing, and data analytics*. IGI Global.
- Doe, R., Castillo, M.S., Musyoka, M.M. (2017). Assessing online readiness of students. *Online Journal of Distance Learning Administration*. 20(3).  
[https://www.westga.edu/~distance/ojdl/spring201/doe\\_castillo\\_musyoka201.html](https://www.westga.edu/~distance/ojdl/spring201/doe_castillo_musyoka201.html)
- Driscoll, M. P. (2005). *Psychology of learning for instruction* (3<sup>rd</sup> Ed.) Allyn & Bacon.

- Drysdale, J. (2018). *The organizational structures of instructional design teams in higher education: A multiple case study* [Doctoral dissertation, Abilene Christian University]. ACU Digital Commons Repository. <https://digitalcommons.acu.edu/etd/115/>
- Ertmer, P. A., & Newby, T. J. (2013). Behaviorism, cognitivism, constructivism: Comparing critical features from an instructional design perspective. *Performance Improvement Quarterly*, 26(2) p. 43-71. <https://doi.org/10.1002/piq.21143>
- Ertmer, P. A, Ross, J., & Cennamo, K. (2013). *Technology integration for meaningful classroom use: A standards-based approach*. Cengage Learning.
- Ertmer, P.A., Stepich, D.A., York, C.S., Stickman, A., Wu, X., Zurek, S., & Goktas, Y. (2008). How instructional design experts use knowledge and experience to solve ill-structured problems. *Performance Improvement Quarterly*, 21(1), 17-42. <https://doi.org/10.1002/piq.20013>
- Fink, L. D. (2013). *Creating significant learning experiences: An integrated approach to designing college courses, revised and updated*. Jossey-Bass.
- Figuroa, S., (2014). *Instructional designers' perception of their personal background and experiences in their work*. [Doctoral dissertation, Georgia State University]. [https://scholarworks.gsu.edu/msit\\_diss/136](https://scholarworks.gsu.edu/msit_diss/136)
- Fong, J., Uranis, J., Edward, M., Funk, C., Magruder, E., & Thurston, T. (2017). *Instructional design and technology teams: Work experience and professional development*. UPCEA Center for Research and Marketing Strategy. <https://upcea.edu/wp-content/uploads/2017/04/Instructional-Design-and-Technology-Teams-Work-Experiences-and-Professional-Development.pdf>
- Gagné, R. M., Wager, W. W., Golas, K. C., & Keller, J. M. (2005). *Principles of instructional design* (5th ed.). Wadsworth/Thomson Learning.
- Gagné, R. M & Deci, E. (2005). Self-Determination Theory and Work Motivation. *Journal of Organizational Behavior*. 26(1). p. 331-362. <https://doi.org/10.1002/job.322>
- Gagné, R. M. (1985). *The conditions of learning and theory of instruction* (4th ed.). New York, NY: Holt, Rinehart & Winston.
- Griffith, A. S. & Altinay, Z. (2020). A framework to assess higher education faculty workload in U.S. universities. *Innovations in Education and Teaching International*. <https://doi.org/10.1080/14703297.2020.1786432>
- Gustafson, K. L., & Branch, R. M. (2002). What is instructional design? In R.A. Reiser & J.V. Dempsey (Eds.). *Trends and issues in instructional design and technology* (pp. 16-25). 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. <https://doi.org/10.5430/ijhe.v8n1p55>
- Hart, J. (2018). Importance of instructional designers in online higher education. *AECT International Convention 41<sup>st</sup> Annual Proceedings*. [https://members.aect.org/pdf/Proceedings/proceedings18/2018/18\\_09.pdf](https://members.aect.org/pdf/Proceedings/proceedings18/2018/18_09.pdf)
- Henderson, J. (2010). An exploration of transformative learning in the online environment. *Proceedings of the 26<sup>th</sup> University of Wisconsin Annual Conference on Distance Teaching & Learning*. <https://silo.tips/download/an-exploration-of-transformative-learning-in-the-online-environment>
- Hoakanson, B. & Miller, C. (2009). Role-based design: A contemporary framework for innovation and creativity in instructional design. *Educational Technology*, 49(1), 21-28. [https://www.researchgate.net/publication/230600783\\_Role-based\\_design\\_A\\_contemporary\\_framework\\_for\\_innovation\\_and\\_creativity\\_in\\_instructional\\_design](https://www.researchgate.net/publication/230600783_Role-based_design_A_contemporary_framework_for_innovation_and_creativity_in_instructional_design)
- 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 Futures. (2016). Instructional design in higher education: A report on the role, workflow, and experience of instructional designers. *Intentional Futures* (with funding from the Bill & Melinda Gates Foundation). <https://intentionalfutures.com/wp-content/uploads/2017/08/Instructional-Design-in-Higher-Education-Report.pdf>
- Jenkins, R. (2011, May 22). Why are so many students still failing online? *The Chronicle of Higher Education*. <https://www.chronicle.com/article/Why-Are-So-Many-Students-Still/127584>
- 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>
- Kearney, M., & Maher, D. (2013). Mobile learning in maths teacher education: Driving pre-service teachers' professional development. *Australian Educational Computing*, 27(3), 76-84. [http://acce.edu.au/sites/acce.edu.au/files/pj/journal/AEC27-3\\_KearneyMaher.pdf](http://acce.edu.au/sites/acce.edu.au/files/pj/journal/AEC27-3_KearneyMaher.pdf)
- Kebritchi, M., Lipschuetz, A., & Santiago, 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>

