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TRAINING HIGHER EDUCATION ADJUNCT FACULTY TO TEACH ONLINE: A
DESIGN-BASED RESEARCH STUDY

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Approval Page



Approval of Dissertation

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Abstract

This thesis researched what characteristics of a training course influenced participants' professional practice. The training this study evaluated was MarylandOnline's Certificate for Online Adjunct Teaching (COAT) course. The COAT project began in 2008 when instructional designers from various higher education institutions collaborated on developing training for instructors who were making the transition to online teaching. Using a design-based research methodological approach within an interpretivist research paradigm, this study used mixed methods data collection tools and grounded theory data analysis techniques to evaluate whether the COAT course effectively helped the target audience of higher education adjunct faculty make the transition to online teaching. This study found that not only adjuncts with no online teaching experience, but also experienced online instructors, full-time faculty, and nonteaching professionals completed the COAT course. Research participants identified that the experience of being situated as students in an authentic online course focused on online teaching and learning influenced their later online teaching, campus-based teaching, and nonteaching professional practice. Focus group participants cocreated an observation protocol that was applied to archived courses taught by COAT alumni, and it was found that instructors, as reflective practitioners, took from their COAT experience instructional approaches and competencies that were appropriate for their specific teaching situations. Although limited to a particular context, the original contribution to scholarship of this study was the articulation of design principles and a conceptual framework that may be useful to researchers and practitioners working in the area of online instructor training.

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List of Abbreviations

<i>COAT:</i>	Certificate for Online Adjunct Teaching
<i>CoI:</i>	Community of Inquiry
<i>CoP:</i>	Community of Practice
<i>DBR:</i>	Design-Based Research
<i>FERPA:</i>	<i>Family Educational Rights and Privacy Act:</i> a US Federal law which protects the privacy of students' educational records
<i>GMDR:</i>	Generic Model for Design Research
<i>IDAG:</i>	Instructional Design Affinity Group
<i>K-12</i>	Kindergarten through twelfth grade primary and secondary education
<i>LMS:</i>	Learning Management System.
<i>MOL:</i>	MarylandOnline, a consortium of higher education institutions
<i>oTPD:</i>	Online Teacher Professional Development

Chapter 1: Introduction for the Study

Teaching online requires different instructor roles and competencies to teaching in campus-based classrooms (Alvarez, Guasch, & Espasa, 2009; Bailie, 2011; Berge, 1995; Ragan, 2009; Smith, 2005; Varvel, 2007; Williams, 2003). The majority of active higher education instructors in the United States are adjunct faculty (Center for Community College Student Engagement, 2010; National Center for Educational Statistics, 2010). Adjunct faculty are usually hired for their content knowledge which is either demonstrated by their credentials in the academic discipline they teach or their work experience in the field (American Association of Community Colleges, 2011; Higher Learning Commission, 2011; Stenerson, Blanchard, Fassiotto, Hernandez, & Muth, 2010); however, they may and often do lack training in the areas of teaching and learning (Eney & Davidson, 2006; Keller, 2008; Wallin, 2004). As increasing numbers of higher education students take online courses in the United States (Allen & Seaman, 2013), there is a corresponding need for additional adjunct faculty to teach these students (Tipple, 2010). In order to help prepare adjunct faculty to effectively teach in the online learning environment, quality, accessible training programs are required (Bedford, 2009; Blodgett, 2008; Chapman, 2011). The purpose of this study was to evaluate whether the content, structure, and instructional approaches of a particular training program effectively helped prepare higher education adjunct faculty to teach online, and to extract design principles that could prove useful for other researchers and practitioners working in the field of online instructor training.

Overview and Background

This study is framed within two trends that currently impact higher education: the growth in the number of students taking online courses in the United States and the decreasing ratio of full-time faculty compared to adjunct faculty. Neither of these trends is judged in this study as having a positive or negative influence, but instead they are documented to demonstrate that both trends are real and they affect the system of higher education in the United States. In this section, first the terms used in this study are defined before some of the literature that describes these two trends is highlighted. The general research problem is then identified and the context of the study described. Finally, the purpose, research paradigm, and research questions of this study are presented.

Definition of Terms

There are a number of names for higher education teachers, and “non-tenure-track faculty have earned many different labels - contingent faculty, adjuncts, lecturers, instructors, clinical faculty and part-timers” (Kezar & Sam, 2010, p. xi). This study uses *instructor* as a generic term for all higher education teachers irrespective of their employment status as full-time or part-time employees. *Faculty* refers to full-time instructors who are employed to work in one higher educational institution as a benefited employee, whereas *adjuncts* are instructors who have part-time, temporary, short-term contracts to teach particular courses. *Higher education* institutions are both four-year and two-year degree-granting, accredited public and private colleges and universities in the United States. *Online teaching* is “the process of delivering, supporting and assessing

teaching and learning through the use of computers and communication networks” (Conrad, 2005, p. 442). Guskey’s (2000) categorization of *training* is used with training being a form of professional development that typically “involves a presenter or team of presenters that shares its ideas and expertise through a variety of group-based activities” (p. 22). Training differs from other forms of instructor professional development, (for example, observations, study groups, mentoring, communities of practice), in that the focus is usually on a facilitated group learning experience with predetermined goals and objectives focused on acquiring new skills, knowledge, and/or attitudes. Training also differs from traditional instruction in that “the goals for the instruction are based on an analysis of the specific jobs for which the trainees are being prepared” (Hannum & Briggs, 1982, p. 10).

Online Enrollment Growth

The overall number of students enrolling in online courses in the United States has continued to grow yearly with over 6.7 million higher education students taking at least one online course in the fall 2011 semester compared to 6.1 million students the previous fall (Allen & Seaman, 2013, p. 17). From fall 2010 to fall 2011 community colleges reported an “8.2 percent increase for distance education enrollments—substantially higher than the overall increase in national campus enrollments, which averaged less than one percent nationally” (Instructional Technology Council, 2012, p. 7). With this growth in online student enrollment comes a corresponding need for additional instructors to teach online courses as the traditional model of one instructor working with a set number of students per class has not changed. For example, the

average number of students per higher education distance learning class in Maryland in 2006 was 19 (Maryland Higher Education Commission, 2007, p. 6), and 79% of respondents to the 2011 Instructional Technology Council's survey of distance learning administrators "indicated they cap online class enrollments - a figure that has not changed substantially in the past five years" (2012, p. 12) with a maximum of 25 students for introductory math and English courses. Respondents to the Instructional Technology Council's survey also reported that they had a "hard time finding qualified faculty to teach online" (2012, p. 17) with "more student demand for distance education courses than we have faculty trained to build and teach them" (p. 14). Palloff and Pratt (2011), commenting on the growth in demand for online teaching, argued that "the training of online instructors has not kept pace with the demand for excellence in the online environment" (p. xiii). If "online learning is about the enhancement of teaching and learning" (Garrison & Cleveland-Innes, 2010, p. 257), then training instructors to effectively facilitate online learning must be a primary consideration in order to ensure quality course delivery. As "quality distance education requires *changes* in... pedagogical practices" (Beaudoin, 2005, p. 69), there is a need for instructor training focused on these pedagogical changes in order to provide quality online learning experiences for students. This need is explored in detail in Chapter Two.

Faculty and Adjunct Ratio

Overall, the faculty to adjunct ratio has decreased with 66% of all faculty in degree-granting institutions having full-time status in 1987 compared to 50.7% in 2009 (National Center for Educational Statistics, 2010, Table 259). The number of adjuncts

teaching at two-year colleges in the United States has increased, and they now represent the majority of active instructors: “About two-thirds of community college faculty members teach part-time” (Center for Community College Student Engagement, 2010, p. 17). This compares to 56% of total faculty being part-time in two-year colleges in 1986 (Smith, 1990, p. 71) and 64% in 1998 (Anderson, 2002, p. 6). Some research has shown that the ratio of faculty to adjuncts in online courses is higher than for campus-based courses with the Distance Education Report (2010) documenting that overall 40.7% of higher education distance learning courses were taught by adjunct faculty (p. 3). However, Seaman (2009), surveying instructors employed at 69 four-year colleges and universities in the United States with responses from over 10,700 instructors, found that “all types of faculty teach online in roughly similar proportions, but that specific faculty (part-time and non-tenure track) do so with greater frequency” (p. 15).

The two trends described in the previous paragraphs indicate that there is an increasing need for instructors who are qualified to teach online, and there is also an increase in the ratio of adjuncts to faculty teaching at higher education institutions. In Chapter Two, studies focused on online teaching roles and competencies are discussed, and recommendations are highlighted that describe the type of training that should be offered to instructors to help them effectively facilitate online learning. Not all institutions that offer online courses have training for online instructors. Pagliari, Batts, and McFadden’s (2009) research into desired versus actual training for online instructors showed that over 40% of surveyed online instructors had not accessed any training in the past year, but the survey did not highlight what training was available. Training

availability has been increasing. Allen and Seaman (2011), in their ninth annual survey of academic leaders, reported that:

In 2009 this survey first asked chief academic officers about the training provided to faculty who are teaching online. Nearly one-fifth (19 percent) of all institutions reported that they do not provide any training (even informal mentoring)... There has been a substantial decrease in the proportion of institutions that report that they do not provide any training for their faculty who teach online -- it is now only six percent of academic leaders who report this. The pattern of types of training provided is otherwise very similar in 2011 as it was in 2009; internally run training courses are the most common approach, followed by informal mentoring and then by a formal mentoring program. (p. 19)

The above studies did not differentiate between the access to training for full-time compared to part-time instructors. The ability of faculty and adjuncts to access internally-run training or mentoring may differ with adjuncts usually being less able to attend face-to-face meetings. Palloff and Pratt (2011), using their own experiences as adjunct faculty, observed that “rarely are adjuncts offered ongoing training for online teaching” (p. 58). This postulated problem of adjuncts being unable to access quality training to help them prepare to teach online was the impetus behind the design and development of the training course that is the focus of this research study. This training course is situated in a particular context which is described in the next section.

Context of the Study

The training this study investigated is delimited to a particular context: a MarylandOnline (MOL) project that focused on designing, developing, and implementing a training certificate for adjuncts who were making the transition to teaching online. MOL was formed in 1999 with 12 charter members and is now a statewide consortium comprised of 20 two- and four-year institutions that offer distance learning. Membership is voluntary and member institutions pay a yearly subscription fee. MOL's vision is to be dedicated "to championing distance education and enhancing the quality and availability of e-learning in Maryland and worldwide" (MarylandOnline, n.d.). In 2008, MOL funded a research grant that led to the creation of MOL's *Certificate for Online Adjunct Teaching* (COAT) project.

The COAT project was initiated in 2008 by a group of instructional designers belonging to the Instructional Design Affinity Group (IDAG), an affinity group of the Maryland Distance Learning Association. A number of IDAG members had responsibility for providing instructor training focused on the pedagogies and technologies used in teaching online. Institutions that IDAG members worked for were in varying stages of developing training for their online instructors. In an attempt to reduce duplicated effort in designing training and to increase the quality of training offered to adjuncts who were preparing to teach online came the idea to explore the possibility of developing a statewide, shared training program that could be designed by an interinstitutional team of instructional designers. The original intent of the COAT project was to produce training that was relevant for two groups: adjuncts who were seeking a

training certificate that was portable to multiple institutions and distance learning administrators who could then hire adjuncts who had completed training that was familiar to the administrators. The next section describes the COAT project in detail while positioning it within the framework of a design-based research (DBR) project.

Statement of the Problem and Research Design Overview

Within the overall framework of DBR (Barab & Squire, 2004; Design-Based Research Collective, 2003; Sandoval & Bell, 2004), this study focused on the COAT training course that was designed and developed as a possible solution to the problem facing some institutions of how to provide quality, accessible training for adjuncts who were making the transition to teaching online. DBR, also called *design experiments* (Brown, 1992), *design research* (Collins, Joseph, & Bielaczyc, 2004; Edelson, 2002; Reeves, Herrington, & Oliver, 2005), *educational design research* (McKenney & Reeves, 2012), and *developmental research* (Richey, Klein, & Nelson, 2003), has generated increasing interest among educational researchers in the last decade (Anderson & Shattuck, 2012). Wang and Hannafin (2005) defined DBR as: “A systematic but flexible methodology aimed to improve educational practices through iterative analysis, design, development, and implementation, based on collaboration among researchers and practitioners in real-world settings and leading to contextually-sensitive design principles and theories” (pp. 6-7). According to Herrington, McKenney, Reeves, and Oliver (2007): “Design-based research integrates the development of solutions to practical problems in learning environments with the identification of reusable design principles” (p. 4089).

A number of DBR studies use the term *intervention* to denote the object that is designed as a possible solution to address a practical problem in education. Bannan-Ritland (2003) defined an intervention as "a socially constructed object that must be systematically articulated and revised over a number of cycles" (p. 23), and McKenney and Reeves (2012) identified intervention as a broad term used in DBR "to encompass the different kinds of solutions that are designed" (p. 14); these solutions include educational products, processes, programs, and policies. This study identified the COAT course as the intervention that was developed as a potential solution to the perceived need for quality training for online adjunct faculty. This research project explored whether the COAT course did have an impact on the participants' teaching practice. The product from this research study was the identification of design principles that could be used by other researchers and practitioners working in the field of online instructor training.

