



**DEPARTMENT OF EDUCATION,  
COMMUNICATION AND LEARNING**

# **Instructional Designers' and Faculty Learners' Experiences with Online Course Development Program at a Jesuit University**

**(Martin) Marcin A. Wojnar**

**Master Thesis in Applied Information Technology with Specialization in Learning**

---

Thesis:	30 higher education credits
Program and/or course:	International Master's Program in IT & Learning
Level:	Second Cycle
Semester/year:	Spring term 2016
Supervisor:	Dr. Anna-Lena Godhe (Department of Applied IT)
Examiner:	
Report no:	

## **Acknowledgments**

I would like to thank my supervisors Dr. Sylvie Vigmo and Dr. Anna-Lena Godhe for their mentorship, encouragement, and assistance with designing and carrying out this research.

## **Abstract**

The use of instructional technology in higher education has been growing at an astounding rate worldwide, attracting students from diverse geographical locations, beyond the traditional reach. Considerable research exists that explored the strengths and challenges associated with online education and the desirable faculty skills related to online teaching. However, no published research has addressed the potentially unique challenges related to online education for universities that, because of their mission, offer small on-campus classes, easy student access to faculty, and mission based professional formation of students. One example of such institutions is Jesuit owned Seattle University (SU) in Seattle, United States.

The purpose of this study was to investigate (a) the instructional designers' experiences with teaching an online course development program to faculty and (b) to investigate the participating faculty's experiences with learning an online course development. Permission to conduct the study was granted by the Institutional Research Board at SU. Yrjö Engeström's theory was selected as a theoretical framework to guide the investigation. A mixed methods design was employed to conduct the study. In-person interviews were carried out with three instructional designers who teach the online course development program at SU. An online survey was administered to assess the participating faculty's perceptions of the program. A sample of 38 faculty completed the survey. Summative content analysis was used to conduct qualitative data analysis obtained from the instructional designers' interviews and narrative comments provided by faculty in their program evaluations. SPSS #18 statistical software was used to calculate means, percentages, and frequencies of quantitative survey data.

Data analysis was guided by the selected theoretical framework. It revealed that instructional designers at Seattle University are highly committed to improving students' access to education, teaching effectiveness, and assisting faculty to expand their skills and knowledge of online teaching tools. Instructional designers are committed to meeting the faculty "where they are" and work collaboratively toward common goals. Tensions resulting from interactions of

instructional designers' with faculty are related to the lack of many faculty's buy-in of online education, low educational technology skills among some faculty, and divergence in the understanding of teaching excellence in the context of SU mission by instructional designers and faculty. While most faculty recognized that teaching online or hybrid courses is congruent with the university's mission, some disagreed, creating tensions relating to teaching "rules" stemming from not only the communities of faculty and instructional designers' understandings but also from broader cultural context of Jesuit educational traditions in which these interactions are taking place. The majority of faculty acknowledged they lacked sophistication in technological skills to properly administer online courses prior to taking the online course development program and saw the new knowledge as beneficial for both online and face-to-face teaching because of the technological tools they could subsequently use. Still, others, regardless of what they learned, had continued to have doubts about the equivalence of online and face-to-face education and thus, were reluctant adopters. In short, while all participants in the study had as a desired outcome provision of excellent education to students, some experienced tensions relating to the understanding of teaching rules in the Jesuit institution, relations they had with instructional designers and others who didn't share their beliefs, and the "division of labor" related to teaching itself. Although complete transformation of faculty attitudes toward online and hybrid education at SU has not yet occurred completely, as the university's senior leadership desires, findings of this study support the Yrjö Engeström's theory that expansive learning and transformation occur gradually as a result of tensions and contraindications between the members of various activity systems that share common goals but experience tensions resulting from diverse understandings of rules, community relations, and responsibilities that are resolved over time and create a new, altered reality.

In conclusion, the tensions identified within and between the two activity systems studied (relations between instructional designers and faculty learning how to create online or hybrid course offerings) are consistent with the Engeström's proposition that tensions and contraindications are natural part of institutional change and growth. Instructional designers at SU are concerned with the buy-in and development of faculty's skills to use diverse educational technology tools to offer online, hybrid (blended), and face-to-face education, while many faculty have concerns with changing the course structure from face-to-face to online or hybrid because of how they understand Jesuit pedagogical traditions. In spite the enthusiasm of some faculty it is essential that instructional designers assist many others with improving their educational

technology skills and knowledge, and developing common understanding that the online and hybrid education are congruent with the Jesuit education mission and values, just a different way to live it.

**Keywords:** “motivators and inhibitors of online teaching”, “online faculty experiences”, “distance education”, “e-learning”, “flipped classroom”, “teaching online”, “online education”, “activity theory”

## **DEFINITIONS OF TERMS**

**Instructional Designer-** an educator who engages in a theory and research based process of designing and implementing instruction for better teaching. The association for educational communications and technology (AECT) defines it as “theory and practice of design, development, utilization, management, and evaluation of processes and resources for learning.” Instructional designers are currently hired by many institutions of higher education to assist faculty (university teachers) with innovative course design using new educational technology (Reiser & Dempsey, 2002, p.1).

**Faculty/Teacher (North American Usage)** – the term faculty refers to the academic staff also known as the university teachers of various ranks, including: professors of different rank, lecturers, and/or researchers. For example, adjunct professors are part-time non tenure track faculty. Tenure track faculty include: assistant professors (full time contract faculty on tenure track), associate professors (full time tenured/permanent faculty typically appointed to the rank of associate professor from the rank of assistant professor when certain criteria in teaching, research, and service are met, as determined by the internal and external university reviewers). Full professors are full-time, permanent, tenured faculty appointed to rank of full professor when the highest university criteria are met in teaching, research, and service, as determined by the external and internal university reviewers. Faculty are experts in their respective specialties hired to teach university students. However, many faculty are hired without prior education regarding the best pedagogy and typically learn how to teach on the job, often through trial and error (Schneider, 2015).

**Flipped Classroom** – an approach to teaching where students are introduced to course content at home through pre-recorded lectures, quizzes, and other online exercises and subsequently

apply what they learned at home during face-to-face meetings on campus with faculty (Alvarez, 2011).

**Hybrid (Blended) Teaching** – an approach to teaching that blends online and face-to-face content delivery. Much of the content is delivered online with a reduced number of face-to-face meetings. Online teaching typically covers from 30% to 79% of course content (Jacob, 2011).

## Table of Contents

<b>ACKNOWLEDGEMENTS</b> .....	<b>2</b>
<b>ABSTRACT</b> .....	<b>2</b>
<b>DEFINITIONS OF TERMS</b> .....	<b>4</b>
<b>1.0 INTRODUCTION</b> .....	<b>8</b>
1.1 Background .....	8
1.2 Purpose .....	11
1.3 Significance .....	12
<b>2.0 THEORETICAL FRAMEWORK</b> .....	<b>12</b>
2.1 Cultural Historical Activity Theory (CHAT)Development .....	12
2.2 Engeström: A Leader of Developmental Work Research.....	13
2.3 Application of the Theoretical Framework to guide this Master’s Thesis .....	17
<b>3.0 LITERATURE REVIEW</b> .....	<b>18</b>
3.1 Methods of Literature Search .....	18
3.2 Online Teaching in Higher Education: Teachers’ Skills/Competencies .....	19
3.3 Flipped Classroom: Faculty & Students’ Experiences & Teaching Outcomes .....	22
3.4 Hybrid (Blended) teaching: Faculty & Students’ Experiences .....	25
3.5 Summary of the Literature Review .....	28
<b>4.0 STUDY PURPOSE AND SPECIFIC AIMS</b> .....	<b>29</b>
<b>5.0 DESIGN AND METHODS</b> .....	<b>29</b>
5.1 Setting .....	29
5.2 Inclusion criteria .....	30
5.3 Procedure .....	30
5.4 Data analysis .....	31

5.5 Ethical considerations .....	31
5.6 Risks and Benefits to the Participants .....	32
5.7 Credibility and Trustworthiness .....	33
<b>6.0 RESULTS .....</b>	<b>32</b>
6.1 Findings from Interviews with Instructional Designers .....	32
6.2 Findings of the Program Evaluation Survey Completed by Faculty .....	36
<b>7.0 DISCUSSION .....</b>	<b>45</b>
7.1 Study limitations .....	48
7.2 Conclusions & Implications .....	48
<b>8.0 REFERENCES .....</b>	<b>50</b>
<b>9.0 TABLES .....</b>	<b>55</b>
9.1 Summary of the Literature Review Table .....	55
<b>10.0 APENDIXES .....</b>	<b>62</b>
10.1 Appendix A Interview Questions .....	62
10.2 Appendix B Course Evaluation Survey 1 .....	63
10.3 Appendix C Course Evaluation Survey 2 .....	65
<b>11.0 FIGURES .....</b>	<b>.....</b>
11.1 Vygotsky’s Framework .....	14
11.2 The Structure of a Human Activity System .....	15
11.3 Third Generation Systems Activity Theory Model .....	16
11.4 Summary of Findings using CHAT Model.....	48
<b>12.0 GRAPHS .....</b>	<b>.....</b>
12.1 Summary of the Scopus Search .....	19
12.2 Summary of Support Experienced by Faculty from Instructional Designers .....	36
12.3 A Summary of the Usefulness of the Review Workshops .....	38
12.4 A Summary of the Participants’ Improved Knowledge .....	39
12.5 Knowledge Gained in the Content Delivery Tools .....	39
12.6 Level of Support from the Designers .....	40
12.7a Level of Preparedness to Teach Online .....	40
12.7b Level of Preparedness to Teach Online .....	41

## **1.0 INTRODUCTION**

Although computer-based instructional technology has been around for several decades, in recent times the velocity of its use in higher education has been growing at an astounding rate worldwide (Cook & Triola, 2014). Many institutions of higher education have embraced instructional technology and online education to reach out to more diverse student body, to respond to the issue of limited physical space, and to overcome decreasing on-campus student enrollments. By offering online education, universities and colleges are able to attract students from diverse geographical locations, beyond the traditional reach. Some authors (Biesta, 2007; Davidson, 2015) warn however, that institutions of higher education are implementing new technologies to support learning despite the paucity of evidence to guide their most efficacious use. A key question for university teachers who develop online curricula is to discern what technology infrastructure should be available and how to best support student learning using new technologies.

### **1.1 Background**

Currently, several perspectives exist on what makes students attracted to educational technology and what aspects of educational technology students prefer most. One perspective that generated considerable controversy was offered by Prensky (2001) who introduced the concept of “digital natives” or “modern students” (educational technology enthusiasts) and the concept of “digital immigrants” (people less amiable to use modern educational technology because of their more advanced age). Since the time Prensky’s (2001) work was first published, many authors critiqued or revised his ideas. Most notably, White and LeCornu (2011) introduced the concept of continuum of the Web “visitors” and “residents” as an alternative for Prensky’s “digital natives” and “digital immigrants.” They challenged the basic premise of the age factor upon which Prensky constructed his ideas of skills and engagement in web technology by suggesting that, regardless of age, people use the Web to a higher degree (“residents”) or lower degree (“visitors”) depending on their need while fulfilling similar purpose. White and Le Cornu (2011) assert that even when someone is quite involved in an online community or uses technology at a higher literate proficiency and thereby is labeled a “resident,” there is still equal opportunity for the “non-residents” to flourish in similar setting. Moreover, they propose that a person who is a later adopter or less active user of online educational resources at first, may not only catch up with the more frequent users but also become more proficient in the said new technology than the established “residents.” They also maintain that people

develop skills to use educational technology based on personal needs and motivation rather than age, just like learning any other life skill.

Likewise, Connaway, White and Lanclos (2011), based on the findings of an ethnographic study, concluded that people of all ages can get inspired to use educational technology. Specifically, Connaway and team (2011) suggest that, regardless of age and computer skills, many students see online education as a more attractive way to reach their educational goals than the traditional, classroom based teaching. Kuehn (2011) went a step further by putting to question the accuracy of any technology related labels. Kuehn (2011) refers to the Web based characterization of people as unfair and uses himself as an example of a person broadly labeled as “digital immigrant” in spite the fact that he was the one who created new educational technology throughout his long career.

Currently, considerable evidence supports Kuehn’s (2011) insights. Ozdemir and Abrevaya (2007) conducted a survey of over 2000 colleges and universities in the United States and found that nearly 3.2 million students of various age groups took at least one online course in 2006, a considerable increase of 800,000 students over the previous year. Moreover, they found that enrollment and graduation rates from online educational offerings were similar for students across the age groups and, in addition to cyber-universities, over 400 ‘brick and-mortar’ institutions of higher education (including such prominent universities as Columbia University, the University of Maryland, and Pennsylvania State University) offered effective graduate level educational programs completely online in 2007 (Ozdemir & Abrevaya). More recently, Docebo (2014) provided a global overview of the current state of online education and made projections for the use of online education worldwide, and produced similar findings. In particular, Docebo’s (2014) report suggests that although the North American market for online education is most mature and fast growing, other world regions currently develop online educational offerings at an astounding rate and are projected to grow even more rapidly in the near future. Consequently, the motivation to provide online course offerings among the institutions of higher education is currently at all-time high all over the world.

However, there are many challenges inherent with offering online education that must be considered when institutions of higher education are pursuing such initiatives. Disadvantages and unanticipated consequences of educational technologies use identified in the literature have included social isolation, lack of personalized attention to students, increased course development time and costly technological infrastructure that must be constantly maintained and upgraded by specialized support staff, a need for ongoing faculty development, and poor



quality education where instructional design support is not available to faculty (Cook, 2007; Cook, 2014). There is also evidence that online education offers some unique and potentially transformative benefits such as the flexibility that helps to overcome barriers of time, distance, and pace of learning, control over course quality and content, and an improved ability to generate and analyze data regarding the process and outcomes of learning (Cook & Triola, 2014). In short, there is substantial evidence that educational technology can support excellence in teaching and produce the desired learning outcomes when it is used appropriately.

Although it is clear that quality of online education is of concern to institutions of higher education worldwide, universities and colleges that pride themselves for offering small on-campus classes, easy student access to faculty, and mission based professional formation of students, appear to be most concerned about the potential negative consequences of online teaching learning on the university mission. One example of such institutions is Seattle University, in Seattle, United States. As an institution of higher education, Seattle University bases its approach to teaching in 450+ year-old Jesuit Ignatian pedagogical tradition of educating the “whole persons to become leaders for just and humane world,” a practice that has long proved effective through classroom teaching, service learning, and in-person coaching of students by faculty (Brown & Duguid, 1991). In other words, faculty members in Jesuit institutions of higher education, in the spirit of Ignatian pedagogy, accompany learners not only in knowledge acquisition but also personal growth and development. Brown and Duguid (1991) assert that Ignatian pedagogy is more than teaching; it is a worldview and a vision on how to approach learners in the education process. At the heart of this worldview lies a conviction that Ignatian pedagogy should be incarnated in the teacher student relationship, which should be a mentor-mentee relationship that is built overtime to educate leaders who uphold the principles of social justice regardless of their chosen profession. As a result, faculty in Jesuit institutions may approach online teaching as being in direct conflict with the principles of Ignatian pedagogy because professional formation of students cannot be carried out in ways it was designed to long time ago. Therefore, Brown and Duguid (1991) assert facilitators and inhibitors to online education should be considered when an institution of higher learning, such as the Seattle University, considers the use of new educational technologies for teaching purposes. Furthermore, Brown and Duguid (1991) point out, one important inhibitor may be an existence of fewer early adopters of technological innovations when compared with other university settings because of the longstanding tradition of Ignatian pedagogy.

Wilson and Stacey (2004) suggest that broad adoption of new learning technologies across the institutions of higher education may become a perfect setting for culture clashes especially where there is a long, mission driven tradition of face-to-face interactions with students for the purpose going beyond pure education, such as the Seattle University. They suggest a need to focus on support staff competent and enthusiastic about delivering online education to aid with the university faculty professional development and buy-in of online education. One specific example is Seattle University, which is the research site for this master thesis. Among other online teaching initiatives, Seattle University uses Canvas Learning Management System (LMS) to organize course materials online and to facilitate course communication between faculty and students. Information Technology department on campus offers periodic classes for new and existing faculty who want develop or improve their skills of using Canvas resources. Still, the faculty use of these resources is inconsistent across the campus, pending faculty availability, professional investment in the use of educational technology, to name only a few. Wilson and Stacey (2004) maintain that frequent and flexible workshops, action learning projects, and consistent website support are among the most effective strategies to gain faculty buy-in for the use of educational technologies. These strategies have helped many faculty at Seattle University to master the use of Canvas; still, as a resource, Canvas is not used by all SU faculty to its full potential. Beyond the use of Canvas at Seattle University, working off the recent online teaching movement worldwide and the long value based tradition of face-to-face education at Seattle University, a special department called COPE has recently been opened and staffed with instructional designers to help faculty incorporate innovative teaching strategies such as the flipped classroom, hybrid (blended), or complete online course teaching into their repertoire of course offerings (O'Flaherty & Phillips, 2015).