- Kenny, R., Zhang, Z., Schwier, R., & 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. <https://doi.org/10.21432/T2JW2P>
- Khalil, M. K. & Elkhider, I. A. (2016). Applying learning theories and instructional design models for effective instruction. *Advances in Physiology Education*, 40(2), 147-156. <https://doi.org/10.1152/advan.00138.2015>
- Ko, S., Rossen, S. (2017). Teaching Online. New York: Routledge, <https://doi.org/10.4324/9780203427354>
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice Hall.
- Kumar, S., & Ritzhaupt, A. (2017). What do instructional designers in higher education really do? *International Journal on E-Learning*, 16(4), 371-393. <https://www.learntechlib.org/p/150980/>
- Krapfl, J. E. (2016). Behaviorism and society. *Behavioral Analysis*, 39(1), 123-129. <https://doi.org/10.1007/s40614-016-0063-8>
- Kreber, C., & Kanuka, H. (2006). The scholarship of teaching and learning and the online classroom. *Canadian Journal of University Continuing Education*, 32(2), 109–131. <https://doi.org/10.21225/D5P30B>
- Larson, M. B., & Lockee, B. B. (2004). Instructional design practice: Career environments, job roles, and a climate of change. *Performance Improvement Quarterly*, 17(1), 22–40. <https://doi.org/10.1111/j.1937-8327.2004.tb00300.x>
- Lebow, D. (1993). Constructivist values for instructional systems design: Five principles toward a new mindset. *Educational Technology Research and Development*, 41(3), 4-16. <https://doi.org/10.1007/BF02297354>
- Lee, Y. & Choi, J. (2011). A review of online course dropout research: Implications for practice and future research. *Educational Technology Research and Development*, 59(5), 593-618. <https://doi.org/10.1007/s11423-010-9177-y>
- Lederman, D. (2018, October 31). Professor, please meet your instructional designer. *Inside Higher Ed*. <https://www.insidehighered.com/digital-learning/article/2018/10/31/survey-professors-shows-surprising-lack-awareness-instructional>
- Lieberman, M. (2017, December 6). Instructional design teams: Beyond the numbers. *Inside Higher Ed*. <https://www.insidehighered.com/digital-learning/article/2017/12/06/instructional-designers-weigh-benefits-and-drawbacks-team-sizes>

- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage Publishers.
- Linder, K. & Dello Stritto, M.E. (2017). *Research preparation and engagement of instructional designers in U.S. higher education*. Corvallis, OR: Oregon State University Campus Research Unit. <https://ecampus.oregonstate.edu/research/study/research-instructional-designers/research-instructional-designers-study.pdf>
- Magda, A. J. (2019). *Online learning at public universities: Recruiting, orienting, and supporting online faculty*. The Learning House, Inc.
- Maharaj, N. (2016). Using field notes to facilitate critical reflection. *Reflective Practice International and Multidisciplinary Perspective*, 17(2), 114-124. <https://doi.org/10.1080/14623943.2015.1134472>
- Mancilla, R. & Frey, B. (2020). A model for developing instructional design professionals for higher education through apprenticeship: Blending theory and practice. *The Journal of Applied Instructional Design*, 9(2). [https://edtechbooks.org/jaid\\_9\\_2/a\\_model\\_for\\_developi](https://edtechbooks.org/jaid_9_2/a_model_for_developi)
- Martin, F., Wang, C., Budhrani, K., Moore, R.L., & Jokiaho, A. (2019). Professional development support for the online instructor: Perspectives of U.S. and German instructors. *Online Journal of Distance Learning Administration*, 22(3). [https://www.westga.edu/~distance/ojdl/spring191/schmidt\\_tschida\\_hodge191.html](https://www.westga.edu/~distance/ojdl/spring191/schmidt_tschida_hodge191.html)
- McGuire, B. (2017). Principles for effective asynchronous online instruction in religious studies. *Teaching Theology & Religion*, 20(1), 28-45. <https://doi.org/10.1111/teth.12363>
- McMurty, K. (2013). Designing online training for faculty new to online teaching. *Journal of Applied Learning Technology*, 3(2), 20-25. <http://salt.org/salt.asp?ss=1&pn=jalt>
- Maxwell, L. (1995). Integrating open learning and distance education. *Educational Technology*, 35 (6), p. 43- 48. <http://www.jstor.org/stable/44428306>
- Merriam, S. B., Caffarella, R. S., & Baumgartner, L. M. (2007). *Jossey-bass higher and adult education series. Learning in adulthood: A comprehensive guide (3rd ed.)*. John Wiley & Sons Inc.
- Merriam, S. B. (1998). *Qualitative research and case study applications in education*. Jossey-Bass.
- Merriam, S. B. & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation 4<sup>th</sup> ed.*. Jossey Bass.
- Meyer, K., & Murrell, V. (2014). A National Survey of Faculty Development Evaluation Outcome Measures and Procedures. *Online Learning*, 18(3). <https://dx.doi.org/10.24059/olj.v18i3.450>

- Miller, S. & Stein, G. (2016, February 8). Finding our voice: Instructional designers in higher education. *Educause Review*. <https://er.educause.edu/articles/2016/2/finding-our-voice-instructional-designers-in-higher-education#:~:targetText=A%20major%20challenge%20for%20instructional,integration%20in%20teaching%20and%20learning>
- Moallem, M. (2003). An interactive online course: A collaborative design model. *Educational Technology Research and Development*, 51(4), 85-103. <https://doi.org/10.1007/BF02504545>
- Molenda, M. (2010). *Origins and evolution of instruction systems design*. In Silber, Kl, & Foshay, W. (Eds.) *Handbook of improving performance in the workplace*. Vol. 1 Instructional design and training delivery. p. 53-92. Pfeiffer.
- Moore, D. T. (2010). *Forms and issues in experiential learning*. In D. M. Qualters (Ed.). *New Directions for Teaching and Learning* (pp. 3-13). Wiley.
- Moskal, P., Thompson, K., & Futch, L. (2015). Enrollment, engagement, and satisfaction in the BlendKit faculty development open, online course. *Online Learning*, 19(4), 1-12. <https://doi.org/10.24059/olj.v19i4.555>
- Moskal, T. M. (2012). *Instructional designers in higher education*. [Doctoral dissertation, University of Nebraska - Lincoln]. UNL Digital Commons. <https://digitalcommons.unl.edu/cehsedaddiss/121>
- Mykota, D. (2013). A coordinated decentralized approach to online project development. *TOJET: Turkish Online Journal of Educational Technology*, 12(3), 1-14. <https://files.eric.ed.gov/fulltext/EJ1016906.pdf>
- Park, J. H., & Luo, H. (2017). Refining a competency model for instructional designers in the context of online higher education. *International Education Studies*, 10(9), 87-98. <https://doi.org/10.5539/ies.v10n9p87>
- Patton, M. Q. (2014). *Qualitative evaluation and research methods: Integrating theory and practice*. (4<sup>th</sup> ed.). Sage Publishing.
- Prestridge, S., & Tondeur, J. (2015). Exploring elements that support teachers engagement in online professional development. *Education Sciences*, 5(3), 199-219. <https://doi.org/10.3390/educsci5030199>
- Protopsaltis, S., & Baum, S. (2019). Does online education live up to its promise? A look at the evidence and implications for federal policy. Fairfax, VA: *Center for Education Policy and Evaluation*. George Mason University. <https://mason.gmu.edu/~sprotops/OnlineEd.pdf>