DBR has proved to be an effective research approach for other research projects focused on the design and evaluation processes of instructor training programs and initiatives (Dede, Ketelhut, Whitehouse, Breit, & McCloskey, 2009; Laferrière, 2002; Mishra & Koehler, 2006; Ostashewski, Reid, & Moisey, 2011). Montgomery (2009), in her doctoral dissertation, used a DBR approach to assess an instructor training program, and she argued that "when a design-based approach is applied to program evaluation, the iterative nature of such an approach can initiate, implement, and sustain an ongoing program of research" (p. 51). Ketelhut, McCloskey, Dede, Breit, and Whitehouse (2006) highlighted the importance of, and tension between, the dual goals of asking program evaluation questions about the *effectiveness* of online teacher professional development

(oTPD) programs and asking empirical research questions about the *impact* of oTPD programs, and they identified DBR as a promising approach to address these two goals.

DBR projects can span many years with multiple research cycles that focus on the different stages of the project analysis, design, development, implementation, and evaluation phases. In order to clearly explain how this independent doctoral research study was positioned within a collaborative DBR project, it is helpful to use McKenney and Reeves' (2012) *Generic Model for Design Research* (GMDR) to provide a visual outline of the COAT project phases. The GMDR (see Figure 1) consists of three main phases: analysis and exploration; design and construction; and evaluation and reflection that lead to two eventual outputs of theoretical understanding and intervention maturation. According to McKenney and Reeves: "Each main phase constitutes its own cycle of action, with its own logical chain of reasoning. Both the analysis and exploration phase, and the evaluation and reflective phase are empirical cycles, featuring data collection" (2012, p. 77).

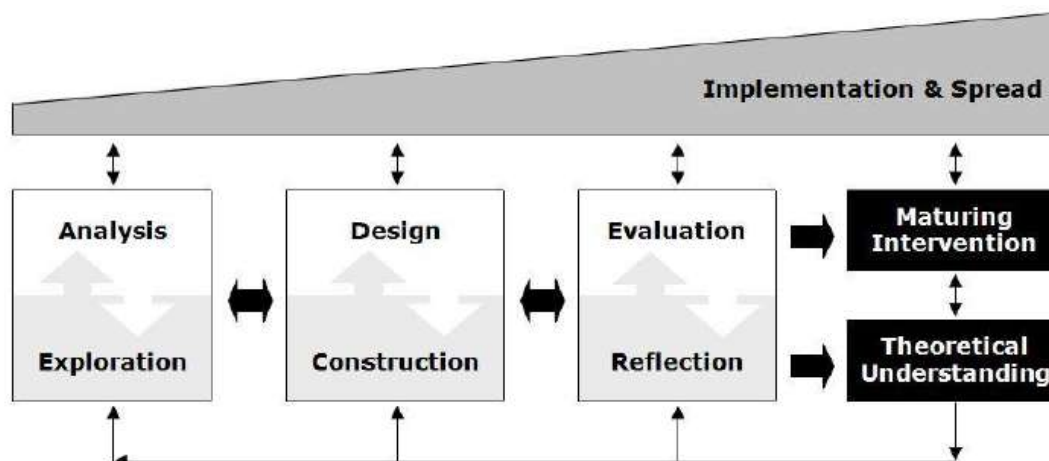


Figure 1. Generic model for conducting design research in education. From *Conducting Educational Design Research* by S. E. McKenney and T. C. Reeves, 2012, p. 77.

Using the GMDR to frame the COAT project, this study is situated in phase three: evaluation/reflection. Table 1 briefly outlines how the COAT project aligned with the three phases of the GMDR with my role and the research activities of this study highlighted. I have added a component of *initial implementation* to the second phase in order to include how the COAT project implemented the first iteration of the training course after a successful pilot. According to McKenney and Reeves (2012), the implementation and spread of an intervention demonstrate how the three phases of analysis/exploration, design/construction, and evaluation/reflection interact with practice in terms of how the intervention is adopted, enacted, and sustained (implementation) in a particular educational setting while information about the intervention is disseminated and diffused to a wider audience (spread).

Table 1

COAT Project and Generic Model for Design Research Phases

	Analysis/Exploration	Design/Construction & Initial Implementation	Evaluation/Reflection
When was the phase completed for the COAT project, and by whom?	Completed: fall 2008-spring 2009 – Team of seven instructional designers & faculty. My role: Codirector of project/member of research team.	Completed: fall 2009-spring 2012 – Teams of instructional designers, faculty, & administrators. My role: Project chair/research coordinator.	Completed: summer 2012-spring 2013 by me for doctoral study.
What research and activities were completed?	1. Literature review on online teaching competencies. 2. Survey of 37 Maryland higher education institutions. 3. Voluntary interviews with key personnel from 17 US higher education online teaching training programs.	1. Developed, designed, & evaluated pilot course. 2. Ran 11 sections of COAT course. 3. Used results from module & end-of-course surveys, course assignments, & reflection journals to make minor ongoing changes to design.	See Chapter Three for details on research methods.

The following sections describe the completed analysis/exploration and design/construction (with initial implementation) phases of the COAT project in more detail. In addition, information is included on how the findings from these two phases were disseminated through presentations and article publication.

COAT: Analysis and Exploration, 2008-2009

Year one of the COAT project began in 2008 when MOL funded IDAG's exploratory research project on the feasibility of developing a statewide teaching certificate for online instructors. The original objectives of this grant project were:

- 1) To research what online instructor certification programs and training were already available, as well as their cost, structure and content (competencies), and
- 2) to recommend a model (or models) that would allow the development and offering of adjunct faculty training sessions or "certification" courses as a state-wide group. (Dubins & Graham, 2009, p. 1)

A team of seven instructional designers and online instructors worked on these objectives in the academic year of fall 2008 to spring 2009. The team conducted a literature review focused primarily on online teaching competencies and researched existing online teaching training programs in the United States (see Dubins & Graham, 2009, for summarized results of this research and the literature review). In addition, 37 Maryland higher education institutions offering online courses were invited to participate in an online survey focused on their existing online instructor training and future training needs. The survey was sent to distance learning administrators and instructional designers or faculty who were responsible for training. Multiple responses were gathered from

individual institutions in order to capture data from administrators and faculty trainers.

With a response rate of 59%, the results of the survey showed that:

- Learning management system training appeared to be offered sufficiently by most institutions;
- Training was more readily available for course development than for teaching online;
- Less than half of respondents (44%) offered training for teaching online;
- The most common reasons for not offering training were lack of staff (62%) and lack of time (31%). (Shattuck, Dubins, & Zilberman, 2011, p. 45)

The survey results also detailed what training topics the respondents would like to offer to online instructors, but that were not currently offered due to lack of staff and time to develop and deliver training: teaching online, pedagogy, assessment, managing online discussions, Americans with Disabilities Act, copyright, course design, and technology (Shattuck et al., 2011, p. 46). With 71% of respondents indicating that there was a possibility that their institutions would be interested in a statewide online teaching certificate program, and 62% stating that the reason they did not offer training sessions was because they did not have the personnel to design and deliver the training, the COAT team felt able to support their recommendations that a *Certificate for Online Adjunct Teaching* training should be developed and piloted. The final team report detailed what competencies should be included in the prototype COAT training and suggested possible formats and structure.

COAT: Design and Construction with Initial Implementation, 2009-2012

Year two of the COAT project, (academic year, fall 2009 to summer 2010), focused on designing the training which was piloted as a nine-week online course from April through June 2010 with 17 people successfully completing the course. Participants in the pilot COAT course did not pay any course fees. Detailed notes were kept on all stages of this design process and results were disseminated (Shattuck et al., 2011). The following year, the COAT project implemented the COAT course as a grant-independent training course. In order to be financially self-sustaining, the COAT project charged participants a fee to take the course with the revenue being used to pay for essential services such as the COAT instructors' teaching stipends and basic administrative costs. Volunteer work (for example, in the areas of research and learning management system administration) helped offset the amount COAT needed to charge participants. The fees were set at \$300.00 for participants who either lived in Maryland or were affiliated with a Maryland higher education institution and \$600.00 for all other participants. The expectation was that participants would primarily come from Maryland institutions, and offering a reduced fee to these participants was seen to be a possible benefit for MOL institutions. A number of institutions individually made the choice to pay all or part of the course fees for their instructors who took the course.

The demand for enrollment in the COAT course was higher than expected and from a wider geographic area than anticipated. From fall 2010 to spring 2012, 204 participants from 17 different US states, over 30 institutions, and one Australian university successfully completed one of 11 sections of the COAT course. Two

instructors facilitated the courses. These 11 sections of the COAT course were essentially the same course that was piloted in spring 2010 with any changes falling into the realm of minor changes that *tweaked* the course design (for example, simplifying the navigation of the course and reducing the workload by making some assignments optional and removing a few discussion boards). Figure 2 lists the COAT core competency areas which have not changed from the pilot course and were used for all 11 course sections. Table 2 shows the COAT course description and course objectives.

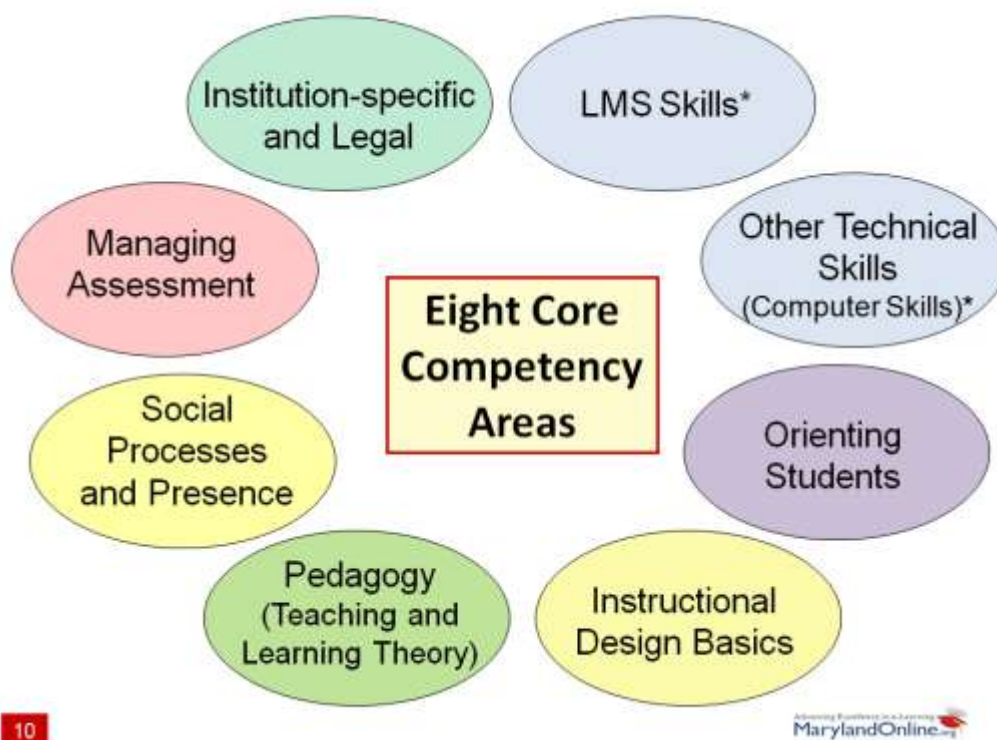


Figure 2. COAT core competency areas. From “MOL’s COAT Online Adjunct Faculty Training Project Outcomes” by B. Dubins, J. Shattuck, and D. Zilberman, 2011, slide 10. From <http://www.slideshare.net/WCETConference2010/online-adjunct-faculty-training>

Table 2

COAT Course Description and Objectives

	Text from COAT Course Syllabus (COAT, 2010)
Course Description	<p>The course will explore the online teaching and learning environment by introducing online learning principles and instructor competencies. Participants will have the opportunity to experience online learning from the students' perspective, as they explore and master specific competencies needed in order to facilitate their own online course. Topics covered include orienting students to the online learning environment, basic instructional design principles as applied to the facilitation of online courses, self-assessment of instructor technical and Learning Management System skills, pedagogical approaches to facilitate online learning, social processes and presence, facilitating online discussions, managing assessment in the online environment, legal issues (ADA, FERPA and copyright), and identifying relevant institutional policies, procedures, and support services. Participants will also develop a plan for their continued professional development. Note: <i>This course is intended to introduce instructors how to teach (facilitate) an online course that has already been developed. This course does <u>not</u> train faculty how to <u>develop</u> an online course</i></p>
Course Objectives	<p>Upon completion of this course, participants will be able to:</p> <ol style="list-style-type: none"> 1. Identify Learning Management System skills and technology skills required of instructors in the online classroom. 2. Recognize and apply basic instructional design requirements of an online course. 3. Identify strategies to effectively orient students to learning online. 4. Describe and select appropriate pedagogical components for the online teaching and learning process. 5. Recognize and establish an appropriate social presence in order to facilitate learning and build a learning community. 6. Facilitate an online discussion. 7. Evaluate and select assessment methods appropriate to the course/discipline in which they teach. 8. Identify basic legal issues of teaching online. 9. Demonstrate an understanding of institutional policies, procedures and support services related to the online teaching environment. 10. Identify networking and professional development opportunities.