In summary, support for innovative teaching approaches offered by the COPE Department at Seattle University intends to reinvent the way faculty approach course organization and delivery. Course innovations are consistently nested in the Jesuit tradition of Ignatian pedagogy paradigm although anecdotally, faculty buy-in of educational technologies is not consistent across the campus. A question remains, therefore, whether mission and value driven institutions of higher education, such as the Seattle University, can swiftly and effectively transition to online education and the use of educational technology in the 21<sup>st</sup> century, while retaining their core mission and values.

## **1.2 Purpose**

The overall purpose of this master's research thesis is to (1) investigate the instructional designers' experiences with teaching an online course development program and (2) to investigate the participating faculty's experiences with learning online course development strategies at Seattle University, Seattle, United States. The specific aims are to: (a) explore the instructional designers' perceptions of introducing the ideas of online education; (b) to explore their perceptions of facilitators and barriers to broader implementation of online education at Seattle University and (c) to assess the faculty perceptions of the learning process and knowledge gained on how to implement online teaching in the Fall 2013, and Winter and Spring 2014, which was the first set of courses.

Engeström's (1987, 1999a, b; 2000; Engeström & Sannino, 2010) Cultural Historical Activity Theory (CHAT) was used to guide data collection, analysis, and discussion of findings. Briefly, at its current level of development, Engeström's theory considers the interactions between activity systems, which are central to CHAT theory, and collectively contribute to organizational change through multivoicedness, tensions, and struggles of ideas. The literature review in this master's thesis provides an overview of evidence regarding the use of technology in flipped classroom and online and hybrid education. In particular, an overview of the facilitators and barriers to quality distance and hybrid education is presented, which Seattle University is aiming to embrace by initiating COPE Department and hiring instructional designers to teach faculty how to use various educational technology tools. Subsequently, research findings are presented and discussed using Engeström's (1987, 1999a,b; 2000; Engeström & Sannino, 2010) framework and the relevant literature. Recommendations for future research and practice conclude the paper.

## **1.3 Significance**

This master's thesis research offers new insights about the instructional designers' and faculty experiences with transitioning to online education at a mission and value driven institution of higher education (Seattle University) that holds the face-to-face teaching and learning, and professional formation of students through in-person interactions with faculty in highest esteem. The study illuminates some tensions that arise when attempting to introduce online teaching technology to faculty at SU. Information gathered from this study may be used by Seattle University and other mission and value driven institutions of higher education to improve

existing support systems for online education and thereby, contribute to the proficiency in the use of educational technology tools in online and hybrid course development while upholding institutional mission and values.

## **2.0 THEORETICAL FRAMEWORK**

This section addresses (1) the history of the selected theoretical framework's development; (2) the framework's current state of development; (3) the framework's intended use to guide data collection, analysis, and discussion of findings.

### **2.1 Cultural Historical Activity Theory (CHAT) Development**

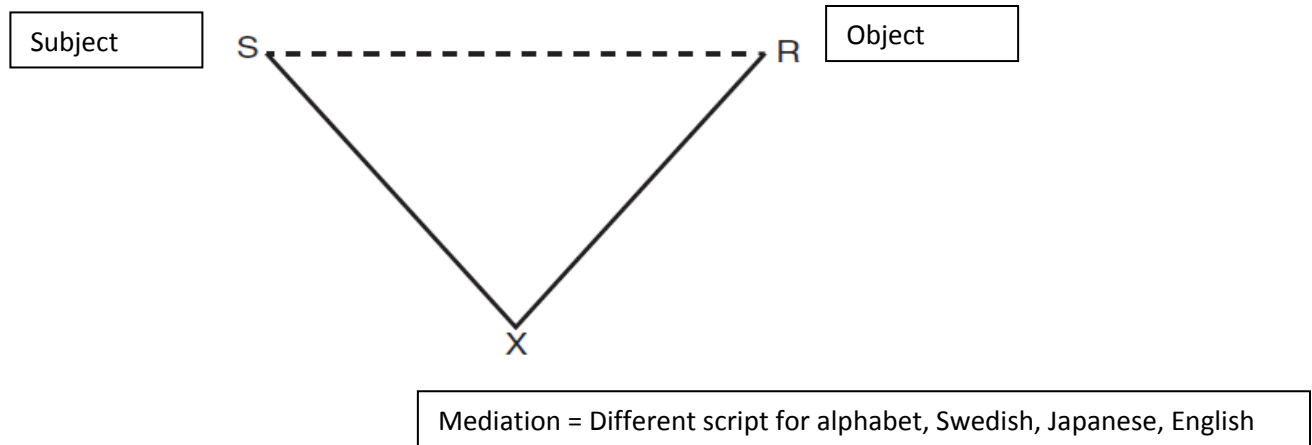
In selecting the theoretical framework for this master's thesis Learning Theory v6 Concept Map by Millwood (2013) was utilized. A theoretical framework seen as most fit with the research questions at hand thereby selected to guide this study was the Cultural Historical Activity Theory (CHAT) (Bedney & Meister, 1997; Leontyev, 1978; Vygotsky, 1978) and the works of works of Yrjö Engeström's and his team (1987, 1999a,b; 2000; Engeström & Sannino, 2010) that built on and expanded CHAT theory. This framework was selected because it helps to understand how the components in activity systems influence the faculty's use of different instructional tools, namely, modern educational technology, to support teaching. In an activity system there is a number of cultural and environmental influences such as the institutional mission and vision, institutional culture, faculty peer influences, and the students' needs and expectations, to name only a few. The theory provides a frame for investigating not just the teaching activity but also the relations between the components of the activity system, including the rules, community relations, and division of labor. Changes within and between these components may give rise to contraindications and tensions that can collectively produce altered reality and institutional growth. The development features of CHAT theory in its current level of development are discussed in detail in the subsequent paragraphs.

### **2.2 Engeström: A Leader of Developmental Work Research**

Over the past several decades Engeström has been the leader in the Developmental Work Research, Adult Education, and Theory of Learning Institute at the University of Helsinki, Finland (Engeström, 2015). The roots of Engeström's theory lay in the works of Vygotsky and Leontyev (also spelled Leontiev and Leont'ev). The key principle of Vygotsky's theory,

developed in the 1920s and 1930s, is that human beings cannot be understood without first understanding their cultural background. Vygotsky posits that culture and culturally based social interactions play an important role in the development of human action and cognition. Vygotsky asserts that every person's cultural development takes place during childhood through social interactions with others and subsequently, on individual level, inside one's mind. Vygotsky claims that this development applies evenly to voluntary attention, memory, and to the shaping of concepts in one's mind. He also suggests that the higher level brain functions are initiated as the actual relationships between individuals are formed (Vygotsky, 1978, pp. 56-57). The relationships between the key ideas in Vygotsky's theory have been at first depicted as a triangular model of connection between the stimuli (cultural acts) (S), objects (responses) and (I) instrument (tool) on the top, and subsequently presented as a triangular model of interconnectedness between the stimuli (cultural acts) (S), objects (responses) and, at the highest level, complex, mediated acts which transcend the first two concepts. In 1930, Vygotsky sketched his idea of stimulus-response process by depicting the complex mediation process as a broken line (Figure 11.1).

Figure 11.1. Vygotsky's Framework as per Engeström, 1987, p. 47.

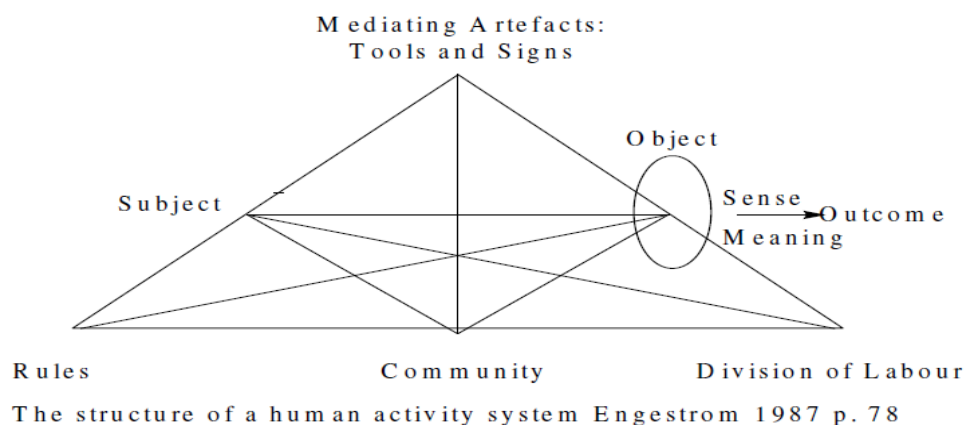


Although Vygotsky's ideas were revolutionary for his times because of the notion of cultural influences on human development and learning, a major limitation of Vygotsky's work was the focus on individual. Vygotsky's follower and mentee, Leontyev, further developed and expanded Vygotsky's ideas to include collective thinking. The key concept of Leontyev's (2009) work was the proposal that researchers can investigate the processes guiding human actions and

interactions using three different levels of analysis. Leontyev proposed that the highest level of analysis is the most general level that focuses on the activities and motivations that drive human actions at the broadest level. According to Leontyev, the second highest level of analysis is the intermediate level which considers human actions as the context for achieving some important goals. At the lowest level of analysis human actions are the key to understanding the ways by which one can achieve the highest-order goals. Leontyev has never graphically represented his theoretical model of collective systems thinking, however, Engeström (1987, 1999a,b; 2000; Engeström & Sannino, 2010), who built on the works of Vygotsky, Leontyev, and other developmental psychologists, did.

Engeström's work eventually resulted in the development of the Theory of Expansive Learning (Engeström, 1987, 1999a,b; 2000; Engeström & Sannino, 2010). In this theory, Engeström uses systems approach to understanding human activities and learning. The concept of activity system is central to Engeström's (1987, 1999a,b; 2000; Engeström & Sannino, 2010) theory. He asserts that the actions of human beings take place to achieve certain goals. Engeström (1987, 1999a,b; 2000; Engeström & Sannino, 2010) call it The Structure of a Human Activity System. Schematic representation of the concepts and relationships included in the Engeström's Human Activity System is depicted in Figure 11.2.

Figure 11.2. The Structure of a Human Activity System (Engeström, 1987, p. 87)



According to Engeström (1987, 1999a,b; 2000; Engeström & Sannino, 2010), the object of human activity is a constantly moving and reframing target that cannot be reduced to small or

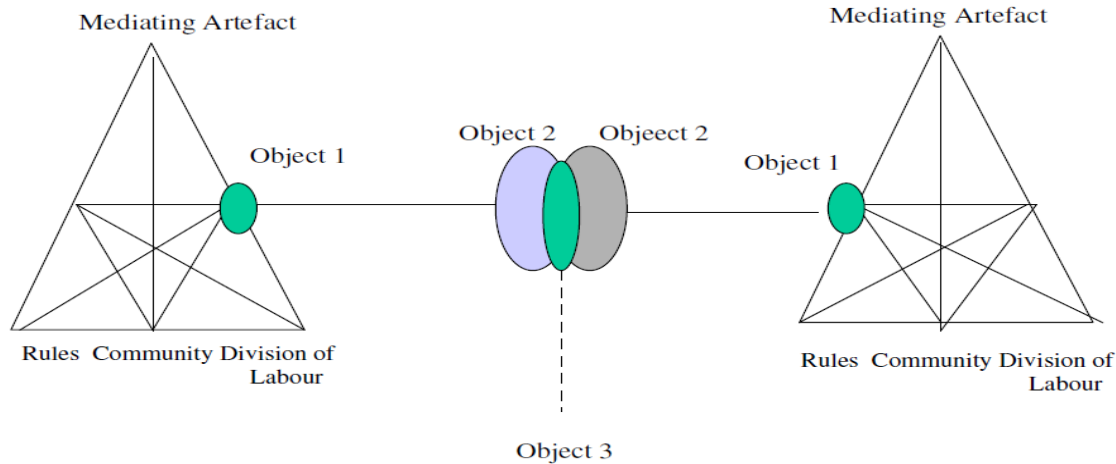
short-term goals. Thus, Engeström's theory may be best understood through the understanding how the elements within the system co-exist and affect each other.

Over time Engeström expanded the original triangular representation of the relationships within the activity system to enable an examination of the systems at the macro level and their relationship with the individuals within these systems on the micro level. Therefore, Engeström (1999a,b; 2000) primarily saw a joint activity of a group of people as a more important unit of analysis than activity of individual people. Engeström and Sannino (2010) assert several principles must be considered in this kind of analysis. First principle is to acknowledge that an activity system is a primary unit of analysis. Moreover, they assert that individual thinking is subordinate to the group thinking. The second principle of Engeström's framework is the principle of activity system which is defined as a collection of multiple points of view, traditions, and interests that work together as a whole. Engeström and Sannino (2010) acknowledge that activity system can be a source of trouble, innovation, and negotiation that demands translation of actions into the tangible results. The third principle is an acknowledgement that human activity systems are shaped over time. Engeström and Sannino (2010) posit that the problems associated with human actions can therefore be best understood in the context of activity systems and historical events during which these actions took place. In his theory, Engeström draws on the ideas of dialog (dialogicality), multiple perspectives (multivoicedness), contraindications, and struggles (Engeström & Sannino, 2010). They posit that contraindications take place because of different understandings and motivations of people within them. They also suggest that tensions and contraindications are the driving forces of change. When they originate new ideas and ways of thinking that meet the need for change, expansive learning takes place and leading to the formation of a new, expanded object and patterns of activity and ultimately, to achieving given goals. Although the process is not easy and often time consuming because the tensions and contraindications between the participating activity systems may be strong, Engeström asserts they are the drivers of change (Engeström, 2005).

On the other hand, Engeström's (1999a,b) graphic representation of how activity systems co-exist and relate to each other in the revised theory (often referred to as the Third Generation Systems Activity Theory Model) is depicted in Figure 11.3. Engeström (1999a,b) maintains that although the sketch depicts just two interacting activity systems it could be

expanded as a myriad of activity systems exhibiting relationship patterns of contradictions and tensions that could result in change.

Figure 11.3 Third Generation Systems Activity Theory Model (Engeström, 1999b).



In the subsequent years Engeström and colleagues continued to explain the relationships between the elements of the CHAT theory expanding its depth. Concurrently, Engeström's students, colleagues, and others conducted qualitative, descriptive, and intervention studies using Engeström's theory as a theoretical framework, and thereby demonstrating the theory's utility. Engeström and Sannino (2010) published a summary of Engeström's ideas accompanied by a literature review of research studies that used Engeström's framework. Engeström and Sannino (2010) divided the studies into thematic groups based on their purpose and specific aims. They summarized findings of research conducted to investigate expansive learning as a way to transform the objects of study (for example, behavior change in students participating in expansive learning approach); expansive learning as a movement in the proximal zone to promote human development (for example, improved students' achievement on standardized tests); expansive learning as cycles of learning actions (for example, evaluation of the complex organizational transformation processes); expansive learning as boundary crossing and network building (for example, studies demonstrating positive developmental outcomes of the organizations that exercise collaborative attitude); expansive learning as distributed and discontinuous movement (for example, studies that analyzed learning across networks and organizations); and formative interventions (studies that used theory based interventions to produce change). Based on the synthesis of the literature that used Engeström's framework,



Engeström and Sannino (2010) concluded that Engeström's theory at its current level of development expands its applicability to activity systems on the broadest level and the issues of subjectivity, human experience, emotion, and moral commitment on the micro level (individual level) of analysis.