- Quality Matters. (2020). *Why QM? About Quality Matters*.  
<https://www.qualitymatters.org/why-quality-matters/about-qm>
- Reeves, T. C., Herrington, J., & Oliver, R. (2004). A development research agenda for online collaborative learning. *Educational Technology Research and Development*, 52(4), 53-65. <https://doi.org/10.1007/BF02504718>
- Reiser, R.A. (2001). A history of instructional design and technology: Part II: A history of instructional design. *Educational Technology Research and Development*, 49(2), 57-67. <https://doi.org/10.1007/BF02504928>
- Reiser, R., & Dempsey, J. (2011). *Trends and issues in instructional design and technology* (3<sup>rd</sup> ed.). Pearson.
- Reiser, R.A. (2017). *Eight trends affecting the field of instructional design and technology: Opportunities and challenges*. In Lai FQ., Lehman J. (Eds). *Learning and Knowledge Analytics in Open Education*. Springer.
- Reynolds, J. E. (2018, March, 17). *Implication of learning theories on instructional design*. eLearning Industry. <https://elearningindustry.com/learning-theories-instructional-design-implications>
- Richardson, J. C., Ashby, I., Alshammari, A. N., Cheng, Z., Johnson, B. S., Krause, T. S., Lee, D., Randolph, A. E., & Wang, H. (2019). Faculty and instructional designers on building successful collaborative relationships. *Education Tech Research Development*. 67(1), 855-880. <https://doi.org/10.1007/s11423-018-9636-4>
- Richey, R. C., Klein, J. D., & Tracey, M. W. (2011). *The instructional design knowledge base: Theory, research and practice*. Taylor and Francis.
- Ritzhaupt, A. D., & Kumar, S. (2015). Knowledge and skills needed by instructional designers in higher education. *Performance Improvement Quarterly*, 28(3), 51-69. <https://doi.org/10.1002/piq.21196>
- Rubley, J. N. (2016). *Instructional designers in higher ed. Changing the course of next-generation learning*. The Chronicle of Higher Education and Pearson Education Report. [https://interactive.holoniq.com/reports/2016-Instructional%20Designers\\_v9\\_Pearson\\_Interactive%20Final.pdf](https://interactive.holoniq.com/reports/2016-Instructional%20Designers_v9_Pearson_Interactive%20Final.pdf)
- Saba, F. (2011). Distance education in the United States: Past, present, future. *Educational Technology*, 51(6), 11-18. <http://distance-educator.com/wp-content/uploads/ET-article-Saba-11-12-2011.pdf>
- Saroyan, A., & Trigwell, K. (2015). Higher education teachers' professional learning: Process and outcome. *Studies in Educational Evaluation*, 46, 92-101. <https://doi.org/10.1016/j.stueduc.2015.03.008>