Four screenshots from the summer 2011 COAT section are given in Figure 3 to show parts of the COAT course and to identify some of its key components. The first screenshot is presented to highlight that the course models a typical credit course with a syllabus, course schedule, and course objectives. The second screenshot gives example asynchronous discussion boards showing how students are encouraged to introduce

themselves at the start of the course to start building community and to interact informally in the social space: the Cyber Café. The last two screenshots show some of activities used in the course to give participants the experience of using interactive activities to check their understanding individually and of participating in group activities such as a wiki for collaborative learning opportunities.

My Courses Scholar

Course Information

Maryland Online Adjunct Teaching Project Syllabus

Attached Files: [COAT_syllabus_v9.pdf](#) (122.405 KB)

Click on the link above to access the syllabus for the course. Even though this is not a college credit course, the course is conducted in a method similar to college courses. This gives you a chance to experience online learning from a college student's perspective.

Be sure to review the syllabus closely.

I also suggest that you print it off so you can easily refer to it later (perhaps store it in a folder along with other "handouts" you may choose to save or print). To view the file, click on it. To save a copy of the file to your hard drive, right click on the file name and choose "Save target as".

Course Schedule

Attached Files: [COAT_schedule_summer_2011_revised.doc](#) (65.5 KB)

This document contains the course schedule, with a list of assignments and due dates. I suggest you print off or download a copy and refer to it throughout the course.

Course Objectives

Attached Files: [Course and Module objectives_2011Jan.pdf](#) (232.213 KB)

The course models a college credit course

My Courses Scholar

Discussion Board

Displaying Forum

1 - **Self Introduction - Participate in the discussion board! -Week 1**

Meet your fellow students! Please go to the discussion board area and post a self-introduction. This introduction could include your name, institution, teaching discipline, teaching experience (both face-to-face and online).

After introducing yourself discuss the results of your Self-Assessment survey from the Penn State site, including what you already know about teaching online versus what you would like to learn. This is a great way to share and exchange your learning objectives and what you hope to get out of this course.

2 - **Cyber Cafe** 57 1 13

Join us in the Cyber Cafe! A Cyber Cafe is one of many ways you can encourage your students to interact with each other within the course. A cyber cafe is a special location (usually a discussion board) in the course site where students can talk to each other and share thoughts and ideas. This is a "social space," so students should be free to discuss topics not related to the course content, if they choose.

Let's put on the "student hat", and participate in the Cyber Cafe.

The Cyber Cafe can be accessed by clicking on the link above, or by clicking on the **DISCUSSION BOARD** menu button (on the left side of this window). Simply click the "+"

Discussion Board

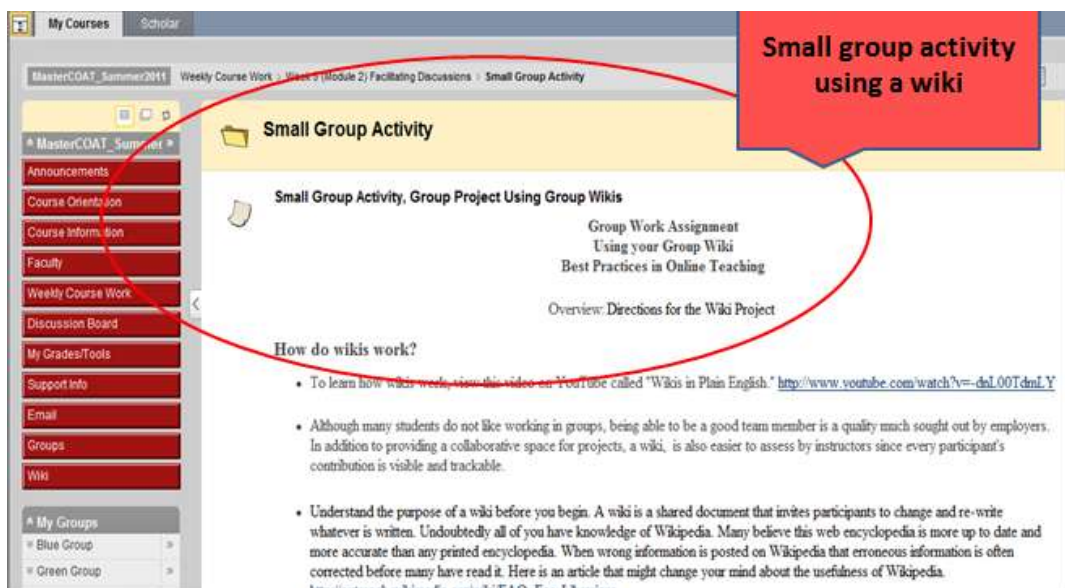
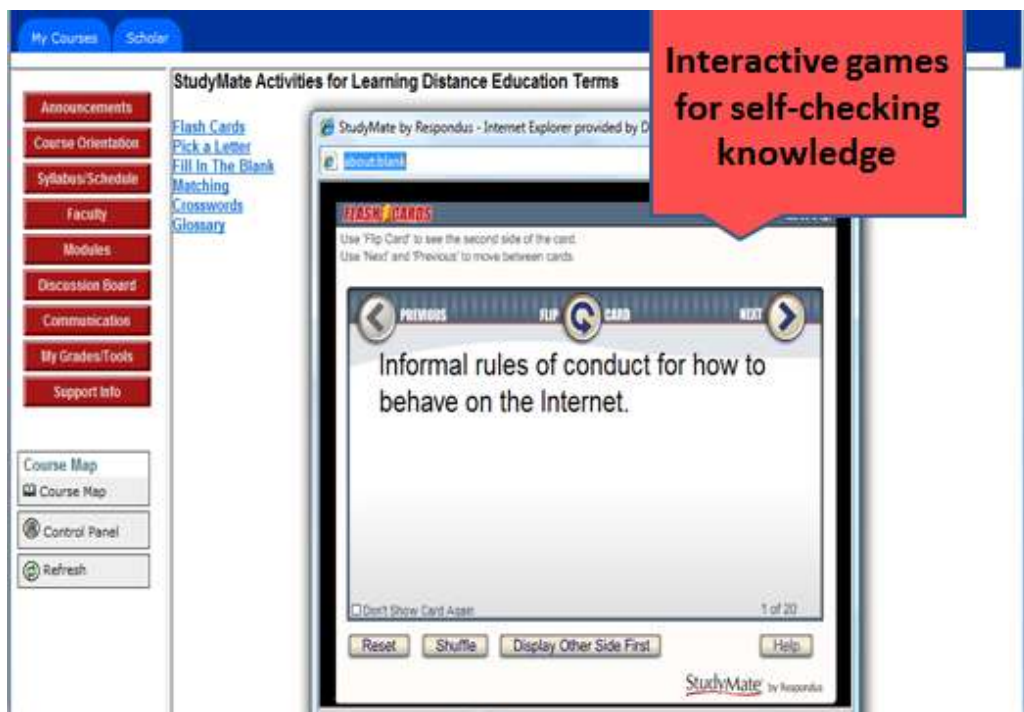


Figure 3. COAT course screenshots. From “MOL’s COAT Online Adjunct Faculty Training Project Outcomes” by B. Dubins, J. Shattuck, and D. Zilberman, 2011, slides 15-17, 20.

Although the COAT core competencies remained identical for all 11 COAT sections, four of the sections were customized to meet the needs of two, nonMaryland universities that asked the COAT project to provide dedicated course sections for their instructors (the other seven sections had mixed participants enrolled from a variety of institutions). For one university, the COAT project customized two sections (in summer and fall 2011) by adapting the nine-week, instructor-facilitated course to a six-week facilitated course with the final module being redesigned into a self-paced format. These two *6-week + self-paced* courses had one minor change to the course description and learning objectives with the final sentence of the course description being removed: “Participants will also develop a plan for their continued professional development,” along with the removal of learning objective 10: “Identify networking and professional development opportunities.” For the second university, two winter 2011/12 sections were run as the nine-week facilitated course with a break in the middle to accommodate the university’s extended holiday period. The course description and learning objectives for the two customized winter 2011/12 courses were the same as for the other seven nine-week courses, and the only content change was to make the institutional policies, procedures, and support services content reference the particular university where all the participants in the course worked.

Although some research had already been conducted that focused on participants’ initial reactions to the COAT course using end-of-module/course surveys and participants’ reflection journals, a detailed research study of the impact of the COAT training on participants’ subsequent teaching practice had not been done prior to this

study. The next section describes the purpose of this study which is positioned within the evaluation and reflection phase of McKenney and Reeves' (2012) GMDR.

Purpose of the Study: Evaluation and Reflection

During the evaluation and reflection phase of the GMDR “design ideas and prototype solutions are empirically tested and the findings are reflected upon, with the aim of refining (theoretical) understanding about if, how, and why intervention features work” (McKenney & Reeves, 2012, p. 133). The purpose of this research study was to evaluate whether the content, structure, and instructional approaches of the COAT course effectively helped prepare higher education adjunct faculty to teach online, and, through reflection, to extract design principles that could prove useful for other researchers and practitioners working in the field of online instructor training. According to McKenney and Reeves (2012), the term *reflection* “is used to describe the retrospective consideration of findings and observations” (p. 134), and this reflection process facilitates the development of design principles and possibly, often after numerous iterative cycles of the GMDR, theoretical understanding of a phenomenon. The next section discusses the *evaluation* component of the evaluation/reflection phase with the *reflection* part discussed in more detail in Chapters Three and Six.

As an evaluation of the COAT course, this study falls within Richey, Klein, and Nelson's (2003) Type 1 categorization of DBR studies that have an emphasis on the “study of specific product or program design, development, and/or evaluation projects” (p. 1103). In their analysis of 56 Type 1 studies, Richey et al. found that “evaluation research techniques are often employed in Type 1 studies to determine the effectiveness

of the resulting product” (p. 1116). The evaluation research model this thesis used to study the COAT course is Guskey’s (2000) model of five critical levels of professional development evaluation (see Figure 4) which he adapted from Kirkpatrick’s (1959) evaluation model designed for evaluating business and industry training programs.

Evaluation Level	What Questions Are Addressed?	How Will Information Be Gathered?	What Is Measured or Assessed?	How Will Information Be Used?
1. Participants' Reactions	Did they like it? Was their time well spent? Did the material make sense? Will it be useful?...	Questionnaires administered at the end of the session	Initial satisfaction with the experience	To improve program design and delivery
2. Participants' Learning	Did participants acquire the intended knowledge and skills?	Paper-and-pencil instruments, Simulations, Demonstrations, Participant reflections (oral and/or written), Participant portfolios	New knowledge and skills of participants	To improve program content, format, and organization
3. Organization Support & Change	Was implementation advocated, facilitated, and supported? Was the support public and overt? Were problems addressed quickly and efficiently?...	District and school records, Minutes from follow-up meetings, Questionnaires, Structured interviews with participants and district or school administrators, Participant portfolios	The organization's advocacy, support, accommodation facilitation, and recognition	To document and improve organization support To inform future change efforts
4. Participants' Use of New Knowledge and Skills	Did participants effectively apply the new knowledge and skills?	Questionnaires, Structured interviews with participants and their supervisors, Participant reflections (oral and/or written), Participant portfolios, Direct observations, Video or audio tapes	Degree and quality of implementation	To document and improve the implementation of program content
5. Student Learning Outcomes	What was the impact on students? Did it affect student performance or achievement?...	Student records, School records, Questionnaires, Structured interviews with students, parents, teachers...	Student learning outcomes...	To focus and improve all aspects of program design...

Figure 4. Guskey’s five levels of professional development evaluation. Adapted from

“Does it make a difference?” by T. R. Guskey, 2002, *Educational Leadership*, 59(6).

For the COAT course, Guskey's (2000) Levels 1 and 2 (participants' reactions and participants' learning) have already been addressed through data collected and analyzed by the COAT team during and immediately at the end of each COAT course. Guskey's Level 3 (organizational support and change) is part of a separate proposed COAT research project which plans to collect and analyze data from the distance learning administrators at the institutions where COAT alumni teach. This thesis collected and analyzed data focused on evaluating Level 4: participants' use of new knowledge and skills. Future research plans include a focus on whether the COAT project can be evaluated at Level 5 to see if being taught by COAT alumni has any impact on student learning outcomes.

Guskey (2000) argued that most evaluations of professional development occur at Level 1 (initial participant reactions) as it is the easiest level to assess. However, data gathered from the lower levels are not informative for measuring the impact of training on subsequent practice. Guskey highlighted that it is challenging to make a connection between teaching practice and earlier training experiences:

Educators work in complex environments where multiple factors affect their behaviors. Changes in leadership, occurrences in one's personal life, other learning opportunities, or changes in professional assignment could alter participants' behaviors and activities quite apart from the influence of professional development. Isolating the professional development experience as the true cause of change in practice is a challenging aspect in any evaluation effort. (2000, p. 187)

This study aimed to meet this challenge through utilizing mixed research methods that included most of the ways Guskey identified for gathering information at Level 4. His methods included: questionnaires; interviews with participants and their supervisors; participant reflections; participant portfolios; direct observations; and video or audio tapes. The research methods used in this study are detailed in Chapter Three and included a questionnaire, participant reflections, archived online courses, and interviews. The next sections present the research paradigm, assumptions, and research questions that guided the design of this study.