### **2.3 Application of the Theoretical Framework to Guide this Master Thesis**

Engeström's theory is used to guide this master thesis' research data collection, analysis, and discussion of findings. In particular, the instructional designers employed at Seattle University are considered to be one activity system and the Seattle University faculty participating in online course development program, the second activity system. CHAT analysis concerns the relations within and between components of two or more activity systems in order to discern where the tensions arise. Instructional designers and faculty participating in the online course development program at SU share the desired outcome: achieving teaching excellence by improving teaching practices. However, some differences appear to exist in the structural components of rules, community relations, and division of labor. Data collected in this study is analyzed using CHAT theory while keeping in mind Seattle University's history, mission, vision, and values. One of the key principles of the Engeström's framework is the consideration of the role of contradictions as sources of change and growth. In this study, contradictions are therefore considered as drivers of change to produce altered reality. Within the context of Seattle University, faculty who volunteered to expand their knowledge of educational technology tools and learn online course development are faced with having to put the University's mission and values into action outside the classroom walls. On the other hand, the instructional designers are faced with having to demonstrate how the online education can support the University's ideals. Engeström's theory asserts the possibility of transformations within any given activity systems that encourage wider horizons of thinking. In the context of Seattle University this may be a re-framing and altering of teaching practices by effective utilization of educational technology while retaining the ideals of Jesuit pedagogy and mission.

## **3.0 LITERATURE REVIEW**

### **3.1 Methods of Literature Search**

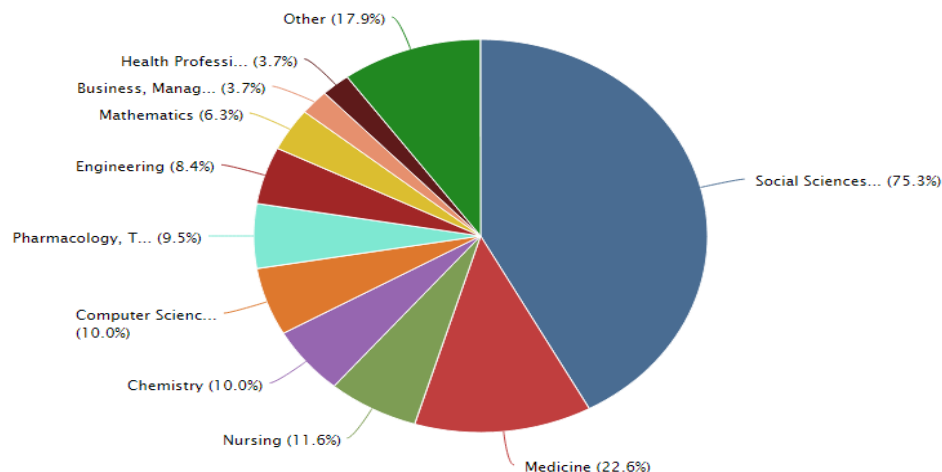
Understanding of what is known and what missing in the literature on online teaching and learning is critical to helping investigators conduct new research and instructional design

departments develop support systems for all online teachers in higher education. To describe and synthesize the knowledge about online teaching and learning this literature review provides an overview of the following topics: (1) online faculty's skills/competencies and perceptions of online teaching in higher education, (2) faculty and students' perceptions of flipped classroom approach teaching effectiveness, and (3) faculty and students' perceptions of hybrid (blended) approach to teaching effectiveness.

The literature review for this study was conducted to investigate the state of the science on the topic of online, hybrid (blended), and flipped classroom teaching. The initial keywords used to facilitate the search included: flipped classroom OR hybrid (blended) learning AND university OR higher education AND NOT k12 AND NOT elementary AND (LIMIT-TO(AFFILCOUNTRY,"United States" ) AND (LIMIT-TO (DOCTYPE,"ar" ) ) AND ( LIMIT-TO(SRCTYPE,"j" ) ). The search resulted in a large number (over 700) of publications. Hence, the search was then limited to only 'Journals' for Source Type, and 'Articles' for Document Type and United States for the location of the current study. This specific filtered search yielded (189) document results of peer reviewed journals published between 2012 and 2016 located through Scopus search, which is the largest abstract and citation database of peer reviewed literature, recommended as the best tool by the research course teachers at Gothenburg University. Additionally, several relevant older works (published between 2005 and 2015) were manually identified using the reference lists in the articles located through Scopus or Google Scholar. The selected works are included in the Literature Review section. Search terms included in this additional search included the following keywords: "motivators and inhibitors of online teaching", "online faculty experiences", "distance education ", " e-learning ", " flipped classroom, teaching online ", " online education ", " activity theory". These keywords were selected because they are relevant to the concepts of the selected theoretical framework and the overall research question and specific aims of this study. A summary of the studies included in this literature review is presented in Table 9. 1. A Summary of the Scopus search results are presented in a Graph 12.1.

Graph 12.1 Summary of the Scopus Search Results

## Documents by subject area



Articles discussed in the subsequent sections are arranged using similar themes and chronological order from the earlier to the latest.

### 3.2 Online Teaching in Higher Education: Faculty Skills/Competencies/ Perceptions

In one of the earlier studies, Yick, Patrick and Costin (2005), using qualitative design, investigated navigating distance and traditional (classroom based) higher education by exploring the faculty's experiences. A total of N = 28 faculty participated in a threaded, asynchronous discussion online that resembled a focus group. Study participants discussed perceptions of online teaching, working at an institution of higher learning without a tenure system, and the role of research in distance education. Participants viewed the online education as 'less' valuable and effective than the traditional, classroom-based education. They perceived the issue of tenure (permanent employment in academia characteristic of North American Universities achieved while the rank of associate professor is earned) as important to progression in academic ranks; however, they collectively concluded the issue of tenure may become less important in the future. In addition, study participants identified challenges associated with teaching online as well as, several mechanisms potentially helpful to improving the general perceptions of academics about the quality of online education. Firstly, they identified a need for more research. Secondly, they suggested that online teaching should be offered to faculty volunteers who, by demonstrating the success in online teaching, might be able to sway the negative perceptions of others about the online teaching and use it as opportunity to bring along other faculty. Moreover, participants identified appropriate training

and resources for faculty who teach online as the highest priority intervention to ensure the success of online education. Although issues investigated in Yick's et al. (2005) study are not explored in the context of Jesuit university's mission and values, they are relevant to this master thesis research, because they explored teachers' concerns in a broader context.

In a subsequent investigation, Kreber and Kanuka (2006) explored the meaning of the scholarship of teaching and learning in an online teaching environment. The authors identified that the most important reason identified in the literature as the barrier to online teaching is the faculty's tendency to carry on traditional, educational practices to the online classroom, making the teaching quite ineffective without any proper training for online teaching strategies. Hence, they argued that gaining new evidence about what are some effective and ineffective features of online education, what are some effective versus ineffective testing strategies in online courses, and what are the outcomes of online education will contribute to improving the effectiveness and the buy-in of teachers' and learners'. Given the expanding interest and demand for online learning, combined with the evidence showing that higher learning outcomes are not easily achieved in the online courses, it is imperative to advance the scientific knowledge of how to best facilitate effective online teaching and learning methods to improve teaching effectiveness and learning outcomes of university students (Kreber & Kanuka, 2006, p. 121).

Conversely, Gannon Cook, Ley, Crawford and Warner (2009) investigated the motivators and barriers in distance and online education for university teachers. Using retrospective design, and the principal components analysis (PCA) method, the authors analyzed findings from four quantitative surveys conducted with several hundred of individuals each. The aim of this investigation was to explore if reward systems play an important role in providing incentives for university faculty to teach in electronic distance education. Based on the comparison of findings from three studies the researchers identified many similarities, although not always in the same order. Three out of four studies identify intrinsic motivation to participate in distance education as sufficient incentive. Likewise, intellectual challenge, opportunity to diversity program offerings, job satisfaction, and an opportunity to improve teaching skills were identified as motivators in the first three studies. Findings from the fourth study included in the analysis agree that while most faculty are indistinctly motivated to help the students, later adopters of distance education are motivated by extrinsic factors such as technology support, salary increase, merit pay, course release and tenure considerations. Authors concluded that the future of distance education lays both in the hands of faculty and university administration

who must offer support faculty to facilitate enthusiasm for distance education through appropriate supports and reward system.

In a subsequent investigation, the notion that effective teaching and learning primarily takes place in the institutional context was challenged by Ranieri, Manca and Fini (2012). Using survey method, they sent two questionnaires to the N = 1107 participants of five Facebook groups of teachers, with the aim of identify mechanisms underlying group membership and implications of peer support for the faculty professional development. The groups were identified using the following criteria: domain, education-related issues, network with at least 500 members but less than 1500, and practice of sharing teaching resources. Authors tested multiple hypotheses in order to explore the nature of three dimensions (domain, network, and practice) involved in these groups. Results showed that groups are characterized by the mechanisms of affiliation and participation, as well as of shared resources.

In another study, Lawrence and Lentle-Keenan (2013) took a broader approach with their investigation of teaching beliefs and practices among academic teachers. The authors considered institutional context and an uptake of web-based technology, and the relationships between these concepts. They used semi-structured qualitative interviews with N=6 teachers, which they subsequently analyzed using inductive analysis and cultural historical activity theory as a framework. They found that teachers' beliefs about teaching, teaching experience, perceptions of technology, and institutional priorities affected their perceptions and motivations for using technology and teaching online. Workload constrains and the learning management systems available for faculty (most notably lack of instructional designers to help with online course design) were also among the inhibitors.

In summary, literature included in this section suggests there is considerable difference between the face –to-face teaching and online teaching, whether it is complete online teaching, hybrid (blended), or flipped classroom teaching. Secondly, there is a general assertion in the works described above that while online teaching is evolving, its sophistication and effectiveness is growing. Finally, authors consistently suggest that online teaching strategies and outcomes of online education need to be further investigated using empirical methods for online teaching to be revised and upgraded in the future.

### **3.3 Flipped Classroom: Faculty and Students' Experiences & Teaching Outcomes**

There are criticisms of educational research in general and in particular, of the pervasive lack of empirical approaches to systematically evaluate online teaching modalities. One of the new and emerging teaching methods is the flipped classroom approach. Using this approach, the typical lecture and homework elements of the course, with the assistance of innovative educational technology, are reversed in the flipped classroom. Typically, videotaped lectures are provided for students online for viewing at home before the face-to-face session, while the face-to-face time is devoted to exercises, projects, or discussions. In other words, this innovative teaching method incorporates the elements of online and traditional classroom and in recent years it has shown promising results in terms of its effectiveness (Ayers, 2006; McLaughlin et al., 2014).

Several early adopters of the flipped classroom approach (Bergman, Overmyer, & Wilie (2011) wrote an online editorial to delineate similarities and differences between flipped and traditional classroom and discussed what flipped classroom is and is not. Bergman et al. (2011) suggest that a flipped classroom provides means for increased interaction and personalized time between students and teachers, a greater opportunity for the students to take responsibility for their learning, and for blending online instruction and hands-on learning. Moreover, Bergman and team noted that teacher-created lectures and videos may also be used as a resource for students who are absent due to sickness and, for all students, as a review material prior to exam. Identifying weaknesses or inhibitors associated with the flipped classroom method was not central to Bergman's et al. (2011) exploration.

However, others addressed the drawbacks of the flipped classroom teaching method. Nielsen (2011), in an online blog, discussed her reservations about the flipped classroom approach including the lack of accessibility to instructional resources for posting online materials, increased time required for teachers to prepare lectures without apparent improved pedagogy, and the lack of proper teacher education. Likewise, Milman (2012) outlined several concerns associated with the flipped classroom method; most notably, poor quality of video/online material production by unskilled teachers, potentially poor environment in which the students view it, inability by the teachers to monitor how much material students understand, and the potential barriers to using flipped learning by the students with disabilities and whose English is a second language. The findings of the investigations regarding students' and teachers' perceptions of the flipped classroom's approach effectiveness lend themselves to the questions explored in this master's thesis because the perceptions of information technology use in teaching may be an important asset or inhibitor when attempting to alter teaching practices.

In the subsequent investigations, researchers set out to produce evidence on how well it works and thus, to discover the effectiveness of flipped classroom method using empirical methods rather than anecdotal knowledge or expert opinion. In a prospective study, using pre and post-test approach, Sparks (2013) was one of the first to examine whether there are some distinct learning outcomes previously attributed to the flipped classroom method. The results from his study indicate that flipping the classroom did improve the test scores only for 14% of the students while 3.7% of students had lower scores. The remaining students' scores did not change significantly. However, 88% of the students self-reported that the flipped classroom resulted in more studying. Sparks noted that flipped classroom provides more opportunity for the students to use technology for learning and more time for interaction with the teacher while in the classroom. He concluded that the value of the flipped classroom appears to be not in the method but in the skillful use of technology to increase the time students spend learning at home and practicing new skills in the classroom.

In contrast, Enfield (2013) conducted a detailed case study in which flipped classroom methodology was applied at California State University. Enfield evaluated flipped classroom method effectiveness by investigating N=34 students' perceptions as well as, teacher self-reflection about the experience. Similar to Sparks (2013), Enfield found that both faculty and students thought of flipped classroom (students learned at home by listening to narrated lecture and spent classroom time on case studies) as an engaging learning approach that helped students to master content, improve self-esteem, and improve learning skills. However, Enfield did not evaluate whether the benefits of using flipped classroom approach went beyond teacher and students' satisfaction or whether the students actually learned more.

In a subsequent investigation, researchers documented benefit of using flipped classroom approach in the various higher education settings. Tune, Sturek, and Basile (2013) investigated graduate students' performance when using flipped classroom. Similar to Enfield's (2013) investigation findings, the students in Tune's et al. (2013) study were required to watch the prerecorded lectures and complete quizzes before class and then attend face-to-face class, where they had exercises based on what they learned in pre-recorded lecture. The assignments, valued 25% of the final grade, were followed by a question and answer and problem-solving class period. In the traditional classroom setting, attending class was optional and there were no quizzes. In both settings students were required to take mid-term and final exam. Students in the flipped course scored significantly higher ( $p \leq 0.05$ ) on the cardiovascular, respiratory, and weighted cumulative sections by an average of 12 percentage

points. Exam averages for students in the flipped classroom were also higher on the renal section of the course (by 11% points). The authors concluded that the weekly quizzes and discussions worth 25% and offered only in the flipped classroom were the primary motivator to consistent student study habits (listening to pre-recorded lectures at home), and therefore, better learning outcomes. They also concluded that flipped classroom model may be an effective and intellectually challenging means of teaching graduate students. Clearly, the flipped method allows freeing up teachers to work on subject material discussion and applied methods of course content in the classroom setting face-to-face. This approach challenges the very definition of traditional classroom teaching modality by blending both in-class and online settings.

Mason, Shuman, and Cook, (2013) have shown that course content offered in flipped classroom format can be covered at a much faster pace than the traditional classroom setting. They reported that in their study, by the fourth week of classes, the flipped classroom offering was already ahead of the face-to-face offering. To further identify the benefits of this method of course delivery, student learning was measured by standardized classroom tests in both groups. It was determined that the grades of students receiving flipped classroom education equaled or surpassed the grades of students receiving face-to-face offering. Moreover, students in the flipped classroom setting showed equal or greater satisfaction with the course than students in the face-to-face setting exclusively (Mason et al., 2013).

Better learning outcomes were also reported for students taking advanced college algebra in Love's et al. (2014) study. The study involved N=55 students in two sections of an applied linear algebra course, using the traditional lecture format in one section and the flipped classroom (self-study using pre-recorded lecture and completing online exercises at home and subsequently, doing case studies in face-to-face meetings in the classroom) model in another. In the flipped classroom model, students were expected to watch videos prepared by the instructor or reading the textbook or the instructor's notes. Content understanding was then measured by the performance on course exams. Students in the flipped classroom approach had a more significant increase in scores between the sequential and final exams. They were also more satisfied with the course than the students in traditional setting. Researchers concluded that flipped classroom is an effective teaching modality.

In conclusion, there is growing evidence to support the claim that a flipped classroom approach to teaching may be an effective teaching modality, in particular when teachers have a solid understanding of educational technology and use it effectively to support students'



preparation at home prior to face-to-face meetings. However, more research needs to be conducted with larger and more diverse samples of teachers and students before definite conclusions about this method's effectiveness can be made. Still, findings from research on flipped classroom supports this thesis research because it consistently suggests that the teachers' knowledge of how to use information technology effectively to put pre-recorded lectures and quizzes online may facilitate effectiveness of independent student learning prior to face-to-face meetings.