- 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). [https://www.westga.edu/~distance/ojdla/spring191/schmidt\\_tschida\\_hodge191.html](https://www.westga.edu/~distance/ojdla/spring191/schmidt_tschida_hodge191.html)
- Schwier, R.A., Campbell, K., & Kenny, R. (2004). Instructional designer's observations about identity, communities of practice and change agency. *Australasian Journal of Educational Technology*, 20(1), 69-100. <https://doi.org/10.14742/ajet.1368>
- Seaman, J. E., Allen, I. E. & Seaman, J. (2018). *Grade Increase: Tracking Distance Education in the United States*. Babson Survey Research Group and Quahog Research Group. <https://onlinelearningsurvey.com/reports/gradeincrease.pdf>
- Sharif, A., & Cho, S. (2015). 21st-Century Instructional Designers: Bridging the Perceptual Gaps between Identity, Practice, Impact and Professional Development. RUSC. *Universities and Knowledge Society Journal*, 12(3), 72-85. <https://doi.org/10.7238/rusc.v12i3.2176>
- Shaw, K. (2012). Leadership through instructional design in higher education. *Online Journal of Distance Learning Administration*, 12(3). Retrieved from: <https://www.westga.edu/~distance/ojdla/fall153/shaw153.html>
- Siemens, G. (2005). Connectivism: A learning theory for the digital age. *International Journal of Instructional Technology and Distance Learning*. <https://er.dut.ac.za/handle/123456789/69>
- Siemens, G. (2008). *Learning and knowing in networks: Changing roles for educators and designers*. University of Georgia IT Forum. <https://eclass.uoa.gr/modules/document/file.php/PPP233/>
- Skiff, D., & Beckendorf, P. (2009). Self-directed learning: a key ingredient for comprehensive training curriculum. *Pipeline and Gas Journal*, 236(1), 76-77. <https://pgjonline.com/magazine/2009/october-2009-vol-236-no-10/features/self-directed-learning-a-key-ingredient-for-a-comprehensive-training-curriculum>
- Skinner B. F. (1938). *The behavior of organisms: An experimental analysis*. Appleton-Centry.
- Skinner, B. F. (1954). The science of learning and the art of teaching. *Harvard Educational Review*, 24, 86-97.
- Smith, P. L., & Ragan, T. J. (2005). A framework for instructional strategy design. In P. L. Smith, & T. J. Ragan (Eds.), *Instructional design*, p. 127-150. Wiley & Sons.

- Smith, K. M., Hessing, J., & Bichelmeyer, B. A. (2006). Graduate students' perceptions and expectations of instructional design and technology. *TechTrends*, 50(4), 17-27. <https://doi.org/10.1007/s11528-006-0017-1>
- Song, S. H., & Keller, J.M. (1999, February). *The ARCS model for developing motivationally-adaptive computer-assisted instruction*. Paper presented at the Association for Educational Communications and Technology, Houston, TX.
- Stevens, K. B. (2013). Contributing factors to a successful online course development process. *Journal of Continuing Higher Education*, 61(1), 2-11. <https://doi.org/10.1080/07377363.2013.758554>
- Sugar, W., & Betrus, A. (2002). The many hats of an instructional designer: The development of an instructional card game. *Educational Technology* 42(1), 45-51. <http://www.jstor.org/stable/44428722>
- Sugar, W., Hoard, B., Brown, A., & Daniels, L. (2012). Identifying multimedia production competencies and skills of instructional design and technology professionals: An analysis of recent job postings. *Journal of Educational Technology Systems*, 40(3), 227-249. <https://doi.org/10.2190/ET.40.3.b>
- Tough, A. (1971). *The adult's learning projects: A fresh approach to theory and practice in adult education*. Toronto: Ontario Institute for Studies in Education.
- Turker, M. A., & Zingel, S. (2008). Formative interfaces for scaffolding self-regulated learning in PLEs. *eLearning Papers*, 9. <http://www.openeducationeuropa.eu/en/article/Formative-Interfaces-for-Scaffolding-Self-Regulated-Learning-in-PLEs>
- UDL on campus: Universal design for learning in higher education. (2020, February 12) <http://udloncampus.cast.org/home>
- U.S. Department of Education, National Center for Education Statistics Integrated Postsecondary Education Data System (IPEDS), (2019), [Fall enrollment component](#)
- van Merriënboer, J.J.G. (1997). *Training complex cognitive skills: A four-component instructional design model for technical training*. Educational Technology Publications.
- Vince, R. & Reynolds, M. (2007). *Handbook of experiential learning and management education*. Oxford University Press.
- Voogt, J., Laferrière, 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>