Research Paradigm

This section introduces the research paradigm that informed the design of this research study. According to Plack (2005), citing Guba and Lincoln (1994):

A paradigm contains the investigator's assumptions not only about the manner in which an investigation should be performed (i.e., methodology), but also in how the investigator defines truth and reality (i.e., ontology) and how the investigator comes to know that truth or reality (i.e., epistemology). More recently, Lincoln and Guba (2000) have added axiology, or the values underpinning ethics, aesthetics, and religion, to this framework on research paradigms. They suggest that answers to questions regarding these four elements provide an interpretive framework that guides the entire research process including strategies, methods, and analysis. (p. 224)

Lincoln, Lynham, and Guba (2011) included five inquiry paradigms in their "Themes of Knowledge" (pp. 102-115) table: positivism, postpositivism, critical (+ feminism + race),

constructivism (or interpretivist), and participatory (+ postmodern). Lists of paradigms and terminology about paradigms are not uniform across the social sciences research literature. For example, Cohen, Manion, and Morrison (2007) identified four paradigms: normative (positivist), interpretive, critical, and complexity theory (p. 33). Crotty (1998), using the term *theoretical perspective* instead of *paradigm*, had an open-ended list of five theoretical perspectives (paradigms): positivism, interpretivism, critical inquiry, feminism, postmodernism, etc. (p. 5); and several researchers have identified DBR as an emerging research paradigm (Edelson, 2002; Design-Based Research Collective, 2003), although others have described DBR as a research methodology (Bell, 2004; Wang & Hannafin, 2005), or a research genre (McKenney & Reeves, 2012).

Figure 5 shows the constructivist/interpretivist paradigm that frames this study. From an interpretivist perspective: “A primary aim of social science is to understand what people mean and intend by what they say and do and to locate those understandings within the historical, cultural, institutional, and immediate situational contexts that shape them” (Moss et al., 2009, p. 501). In order to explain why the term *interpretivist* is used rather than *constructivist*, it is important to clarify how this study defines two of the terms that are often used in diverse ways when talking about paradigms and theories. The next section discusses the primary uses of the terms *constructionism* and *constructivism*.

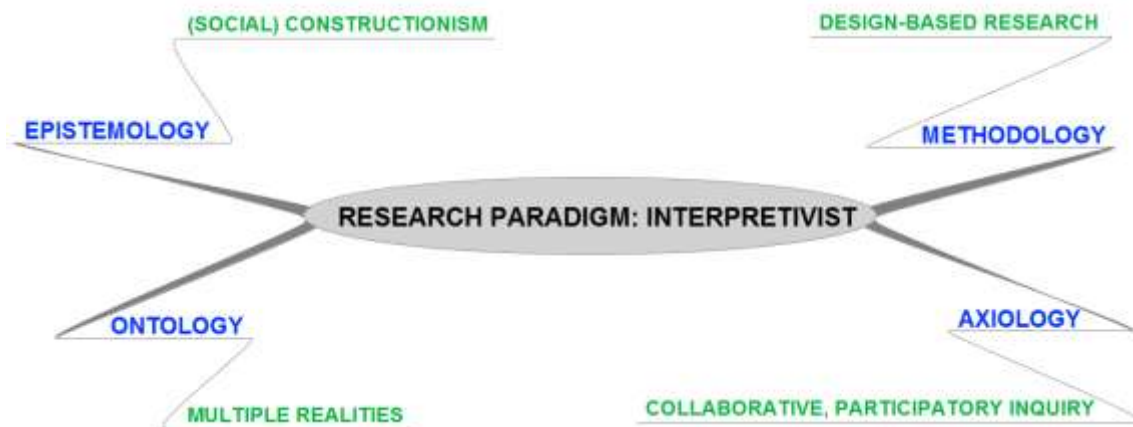


Figure 5. Research paradigm.

Constructi-ists

Two terms have multiple meanings and uses throughout the social sciences literature: *constructivism/ist* and *constructionism/ist*, sometimes with the word *social* in front of them. Figure 6 gives a simplistic illustration of these diverse uses.

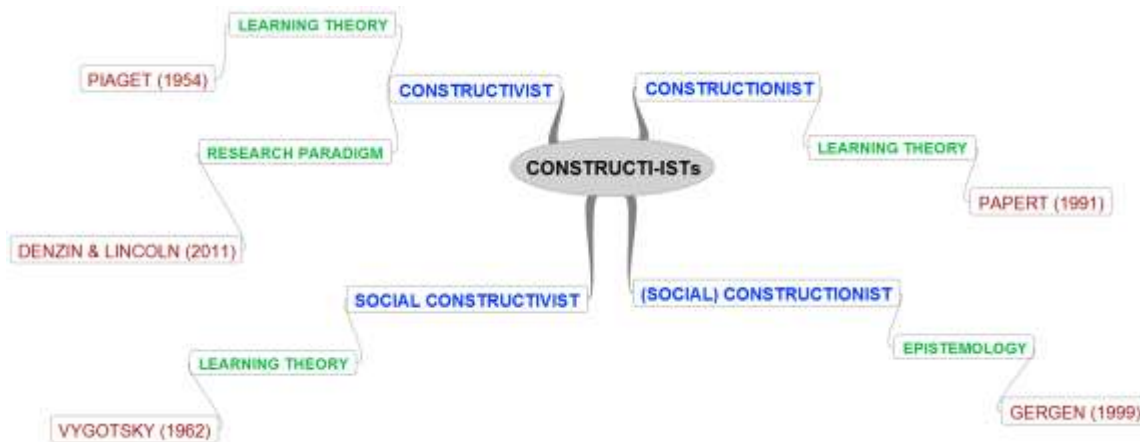


Figure 6. Constructi-ists.

This study uses the term *interpretivist* instead of *constructivist* for its research paradigm in order to more easily differentiate between two concepts that use the same term: a constructivist paradigm and a constructivist learning theory (Chapter Two

discusses constructivism as a learning theory). Although Papert's (1991) constructionist learning theory has the same view of learning as the constructivist concept of learners actively constructing their own knowledge, constructionism "adds the idea that this [building knowledge] happens especially felicitously in a context where the learner is consciously engaged in constructing a public entity" (p. 1). This shift from a focus on individuals' internal meaning-making to people's knowledge construction in particular contexts through creating sharable artifacts can also be seen when distinguishing between constructivism and constructionism as epistemologies. A number of scholars have highlighted that the terms *constructivism* and *constructionism* are often used interchangeably in discussions on epistemology and paradigms (see, for example, Burr, 2003; Charmaz, 2008; Crotty, 1998; Lincoln, Lynham, & Guba, 2011; Gergen, 2009; Holstein & Gubrium, 2008). However, a difference between these two *constructi-ist* concepts has been identified: "Although resonant with constructionist views, constructivists tend to place meaning within the mind of the individual, while social constructionists locate the origin of meaning in relationships" (Gergen, 2009, p. 26), and this individual/social distinction is also highlighted by Burr (2003):

The essential difference between... constructivisms and social constructionism are twofold: in the extent to which the individual is seen as an agent who is in control of this construction process, and in the extent to which our constructions are the product of social forces, either structural or interactional. (p. 20)

This study is framed within a social constructionist epistemology which highlights that knowledge is constructed between people within particular social and historical

situations. The alignment of this epistemology with an interpretivist research paradigm, a DBR methodology, the data collection and analysis methods, and the role of the researcher is described in Chapter Three. The primary assumptions that underpin the research questions are introduced next.

Assumptions

There are three main assumptions on which the research questions that guide this study are based. The first two assumptions, which will be discussed in detail in the literature review in the following chapter, are that: Teaching in an online environment requires different instructor roles and competencies to teaching in a campus-based classroom; and online training courses can help instructors learn about, observe, experience, and explore these roles and competencies. The third assumption, which is grounded in an emic research orientation that values the perspectives and practices of participants in the generation of knowledge about the intervention being studied, is that: Alumni of training courses can reflect on a prior training experience to identify what impact, if any, the training had on their later teaching practice. Within an interpretivist paradigm, instructors, as both subjects and reflective practitioners, can be considered a primary source of data on how they became more effective online teachers and on the effectiveness of training courses they participated in to help them move from teaching in a campus-based environment to teaching online.

The third assumption is also influenced by my own experiences reflecting on teacher training courses I have taken. I started teaching as an adjunct over 20 years ago armed with my new degree that proved I knew my subject and also armed with the

misplaced idea that I had enough knowledge to teach effectively. I had taken no course work focused on how teachers teach or how learners learn, but felt that my own experiences as a student and my enthusiasm for my subject would be sufficient. My very first class was a disaster and the only thing that prevented it from also being my last class was a veteran teacher who took me under his wing. I realized I had a lot more to learn than I had to teach, so I enrolled in an evening teaching course as a part-time, adult student while I practiced what I learned at night during the day with my students. From this personal experience came my strong belief that higher education instructors can benefit from training in the art and craft of teaching. This belief has influenced my career choices as I worked in a variety of tutor/teacher/instructor training settings.

I know my own need for professional development as an instructor never ends. A recent course I took that focused on teaching online required me to reflect on my teaching career and think about what had influenced my own teaching philosophies and practices. Since I took my first teacher training course in 1991, I have participated in countless professional development activities. However, I was still able to reflect back on my experience taking my first training course and identify skills and instructional approaches that I learned in the course that impacted my teaching practice and still are an important part of who I am as a teacher. This personal reflective experience suggested to me that other instructors are also able to sift through the many varied influences and professional development opportunities they participated in to identify what components or features of a particular training course had any influence on their subsequent teaching practice.

The COAT training course was a project I helped initiate with a group of like-minded instructional designers and online instructors who considered that developing and implementing an interinstitutional training course was an important strategy in helping to solve a common problem for higher education: how to best help adjuncts prepare to teach their first online course. Like me when I started as an adjunct, a number of adjuncts have no formal training in how to teach, and they cannot even draw on their own experiences as students because they have never been online students.

The COAT training course we designed had a goal to help adjuncts make the transition to teaching online through being students in a paced online course focused on teaching and learning online. I consider that the alumni of this training course can reflect on their experiences in the course to identify what parts or outcomes of the course, if any, influenced their teaching practice. Their voices are an important and valued part of the evaluation of the impact of this training course, and this thesis used their experiences to help create design principles that could be helpful to other professionals working in the area of online instructor training.

Research Questions

Before introducing the research questions which drove this study, it is useful to situate the questions within the context of recent studies that identified gaps in the literature of oTPD programs. A group of researchers from the Harvard Graduate School of Education reviewed current empirical research articles on oTPD projects and used their findings to create a research agenda for oTPD (Whitehouse, Breit, McCloskey, Ketelhut, & Dede, 2006; Dede et al., 2009). Dede, Ketelhut, Whitehouse, Breit, and

McCloskey (2009) evaluated 400 oTPD studies, found 40 that met their standards for quality empirical research, and grouped the research questions of these 40 studies into questions relating to four categories: program design, program effectiveness, program technical design, and learner interactions. Whitehouse, Breit, McCloskey, Ketelhut, and Dede (2006) found “rich findings on the design and nature of online interactions, but it [the research terrain] is much thinner on the depth and durability of teacher learning, teacher change, and impact on student learning” (p. 27). This mirrors Guskey’s (2000) claim that most professional development evaluations are too shallow and that “rarely do we consider the impacts of these efforts [professional development] on more important indicators of success, such as participants’ professional knowledge or practice” (p. 9). Dede et al. (2009) concluded by calling for a research agenda focused on five areas, one of which this study was designed to explore: the “impact of professional development on teacher change, particularly improvements that transform practice” (p. 16).

The guiding question this study sought to explore draws on both the key question that Guskey (2002) identified for Level 4 of his model: “Did the new knowledge and skills that participants learned make a difference to their professional practice?” (p. 47), and on the type of questions McKenney and Reeves (2012) identified for research on interventions which are focused “more on (characteristics of) the intervention type” (p. 193). The guiding question for this study is: *What characteristics of the COAT course, if any, made a difference to alumni’s professional practice?* This guiding question is then separated into three research question areas:

1. Did COAT alumni participate in the COAT training because they were Maryland

higher education adjuncts who wanted to make the transition to teaching online?

Did COAT alumni first teach online after taking the training course? Do COAT alumni identify taking the COAT course as influencing their choice to teach online, and, if yes, in what way(s) did COAT influence them?

2. Can a sample of alumni who taught online after completing the COAT course identify any elements (content, structure, instructional approaches, etc.) of the COAT course as being notably important in helping them teach their subsequent online course(s)? If yes, which elements? Do they identify any elements as being unimportant or even misleading in informing their subsequent online teaching practice? If yes, which elements?
3. Does a sample of COAT alumni demonstrate any key competencies and instructional approaches that were included in the COAT course in their subsequent online teaching practice? If yes, how do these alumni demonstrate these competencies and instructional approaches, and do they attribute their use of them to what they learned in the COAT course? (Key competencies and instructional approaches emerged from the data collected from question two.)

How this study explored these research questions is detailed in Chapter Three.