### **3.4 Hybrid (Blended) Teaching: Faculty and Students' Experiences and Outcomes**

Student satisfaction and outcomes of learning in hybrid courses have typically been investigated using the case study research approach. An analysis of student satisfaction with hybrid courses showed several benefits, in particular, when compared to the online-only format. For example, in one of the earlier case study publications Foster and Drew (2009), using qualitative approach, evaluated students' perceptions of learning environment and the actual learning of undergraduate Astrobiology students. In this investigation students appreciated flexible scheduling, self-paced online materials, and face-to-face interaction with faculty. Students' assessment of learning showed significant improvement in knowledge and improved ability to apply self-study skills.

Likewise, Lian and He (2013), in a study of 200 medical students who were randomly assigned to classroom or hybrid learning in one of the course found that students performed better on tests after the hybrid portion of the course than students in the face-to-face setting. Students in the hybrid group recognized that this learning format helped them develop more responsibility for their learning and perceived that learning was more fun. Lian and He concluded that online teaching is more effective than large classroom face-to-face teaching. At the same time, students in hybrid portion of the course expressed some concerns. That is, some students were concerned about their own time management and personal organization skills and group projects. Similar concerns were voiced in a study conducted by Sowan and

Jenkins (2013) who evaluated learning outcomes and perceptions of 60 undergraduate nursing students assigned to online (n=25) or hybrid (n=35) section. Overall, students in both sections managed to finish the course successfully, including the students with limited technology skills and resources at the beginning of the course. However, similar to other reports, distance students in this investigation complained of the lack of time management skills and troubles with collaborating on team projects.

Interestingly, not all studies showed improvements in student learning outcomes and satisfaction with hybrid course design. For example, Baele, Tarwater, and Lee (2013) investigated student satisfaction and student learning outcomes in the Anatomy and Physiology class using hybrid versus face-to-face design. They found no statistically significant differences in the learning outcomes and student satisfaction with course delivery between the sections. Moreover, students in this study found the face-to-face interaction with course faculty more beneficial than online learning. The authors did not specify, however, whether or not the online portion of the course was developed by faculty experienced with online teaching or received support from an instructional designer to make the presentation of content interesting and course assignments interactive, a potential pitfall that often limits the effectiveness of online education.

Likewise, researchers investigated student satisfaction between the on-campus course delivery and the blended distance section for graduate pre-service teachers (Parkinson, Greene, Kim, & Marioni (2003). The researchers employed survey design. During the preliminary analysis of the data, five themes emerged across all the survey questions: classroom environment, learning needs, learner efficacy, interaction and appropriateness of format for the content. While the students in face-to-face section consistently expressed satisfaction in all of the theme areas, the students in the hybrid class format were less satisfied. The researchers reported that these students felt it was too big of a sacrifice to spend so much

time on independent learning online, which they found concerning. In addition to student attitudes, researchers have explored whether hybrid learning impacts the student learning outcomes and found no differences between the groups.

In contrast, at the University of Central Florida, researchers (Dziuban, Hartman, & Moskal, 2004) found that hybrid course design had learning outcomes comparable to, and in some cases, better than face-to-face. Moreover, hybrid design lowered attrition rates from courses in comparison with the fully online students (Dziuban et al., 2004).

The perceptions and responsibilities of faculty teaching hybrid courses have also been studied. Conrad (2005) and Edginton (2010) assert that faculty teaching a hybrid course can expect to invest more time becoming familiar with available technology, creating online and in-class activities that flow well, and reflecting on overall course structure to be successful at teaching. Likewise, faculty are advised to take deliberate actions once courses begin to create online interactive discussion boards and monitor and respond to online discussion board postings to facilitate learning and indicate presence.

Unlike other investigators, who studied either the student or faculty perceptions of hybrid courses, Napier, Dekhane, and Smith (2011), using survey approach, investigated both the students' and faculty perceptions of transitioning to hybrid course teaching in an introductory computing course. Their findings supported Conrad's (2005) assertions that properly applied hybrid portion of the course can significantly reduce face-to-face instruction by incorporating rich, online learning experiences. To assess the impact of hybrid learning on students, survey data was collected at the midpoint and end of semester, and student performance on the final exam was compared in traditional and hybrid learning sections. To capture faculty perspectives on teaching blended learning courses, written reflections and small group discussions from faculty teaching blended learning sections were analyzed. Results indicate that student performance in the face-to-face and hybrid sections of the course were comparable and that

students reported high levels of interaction with their instructor in the latter one. They concluded that offering hybrid courses represents an innovative teaching methodology which, when the course is well designed, can offer superior learning experiences for students.

In conclusion, similar to the current state of knowledge on flipped classroom effectiveness, there is considerable evidence that hybrid course design may be an effective teaching modality, when faculties have solid understanding of educational technology to blend online classes effectively with the face-to-face meetings. However, while some studies are pointing to the superiority of hybrid teaching, research findings are inconsistent, putting to question teachers' creativity and mastery of educational technology as much as the method effectiveness. Hence, more studies need to be conducted with clear delineation of the teachers' preparation for online teaching before any definite conclusions about hybrid teaching effectiveness can be made. Regardless, findings from the existing research consistently point to the fact that the teachers' knowledge of educational technology and online course design are the key factors influencing the effectiveness of hybrid teaching.

### **3.5 Summary of the Literature Review**

The literature review for the current study provides the state of the science of the motivators and inhibitors of an online education using current educational technology tools based on highly referenced journal articles retrieved from the Scopus database, Google scholar, and manual search of references in the retrieved articles. The literature review presented in the preceding section focuses on the discussion of articles relevant but not limited to the research question of this master's research. In particular, the literature review provides an overview of the current state of the science about the teachers' and students' perceptions of online education and hybrid and flipped classroom approach to teaching and learning. Moreover, in the introductory section, the discussion of resources to support online education at Seattle University is presented to better understand the context for this study. Although considerable research has been conducted on the topic of barriers and facilitators of online, hybrid (blended) and flipped classroom education discussed in the previous sections, no published research was found that

specifically explored the experiences of instructional designers' and faculty (university teachers') within the context of a value based institution with a strong mission affinity to in-person, traditional classroom teaching.

#### **4.0 STUDY PURPOSE AND SPECIFIC AIMS**

As stated in the preceding section, the overall purpose of this master's research thesis is to (1) investigate the instructional designers' experiences with teaching an online course development program and (2) to investigate the participating faculty's experiences with learning online course development strategies at Seattle University, Seattle, United States. The specific aims are to: (a) explore the instructional designers' perceptions of introducing the ideas of online education; (b) to explore their perceptions of facilitators and barriers to broader implementation of online education at Seattle University and (c) to assess the faculty perceptions of the learning process and knowledge gained on how to implement online teaching in the Fall 2013, and Winter and Spring 2014, which was the first set of courses.

#### **5.0 DESIGN AND METHODS**

A mixed methods design was used to conduct the study. In-person interviews were conducted with the instructional designers who teach the online course development programs at Seattle University over the past few years. The interviews were audio recorded and transcribed verbatim for analysis. An online survey was used to assess the faculty's perceptions of the learning process and knowledge gained from the online course development program they took via the COPE Department at Seattle University.

##### **5.1 Setting**

The study was carried out at Seattle University, Seattle, WA. Seattle University is one of the top universities in the West, according to *U.S. News & World Report: Best Colleges 2016*. The university ranks #6 for its full range of undergraduate, master's and select doctoral degree programs. Enrollment in Fall 2015 included approximately 7,500 undergraduate and graduate students, 95% of which attend full-time. More than 30% of all students are from ethnically diverse backgrounds and approximately 10% are international students. Seattle University

offers an extensive array of programs in eight schools and colleges and certificate programs. Average class size is approximately 20 students per faculty and all classes are taught by faculty. Consistent with the Seattle University's 450 years of Jesuit tradition to educate the "whole person" and to promote and uphold social justice, three out of four Seattle University's undergraduate students engage in community service, three times the national average. Students, faculty and staff contribute over 200,000 hours of service to the community annually, representing some of the many unique features offered by this institution of higher education.

## **5.2 Inclusion Criteria**

Study participants were recruited from a population of three instructional designers employed at Seattle University in academic year 2013-2014 and the population of N= 71 faculty who participated in the online course development program via COPE Department at Seattle University from Fall 2013 through Spring 2014. All three instructional designers employed by the COPE Department at SU agreed to participate in the study. The course evaluation survey was sent to 71 faculty and 38 completed the survey. Both qualitative and quantitative data obtained from the surveys were included in the analysis.

## **5.3 Procedure**

Prior to submission of the research proposal to Seattle University Research Ethics Board for ethical review, an informal meeting was arranged with the instructional designers at the COPE Department at Seattle University to gain their support to conduct the study. Next, study proposal was submitted for ethical review to the Research Ethics Board at Seattle University and was granted an exempt from review status.

In-person interviews were conducted with all three instructional designers regarding their experiences with teaching the online course development at Seattle University. In particular, questions were asked about their satisfaction with teaching and perceptions regarding the facilitators and barriers to expanding online education within the Seattle University's context and thus, were guided by the theoretical framework. The interviews were audio recorded and transcribed verbatim for analysis. They lasted from 30-40 min each. The following open-ended questions guided interviews with the instructional designers to generate information regarding specific aim (1) and (2) and, as needed, probing was used to enhance the depth of participants' sharing (for summary of questions used to guide the interviews see Appendix A).

Additionally, all 38 surveys completed by faculty participating in an online course

development in Fall 2013 through Spring Quarters 2014 were used for analysis to meet the study's specific aim #3. Surveys were administered at midpoint (Appendix B) and upon program completion (Appendix C). The surveys included Likert scale type of questions and narrative comments.

#### **5.4 Data Analysis**

Summative Content Analysis (Hsieh & Shannon, 2005) was employed to analyze data from N=3 in person qualitative interviews conducted with the instructional designers and from narrative comments provided by faculty who completed program evaluation surveys. Steps of summative content analysis, as described by Hsieh and Shannon (2005) include **manifest content analysis** that consists of: (a) reading and re-reading of the entire text to gain an overall understanding of content; (b) reading of the text line by line and quantifying keywords and phrases derived directly from the text. In this study the following keywords/phrases were used to organize the interview text: (1) Teaching Online, (2) Course Design, (3) Education Access, (4) Campus Conflicts & Collaborations, (5) SU Mission relation with COPE Mission (6) Overcoming Challenges; (7) Faculty Distress and Development, (8) Teaching Innovation.

According to Hsieh and Shannon (2005), the second level of analysis is called **latent content analysis** which consists of (a) approaching the text by making notes of the researcher's first impressions, thoughts, and initial analysis; (b) clustering of information with similar content; and (c) identifying common themes and exemplar quotes that support the themes. The themes derived from the interviews with instructional designers (after data were clustered according to the keywords/phrases) are presented and discussed in the subsequent section. Because the final step of Summative Content Analysis approach involves deriving themes and interpreting meanings from the content of text data, the approach adheres to the naturalistic, qualitative paradigm (Hsieh & Shannon, 2005).

Quantitative data obtained from the course evaluation surveys completed by a sample of N=38 faculty (out of the population of 71 possible respondents) were analyzed using SPSS statistical software #18. Descriptive statistics were used to calculate frequencies, percentages, Means, and ranges for the individual survey questions and to develop graphs. Both quantitative data and qualitative comments obtained from faculty who completed the surveys were analyzed using Theoretical framework as a guide to understanding participants' responses.

#### **5.5 Ethical Considerations**

Confidentiality and privacy in this study was maintained by strict adherence to the Seattle University Research Board Guidelines. All returned course evaluation surveys were anonymous and only group data reported. Likewise, each of the interviews conducted with instructional designers was labeled with a unique identification number and only generalized findings are reported. There was no known conflict of interest between the investigator and the study participants.

### **5.6 Risks and Benefits to the Participants**

Participants were offered no monetary compensation for participation in the study. However, participation did allow the faculty to share their perspectives about the online course development program effectiveness and usability. Likewise, for the instructional designers participating in the study allowed them to share their perspectives on teaching, as well as, on the facilitators and barriers to the broader implementation of online education at Seattle University. The participation in the study was deemed unlikely to cause any harm or emotional distress to the participants and therefore was deemed an exempt from ethical review.

### **5.7 Credibility and Trustworthiness**

Rigorous adherence to the steps of summative content analysis outlined by Hsieh and Shannon (2005); prolonged engagement with study participants (repeated data collection points with faculty) and multifaceted data collection process that included interviews with instructional designers and mixed methods surveys of faculty participating in COPE program) were carried out to enhance the credibility and trustworthiness of qualitative data findings (Houghton, Casey, Shaw, & Murphy, 2013). Moreover, consistent with Coliazzi's (1978) recommendations I engaged in the process of bracketing during the data collection and analysis process in an attempt to set aside my personal assumptions about the topic under investigation. Clarifying insights with the study participants (instructional designers) throughout the interview process helped to accomplish this goal. I relied on this feedback to avoid bias, maintain clarity, and to present a true description of what was being said about teaching instructional design at SU. Faculty survey was developed by COPE Department and was not tested for validity and reliability.



## 6.0 RESULTS

### 6.1 Findings from the Interviews with Instructional Designers

Data obtained from the interviews conducted with instructional designers (N=3) revealed the following inductively developed themes that came from data: (1) “Teaching Online Course Development at SU: A Mostly Positive Experience”; (2) “The Key Driver: Passion to Expand the Access to Education”; (3) “Using Creativity and Collaboration to Overcome the Challenges”; (4) “Supporting SU Mission through Online Education”; (5) “Alleviating Distress of Faculty and Overcoming Challenges to Assure Progress”

The instructional designers participating in the interviews consistently revealed that teaching at SU, generally, was a positive experience. It was captured by the theme: “Teaching Online Course Development at SU: A Mostly positive Experience.” The overall perspective of instructional designers’ was that teaching an online course development was worth their efforts because it improved the faculty’s skills in teaching innovation using educational technology and thus, contributed to the overall quality of teaching at Seattle University. Instructional designers in this study reflected that watching the faculty’s enthusiasm as they mastered new instructional technology was most gratifying. On the other hand, dealing with the faculty’s lack of knowledge of educational technology and differences about understanding of teaching excellence between the instructional designers and some faculty was a challenge. Like others, one instructional designer reflected:

I really enjoy watching the faculty improving their comfort with using educational technology from podcasting to Prezi to thoughtful use of online discussion. I watch with amazement how some people’s skills grow from none to advanced skills in front of my eyes. The greatest transformation I observed was when I helped one faculty, who didn’t even know how to copy-paste, to gradually develop an entire course online. They now teach this course online. It required a lot of individual attention but was well worth it. This faculty is now a “convert”. It just tells you that with proper support anyone can master new technology to teach at least some content online effectively. On the other hand, when they (faculty) are not willing to consider the positive aspects of online education or are obstructionist to progress altogether it is difficult to bring upon change.

The interviewees specifically commented on the instances where faculty and administrators don’t believe that online teaching can reflect Seattle University mission and Jesuit/Ignatian pedagogy. The designers discussed how such beliefs/behavior stall the development and implementation of blended or fully online course offerings. They noted that even for faculty who have already become proficient in the use of educational technology and

are capable to deliver online, hybrid, or flipped classroom courses this may represent an important barrier. All three instructional designers described it as “missed opportunity to move on with times by some members of the Seattle University community” and saw it as a source of tensions and contraindications in how members of the university community see as teaching mission, something the instructional designers want to overcome. In this small study, tensions between the instructional designers’ desire for teaching innovation offered by educational technology and the university’s traditions deeply affected what many faculty considered “teaching excellence” and appeared to be one of the greatest challenges to bring upon change in how teaching is delivered on a broader scale. For example, all three designer interviewees talked at length about their passion to improve quality of education through creative delivery of course content in the online and face-to-face offerings. At the same time, some faculty were ambivalent to consider online teaching or excessive use of educational technology in face-to-face teaching as incongruent with SU mission.

The instructional designers’ passion in this study expanded beyond online teaching and included will to broaden access to education for students. Their desires were captured by the theme: “The Key Driver: Passion to Expand the Access to Education.” The instructional designers collectively articulated that the COPE’s mission to open access to education for those who wouldn’t otherwise be able to take face-to-face university courses is consistent with the university’s mission and saw it as a facilitator of change. All three interviewees were expressing their beliefs as consistent with the University’s mission to broaden students’ access to education and worked toward overcoming differences in their perceptions of mission and definition of teaching excellence with faculty through dialog. In his theory, Engeström draws on the idea of dialog where multiple perspectives (multivoicedness) come together to produce a new understanding. In this study, the instructional designers and faculty shared the goal of achieving teaching excellence but had different perspectives on norms, community relations, and division of labor.