- Wilson, B. G., Jonassen, D. H., & Cole, P. (1993). Cognitive approaches to instructional design. In G. M. Piskurich (Ed.), *The ASTD handbook of instructional technology*. McGraw-Hill.
- White, C. (2000). Collaborative online course development: Converting correspondence courses to the web. *Educational Technology* 40(6), 58-60. <https://www.jstor.org/stable/44428641>
- Winne, P.H. (1985). Cognitive processing in the classroom. In T. Husen & T. N. Postlethwaite (Eds.), *The international encyclopedia of education* (Vol. 2, pp. 795-808). Oxford, England: Pergamon.
- Xu, H., & Morris, L. V. (2007). Collaborative course development for online courses. *Innovative Higher Education*, 32(1), 35-47. <https://doi.org/10.1007/s10755-006-9033-5>
- Yen, C.-J., & Liu, S. (2009). Learner Autonomy as a Predictor of Course Success and Final Grades in Community College Online Courses. *Journal of Educational Computing Research*, 41(3), 347–367. <https://doi.org/10.2190/EC.41.3.e>
- Zundans-Fraser, L., & Bain, A. (2016). The role of collaboration in a comprehensive programme design process in inclusive education, *International Journal of Inclusive Education*, 20(2), 136-148. <https://doi.org/10.1080/13603116.2015.1075610>

## Appendix A

### Approval by Department Director for Data Access

Teaching and Learning with Technology  
Division of Continuing Studies  
Continuing Studies

Teaching and Learning with Technology  
Division of Continuing Studies

████████████████████  
████████████████████ 201  
████████████████████

TO: Institutional Review Board  
Seton Hall University

FROM: ██████████ Director of Instructional Design, ██████████ University Dept. of  
Teaching & Learning with Technology

DATE: April 22, 2019

RE: David Uibelhoer Dissertation Data Access

---

Please allow this memo, and my signature below, to serve as proof that I have given my permission for David Uibelhoer to interview members of the instructional design unit within my department at ██████████ University Teaching and Learning with Technology. Furthermore, I give my permission for David to access and review documents related to the Online Teaching Certificate Program the department offers. These materials will be provided to him upon IRB approval for use in the completion of his doctoral dissertation.



██████████  
Director of Instructional Design  
Division of Continuing Studies, Department of Teaching & Learning with Technology  
██████████ University

## Appendix B

### Informed Consent



#### CONSENT TO TAKE PART IN A RESEARCH STUDY

**TITLE OF STUDY:** *Practicing what they Preach: A Case Study Exploring the Experiences of Instructional Designers in an Online Teaching Certificate Program*

**Principal Investigator:** David Uibelhoer, Doctoral Candidate, Seton Hall University

This consent form is part of an informed consent process for a research study and it will provide information that will help the research participant to decide whether they want to take part in this study. It is the research participants choice to partake in the study or not. After all of the research participants questions have been answered, and if they still wish to take part in the research study, they will then be asked to sign this consent form. The research participant will be given a copy of the signed form to keep. The research participants alternative to taking part in the research is not to take part in it.

#### **Who is conducting this research study and what is it about?**

The research participant is being asked to take part in research being conducted by David Uibelhoer, who is a graduate student at Seton Hall University in the Department of Education, Leadership, Management & Policy. The purpose of this study is to examine the experiences of instructional designers who are teaching other faculty, staff and interested students in fundamental and advanced online pedagogy, major issues in online teaching and learning, and major tools in online learning in an online graduate teaching certificate program.

#### **What will I be asked to do if I take part?**

The semi-structured interview will take about 1 hour to complete. The researcher anticipates approximately 10 research subjects will take part in the study.

#### **What are the risks and/or discomforts I might experience if I take part in the study?**

Breach of confidentiality is a risk of harm, but a data security plan is in place to minimize such a risk. Also, some questions may make the research participant feel uncomfortable. If that happens, the research participant can skip those questions or withdraw from the study altogether. If the research participant decides to withdraw at any time before having finished the interview, the interview recording will be deleted.

**Are there any benefits to me if I choose to take part in this study?**

There are no direct benefits to a research participant for taking part in this research study. The research participant will be contributing to knowledge about the identity, roles and experiences of instructional designers in higher education.

**Will I be paid to take part in this study?**

The research participant will not be paid to take part in this study.