Summary

This chapter has presented the purpose of this research study: to evaluate whether the content, structure, and instructional approaches of a training program effectively helped prepare higher education adjunct faculty to teach online, and to extract design principles that could prove useful for other researchers and practitioners working in the

field of online instructor training. Positioning the COAT course as the intervention that was designed to solve the problem of how best to provide quality, accessible training for adjunct faculty in Maryland, this research study evaluated and reflected on the impact of the COAT course on alumni's subsequent practice. By using Guskey's (2000) model of professional development evaluation, this study was designed to fill a gap identified in the oTPD research terrain: the longer term impact of training on instructors' teaching practice. The next chapter provides a preliminary literature review focused on the three elements identified in the research questions: the content, structure, and instructional approaches of training courses for adjunct faculty who are making the transition to teaching online. This is then followed by Chapter Three which describes the research methodology in detail.

Chapter 2: Preliminary Literature Review

This preliminary literature review focuses on three instructional elements that need to be explored when designing an educational intervention: what content, structure, and instructional approaches best meet the objectives of the intervention as gleaned from an extensive and informed review of the literature and of the context in which the intervention will be tested. In DBR, the instructional elements of an intervention are first identified in the analysis and exploration phase of a design project through a literature review and the input of experts and practitioners. This information is then used to design the first iteration of the intervention. The literature review is not limited to being an initial step in a linear research process, and it is expected that the literature review will be revised and revisited throughout a DBR project as findings from ongoing data collection and analysis cycles lead to the need for additional reviews of the literature. A preliminary literature review is conducted with the purpose of identifying draft design principles that have the potential to address the problem the intervention is being designed to solve. In the COAT project, the draft design guidelines included what content, structure, and instructional approaches might best be used to address the training needs of adjuncts who are making the transition to teaching online.

A preliminary literature review was conducted in fall 2008 to spring 2009 in the analysis and exploration phase of the COAT project. Findings from that literature review, combined with interviews with key personnel from 17 US training courses for online instructors and a survey of distance learning administrators and faculty trainers at

Maryland higher education institutions that offer online courses, informed the development of the first iteration of the COAT course.

COAT's initial literature review is revisited and extended in this chapter to include additional and more recent studies. This chapter both highlights some of the empirical data that informed the COAT draft design principles and also explores what, if any, changes have been identified in the area of how best to design training that helps adjuncts make the transition to teaching online. The first section of this chapter presents what content should be included in such training. Then studies that have explored the specific training needs of online adjuncts and any recommendations on how that training should be structured are discussed. Finally, the instructional approaches that informed the first iteration of the COAT course are detailed.

Content

This section primarily reviews research studies focused specifically on online teacher roles and competencies. Researchers have tended to agree that the basic functions of teaching do not change from campus-based to online teaching (Díaz & Entonado, 2009; Anderson, Rourke, Garrison, & Archer, 2001), but that “online teaching requires different roles and competencies than classroom teaching” (Aydin, 2005, p. 1). Baran, Correia, and Thompson (2011) conducted a critical analysis of literature focused on online teacher roles and competencies and found that “while the traditional roles of teachers can be transferred to the online environment, the affordances and limitations of the new learning setting require teachers to adapt to new roles for creating effective and

meaningful learning experiences” (p. 425). These new roles for online teaching are discussed next.

Berge’s (1995) taxonomy of instructors’ roles for moderating online discussions has been frequently cited in the literature (see, for example, Conrad, 2007; Morris & Finnegan, 2008-2009; Palloff & Pratt, 2007). Berge identified four roles: pedagogy, management, social issues, and technology. These four roles have since been recognized as important areas for online faculty professional development (Kanuka, Heller, & Jugdev, 2008). Goodyear, Salmon, Spector, Steeples, and Tickner (2001) extended the purview of online teaching from just moderating online discussions to facilitating an entire course online, and they highlighted eight roles for online teachers: process facilitator, advisor-counselor, assessor, researcher, content facilitator, technologist, designer, and manager-administrator (p. 69), while acknowledging that “these roles are unlikely to have equal importance in any specific instance of online teaching” (p. 68). Gabriel (2007) argued that all these roles fall within Chickering and Gamson’s (1987) principles of good teaching.

Chickering and Gamson’s (1987) seven principles for good practice in undergraduate education, although originally formulated for campus-based education, were revisited by Chickering and Ehrmann (1996) with a focus on using technology. The seven principles have been seen by distance education researchers as offering “solid, research-based guidance for the design and delivery of Internet-based courses” (Bangert, 2004, p. 221), and as “effective pedagogical practices for online teaching” (Bailey & Card, 2009, p. 152). Gabriel (2007) considered that the seven principles describe “certain

universals of teaching and e-learning” (p. 182) which are applicable irrespective of teachers’ individual perspectives on teaching. Chickering and Gamson’s seven principles state that good practice:

- (a) encourages students and faculty contacts;
- (b) develops mutual dependence and collaboration among students;
- (c) utilizes active learning techniques;
- (d) offers prompt feedback;
- (e) stresses time on task;
- (f) conveys high expectations; and
- (g) respects diverse ways of learning and talents.

Recent studies have looked at how novice and experienced online instructors differ in their performance of online instructor roles. Using Berge’s (1995) four roles, Morris and Finnegan (2008-2009) found that:

There were distinct differences in the roles enacted by experienced online faculty as compared to novice online faculty. Novice instructors most frequently enacted a management role to a limited degree, and rarely posted a comment classified as ‘pedagogical.’... Experienced faculty, however, enacted multiple roles – social, managerial, and pedagogical – to engage students and increase student persistence and success.... Experienced instructors primarily enacted a pedagogical role. (p. 61)

This indicates that training for novice online instructors should emphasize and challenge instructors to develop the multiple roles associated with more experienced online

instructors. One of these roles was highlighted by Bawane and Spector (2009) in their study that used data from a survey completed by 30 experienced online instructors. They found that these instructors ranked the pedagogical role as the most important, and they described five activities, associated with this role:

- (a) design instructional strategies,
- (b) develop appropriate learning resources,
- (c) implement instructional strategies,
- (d) facilitate participation among students, and
- (e) sustain students' motivation. (Bawane & Spector, 2009, p. 392)

In a qualitative study focused on five novice online instructors who were making the transition to teaching their first online course, Conrad (2004) found that the instructors were primarily concerned with how to deliver content in the online learning environment. These instructors drew on their prior campus-based teaching experience when creating their online teaching role, with each instructor transferring to the online learning space what was important to them as instructors in a face-to-face classroom. Most notably lacking in the instructors' reflections on their online teaching experience were their observations or acknowledgement of the importance of building community and social presence in online courses.

This preliminary review of the literature on online instructor roles indicates that training for adjuncts making the transition to teaching online should include a focus on all four of Berge's online teaching roles. This emphasis on roles was incorporated into the COAT course objectives (see Table 3). Although some of the COAT course objectives

can be seen to align with more than one online instructor role, each outcome aimed to introduce participants to at least one of Berge's (1995) roles with a majority aligning with the pedagogical role: pedagogical (objectives 2, 4, 6, 7, 10), social (objectives 3, 5), managerial (objectives 8, 9), and technical (objective 1).

Table 3

COAT Course Objectives

	Text from COAT Course Syllabus (COAT, 2010)
Course Objectives	<p>Upon completion of this course, participants will be able to:</p> <ol style="list-style-type: none"> 1. Identify Learning Management System skills and technology skills required of instructors in the online classroom. 2. Recognize and apply basic instructional design requirements of an online course. 3. Identify strategies to effectively orient students to learning online. 4. Describe and select appropriate pedagogical components for the online teaching and learning process. 5. Recognize and establish an appropriate social presence in order to facilitate learning and build a learning community. 6. Facilitate an online discussion. 7. Evaluate and select assessment methods appropriate to the course/discipline in which they teach. 8. Identify basic legal issues of teaching online. 9. Demonstrate an understanding of institutional policies, procedures and support services related to the online teaching environment. 10. Identify networking and professional development opportunities.

Many of the research studies of instructors' roles were conducted with the goal of using the roles to identify online teaching competencies. The next section focuses on research studies in the area of online teaching competencies.

According to Williams (2003), "the initial step in creating a successful professional development program is to identify the competencies needed to perform the functions and outputs of major roles" (p. 46). The International Board of Standards for Training, Performance, and Instruction (IBSTPI) defined a competency as "an integrated

set of skills, knowledge, and attitudes that enables one to effectively perform the activities of a given occupation” (IBSTPI, n.d., How We Do It section, para. 1). The IBSTPI board sponsored Goodyear et al.’s (2001) research on online instructors’ roles and competencies which documented the results of a 48-hour workshop involving experienced online educators who produced a preliminary competence framework for online instructors. This work informed the IBSTPI’s (2003) instructor competencies document which included 17 competencies grouped into five domains of instructor performance: professional foundations; planning and preparation; instructional methods and strategies; assessment and evaluation; and management. Further research studies focused on online instructor competencies have resulted in a number of competency profiles using a variety of research methods and producing varying categorizations of competencies. The following paragraph highlights a number of these competency profiles as examples of the research done in this area. More recent research into the relevance and usefulness of such competency lists to inform training decisions is then discussed.

Ragan (2009) used information gathered from interviews with online teaching experts and a literature review to inform his 50 competencies. Smith’s (2005) 51 competencies were derived from articles/books that discussed online teaching, and Varvel’s (2007) 247 competencies were identified through a five-step approach: student input, literature review, faculty input, collaborative working group, and alignment with regionally recognized standards. Bailie (2011), like Williams (2003), used a modified Delphi approach to confirm findings from similar competency studies that had looked at both faculty and student perspectives on online teaching competencies, and the results,

(detailed in Bailie, 2011, Table 3, p. 87), showed “that a consensus between what online faculty and online students perceived as important instructional competencies continues to be possible” (p. 88).

The first iteration of the COAT course was designed around eight core competency areas (see Figure 2, p. 15) that the COAT research team identified after reviewing the literature on online teacher competencies, conducting a survey of 37 Maryland higher education institutions on their faculty training needs, and interviewing people connected to 17 online instructor training programs. An outline of how these eight core competency areas were grouped into four COAT course modules, along with the learning objectives for each module is given in the COAT syllabus (COAT, 2010). The eight COAT core competency areas were not separated into a list of individual competencies as the COAT team felt that having general areas was more flexible in guiding the design of training for novice online instructors who would go on to teach in a number of higher education contexts and disciplines, and who had a variety of teaching perspectives and philosophies. Tigelaar, Dolmans, Wolfhagen, and van der Vleuten (2004) emphasized that competencies need to be “broadly defined to give room for differentiated teacher profiles” (p. 264). This recommendation to take into account instructor diversity was expanded by Alvarez, Guasch, and Espasa (2009) with their acknowledgement of the influence of the context on competencies.

Alvarez et al. (2009) conducted a bibliographic review focused on the roles and competencies of online higher education instructors; reviewed 16 instructor training activities/designs for incorporating information and communications technology into

teaching and learning; and conducted focus groups with 101 instructors. They argued that any statements on competencies must take into account the context in which the learning takes place, and they differentiated *socially situated competency* from the skill type *individually placed* competency which they saw as limited when applied to everyday practice in specific contexts. The bibliographic review by Alvarez et al. found consensus in the identification of instructor roles, but indicated that “the list of competencies and the priority or rank assigned to each does vary significantly from study to study” (2009, p. 329), with the studies agreeing that competencies are socially situated. The online instructor roles identified in the studies were designer/planning, social, cognitive, technological, and managerial. Although not stated by Alvarez et al., these roles are almost identical to the roles first identified by Berge (1995).

Baran (2011), in her doctoral dissertation, conducted a critical literature review using transformative learning theory as a lens through which to analyze articles focused on online teacher roles and competencies. In an article based on her thesis, Baran et al. (2011) argued that the literature on online roles and competencies has failed to take into account the concept of online educators being themselves adult learners who are active participants in accepting, rejecting, or adapting prescribed competencies and roles. Baran et al.’s critical analysis of the literature claimed that there has been too great an emphasis on a functionalist view of knowledge- or performance-based competencies at the expense of individual instructors’ critical reflection of what online teaching means to their specific, evolving, discipline-based, and context-bound teaching practice. In addition, they found that “research has been limited in terms of bringing teachers’ voices into this

[developing a list of online competencies] process” (Baran, Correia, & Thompson, 2011, p. 431). Baran concluded that “we need to consider online teachers, especially in higher education, as reflective practitioners who make their own decisions about preferred goals and practices of online teaching” (2011, p. 37), and she called for research that is more inclusive of teachers’ input and reflections on how making the transition to teaching online has affected their teaching practice and identity.

A number of other researchers also identified that instructor perceptions and self-reflection are important when making the transition to teaching online. Stacey and Wiesenberg (2007) used Pratt and Collins’ (2000) internationally validated research instrument, the *Teaching Perspectives Inventory*, to research whether college instructors in Australia and Canada perceived their online teaching differently to their campus-based teaching, and they found that instructors reported being more teacher-centered in the campus-based environment and more student-centered when teaching online. Another method of helping instructors articulate their teaching perspectives is through the use of metaphor. McShane (2005) conducted a survey of online university instructors to see how using metaphor and similes helped them frame their teacher identity in an online environment. The research participants saw teaching online as like:

- (a) performance (metaphoric roles: performer, model, preacher, juggler);
- (b) care (mentor, Obi-wan-kenobi, lamplighter, pastoral carer);
- (c) community service (social worker, policewoman, tour guide);
- (d) management or direction (orchestra conductor, stage manager, team leader, coach, tour guide, guru); and

(e) facilitation (not a metaphor).