Like others, one participant explained:

Our mission at COPE is to expand the access to education for students who otherwise wouldn’t be able to take face-to-face classes. Likewise, improving the quality of teaching campus wide, regardless of the teaching method and setting is important. I believe that faculty who participated in COPE classes are now better teachers because they had to critically evaluate their teaching and rethink how they do things. For some of them it was many years before anybody has asked them to self evaluate. Whether the faculty subsequently to taking COPE program chose to teach online, hybrid, or face-to-face courses is less important to me, as the designer, than rethinking teaching strategies and

improving the overall quality of teaching. These two goals are what drives me and our program and appear to bring upon an overall positive change at the university.

In summary, from the perspectives of instructional designers' the most important aspect of change for the community of faculty is to embrace the change in teaching strategies, which faculty participating in the program did and others did not.

The third theme "Using Creativity and Collaboration to Overcome the Challenges" refers to the instructional designers' desire for collaboration within the University's systems, which represents changes they desired in the division of labor. Specifically, the instructional designers talked at length about how offering creative solutions to faculty questions about course design helped to improve the flow and presentation of course content for many faculty. Collaborative approach to course development and process evaluation was the key strategy they found successful. All instructional designers shared a belief that the faculty's curiosity to learn the use of educational technology was far more important than the skills faculty brought with them to the program. In fact, they believed that with proper coaching anyone can develop sophisticated skills to use educational technology, regardless of educational background or age. However, they made a collective observation that younger faculty generally had more advanced computer skills at the beginning of programs they offered.

One participant reflected:

Well, there are a lot of things to talk about but first and foremost, I love problem solving and improving things. We can consult with faculty to improve their courses and this I find most exciting. Patience is actually very important in this role. Many faculty want instant solution but persistence and improving common understanding of what constitutes teaching excellence, what I would say, brings the greatest benefits in a long run. And so we, as designers, are knocking on a lot of doors on this campus reminding faculty of deadlines, explaining, supporting, and working together to generate progress in how information technology is used to improve teaching and learning.

The fourth theme derived from the instructional designers' narratives was: "Supporting SU Mission through Online Education," which refers to the designers' belief that online education, whether completely online or hybrid (blended) is congruent with the University's mission. This was an overarching belief of the instructional designers, threaded throughout the interview narratives. In the context of Seattle University, it may represent application of old, proven ideas of Jesuit/Ignatian pedagogy to new ways of teaching and learning, which employs educational technology to teach online in place or in addition to face-to-face teaching.

Like others, one designer explained:

I believe it is important for SU to deliver online education to fulfill the mission of improving access to education. But, while complete online education has something important to offer, I personally am an advocate of hybrid education for SU to help the transition and to be in-line with the mission to offer professional formation of students. This allows faculty getting to know the students in person and for many, this alone alleviates distress that they wouldn't be able to assist students with professional formation. And, for the students actually the same is true. I feel when people know each other, the conversations online are then richer. And it brings in students who would never be able to come to classes at SU every day. I feel like the assignments and conversations online, whether completely online or hybrid, or flipped classes can sometimes be better than face-to-face meetings, you just have to apply them skillfully.

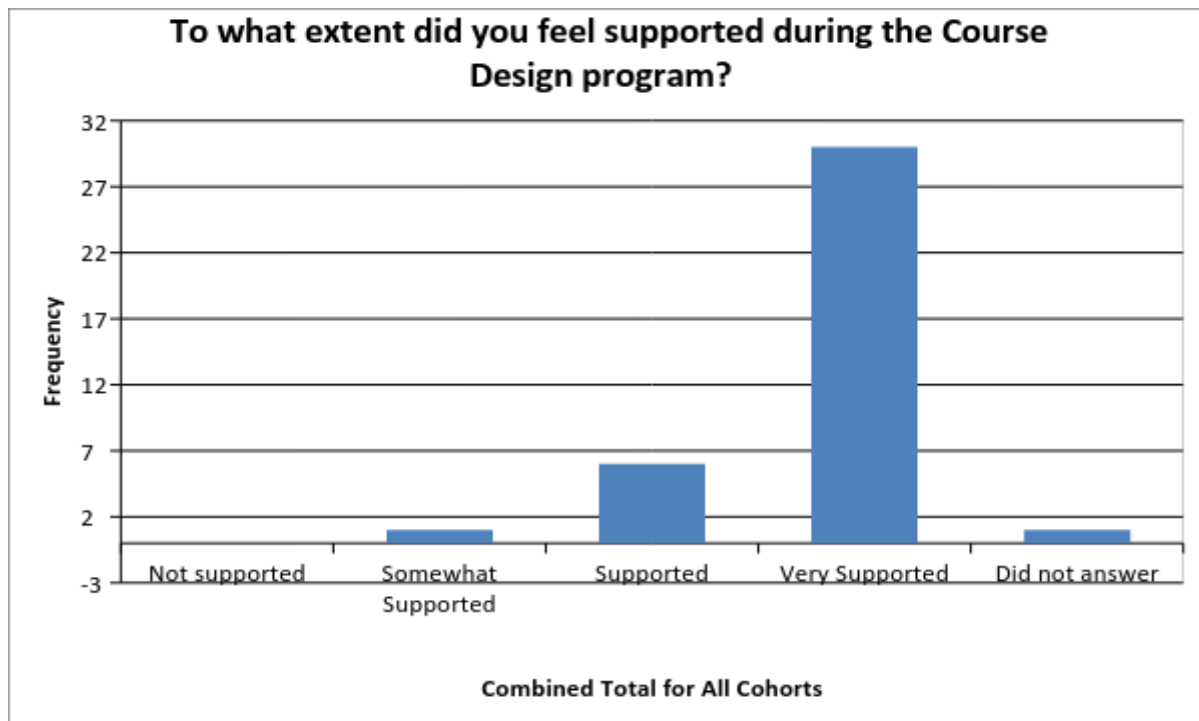
Subsequently, instructional designers talked at length about way of overcoming the barriers to online education at SU already mentioned in the preceding paragraphs. A unifying theme that addressed this issue was: "Alleviating Distress of Faculty and Overcoming Challenges to Online Education". Like others, one instructional designer reflected:

I think there is a perception among university community that faculty who seek our help have to undergo a big transformation; you know, to adopt some new ways of thinking and doing things. Developing an online course well is extremely time consuming. This combined with low computer literacy of some faculty, is a perfect storm. I would say, for the population of faculty here, technological skills, shame, personal beliefs, and university mission to educate the whole person, for many, is the key barrier. The current lack of financial incentives from university administration is also a deterrent. On the other hand, those who took the course at COPE and succeeded are a definite testimony things can move forward. One can overcome any imaginable challenges with the use of technology; people just need time and patience to overcome the barriers.

## **6.2. Findings from the Program Evaluation Survey Completed by Participating Faculty**

A sample of N=38 faculty completed the online program evaluation surveys. Sample came from the population of 71 possible respondents who met inclusion criteria, representing a survey response rate of 53.5%. Among the respondents, the majority (n=30; 78.0%) felt very supported by instructional designers, some (n=5; 13.1%) felt supported, and a few (n=2; 5.2%) respondents felt unsupported. One (n=1; 2.6%) respondent did not answer the question. Moreover, the majority (n=36; 94.7%) of respondents indicated they would recommend this program to a colleague, one participant (n=1; 2.6%) would not recommend it, and one (n=1; 2.6%) did not answer the question. Examples of the faculty perceived gains on selected variables are presented by graphs below.

Graph 12.2 A Summary of Support Experienced by Faculty from Instructional Designers

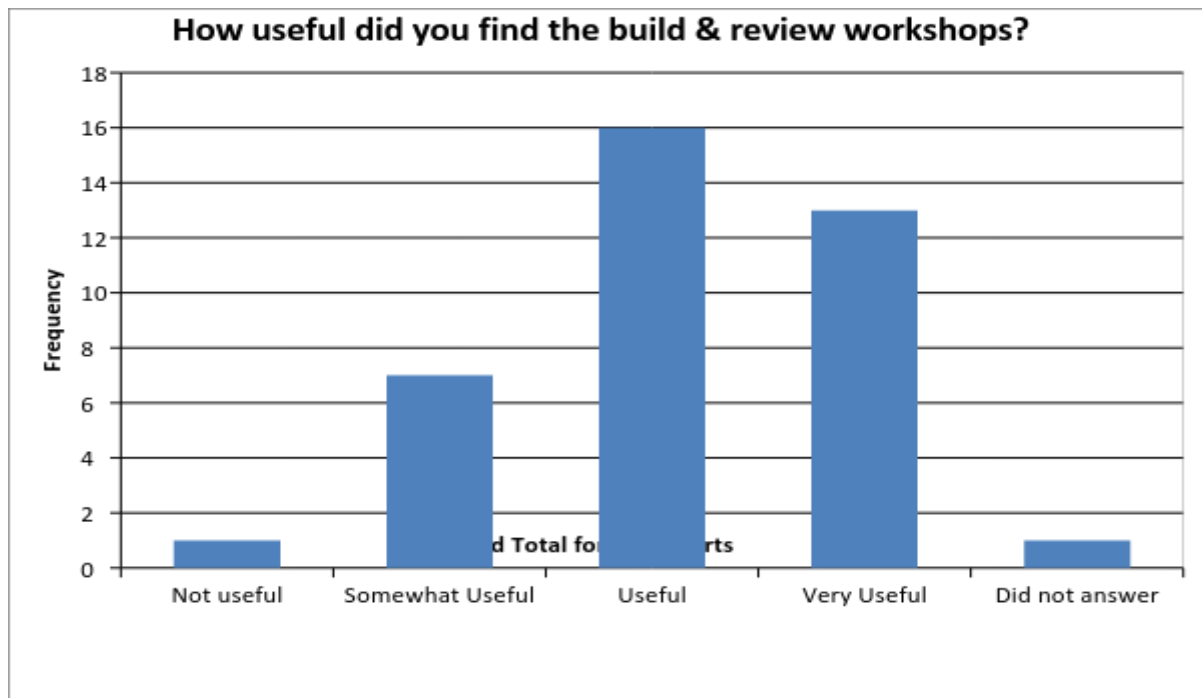


A majority of respondents considered the course 'building and review' workshops described below very useful (n=13; 34.2%) or useful (n=16; 42.1%). Still, (n=7; 18.4%) of respondents considered the workshops only somewhat useful. One faculty (n=1; 2.6%) did not find them useful, and one (n=1; 2.6%) did not answer the question.

'Course building and review workshops' are weekly sessions offered by the instructional designers for faculty who signed up for the online course development program. The goal of weekly workshops is to assist faculty with planning and building, step-by-step, an online or hybrid (blended) course. Even before faculty enroll in the program they must submit a short course proposal to the COPE department. This helps the instructional designers with the program planning. Once enrolled, the instructional designers begin the program with sharing of course development plans by faculty. Feedback to individual faculty is offered by the instructional designers and other program participants. Subsequently, creative ideas are realized through the blend of teaching specific technology skills such as proficient use of

Canvas (learning management system used by Seattle University) and other resources. Faculty are also coached on how to develop interactive online activities, quizzes, and discussion boards. In addition to weekly workshops, individual consultations with instructional designers are offered to each participating faculty at every step of course development. The ultimate goal of the program is to help SU faculty gain confidence in using the available technology resources and complete the online course development prior to program's completion. At the end of the program, faculty present their newly designed online courses to receive final peer feedback and celebrate program completion during an informal reception. The final step involves receiving a formal feedback from the designers prior to putting the courses online.

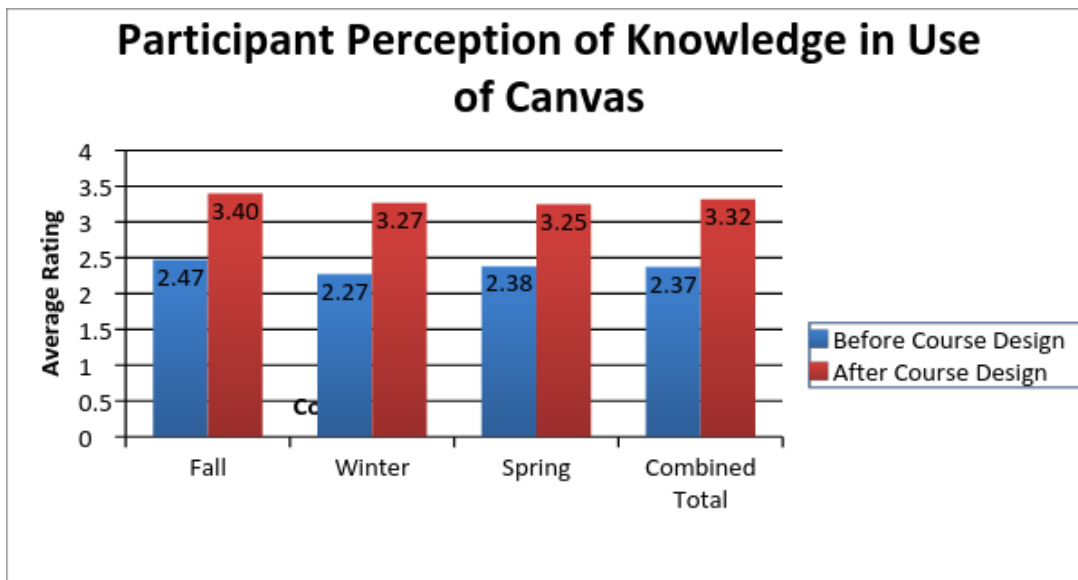
Graph 12.3 A Summary of the Usefulness of the Building and Review Workshops



Participants' perception of knowledge gained resulted in self-reported knowledge increase for all participants. A combined perceived improvement in knowledge pre and post program increased from the mean score of  $M=2.58$  points on the 0-4 scale to  $M=3.35$ , a 0.77 (19.25%) increase. A combined total mean score among respondents on the improvement of

knowledge before the course and after course completion has improved from  $M=3.03$  to  $M=3.47$  on the scale of 0-4, a 0.44 (11.0%) increase. The combined average rating of the participant perception of knowledge in the content delivery area increased from  $M=2.18$  to  $M=3.24$  on 0-4 scale, a 1.06 (26.5%) increase. Participants' perception of knowledge gained in the knowledge contribution tools has increased from 1.87 before course design program to 3.08 after on 0-4 scale, a 1.21(30.25%) increase. The combined total score of the participants' perception of knowledge of the Canvas (the online learning management system used by Seattle University) use has increased from  $M=2.37$  to  $M=3.32$  on a scale from 0-4, a 0.97 (24.5%) increase. An example of graphic representation of knowledge gained, in this instance of using Canvas, is presented in Graph 12.4.