**How will information about me be kept private or confidential?**

All efforts will be made to keep research participant responses confidential, but total confidentiality cannot be guaranteed. In order to maintain confidentiality to the best of the investigator's ability, only the investigator will have access to the data which will be kept in a locked file cabinet or on a password protected computer in a locked room. To protect research participant privacy (and student privacy), personal, identifiable information will be removed from all study documents. Research participant names will be removed from the interview transcripts and replaced with a study identifier (i.e. an alias). Student names/student identification numbers will be redacted from course evaluations prior to researcher review by the department secretary. Any identifying information will be stored separately from data and will be kept only until the related dissertation has been successfully defended. Audio recordings and written transcripts will be destroyed after three years.

No information that can identify a research participant directly will appear in any professional presentation or publication.

**What will happen to information I provide in the research after the study is over?**

After information that could identify a research participant has been removed, de-identified responses may be used by or distributed to investigators for other research purposes without obtaining additional informed consent from the study participant.

**What will happen if I do not want to take part or decide later not to stay in the study?**

Research participation in this study is voluntary. If a research participant chooses to take part now, they may change their mind and withdraw later. A research participant may leave without turning in a completed form or by turning in a blank or incomplete form.

**Who can I call if I have questions?**

If you have questions about taking part in this study, you can contact the principal investigator, David Uibelhoer; [David.uibelhoer@shu.edu](mailto:David.uibelhoer@shu.edu). You can also contact faculty advisor, Dr. Robert Kelchen; [Robert.kelchen@shu.edu](mailto:Robert.kelchen@shu.edu).

If you have questions about your rights as a research subject, you can call the IRB Director at: Seton Hall University, 400 South Orange Avenue, South Orange, NJ 07079, (973) 313-6314

Please keep this consent form if you would like a copy of it for your files.

By signing below the research participant voluntarily agrees to participate in the study as described above. Additionally, by signing below the research participant agrees to be audio recorded. On all audio recordings the research participant will be identified only by a unique ID number or alias. The researcher will also transcribe the audio recordings with the research participant's unique ID number or alias. Only the researcher will have access and listen to the audio-recordings. All audio recordings will be stored on a USB drive and locked in the researchers' cabinet for up to five years.

### **AGREEMENT TO PARTICIPATE**

#### **1. Subject consent:**

I have read this entire consent form, or it has been read to me, and I believe that I understand what has been discussed. All of my questions about this form and this study have been answered. I agree to take part in this study.

Subject Name (printed): \_\_\_\_\_

Subject Signature: \_\_\_\_\_ Date: \_\_\_\_\_

#### **2. Signature of Investigator/Individual Obtaining Consent:**

To the best of my ability, I have explained and discussed all the important details about the study including all of the information contained in this consent form.

Investigator/Person Obtaining Consent (printed): \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## Appendix C

### Interview Protocol

#### Interview Questions

##### Icebreaker & Broader Questions

- Can you please provide your official job title at the university?
- Can you please provide your age?
- Can you please provide your race and gender identification?
- What is your educational background?
- How long have you been an instructional designer?
- What professional experiences (if any) have you had prior to becoming an instructional designer at the university?
- Can you discuss how you got to your current role as an instructional designer with the institution?
- How many times have you taught in the program up to this point?

##### Semi-structured interview questions related to RQ1:

- Can you describe your role in the online teaching certificate program?
- What course(s) have you developed/taught in the program?
- How does the course tie into the overall scope of the program?
- How would you describe the collaborative process of working with another team member to develop and teach the course(s)?
- What do you feel is the overall goal of the program?
- How would you describe team collaboration within the overall program?
- How are responsibilities within the program delegated?

##### Semi-structured interview questions related to RQ2

- How (if at all) does university leadership help to support/promote the program?
- How is the program received amongst the larger university community?

##### Semi-structured interview questions related to RQ3

- How do you engage learners in the program?
- What strategies do you use to gain “buy-in” to the concepts and methods being taught?
- What should learners be able to accomplish after taking this program?

##### Wrap-up questions

- Do you have any questions for me regarding this interview or is there anything you would like to elaborate further upon?

- If I need any additional clarification of your responses, may I contact you?