Bailey and Card (2009) conducted a phenomenological study using interviews with 15 experienced, e-learning award winning instructors who reflected on their teaching practice, and their research found eight effective pedagogical practices for online teaching: fostering relationships, engagement, timeliness, communication, organization, technology, flexibility, and high expectations (p. 154). One of their recommendations was that “university administrators need to consider providing more pedagogical training and support to instructors who teach online” (Bailey & Card, 2009, p. 155).

This section on what the research literature identified as important when considering what content to include in a training course for instructors who are making the transition to teaching online did not result in one easily identifiable list of generic online teaching competencies that are applicable in every teaching and learning context. However, research studies did highlight that there are common roles online instructors play that may be different to the roles instructors are used to when teaching on campus and that training is useful to help instructors reflect on their pedagogical practices as they make the transition to online teaching. Conrad (2007) claimed that:

No one *can* teach you how to teach: Teaching is an expertise that you will develop or have already developed by marrying sound theory to real practice. Teaching involves not just your head and all your cognitive knowledge but also your *heart* (Palmer, 1998). In online teaching more so, the contribution of your ‘self’ – *your* heart – is critical to the success of the venture.... That said, a lot of literature offers empirical research on other teachers’ experiences, and there is a

growing body of material that will help you to plan activities and assist you with instructional design. (pp. 194-195)

The COAT team conducted a literature review in 2008-2009 of online teacher competencies to identify empirical research that then informed the development of the eight COAT course competency areas which were used to guide the design of a training course aimed at helping adjuncts explore what it means to teach online. My revisiting the literature on online teaching competencies in this section has highlighted that more recent studies question the usefulness of identifying generic competencies to inform teaching practices (see, for example, Baran, 2011). Whether the training that was developed with the aim of introducing the COAT core competency areas proved to be of use to adjuncts who took the training and went on to teach online is the focus of this study. The following section reviews the literature on how training for adjuncts who are making the transition to teaching online might be structured. This chapter then concludes with a discussion of the instructional approaches that informed the first iteration of the COAT course.

Structure

Before talking about *adjuncts* in the aggregate, it is important to highlight that adjuncts are individuals with unique needs, preferences, and reasons for teaching part-time in higher education: "Non-tenure-track faculty are a heterogeneous mixture of people who differ greatly in terms of employment, experiences, job descriptions, and motivations" (Kezar & Sam, 2011, p. viii). Gappa and Leslie (1993) created a typology to assist in defining the lifestyles and motivations of adjuncts: specialists, experts, and

professionals; freelancers; career enders; and aspiring academics. Online adjuncts can be seen to align with Gappa and Leslie's typology. For example, Bedford (2009), basing her arguments on the responses of a small sample of 22 adjuncts, found a subclassification of online adjuncts that she termed *professional* adjuncts. Professional adjuncts "are a small but growing number of individuals who do not hold full-time jobs but rely on multiple adjunct positions to fulfill their professional needs" (Bedford, 2009, para. 1). This mirrors Anderson's (2002) quantitative data results showing 65% of multiemployed adjuncts as holding more than one part-time job within higher education.

Despite the different orientations to the employment, there are commonalities involved in adjunct work situations. The online learning contexts many US higher education adjuncts work within often have similar requirements of providing formal, accredited learning that requires assessment; being paced in a semester length format; utilizing a learning management system to structure the learning environment; and complying with federal laws that govern areas such as accessibility and student privacy. These commonalities suggest that there are shared training needs for adjuncts who are preparing to teach online. Cooper and Booth (2011) pointed out that all adjunct types included in Gappa and Leslie's (1993) four groups "can benefit from advice and approaches for teaching practices that enhance and increase effective learning" (p. xii). The access of adjuncts to training for improving teaching practices is explored next.

Anderson's (2002) quantitative study of more than 30,000 faculty at 974 nonprofit, higher education institutions in 1992 and 28,000 faculty at 960 institutions in 1998 found that 49% of all responding instructors were adjuncts, with public two-year

colleges employing the most adjuncts (64.3%). Of interest to this research study is the data on the support institutions gave instructors for professional activities: 30.1% of full-time tenured/tenure-track faculty, 27.6 % of full-time nontenure-track faculty, but only 9.9 % of adjuncts received training to improve research/teaching (Anderson, 2002). In their monograph reviewing all major publications on the topic of nontenure-track faculty (a group that includes adjuncts), Kezar and Sam's (2010) findings confirmed that "professional development opportunities are more commonly available for full-time nontenure-track faculty than for part-time faculty" (p. 56), and they recommended that "consortia across similar institutions may be an important direction for creating affordable professional development" (p. 91).

Wolf (2006) found that "a comprehensive literature review revealed little scholarly research about training faculty to teach in a virtual learning environment" (p. 48). To address this gap in the literature, Wolf conducted a meta-analysis of literature focused on training faculty and trainers to teach online; interviewed distance learning experts; and reviewed a successful training program for online teaching at a university that employed adjuncts. Her research found that: "Training programs are successful when faculty have computing skills before enrolling in the training, are trained using the course delivery system with which they will be teaching, have ongoing institutional support, and are motivated to work in this environment" (Wolf, 2006, p. 47). When the COAT course was designed, course prerequisites were identified that aligned with Wolfe's recommendations on computing skills and motivation (see Table 4). In addition, the

Learning Management System (LMS) that was used to host all the COAT courses is one of the major LMSs currently used in higher education institutions.

Table 4

COAT Prerequisites

	Text from COAT Course Syllabus (COAT, 2010)
Prerequisites	<ol style="list-style-type: none"> 1. Experience teaching in the traditional (face-to-face) classroom 2. Basic computer skills. To evaluate your computer skills, take the “Computer Skills Inventory” self-check quiz. (Note: Disregard the reference to workshops, these are for undergraduate students only.) At a minimum, you must be able to: <ul style="list-style-type: none"> • Browse the Internet using browsing software • Save, find, and organize files and folders on your hard drive • Send and receive files using email • Use word processing software (Microsoft Word or compatible) <p>Note: Computer skills are not taught in the COAT course. If you are lacking basic computer skills you should reconsider taking the COAT course until you have acquired those skills.</p> 3. A sincere interest in learning how to teach online. If you aren't sure whether you are a good candidate for teaching online, please view <i>Are You a Good Candidate for Teaching Online?</i>

Chapman (2011) surveyed 294 online instructors (with a 48% return rate) to see whether there were differences in motivation and incentives for online teaching between full-time and part-time faculty. Chapman found that the motivations for teaching online were similar for both groups, but there was a significant difference in the responses of the two instructor groups as to what incentives would affect their decision to continue teaching online courses: “Two incentives were at the top of the contingent faculty members’ list that were also significantly different from the tenured/tenure-track faculty,

an online community for DE instructors and a program for certification in online instruction” (2011, Summary and Conclusions section, para. 8). Chapman concluded by recommending that, in order to retain adjunct faculty, “administrators should investigate the feasibility of establishing certification programs for online instructors, not only to motivate them to teach, but to also establish baseline quality standards” (2011, Implications section, para. 4).

Kanuka, Jugdev, Heller, and West (2008) conducted an exploratory study “to gain a better understanding of how to provide continuous learning opportunities to improve teaching practices for academics who are teleworking” (p. 150). They surveyed 609 academics working at a large distance education university in Canada and ended up with a sample of 161 respondents who described themselves as teleworkers. Of this population, 107 (66.5%) were adjuncts (Kanuka, Jugdev, Heller, & West, 2008, p. 153). Using descriptive and factor analyses, Kanuka, Jugdev, et al. found that “the data in this study indicate continuous learning activities should be delivered via digitally-based web-spaces whereby teleworkers can access the information from their home office” (2008, p. 162). The data analysis also highlighted that new instructors should be provided with “an option for sustained early training in distance-delivered online teaching” (Kanuka, Jugdev, et al., 2008, p. 162). Kanuka, Jugdev, et al. pointed out that surveys tend to show what is happening, but not why it happens, and they recommended that further research is needed “to provide greater explanatory power from the insiders’ perspectives, and to gain greater understandings between the curriculum developers, instructors, courses and programs” (2008, p. 164).

In her doctoral dissertation, Blodgett (2008) explored adjuncts' perceptions of their initial online training needs, and she hoped to address "the lack of information regarding professional development of part-time/adjunct faculty in preparation for online teaching from the perspective of such faculty" (p. 7). Blodgett's research questions focused on what training adjuncts had received to prepare them to teach online, how effective this training was from the perspectives of the adjuncts, and what their perceived needs and preferences for training were (2008, p. 9). She used a purposive sample of participants who had worked as online adjuncts within the previous two years, and her data collection tools were an electronic survey which had 28 respondents, and three focus groups with a total of eight participants. Her research findings on adjuncts' perceived preferences for training included using online formats to address accessibility issues, providing adjuncts with the experience of being students in an online course, and mentoring. One of Blodgett's three recommendations was that "universities should develop formalized, yet flexible faculty development programs for adjunct faculty who are hired to teach online courses" (2008, p. 88).

Other recent doctoral studies have focused on online faculty training, some looking at all online instructors, irrespective of whether they are full-time or adjunct, (Frese, 2006; Mier, 2011; Regino, 2009; Reushle, 2005), with others focusing only on adjuncts (see, for example, Biro, 2005). Recommendations from these studies included the need for training that includes "more pedagogical skills like how to meet the needs of an online and/or adult learner, how to become a facilitator/moderator of an online class, and how to prevent plagiarism or cheating in an online class" (Regino, 2009, p. 102).

Mier's (2011) research on whether training transformed teaching practices "found that faculty actually use the principles learned in training programs to teach in the online environment" (p. 124), and he recommended that "administrators should require all faculty that teach online to complete a certification program" (p. 124). Biro's (2005) research findings led to her recommendation that training "must contain components that recognize faculty as adult learners and facilitate critical reflection for adjuncts who design and deliver online instruction" (p. 90).

The research literature on how training for adjuncts who are making the transition to teaching online might be structured in an accessible format indicated that online, flexible training (Blodgett, 2009; Kanuka, Jugdev, et al., 2008; Wolf, 2006) which is managed by a consortium (Kezar & Sam, 2010) and that results in a certificate (Chapman, 2011; Mier, 2011) may work best for training online adjuncts. The COAT course was designed through the work of an interinstitutional consortium project which developed an online training course that resulted in a certificate in online teaching. Empirical research studies recommended that training for online teaching should give participants the opportunity to experience being an adult learner as they explored online pedagogical skills in an online course (Biro, 2005; Regino, 2009). The topic of what instructional approaches were applied to the design of the first iteration of the online COAT course is discussed in the following section.

Instructional Approaches

Reigeluth and Keller (2009) defined instructional approaches as macrostrategies that "set a general direction or trajectory for the instruction" (p. 31), and they highlighted

instructional design and learning theories on which different approaches to instruction are based. This section identifies the primary theoretical frameworks in which the first iteration of the COAT training course structure and syllabus were situated (for syllabus, see COAT, 2010). First, Bandura's (1977) social learning theory informed the design of having participants experience the student role in an online course:

A primary objective for the paced COAT course structure was to provide instructors with the experience of online learning from the student's perspective. The concept of a group training experience led by an instructor, as opposed to self-paced study with no instructor, drew on Bandura's (1977) social learning theory, in particular on the idea of modeling. By participating in a well-designed online course facilitated by an experienced online instructor who modeled identified best practices, participants would benefit through observing the practical implementation of what they studied in the course. (Shattuck et al., 2011, p. 48)

Second, the course was designed drawing on the Community of Inquiry (CoI) framework (Garrison, Anderson, & Archer, 2000) which is itself grounded in the work of Dewey's (1933) construction of practical inquiry. Although CoI was not explicitly introduced to COAT participants as a theoretical framework for online teaching, the COAT course included in its design a focus on the three CoI factors: cognitive, social, and teaching presences with a particular emphasis on social presence and the facilitation component of teaching presence. Facilitation ties in with Chickering and Gamson's

(1987) “ideas of contact between students and faculty and reciprocity and cooperation among students” (Garrison & Arbaugh, 2007, p. 164).

Finally, the COAT course is situated within a constructivist framework. Although Simonson, Schlosser, and Hanson (1999) claimed that “distance education is open to behaviorist, cognitive, constructivist, and other modes of learning” (p. 68), in keeping with the general rise of influence of constructivist pedagogies in all forms of higher education, a number of more recent researchers have recommended that online learning should be guided by a constructivist learning theory (see, for example, Bailey & Card, 2009; Bangert, 2004; Conrad, 2007; Garrison, 2009; Garrison, Anderson, & Archer, 2001). Constructivism is described in diverse ways in the literature: as one of many theories under the umbrella of cognitive theory (Morrison, Ross, & Kemp, 2007); as an epistemology rather than a learning theory (Jonassen, Cernusca, & Ionas, 2007); as an epistemology and a learning theory (Harasim, 2012); and as “a learning framework about facilitating the learning *process* that is flexible, meeting the needs of the *learner*” (Kanuka & Brooks, 2010, p. 79). Woolfolk (2010) argued that “there is no one constructivist theory of learning” (p. 311), but most constructivist theories include the same two concepts: learners actively construct their own knowledge and social interactions are central to the knowledge construction process. Constructivist instructional approaches promote student-centered learning environments in which instructors provide students with opportunities to construct meaning for themselves through collaborative, task-based activities which build on and develop learners’ existing knowledge.