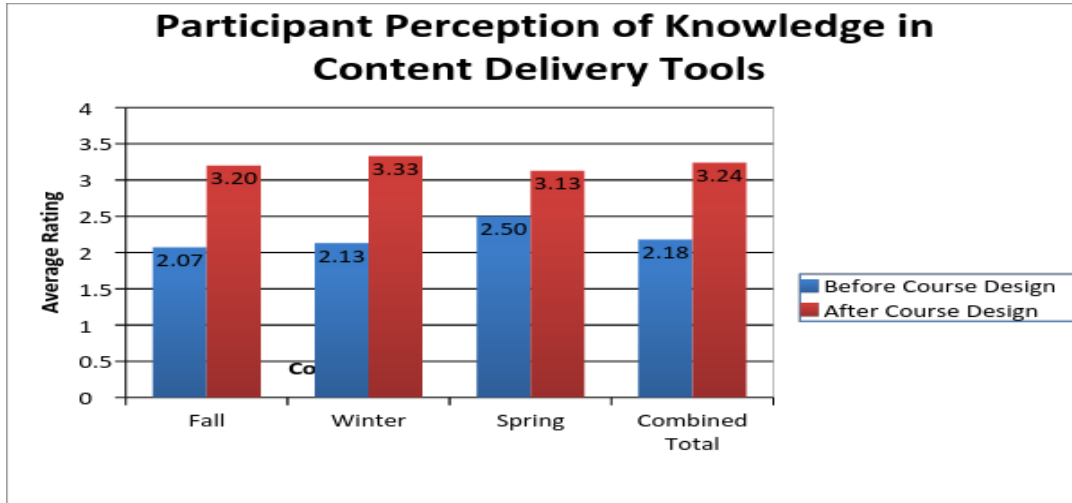
Graph 12.4 A Summary of the Participants' Improved Knowledge of Canvas



Likewise, the participants' perception of knowledge in the design accessible content has improved across the cohorts from a combined total of  $M=2.24$  before the course to  $M=3.18$  after on the 0-4 scale, a 0.63 (15.75%) increase. A combined total score in the copyright compliance has increased from  $M=2.55$  before to  $M=3.08$  upon course completion, a 0.53 (13.25%)

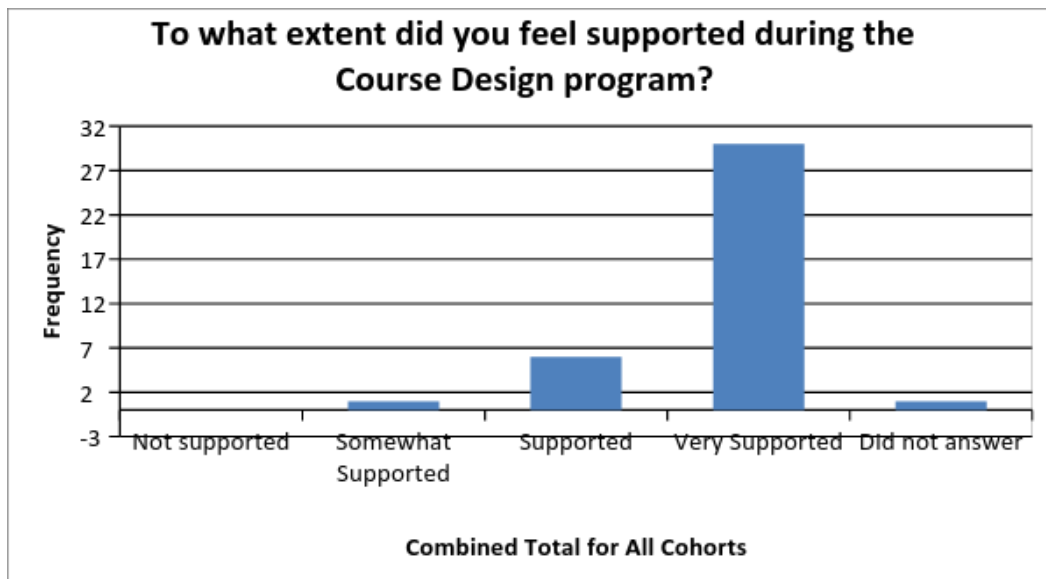
increase, most likely also contributing to alleviating the tensions between the instructional designers and faculty.

Graph 12.5 Knowledge Gained in the Content Delivery Tools



A graph below shows level of support received from instructional designers as perceived by the course participants.

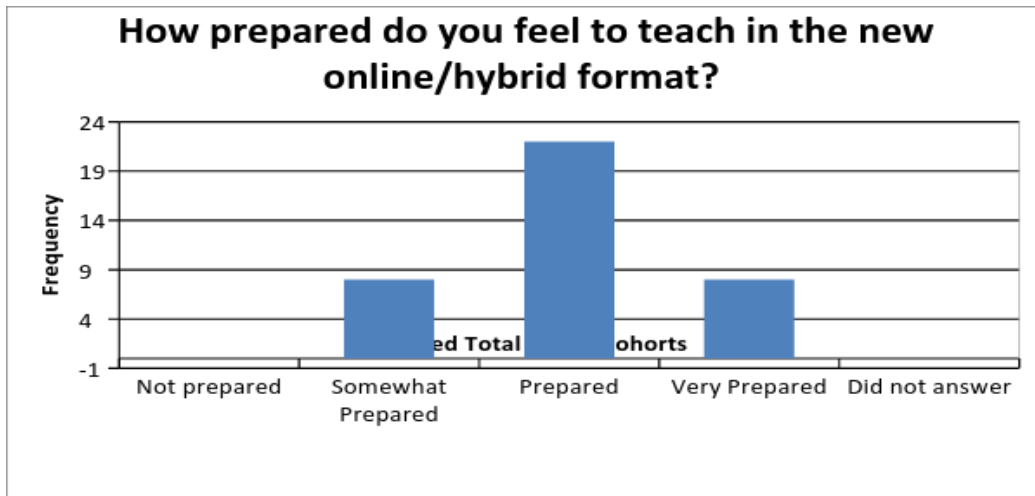
Graph 12.6 Perceived Support from the Instructional Designers



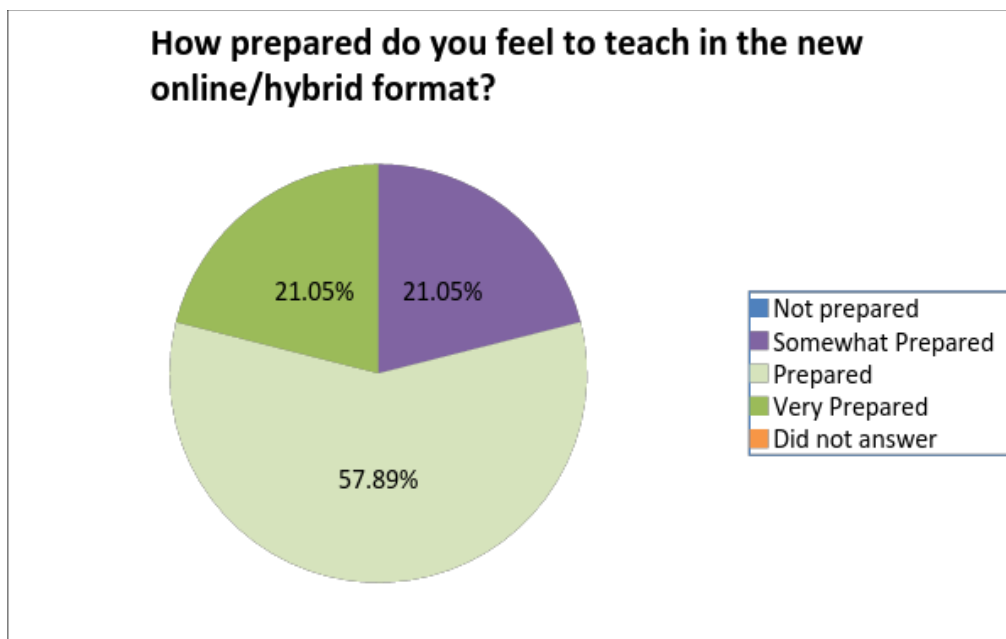


Regardless of the support received, at the end of the program only (n=8; 21.05%) participants felt very prepared to offer an online or hybrid course, (n=23; 60.5%) prepared, and (n=8; 21.05%) only somewhat prepared. Additionally, (n=30, 78.95%) of respondents reported they were using what they learned in the online course design program in their classroom teaching and (n=8, 21.05 %) did not use the new skills. Summary of faculty's perceptions of online teaching preparedness is presented by Graphs 14.7a,b.

Graph 12.7a How Prepared Faculty Felt to Teach Online



Graph 12.7b Faculty Perceptions of the Preparedness to Teach Online



Collectively, the quantitative findings from faculty suggest that skills they developed while taking an online course development program through COPE were useful for transformation of their skill repertoire to use educational technology. However, improving the skills alone is not sufficient to drive how teaching is carried out and other components are necessary to carry out change. Using CHAT framework as a guide to understand faculty responses, it is evident that tensions related to specific components of activity system were present. In particular, some participating faculty expressed tensions in relation to the rules of online pedagogy conveyed by the instructional designers in the course. Moreover, not all faculty felt they had a positive relations within the community, and in particular expressed tensions related to not feeling adequately supported by instructional designers. Consequently, over 20% of the respondents felt only somewhat ready to start teaching in the format new to SU (online or hybrid) and relayed the specific reasons in the qualitative portion of the program survey described below.

Qualitative data obtained via narrative course evaluation comments supported faculty quantitative responses. Data from the participants' qualitative responses were analyzed using summative content analysis (Hsieh & Shannon, 2005). Of the N=38 respondents who completed program evaluation surveys, only some (n=9, 23.6%) submitted qualitative comments; of the nine respondents, the majority (n=7, 77.7%) of respondents rated the program as excellent. Like others, one participant commented:

It was a good and successful program. COPE faculty modeled excellent teaching skills and demonstrated collaborative spirit while teaching participating faculty. I appreciated support for the course design development outside weekly workshop hours. Earning a stipend for participation was an extra bonus. Thank you!

Another participant stated:

I think it's an incredibly useful program to go through, whether you've taught online before or not or are planning to teach online. It seems that the content is supportive of university mission and I think that all SU faculty should be required to take it, if they plan to integrate technology into their teaching in some way in the online or in face-to-face courses.

On the other hand, some respondents (n=2, 22.2%) complained that the uneven computer skills among the program participants hindered effective use of class time and suggested that adding an assessment of computer skills at the onset of the program and, as necessary, adding extra sessions for those lagging behind in computer skills would be beneficial. One person (n=1; 11.1%) suggested it would be beneficial for all program

participants to hone the new skills “from simple to complex rather than learning complex concepts all along”. Consistent with CHAT theory underpinnings these comments are examples of tensions within the faculty activity system that may have contributed to slowing down the process of change.

In particular, faculty comments relate to the component tools or skills, which alone may not be sufficient to bring on the change among the broader community without good communication, proper IT support after the program, and support from the broader community. However, it is apparent that based on the component skills improvement alone, some individual faculty changed their attitude toward using online tools and saw how the tools relate to supporting the university mission, not going against it. As the faculty narratives indicated above, with the improved knowledge and confidence in using the current educational technology tools they felt ready to start changing their course structure. Tensions were present however, within the community of faculty related to different degrees of knowledge amongst participants, hence, perceived waste of time in terms of time management and progress that could have been made, should slower learners be separated from the stronger ones.

One of them stated:

Working in the classroom during weekly workshops on course development alongside other faculty was awful; the issue is a tough one which we as faculty teachers face as well when students struggle. There is clearly a wide variance in comfort with IT among program participants and this forces the entire group to work at the snail speed of the least knowledgeable faculty. It feels like very little progress is sometimes made for one hour of work because of the slower faculty. I also think there needs to be more control of the flow - occasionally a more talkative participant would start off on a tangent and stay there for too long and the designers just listened patiently. I found it hard to bare.

Additionally, one respondent (n=1, 11.1%) saw technical support on campus as mediocre and therefore, as a potential barrier to full utilization of his newly acquired skills. Specific areas for course improvement included a suggestion to add more individual consulting sessions with program faculty (n=2; 22.2%), making homework mandatory/not pay out of stipends for faculty who come unprepared (have not done assigned homework) prior to the weekly review workshops (n=2; 22.2%); and spending more time doing hands-on exercises (working at the computer to develop the course) versus listening to lectures (n=2; 22.2%).

The surveys completed at the end of Spring quarter 2014 produced the following information. Of the N=38 respondents, n=23 (60.5%) reported they will offer hybrid and n=15

(39.4%) fully online courses. Overall, faculty reported improved ability to use Web resources (n=12; 31.6%), introduction of at least some hybrid courses (n=23,60.5%), improved effectiveness in the use of Canvas (n=14; 36.8%), motivation to teach at least one completely online course a year (n=4, 10.5%).

Like others, one faculty reflected:

I appreciated that Canvas and other technology were laid over the tenets of good instructional design. If it hadn't been about good instructional design at the core, I would have disengaged. And, I liked seeing websites and possibilities and trying them out together in class. I just don't make time to do things like that in the rest of my life. I needed it to be in a dedicated time.

Another faculty stated:

The opportunity to learn about a tool and then attempt to incorporate it in a session was most useful. The opportunity to see what is possible from COPE alumni was great. Coaching while attempting to build a page was the best part of the course.

Interestingly, some faculty still felt a need to hone new computer skills to improve their teaching (n=4;10.5%). For example, one person explained " Having to negotiate the technology as I learned it. I'm getting better, but I feel like time was wasted because I'm not an expert. No way to fix that, really, except practice!"

Still, a number of faculty voiced ongoing apprehension about moving to online education even after participating in the program (n=9, 23.6%) because of their philosophical beliefs.

I am still not a convert of online teaching and frankly, I may never become one. I know that it is the "wave of the future", but I remain stuck in old fashioned pedagogy (face to face, and in person teaching format); I love the Jesuit Ignatian pedagogy. Online education seems in conflict with my values and beliefs. I thought taking the program would change me but it didn't.

Another respondent explained:

Personally, I needed a better sense of the core content of the class I'm being asked to design and higher accountability in terms of small steps toward the building of individual units/modules. To be fair, my situation is unique and many hesitations of mine were rooted in circumstances well beyond COPE's purview. I feel very committed to the traditional, Jesuit pedagogy and thus, in person teaching and coaching of students. Teaching online is a turnoff.

Still, another respondent reflected:

Still wondering how I'll do when I don't get the feedback from student bodies in front of me, about testing (cheating), about students who won't be able to do this because of the cost of the tech, and so on. While I am not convinced about the value of teaching online I'm going forward with much more confidence to applying some hybrid teaching thanks to the course.

Additionally, several faculty complained exclusively about the lack of in-person interaction with the students (n=3; 7.8%) when using online education, poor to average IT support on campus (n=3, 7.8%), and fears that things will somehow go wrong with the online course (n=3; 7.8%).

## **7.0 DISCUSSION**

The Online Course Development Program offered at Seattle University by the COPE department is discussed using CHAT theory to relate the tensions and contraindications experienced by the study participants. Overall, the program received primarily positive feedback from the participating faculty. The positive feedback was provided by approximately 70% of faculty and constructive criticism and self doubt was offered by about 30% of faculty. The criticism was mainly directed at how the program could be improved and how the overall recourses on campus could be improved to assist faculty with online course development and sustainable teaching. Some participating faculty, however, expressed high stress level related to the computer skills necessary to complete the online course development and subsequently, to carrying out the teaching. This expressed tension is relating to the principal component tool, which is the focus of change in the faculty development program on the use of educational technology for online teaching at SU. There was also ambivalence among some faculty about moving to online teaching altogether even after successful course completion because of their understanding of university mission as one that necessitates face-to-face meetings to ensure professional formation of students. This particular example represents tensions within the SU community in terms of understanding how the broader mission should be carried out. In other words, some faculty related their ambivalence to abandoning the University's mission by refraining from face-to-face formative interactions with students. These faculty perceptions represent what CHAT theory refers to as tensions and contraindications within the community relations. Likewise, tensions related to division of labor in online and hybrid teaching and the perception of limited existing IT support for faculty on campus. Likewise, others were satisfied

with the support. These perspectives represent multiple voices that must be heard and responded to by the collective resulting in change within the broader community.

The designers, while consistently appeared to be supportive of the faculty, expressed frustrations with some faculty members' tardiness in completing the program assignments and receiving constructive feedback about their teaching altogether. They desired progress in the quality online teaching on campus to be more expedient, which was considerable source of tension and stress within the SU community relations. At the same time, the instructional designers were celebratory about every meaningful "win," such as the teaching some faculty how to apply educational technology nearly completely from scratch and succeeding. Clearly, while the process of moving Seattle University toward the reality of expansive learning in terms of embracing the educational technology and online and hybrid teaching at SU broadly, the selected framework clearly helps to understand the sources of current tensions related to rules and norms, community relations, and division of labor in terms of faculty support by IT department and instructional designers' support, teaching online or hybrid, and face-to-face teaching. Like the perceptions of instructional designers and faculty in the COPE program at Seattle University, Engeström (1987, 1999a,b; 2000; Engeström & Sannino, 2010) assert that the activity systems experience contraindications, struggles, and tensions, all of which are part of understanding the root causes of problems, and ongoing change and organizational growth.