Summary

This preliminary literature review focused on the three elements highlighted in this study's research questions: content, structure, and instructional approaches of a course to train adjuncts to teach online. Research studies published since the COAT project's initial literature review of online instructor roles and competencies showed that roles have not changed, but that competencies may differ depending on the context (Alvarez et al., 2009). Research suggested that digitally-based, flexible training (Blodgett, 2009; Kanuka, Jugdev, et al., 2008; Wolf, 2006) which is managed by consortia (Kezar & Sam, 2010) and that results in a certificate (Chapman, 2011; Mier, 2011) may work best for training online adjuncts. The COAT course is an interinstitutional consortium project that is delivered online with successful completion leading to a certificate in online teaching. This study aimed to research whether this is the right structure for the course. The theoretical underpinnings of the first iteration of the COAT course included modeling good teaching practices (Bandura, 1977) while building and demonstrating a CoI (Garrison et al., 2000) using a constructivist framework. The research questions and methods were designed to explore whether the instructional approaches of the first iteration of the COAT course were perceived as being appropriate by the participants in helping them prepare to teach online.

The next chapter argues that DBR was the best research approach for this study and provides the rationale and justification for this choice. The main characteristics of DBR are described before the practicalities of implementing this study within a DBR framework are discussed.

Chapter 3: Methodology

This methodology chapter reintroduces the positioning of this study within a DBR framework. DBR is first discussed in more detail and in relation to other methodological approaches. This is followed by a description of how the procedure of the study was designed to answer the research questions that drove this study. Finally, the limits and constraints of DBR are highlighted and discussed in relation to this study.

Design-Based Research

As discussed in Chapter One, this research study used McKenney and Reeves' (2012) *Generic Model for Design Research* (see Figure 1, page 10) to position this study in their third phase of evaluation/reflection. McKenney and Reeves created their generic model by building on other frameworks and models used in educational design research with their model consisting of three main phases (analysis and exploration; design and construction; and evaluation and reflection) that lead to two eventual outputs of theoretical understanding and intervention maturation.

This study was designed to address the guiding research question: *What characteristics of the COAT course, if any, made a difference to alumni's professional practice?* Findings from this study are expected to both inform redesign decisions for the COAT project and to produce usable knowledge for other instructional designers and higher education professionals working in the area of online instructor training. DBR is not a linear process where one iteration of the analysis/exploration, design/construction, and evaluation/reflection phases is expected to complete the design process. Findings from the three phases are used in a cyclical manner over any number of iterations until an

intervention can be seen as being mature with theoretical understanding articulated. This study is positioned as the initial evaluation/reflection phase in the COAT project, and, as such, contributes to eventual theoretical understanding and the maturation of the intervention. As a *microcycle* of evaluation/reflection (see Figure 7, showing a sample DBR process consisting of six microcycles, with the positioning of this study's microcycle indicated with an arrow), the findings from this study are expected to both inform decisions for the next cycle of research/design and generate design principles.

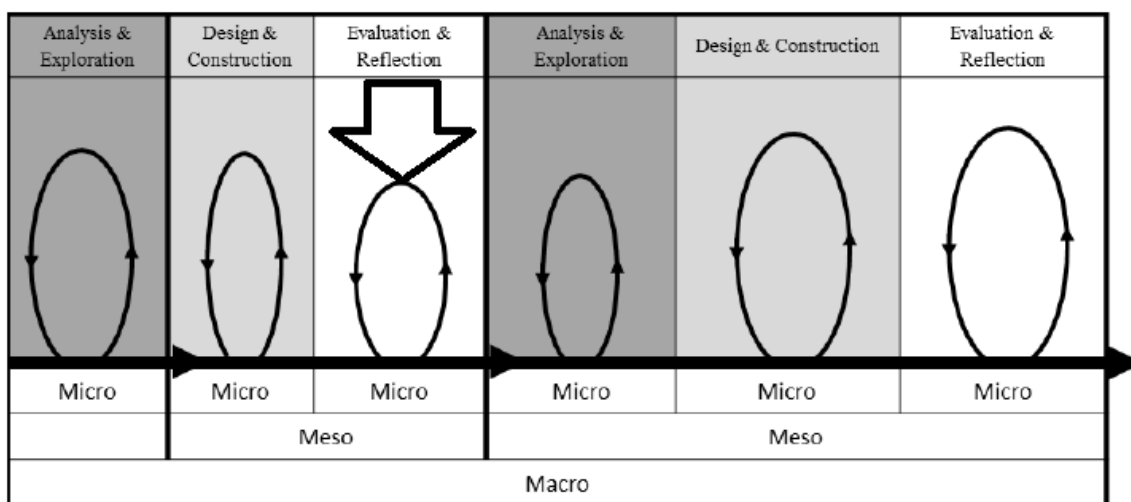


Figure 7. Micro-, meso-, and macro-cycles in educational design research. Adapted from *Conducting Educational Design Research* by S. E. McKenney and T. C. Reeves, 2012, p. 78.

Design principles is the term used by both Reeves and McKenney in their earlier papers on DBR when discussing theoretical understanding as a product of the final stage of DBR. For example, Amiel and Reeves (2008) highlighted that developing design principles is part of an ongoing DBR process that may eventually lead to theory development or understanding:

The outcomes of design-based research are a set of design principles or guidelines derived empirically and richly described, which can be implemented by others interested in studying similar settings and concerns. While the ultimate objective is the development of theory, this might only occur after long-term engagement and multiple design investigations. (p. 35)

One of the goals of this research study was to use the detailed data that were collected and analyzed from the research into the first iteration of the COAT course to articulate design principles that are relevant to other distance learning professionals working in similar contexts.

Before moving to the discussion of data collection and analysis, it is important to first discuss DBR in relation to the research orientation of this study. Then a comparison of DBR to other methodological approaches reinforces the choice of DBR as the appropriate approach for this study.

DBR is not depicted in the literature as belonging to one theoretical position or paradigm. Bell (2004) argued that it is useful to view DBR “as a high-level methodological orientation that can be employed within and across various theoretical perspectives and research traditions to bring design and research activities into a tight relation to advance our understanding of learning-related educational phenomena” (p. 245). Anderson (2005) claimed that design-based researchers seemed “little disposed towards extensive efforts in detailing its [DBR’s] epistemological or ontological underpinnings” (Stages of Design-Based Research section, para. 7). This is possibly due to these researchers drawing “from multiple disciplines, including developmental

psychology, cognitive science, learning sciences, anthropology, and sociology... the fields of computer science, curriculum theory, instructional design, and teacher education” (Sandoval & Bell, 2004, p. 200).

As presented in the *Research Paradigm* section in Chapter One, this study is framed within an interpretivist paradigm. According to Denzin and Lincoln (2011), an interpretivist paradigm “assumes a relativist ontology (there are multiple realities), a subjectivist epistemology (knower and respondent co-create understandings), and a naturalistic (in the natural world) set of methodological procedures” (p. 13). Crotty (1998) differentiated between *creating* understandings, a subjectivist epistemology that sees meaning as being created by individuals, and *constructing* understandings, a constructionist epistemology that considers that people construct meaning together in relation to their engagement with their human world. This DBR study, with its focus on generating knowledge about a training course from the subsequent activities and reflections of COAT participants, operates within a (social) constructionist epistemology (as noted in the *Constructi-ists* section in Chapter One, the term *constructionist* sometimes has the word *social* in front of it with no change in the epistemological meaning of the term). According to Koro-Ljungberg, Yendol-Hoppey, Smith, and Hayes (2009), educational researchers working within a social constructionist perspective have multifaceted, participatory roles; research goals to “negotiate and transform the practice” (p. 690); and a view of knowledge as being generated from groups of participants. In addition, this study falls within what Bell (2004) described as a “folk (emic) research orientation that investigates the manifested meaning of an intervention from the point of

view of the participants of the research as interpreted through their activity and their accounts” (2004, p. 248). This aligns with DBR’s characteristics of offering practical solutions to real world problems from the perspectives of participants, with the researcher being an integral part of the design team.

Design-Based Research in Relation to Other Research Approaches

Collins, Joseph, and Bielaczyc (2004) compared DBR to three types of educational research approaches: laboratory and training studies; ethnographic research; and large-scale studies. They argued that laboratory and trainings settings do not account for multiple variables, multiple participants’ expertise, and “the messy situations that characterize real life learning” (Collins et al., 2004, p. 20); ethnographic research describes in detail what and why relationships and events occur, but it does not try to change practice; and large-scale studies “do not provide the kind of detailed picture needed to guide the refinement of a design” (p. 21).

Action research has similarities with DBR in terms of collaboration, researchers having multiple roles, and reflection on practice. Typical action research, as opposed to critical action research, positions the teacher-as-researcher conducting “a form of disciplined inquiry, in which a personal attempt is made to understand, improve, and reform practice” (Cohen, Manion, & Morrison, 2007, p. 297). Action research can be collaborative, but the emphasis is on reflective research to inform individual practice at the local level. DBR, in contrast, is always collaborative with a focus on the generation of design principles in an evaluation/reflection phase where reflection “involves active and thoughtful consideration of what has come together in both research and development

(including theoretical inputs, empirical findings, and subjective reactions) with the aim of producing new (theoretical) understanding" (McKenney & Reeves, 2012, p. 151).

DBR uses and extends the research methods of traditional evaluation with evaluation research informing the ongoing iterative process of redesign in specific contexts. This research study is positioned as being the evaluation/reflection phase of a larger DBR study as opposed to being a stand-alone evaluation of a program, and the rationale for this is detailed in Table 5.

Table 5

Research versus Evaluation

	Research	Evaluation	This Thesis
Motivation of the Inquirer	"Researchers are interested in advancing knowledge" (Guskey, 2000, p. 44).	"Evaluators are interested in solving practical problems" (p. 44).	Both research and evaluation: advancing knowledge while solving a practical problem (a characteristic of DBR).
Objective of the inquiry	"Research seeks conclusions" (p. 44).	"Evaluation typically leads to decisions" (p. 44).	Research: conclusions may lead to COAT leadership making decisions, but that is not the primary purpose of the study.
Role of explanation	"Research seeks credible explanations of educational phenomena" (p. 44).	"Evaluation seeks to determine merit or worth" (p. 44).	Research: this study is not designed as a judgment of merit or worth of COAT. Instead design principles are sought.
Autonomy of the inquiry	"Research is an independent and autonomous enterprise" (p. 44).	"Evaluation is generally undertaken at the request of a client" (p. 44).	Research: this doctoral study is independent and autonomous.
Criteria for judging the activity	"Research is judged by the degree to which results are not confounded by various sources of error and can be generalized to other situations with similar characteristics" (p. 45).	"Evaluation is judged by its accuracy, credibility, utility, feasibility, and propriety" (p. 45).	Both research and evaluation: as a qualitative DBR study the results may be transferable to similar contexts, but no claims for generalizability are made.

Table 5 uses part of Guskey's (2000) summary of Worthen and Sanders' (1987) 12 characteristics and differences of *pure* research versus *pure* evaluation to highlight how this study can be seen to primarily align with characteristics of research as opposed to evaluation. Ketelhut et al. (2006) recommended that both program evaluation and empirical research methods are used in assessing "the development of effective models for online teacher professional development" (p. 258), and they identified DBR as being a promising research approach for combined evaluation and empirical research needs.

As a doctoral dissertation, this thesis is required to be an independent and autonomous research study, and using a DBR research orientation allows for this study to be an independent research microcycle within an ongoing research project. While the researcher's role was briefly outlined in Chapter One, Table 1 (p. 11), it is important to now detail my relationship to the COAT project to identify the roles I have played in the collaborative effort, and the role I had as the independent researcher of this study.

Role of the Researcher

I was a founding member of the COAT project, and I cowrote the initial grant proposal that applied for MOL funds to research the identified problem of how best to provide quality, accessible training for adjunct faculty who were making the transition to teaching online in Maryland. My continued involvement in this project has been as codirector/member of the research team in the *Analysis/Exploration* phase, 2008-2009 (paid by stipend), and as project chair/research coordinator in the *Design/Construction with Initial Implementation* phase, 2009-2012 (volunteer, unpaid position). Using Morrison, Ross, and Kemp's (2007) instructional design plan as a model, the design

functions of the COAT project that I participated in are highlighted by rectangular outlines (see Figure 8).