As evident from this study's findings, the reality of where the instructional designers and the faculty participating in the study are in relation to online teaching at SU is quite complex. Clearly, instructional designers and faculty at SU still have somewhat incongruent understanding of how to best express and deliver University's mission. While instructional designers appear to believe without hesitation that the University's Jesuit mission can easily be expressed through online education, some faculty are still ambivalent, even after they mastered online course development strategies. Still, it is clear that the interactions between the designers and faculty have expanded the understanding of faculty by the instructional designers', and the skills and willingness to teach online among the faculty appear to have improved. In other words, the instructional designers and faculty appear to already affect the future of online and face –to-face education at Seattle University because they possess more tools to teach more creatively. Nevertheless, consistent with the tenets of CHAT theory it is important to keep in mind that because human perceptions are the preamble to any human behavior, any negative perceptions of individual faculty and instructional designers will

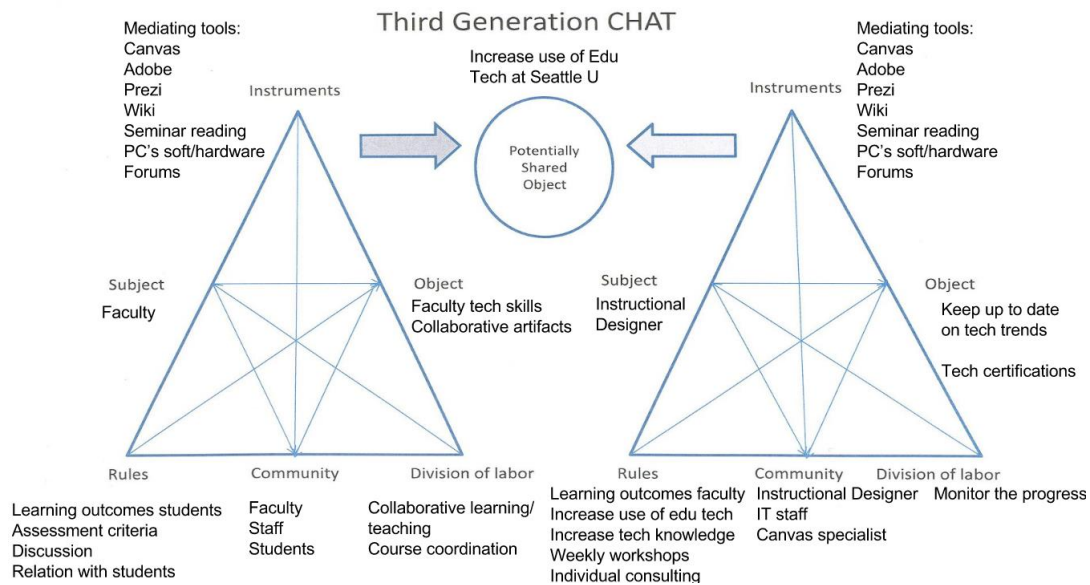
contribute to the course structure and long term outcome of online education at Seattle University, be it positive or negative. Interestingly, consistent with prior research findings (Prensky, 2001) all instructional designers participating in the study perceived that older faculty enrolling in the online course development program had significantly more challenges in using computer technology than did the younger faculty. Still, unlike Prensky (2001) who labeled technology users as 'digital natives' and 'digital immigrants' instructional designers at SU consistently highlighted that older faculty with limited computer skills were capable of fast learning and, with appropriate support, exceeded in educational technology knowledge and skills over younger faculty. This finding from the current study supports findings from prior research (Connaway, White, & Lanclos, 2011; White & Comou, 2011) that were conducted with different populations and in different contexts and supports the ideal of expansive learning.

Likewise, findings from the present study suggest that for some faculty, negative perceptions of online teaching come from the long held beliefs about the superiority of Jesuit pedagogy during face-to-face interactions. It appears that these beliefs may have influenced their resistance to online teaching even after they mastered educational technology skills for online course development. Regardless of how these faculty will teach from now on (online, hybrid, or face-to-face), learning new skills have contributed to their overall course structure teaching because they gained new computer skills in the process. In other words, while online education may be seen by many as a natural progression in how higher education will be delivered worldwide, in reality, the learning curve, long standing beliefs of faculty and university administration and, as importantly, the faculty's satisfaction with teaching need to be taken into consideration when projecting the level of acceptance of online teaching at SU. Faculty satisfaction with their ability to skillfully use current educational technology for online or hybrid teaching may clearly be seen in this study as a mutual goal for many faculty and all instructional designers at SU. These findings are consistent with previous research which indicated that faculty's assessment of online education effectiveness and confidence in online teaching can positively or negatively influence the acceptance of online education (Kuehn, 2011; Ozdemir & Abrevaya, 2007). A unique finding from this study is that for some faculty at SU, the Jesuit tradition of professional formation of students' in the "brick and mortar" classroom environment is considerable and thus, continues to create tensions between different ways of teaching. This finding suggests that the transition to embracing online education at SU may take longer than in non Jesuit institutions.

Faculty narratives have demonstrated however that, many online course development program participants self-assessed as far more proficient in the use of Canvas and overall ability to exercise creativity in the classroom than prior to the program. One could argue that some faculty may have undergone positive transformation in terms of knowledge and skills of educational technology without even realizing it. Hence, all of the program participants along with the instructional designers are contributing to the positive transformation within the university. Because many faculty at Seattle University have not yet taken the program, and some who have taken it don't consider themselves 'coverts' of online education, it can be concluded that Seattle University is on the journey toward fully embracing hybrid education, which is more in line with the Ignatian pedagogy ideals than fully online education.

A summary of tensions and relationships between the faculty and instructional designers' activity systems using CHAT theory is depicted in Figure 11.4 below.

Figure 11.4 Summary of Findings using CHAT Theory



## 7.1. STUDY LIMITATIONS

The following limitations were identified in the current study:



- 1) The sample of instructional designers, while constituted the entire instructional designer population at SU, was very small (N=3) and may not represent the views of instructional designers at other institutions of higher education. Future studies with more diverse samples of designers would be helpful to identify common tensions experienced by instructional at Jesuit and non-Jesuit institutions of higher education and design strategies to overcome these challenges.
- 2) The response rate on the course evaluation surveys was less than 60%, thus responses gathered may not only not be representative of the of faculty views at Seattle University and beyond. Future studies are needed incorporating strategies to assure greater response rate from program participants and therefore, produce findings more representative of the broader faculty community.
- 3) The responses to open ended qualitative questions were answered by only nine participants; hence may also not be representative of the views of entire population. A follow-up qualitative study to better understand the tensions experienced by SU faculty would contribute to designing strategies aimed at overcoming the barriers and challenges with moving toward the desired outcome for online education at SU.
- 4) The survey given to faculty was developed by COPE and not tested for validity and reliability.

## **7.2. CONCLUSIONS AND IMPLICATIONS**

Cultural-historical activity theory (CHAT) reflects an approach to practice-based theorizing that aims to understand and explain social phenomena from actual human practices. One benefit of employing CHAT to investigate professional practices of Instructional Designers and faculty taking an online course development program at SU was that the CHAT framework provided ways to systematically reflect on current teaching practices from the perspective of instructional designers and faculty taking an online course development program using the CHAT theory concepts while being mindful of the SU institutional mission and historical context. Using this approach tensions related to specific components of CHAT theory were revealed. The second benefit was that in identifying the tensions related to the specific components of CHAT theory (rules, community, and division of labor) new ideas about how to improve teaching practices at SU, both while delivering the COPE program for faculty and subsequent teaching of students may be taken into consideration because the study reveals particular interactions that hinder or

improve the journey toward the desired outcome. In sum, using the CHAT theory unique components for analysis of findings offered a constructive way to assess the current norms, community relations, and division of labor for a small sample of Instructional Designers and faculty at SU. Several areas for practice and research are suggested by the findings and limitations of the findings from this study. First, the sample small and came from one geographical location; hence, it would be prudent of researchers to conduct similar studies with larger and more diverse samples of Instructional Designers and faculty to identify if similar findings apply to other Jesuit institutions of higher education and beyond. Such studies would allow to determine the impact of contraindications and tensions within and between the activity systems over time. An in-depth understanding is needed of the experiences of instructional designers who are experts in the use of educational technology tools and the experiences of faculty who are content experts in various fields of knowledge with various levels of teaching experience and proficiency in the use of technology, to better identify the needs and barriers for online education at value based institution such as SU.

## 8.0 REFERENCES

- Alvarez, B. (2011). Flipping the classroom: Homework in class, lessons at home. *Education Digest: Essential Readings Condensed for Quick Review*, 77(8), 18-21.
- Ayers, P. (2006). Using subjective measures to detect variations of intrinsic cognitive load within problems. *Learning and Instruction*, 16(5), 389-400.
- Bedney, G., & Meister, D. (1997). *The Russian Theory of Activity: Current applications to design and learning*. Series in Applied Psychology: Psychology Press  
[ISBN 978-0-8058-1771-3](#).
- Bergmann, J., Overmyer, J., & Wilie, B. (2011). The flipped class: What is it and what it is not. *The Daily Riff*, July 2011. Retrieved on January 9, 2016 from:  
<http://www.thedailyriff.com/articles/the-flipped-class-conversation-689.php>
- Biesta, G. (2007). Why “what works” won’t work: Evidence based practice and the democratic deficit in educational research. *Educational Theory* 57(1), 1-22.

- Brown, J.S., & Duguid, P. (1991). Organizational learning and communities-of-practice: Toward a unified view of working, learning, and innovation. *Organization Science*, 2(1), 40-57.
- Coliazzi, P. F. (1978). Psychological research as the phenomenologist views it. In R. S. Valle & M. King (Eds.), *Existential phenomenological alternatives for psychology* (pp.48–71). New York, NY: Plenum.
- Connaway, L.S, White, D., & Lanclos, D. (2011). Visitors and residents, what motivates engagement with the digital information environment. *ASIST*, Oct 9-13, New Orleans, LA, USA. Retrieved from [http://www.asis.org/asist2011/proceedings/submissions/129\\_FINAL\\_SUBMISSION.pdf](http://www.asis.org/asist2011/proceedings/submissions/129_FINAL_SUBMISSION.pdf)
- Cook, D.A. (2007). Web-based learning: Pro's, con's, and controversies. *Clinical Medicine*, 7, 37-42.
- Cook, D.A. (2014). The value of online learning and MRI: Finding a niche for expensive technologies. *Medical Teacher*, 7, 1-8.
- Cook, D.A. & Triola, M.M. (2014). What is the role of e-learning? Looking past the hype. *Medical Education*, 48, 930-937.
- Davidson, S. (2015). Making sense of the higher education technology landscape. *EduVentures*. Available at: [www. Eduventures.com](http://www.Eduventures.com). Accessed January 15, 2016.
- Enfield, J. (2013). Looking at the impact of flipped classroom model of instruction on undergraduate multimedia students at CSUN. *Technological Trends*, 57(6), 14-27.
- Docebo (2014). E-Learning Market Trends & Forecast 2014 – 2016. Available at: [Reporthttps://www.docebo.com/landing/contactform/elearning-market-trends-and-forecast-2014-2016-docebo-report.pdf](https://www.docebo.com/landing/contactform/elearning-market-trends-and-forecast-2014-2016-docebo-report.pdf). Accessed March 21, 2016.
- Dziuban, C.D., Hartman, J.L., & Moskal, P.D. (2004). Blended Learning. *Educause Center for Applied Research*, 2, 1-12.
- Edginton, A. (2010). Blended learning approach to teaching basic pharmacokinetics and the significance of face-to-face interaction. *American Journal of Pharmaceutical Education* 74,1-7.
- Engeström, Y. (1987). *Learning by expanding: An activity-theoretical approach to developmental research*. Helsinki: Orienta-Konsultit.
- Engeström, Y. (1999a). Expansive visibilization of work: An activity-theoretical perspective. *Computer Supported Cooperative Work*, 8, 63-93.
- Engeström, Y. (1999b). Innovative learning in work teams: analysing cycles of knowledge

- creation in practice, in: Y. Engestrom et al. (Eds.) *Perspectives on Activity Theory*, Cambridge: Cambridge University Press, 377-406.
- Engeström, Y. (2000). Activity theory as a framework for analyzing and redesigning work. *Ergonomics*, 43, 960-974.
- Engeström, Y. (2005). *Developmental work research: Expanding activity theory in practice*. Berlin: Lehmanns Media.
- Engeström, Y. (2015). A short autobiography. Available at <http://www.edu.helsinki.fi/activity/people/engestro/>. Retrieved on December 31, 2015.
- Engeström, Y., Kerosuo, H., & Kajamaa, A. (2007). Beyond discontinuity: Expansive organizational learning remembered. *Management Learning*, 38(3), 319–333.
- Engeström, Y., & Sannino, A. (2010). Studies of expansive learning: Foundations, findings and future challenges. *Educational Research Review* doi: 10.1016/j.edurev.2009.12.00. Available at: <http://www.helsinki.fi/cradle/documents/Engestrom%20Publ/Studies%20on%20expansive%20learning.pdf> Accessed on March 21, 2016.
- Foster, J.S., & Drew, J.C. (2009). Astrobiology undergraduate education: students' knowledge and perceptions of the field. *Astrobiology*, 9(3), 325-333. doi: 10.1089/ast.2007.0221.
- Gannon Cook, R., Ley, K., Crawford, C., & Warner, A. (2009). Motivators and inhibitors for university faculty in distance and e-learning. *British Journal of Educational Technology*, 40(1), 149-163.
- Hall, C. (2012). Teaching and Learning in a Virtual Environment. *The Journal of Education, Community and Values*, 12, 1-4.
- Houghton, C., Casey, D., Shaw, D., & Murphy, K. (2013). Rigour in qualitative case-study research. *Nurse Researcher*, 20(4), 12–17.
- Hsieh, F.H., & Shannon, S.E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277-1288.
- Jacob, A. (2011). Benefits and barriers to the hybridization of schools. *Journal of Education Policy, Planning and Administration*, 1(1), 61-82.
- 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.
- Kuehn, L. (2012). No more “Digital Natives” and “Digital Immigrants.” *Our Schools Our*

- Selves, Available at [http://www.ccpnews.ca/sites/default/files/uploads/publications/National%20Office/2012/02/osos106\\_Digital\\_Natives.pdf](http://www.ccpnews.ca/sites/default/files/uploads/publications/National%20Office/2012/02/osos106_Digital_Natives.pdf) Retrieved on Jan 26, 2016.
- Lawrence, B., & Lentle-Keenan, S. (2013). Teaching beliefs and practice, institutional context, and the uptake of web-based technology. *Distance Education*, 34(1), 4-20.
- Leontiev, A.N. (1978). *Activity, consciousness, and personality*. Englewood Cliffs, NJ: Prentice Hall.
- Lian, J. & He, F. (2013). Improved performance of students instructed in a hybrid PBL format. *Biochemistry and Molecular Biology Education*, 41(1),5-10.
- Love, B., Hodge, A., Grandgenett, N., Swift, A.W. (2014). Student learning and perceptions in a flipped linear algebra course. *International Journal of Mathematical Education in Science and Technology*, 45(3), 317-324.
- Mason, Shuman, & Cook, (2013). Comparing the effectiveness of an inverted classroom to a traditional classroom in an upper-division engineering course. *Source of the DocumentIEEE Transactions on Education* 56 (4), 6481483, pp. 430-435.
- McLaughlin, J., Roth, M.T., Glatt, D.M., Gharkholonarehe, N., Davidson, C., Griffin, L., Esserman, D., & Mumper, R.J. (2014). The flipped classroom: A course redesign to foster learning and engagement in a Health Professions School. *Academic Medicine*, 89(2), 236-243.
- Milman, N. B. (2012). The flipped classroom strategy: What is it and how can it best be used? *Distance Learning*, 9(3), 85-87.
- Millwood. R. (2013). Learning Theory v6 Concept Map. *Holistic approach to Technology Enhanced Learning (HoTEL)*. Available at: <http://cmappublic3.ihmc.us/rid=1LGVGJY66-CCD5CZ-12G3/LearningTheory.cmap> Retrieved on January 9, 2016.
- Napier, N. P., Dekhane, S., & Smith, S. (2011). Transitioning to blended learning: Understanding student and faculty perceptions. *Journal of Asynchronous Learning Networks*, 15(1), 20-32.

Nielsen, L. (2011). *Five reasons I'm not flipping over the flipped classroom*. Available at <http://theinnovativeeducator.blogspot.com/2011/10/five-reasons-m-not-flipping-over.html>

Retrieved on January 8, 2016.

Northwest Commission on Colleges and Universities (NCCU), (2015). Available at

<http://www.nwccu.org/Directory%20of%20Inst/State%20Map/Washington/Washington.html>. Retrieved on January 8, 2016.

Ozdemir, Z.D., & Abrevaya, J. (2007). Adoption of technology-mediated distance education: A longitudinal analysis. *Information & Management*, 44(5), 467-479.

O'Flaherty, J., & Phillips, C. (2015). The use of flipped classrooms in higher education: A scoping review. *The Internet and Higher Education*, 15, 4-15.

Parkinson, D., W., Greene, Y., Kim, Y., & Marioni, J. (2003). Emerging themes of student satisfaction in a traditional course and a blended distance course. *Technology Trends* 47, 22-28.

Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon*, 9(5), 1-6.

Reiser, R.A. & Dempsey, J.V. (2002). *Trends and issues in instructional technology*. Upper Saddle River, NJ: Merrill Prentice Hall.

Ranieri, M., Manca, S., & Fini, A. (2012). Why (and how) do teachers engage in social networks? An exploratory study of professional use of Facebook and its implications for lifelong learning. *British Journal of Educational Technology*, 43(5), 754-769.

Schneider, C. (2015). Recognizing and supporting faculty work. Association of American Colleges and Universities. Retrieved April 18, 2016 from [www.aacu.org/publications-research/periodicals/recognizing-and-supporting-faculty-work](http://www.aacu.org/publications-research/periodicals/recognizing-and-supporting-faculty-work)

Sparks, R.J. (2013). Flipping the classroom: An empirical study examining student learning. *Journal of Learning in Higher Education*, 9(2), 65-70.

Sowan, A.K., & Jenkins, L.S. (2013). Designing, delivering and evaluating a distance learning nursing course responsive to students needs. *International Journal of Medical Informatics*, 82(6), 553-564. doi: 10.1016/j.ijmedinf.2013.02.004.

Tune, J.D., Sturek, M., & Basile, D.P. (2013). Flipped classroom model improves graduate student performance in cardiovascular, respiratory, and renal physiology. *American Journal of Physiology*, 37(4), 316-320.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.

White, D., Le Cornu A. (2011). Visitors and Residents: A new typology for online engagement. *First Monday*, 16(9). Retrieved on March 11, 2016 from:  
<http://firstmonday.org/ojs/index.php/fm/article/view/3171/3049>

Wilson, G., Stacey, E (2004). Online interactions impacts on learning: Teaching the teachers to teach online. *Australasian Journal of Educational Technology*, 20(1), 33-38.

Yick, A, Patrick, P., & Costin, A. (2005). Navigating distance and traditional higher education: Online faculty experiences. *International Review of Research in Open and Distance Learning*, 6(2), 1-17.

## 9.0 TABLES

### 9.1 Summary of the Literature Review used in the Thesis Paper

Author(s) /Year	Nr. Citations	Purpose	Framework	Sample/Methods	Results and Conclusions
<b>Online Teaching in Higher Education: Faculty Skills/Competencies/Perceptions</b>					
Yick, Patrick, &	45	To explore	None noted	N=28,	-online education

Costin (2005)		teachers' perceptions of online vs. classroom teaching in higher education		asynchronous online survey; Qualitative content analysis method	'less' than the traditional, classroom-based education -facilitators of online teaching: early adapters, faculty, volunteers, positive peer influence -challenges: lack of resources, instructional designers, lack of motivation Conclusions: There are strengths of online teaching but there are also many challenges
Kreber & Kanuka (2006)	36	To explore the meaning of the scholarship of teaching and learning in a virtual teaching environment	None noted	Review and critical analysis of literature	-scarcity of research exists - set forth learning outcomes are not easily achieved in online courses -lack of proper teacher training -faculty have tendency to bring traditional classroom teaching skills and experience to online environment Conclusion: scholarship of teaching and learning in virtual environment is imperative to provide resources for teachers
Gannon Cook, Ley, Crawford & Warner (2009)	66	To study the motivators and barriers for university faculty in distance and online teaching	None noted	Retrospective design, using the principal components analysis (PCA) approach authors analyzed and compared data from 4 large studies	-facilitators: faculty intrinsic motivation, intellectual challenge, opportunity to diversity program offerings, job satisfaction, and an opportunity to improve teaching skills, technology support, salary increase, merit pay,



					<p>course release and tenure considerations</p> <p>-inhibitors: University Administration not supportive of providing the necessary resources</p> <p>Conclusion: Teachers' enthusiasm and buy-in of online education alone is insufficient without administration support to provide proper resources</p>
Ranieri, Manca and Fini (2012)	1107	To explore how group membership and sharing of online teaching resources facilitates professional development	Social capital theory	Survey method; two surveys via Facebook, the N= 1107 users/ teachers	<p>-The groups were characterized by the mechanisms of affiliation and participation, as well as of shared resources</p> <p>-Professional development through online sharing took place</p> <p>Conclusion: online sharing of ideas and resources can facilitate professional development of faculty</p>
Lawrence and Lenthle-Keenan (2013)		To explore teaching beliefs and practices, institutional culture and the use of web based technology to teach	Cultural Historical Activity theory (CHAT)	Qualitative study of N=6 teachers, semi-structured interviews, inductive content analysis and CHAT framework	<p>-Four themes emerged that influenced teachers; motivation for the use of technology in teaching: beliefs, experience and practice, perceptions of technology as a teaching tool, institutional policies and division of labor</p> <p>Conclusion: Institutional priorities can be a significant barrier in adopting web-based technology in</p>

					teaching
<b>Flipped Classroom: Faculty &amp; Students' Perceptions and Teaching Outcomes</b>					
Ayers (2006)	N/A	To define and describe what flipped classroom approach is	none	A general description of the concepts essential for instruction and learning using flipped classroom method	- offers increased interaction and personalized time between students and teachers, -an opportunity for the students to take responsibility for
McLaughlin, J., Roth, M.T., Glatt, D.M., Gharkholonarehe, N., Davidson, C., Griffin, L., Esserman, D., & Mumper, R.J. (2014)	A case study	To show the effectiveness of blended classroom approach as part of faculty development in medical school	A blended learning scenario	Blended classroom scenario was implemented following the inverted classroom model	-Faculty development curriculum was described -The course was well accepted by faculty -The method was subsequently broadly implemented In the school
Bergmann, J., Overmyer, J., & Wilie, B. (2011)	30	To define what flipped classroom is and is not	A general reference to innovative teaching	An overview of the flipped classroom method	- provides means for increased interaction and personalized time between students and teachers, -an opportunity for the students to take responsibility for their learning, -blending of online instruction and hands on training, -a means for providing electronic lectures for students who are absent due to sickness that can also be used as a review material prior to exam. Conclusion: A flipped classroom method is an innovative and potentially more effective teaching strategy than traditional teaching
Nielsen (2011)	N/A	An online white paper	None noted	Discussion of barriers to proper application of	-lack of access to online resources -lack of on-campus resources

				flipped classroom	-increased time required from faculty -no apparent improvements in learning outcomes
Milman (2012)	N/A	Expert opinion	None noted	To discuss the flipped classroom strategy and how it can be best used	-Benefits of flipped classroom and barriers to its best utilization are discussed
Enfield (2013)	34	To explore the student and teacher satisfaction with flipped classroom approach in a university setting	None	Case study approach, analysis of qualitative and quantitative course student (N=34) course evaluations and faculty self-reflection	Students were generally satisfied with flipped classroom teaching method and perceived they learned better -teacher was also satisfied -Inhibitors to using the method included increased time to produce the on-line materials and lack of skills Conclusion: Flipped classroom approach can be satisfying teaching method for faculty and students
Mason, Shuman, & Cook (2013)	Case study approach 2 Courses compared	Flipped classroom versus face-to face offering was compared	None	Learning was measured by comparison of standardized test results in both classes	-flipped classroom participants surpassed or equaled results in face-to-face classroom -Students in flipped classroom expressed greater satisfaction with teaching
Sparks (2013)	4	An empirical study to examine student learning using flipped classroom method	None noted	Pre and post test to examine teaching effectiveness of flipped classroom method	-only 14% of learners improved test scores -nearly 4% showed lowed scores -over 80% of students liked the method Conclusion: Although more than 80% of students liked the

					method, the method alone does not appear to improve learning outcomes; the increased time learning does
Tune, Sturek, & Basile (2013)	57	To compare learning outcomes of graduate students enrolled in the course using flipped classroom method versus traditional teaching	None noted	Average standardized scores were compared for N=27 Flipped classroom and N=14 traditional enrollment students	-Students in the flipped classroom method performed better than students in the traditional classroom -Researchers concluded that weekly quizzes and discussions in the flipped classroom method contributed to better learning outcomes
Love, Hodge, Grandgennett, & Swift (2014)	55	Empirical study of flipped versus face- to- face classroom In the applied linear algebra course	None	Standardized course exams in both groups	-significantly higher exam scores in the flipped classroom -higher student satisfaction with the flipped classroom versus face-to-face traditional teaching approach
<b>Hybrid (Blended) Teaching: Faculty &amp; Students' Perceptions and Outcomes</b>					
Parkinson, Greene, Kim, & Marioni (2003)	2 classes of students	Convenience sample; students self selected on campus or hybrid course design	None noted	Comparison of results on standardized tests for each group and survey of students to compare students' perceptions of both teaching approaches	-Five themes emerged regarding classroom environment, learning needs, student efficacy, interactions with course faculty, and appropriateness of course design -Students in the hybrid group were less satisfied
Dziuban, Hartman, & Moskal (2004)	2 classes compared	Convenience sample, students self selected to hybrid or face-to-face group	None	Learning outcomes on standardized tests in both groups were compared	-There were no statistically significant differences in learning outcomes between the groups -attrition rates in the hybrid class were lower

Conrad (2005)	N/A	A literature review	None	Expectations from faculty in hybrid course design	-faculty need to spend more time preparing the course than traditional courses -faculty need to take more time to facilitate online discussion boards
Foster & Drew (2009)	20	Qualitative design	None	In person interviews with participants	Significant self-reported improvement in knowledge by the students -improved satisfaction with teaching methodology -improved skills with the use of self study skills
Edgington (2010)	N/A	A literature review	None	Expectations from faculty in hybrid course design were reviewed	-faculty are expected to spend more time preparing the course -faculty need to be more proficient in educational technology than others -faculty need to be more engaged with the students while setting an online course discussions and other postings
Napier, Dekhane, & Smith (2011)	5 class sections of 121 to 332 students and faculty in the traditional vs hybrid courses	Survey design	None reported	-Students' and Faculty perceptions of transitioning to hybrid from traditional teaching	-Properly administered hybrid course can significantly improve student engagement with the course, self-directed learning -learning outcomes were comparable with face-to-face classroom
Baele, Tarwater, & Lee (2013)	2 classes of students	Convenience sample; students self selected the class	None noted	Comparison of results on standardized tests for each group	-no statistically significant differences between the groups

Lian & He (2013)	200	Randomized trial; random assignment of medical students to classroom and hybrid (blended) learning environment	None	Pre and post standardized tests and course evaluations by the students	-Better scores on tests in the hybrid setting -improved students interactions Downfall of the hybrid classroom: Student had hard time with time management and self-study skills
Sowan & Jenkins (2013)	60	Random assignment of students to groups; convenience sample	None	Standardized tests in both groups; comparison of results	-Students in both sections completed the course successfully -there were no significant differences in test results -students in the hybrid group complained about lack of time to study online and self-study management skills

## **10. APPENDIXES**

### **10.1 Appendix A: Interview Questions with Instructional Designers**

- 1) What has it been like for you to teach online course design to faculty at Seattle University?
- 2) What do you like most about your job?
- 3) What have you found to be most challenging?
- 4) What are the facilitators that promote broader implementation of online education at Seattle University?
- 5) What are the greatest tensions/barriers associated with implementing and sustaining online educational at Seattle University?
- 6) What do you feel is important to using educational technology effectively at Seattle University?
- 7) Why do you feel is it important to move to the online education at Seattle University to a greater extent?
- 8) Is there anything else you would like to share that I didn't ask in this interview?

## 10.2 Appendix B: Course Evaluation SU Online Course Design

Thank you for taking the Course Design mid-course questionnaire. Please answer the following questions as completely as you can. Click the next button to advance through the questionnaire. Your responses will be used to improve the remaining sessions of Course Design and for future cohorts. E-mail addresses will only be used to track those who completed the questionnaire.

Your identity will not be revealed in any report or presentation of questionnaire results. Thank you again for your time and hard work.

1. Seattle University E-mail \*

2. Please indicate the delivery format for the course you are designing.

- Don't Know
- Online
- Hybrid

3. Is the course you are developing in the Course Design program one that you have taught before?

- Y
- N

Please select the rating that best answers the following question.

4. How useful did you find the following workshops?

4a Fell free to add any comments about the usefulness of the workshops

5. Are there any topics you need more information about? If so, please elaborate.

**Please select the rating that best answers the following questions.**

6. The Course Design Workshops are set up as a community of practice. How comfortable do you feel with the community of practice model

7. To what extent do you feel supported during the Course Design program?



8. Do you have concerns regarding delivering a course in an online or hybrid format? If so please elaborate in the text box below

9. Did you do your homework assignments each week?      Yes       No

10. For the weeks you did not complete the homework assignments, which of the following best describes why? (Please check all that apply. If your answer is not listed below, please specify your reason in the "Other" text box).

I had too much to do.

I didn't feel it was relevant to my learning.

The instructions weren't clear to me.

Completing my homework and sharing it with others is not beneficial to me.

6. Please add any other comments, suggestions, or explanations to improve the Course Design program for future cohorts.

### 10.3 APPENDIX C End of the Program & Alumni Survey Results

Thank you for taking the Course Design post-course questionnaire. Please answer the following questions as completely as you can. Click the next button to advance through the questionnaire. Your responses will be used to improve Course Design for future cohorts. E-mail addresses are required for tracking purposes only. Your identity will not be revealed in any report or presentation of questionnaire results. Thank you again for your time and hard work.

1. Seattle University E- mail \*

2. The final course designed through the Course Design program will be administered in the following format (Please select one).

Hybrid

Online

Unsure

#### 3. Quality of learning experience

Please select the rating that best answers the following questions.

4. How would you describe your knowledge of the following teaching activities in hybrid or online formats **before** completing Course Design?

5. Are you incorporating what you learned from the Course Design program in your face- to- face courses?

Y

N

Please explain your selection below.

6. Do you have concerns regarding delivering a course in an online or hybrid format?

- Y   
N

Please explain your selection below.

7. How prepared do you feel to teach your course in the new format (hybrid or online)?

Not At ALL    SOMEWHAT    Well    VERY PREPARED

8. The Course Design workshops were set up as a community of practice. How comfortable do you feel with the community of practice model?

9. How useful did you find the following workshops?

10. Which aspects of the Course Design program did you enjoy the most? (Fill in the b

11. Which aspects of the Course Design program did you enjoy the least?

12. Would you recommend it to a colleague?

13. Would you recommend the Course Design program to a colleague?

- Y   
N

### **Quality of course delivery**

**Please select the rating that best answers the following questions.**

14. Please rate the overall quality of the instructors' delivery.

15. Please indicate the degree to which you agree or disagree with the following statements.

16. Please add any other comments, suggestions, or explanations in order to refine or improve the Course Design program for future cohorts. Thank you for your time!

**If Applicable, Go On to Alumni Questionnaire:** Thank you for taking the COPE Course Design Alumni Questionnaire. Please answer the following questions as completely as you can. Click the next button to advance through the questionnaire. Your responses will be used to improve faculty experience after the Course Design program concludes. Your identity will not be revealed in any report or presentation of questionnaire results. Thank you again for your time and hard work.

Q1 The course I taught was in

- online format
- hybrid format

**Your experience**

Q2 How prepared did you feel to teach in an online/hybrid format?

Q3 Did any concerns arise while teaching the class?

Q4 Did you or your students experience any technology issues that impacted what you were able to do in your course?

Q5 Did you feel adequately supported by COPE and/or IT while you were teaching your course?

**Student experience**

Q6 Did your students give you any feedback about the course that you would like to share?

Q7 Do you feel your students' pre-conceived notions or expectations about online learning affected how they experienced your course?

Q8 What is your impression regarding student achievement in your hybrid/online course compared to face-to-face courses? My students learned:

- less
- somewhat less
- about the same
- somewhat more
- more

**Moving forward**

Q9 Do you plan to design more courses for hybrid or online delivery? If so, what would you do differently next time you teach an online or hybrid course?

Q10 Have you incorporated what you learned in the Course Design program in your face-to-face courses?

Q11 Is there anything you would like to share with other faculty who take the Course Design program?