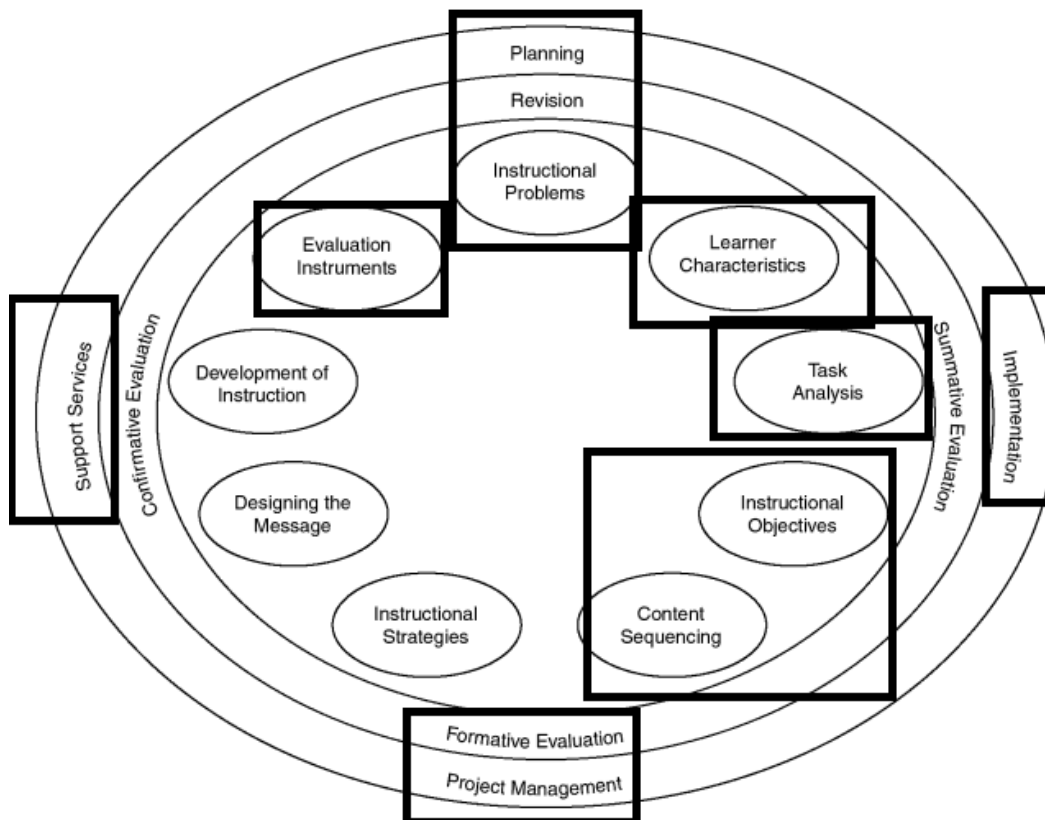


Figure 8. Instructional design model. Adapted from “Designing Effective Instruction” (5th ed.) by G. R. Morrison, S. M. Ross, and J. E. Kemp, 2007, p. 1.

In the analysis/exploration phase, I was one of two codirectors who managed the project, and I participated as part of the research team. In the design/construction phase, I cowrote the syllabus and course competencies documents after completing the analysis activities (instructional problems, learner characteristics, and task analysis). I was not an integral part of the team that did the actual work of developing the course content within the LMS, but, as project chair, I was involved in overseeing the start of the design process which included selecting the team members; clarifying their roles,

responsibilities, and tasks; and creating a timeline. In addition, I developed the evaluation instruments that would provide data on the participants' initial reactions to the course.

After the course was piloted, my role was to analyze the data from these evaluation instruments and provide input for the team to use to discuss what changes may be necessary.

After the successful pilot, and during the course of the 11 sections that have since been offered, my role has continued to be both at the project management level under the project director, and as the research coordinator who collected and analyzed data on the participants' initial reactions to the course. In addition, as all the COAT sections have been delivered using my college's LMS, I have served as the LMS technical support person for participants. I did not teach any of the COAT sections, but I did play the role of *guest speaker* in one of the weeks of the pilot course and the fall 2010 course.

Feasibility of the study. My involvement in the COAT project had implications for the feasibility of this study. Access to the project and permission to identify COAT for the research purposes of my dissertation was agreed to by MOL and the COAT director. In addition, I was introduced to all COAT participants as their LMS support person. This meant that the potential research participants were familiar with my name at least, and sometimes had a more extensive relationship with me. A benefit to this familiarity was the expectation of having a successful response rate to the request for participants. However, these existing relationships also brought questions of researcher bias and subjectivity. For example, some of the instructors who successfully completed the COAT course teach at my college. My college role is as a full-time faculty

member/instructional designer which means I may have worked with some COAT alumni at my college on their online course design, but I have not had any supervisory responsibilities for any of the participants.

Researcher bias. Not having an objective, external researcher role aligns with both DBR and a social constructionist epistemology. In DBR the researcher is an integral part of the design team, and my role in this research study can be seen to be what McKenney and Reeves (2012) termed a *nuisance variable* which they argued design researchers can embrace and compensate for “by clearly describing their presence in the research setting and discussing their real or potential influence on the data” (p. 150).

Researchers working within a social constructionist epistemology:

would regard objectivity as an impossibility, since each of us, of necessity, must encounter the world from some perspective or other (from where we stand) and the questions we come to ask about that world, our theories and hypotheses, must also of necessity arise from the assumptions that are embedded in our perspective.

(Burr, 2003, p. 152)

Researcher *reflexivity*, a term used by social constructionist researchers to refer to their self-reflection on their influence on the research process, was an integral part of the data collection and analysis stages of this research study. These stages are discussed next.

Procedure of the Study

This section addresses the practicalities of this study. First, participants and data collection tools are detailed before data analysis methods are presented. Then limits and constraints of DBR are highlighted and discussed in relation to this study.

Participants

All 204 COAT alumni who successfully completed one of the following COAT courses were invited to participate in this research study:

- (a) fall 2010 (one section, 19 participants),
- (b) spring 2011 (two sections, 33 participants),
- (c) summer 2011 (two sections, 30 participants),
- (d) fall 2011 (two sections, 45 participants),
- (e) winter 2011/12 (three sections, 54 participants), and
- (f) spring 2012 (one section, 23 participants).

For fall 2010 through spring 2012, 224 participants started a COAT course section and 204 successfully completed the course (a success rate of 91%). It was not known how many of these participants went on to teach an online course after completing COAT. In order to find out this information, all COAT alumni were contacted to invite them to participate in an initial brief questionnaire aimed at identifying alumni who subsequently taught online and who were interested in participating in this study. Before COAT alumni of the 11 course sections were contacted, the 17 COAT alumni from the pilot course in spring 2010 were invited to participate in a pilot research study that was conducted in June 2012 to test and refine the research tools for the first two research question areas. The following section describes the research methods in detail.

Research Methods

Both qualitative and quantitative methods are appropriate in DBR as long as they align with the research questions. Hoadley (2004) considered that design-based

researchers “can interleave methods as long as the systemic validity of the activity holds” (p. 205), and systemic validity is present when “the research and the inferences drawn from it inform the questions that motivated the research in the first place” (p. 205).

Anderson and Shattuck (2012), in their study of the most-cited DBR articles from 2002-2011, found that both quantitative and qualitative methods were used. The mixed data collection tools for this research project are highlighted in Table 6 with details of data sources and participants given in the following sections. In order to facilitate researcher reflexivity, both a research blog and a personal research journal were kept throughout the research process, and these items were included in the data analysis phase of this study.

Table 6

Data Collection Methods and Timeline

Research Questions (Abbreviated)	Data Sources and Participants	Timeline
Did COAT alumni participate in the COAT training because they were higher education adjuncts wanting to transition to teaching online? Did alumni first teach online after taking COAT?	Online questionnaire of all alumni.	June 25 – Sept. 18, 2012. Reminders sent July 24, Sept. 5, & Sept. 17, 2013.
Can alumni who taught online after completing the COAT course identify any elements of the COAT course as being notably important in helping them teach their subsequent online course(s)?	Online, asynchronous focus groups. Purposive sample of COAT alumni who went on to teach at least one online course after completing COAT course.	Three focus groups: July 9-11, August 6-8, and Sept. 25-27, 2013
Can COAT alumni be seen to demonstrate any key competencies and instructional approaches that were included in the COAT course in their subsequent online teaching practice?	Analysis of archived online courses. Convenience sample of alumni who went on to teach online after completing the course.	October - November, 2013
If yes, do these alumni attribute their use of these elements to what they learned in COAT course?	Semistructured interviews with the participants whose courses were analyzed.	November, 2013

Initial questionnaire. This exploratory, descriptive, online questionnaire was designed to collect primarily demographic data with some more open-ended questions in order to answer the first research question area:

Did COAT alumni participate in the COAT training because they were Maryland higher education adjuncts who wanted to make the transition to teaching online?

Did COAT alumni first teach online after taking the training course? Do COAT alumni identify taking the COAT course as influencing their choice to teach online, and, if yes, in what way(s) did COAT influence them?

All COAT alumni (204 participants) were contacted to identify those who were willing to complete a brief online questionnaire that collected demographic data as well as some information on teaching experience and reasons for taking the COAT course. Table 7 details what questions were asked and how they aligned with the first research question area. Appendix A has a copy of the complete questionnaire. Athabasca University's online survey tool, Lime Survey, which is password-protected and hosted on a secure server was used to administer the questionnaire. Participants were invited to complete the questionnaire through an initial email that included information about the research; informed and voluntary consent; and the expected length of time to complete the questionnaire (which was informed by the pilot run of the questionnaire). Alumni who had taught online were then invited to participate in online, asynchronous focus groups. The following section discusses the focus groups in more detail.

Table 7

Initial Questionnaire

Question (Abbreviated)	Purpose	Research Question
1. Which COAT course section did you take?	1. To identify cohort.	
When you took the COAT course:		
2. What type of institution were you working at?	2.3.4.5.6. To identify how many participants were part of the original targeted audience:	Did COAT alumni participate in the COAT training because they were Maryland higher education adjuncts who wanted to make the transition to teaching online?
3. What was your primary role at that institution?	Maryland higher education adjuncts with on campus teaching experience who had not yet taught online.	
4. Where is that institution located?		
5. If you taught on campus prior to COAT, for how many years?		
6. If you taught online prior to COAT, how many courses?		
If you had not taught online before COAT:		
7. Did you first teach online while taking the COAT course?	7.8. To identify who taught their 1 st online course during/after taking COAT, and how long was the gap (where applicable).	Did COAT alumni first teach online after taking the training course?
8. Did you first teach online after taking the COAT course? If yes, how long was the gap between taking COAT and teaching online?		
9. Did your experience taking the COAT course influence your choice to teach online? Please give any details you think are relevant.	9. To identify if taking COAT was perceived as impacting decisions to teach online.	Do alumni identify taking COAT as influencing their choice to teach online?
10. Why did you take the COAT course, and what were your anticipated outcomes from taking the course?	10. To identify if making the transition to teaching online was their goal.	Did COAT alumni...want to make the transition to teaching online?
11. Is there anything that you would like to add about your experience taking the COAT course and/or any impact COAT may have had on your professional practice?	11. To allow alumni who did not teach online to comment on other professional practice.	What characteristics of the COAT course, if any, made a difference to alumni's professional practice?

Online asynchronous focus groups. Focus groups are a form of group interviews where the interaction between the participants is of central importance (Kruegar, 1988; Kruegar & Casey, 2009; Tonkiss, 2004). The role of the researcher or moderator is to provide prompts to initiate a group discussion on the topic of focus. Moderators facilitate the discussion without taking the lead or dominating the process. Additionally, moderators provide closure to the discussion by summarizing the main points and asking participants for their agreement on the accuracy of this summary. Focus groups are an appropriate research tool to address the second research question area that focuses on participants' perceptions of the impact of COAT on their subsequent teaching practice with the purposes of both providing evaluative data about the COAT course and also exploring what COAT key competencies and instructional approaches should be included in the observation instrument used for the third research question area. Both purposes align with Anderson and Kanuka's (2003) description of how focus groups can be used in research studies:

Focus groups can be used for both exploration and confirmation and are particularly effective for collecting data about attitudes, perceptions, and opinions. Focus groups can be especially useful for revealing the complexities of the problem, but can also be useful for evaluation purposes (most often program evaluations) to identify strengths, weaknesses, and needed improvements. (p. 102)

By using focus groups, strengths, weaknesses, missing elements, etc. of the COAT training course were explored collaboratively. The choice to use online focus groups is explained next.

Traditionally, focus groups have been conducted face-to-face, but online focus groups can be facilitated either synchronously using online conferencing technology or asynchronously using online discussion boards. This study used online asynchronous focus groups using the LMS discussion board feature. According to Krueger and Casey (2009):

The Internet focus group pushes the limits of what is a focus group. Is it really a focus group or is it merely a chat line or a bulletin board discussion? Internet groups become focus groups when the questions are focused, when participants are screened and invited to participate, when participants can freely and openly communicate without inhibitions or fears, when the moderator maintains control and moves the discussion in such a way so as to provide answers to the research question. (p. 182)

Turney and Pocknee (2005) researched the use of LMS discussion boards for virtual focus groups, and concluded that asynchronous focus groups were theoretically sound because they have the potential to meet Krueger's (1988) six criteria for making a group a focus group: involving people, being conducted in a series, having relatively homogenous participants who do not know each other, being a method of data collection, collecting qualitative data, and constituting a focused discussion.

Nicholas et al. (2010) summarized the advantages to conducting asynchronous focus groups: convenient access; no time constraints allows participants to reflect which leads to "data depth and richness" (p. 110); participants cannot interrupt each other; emotions can be expressed through emoticons and textual clues; no travel or transcription

costs; and face validity is fostered “due to member checking, as participants have continuous access to the data transcript and have ongoing opportunity to reflect on their statements to ensure that meaning is sufficiently captured within the data” (p. 110).

Disadvantages include a lack of visual clues, time commitments required of participants, possible technical barriers to participate, and questions about security of data.

An online, asynchronous format was appropriate for the participants of this study for the following reasons. All COAT alumni are accustomed to interacting asynchronously using a discussion board as this was an integral part of the COAT course, and, as such, technical barriers were not expected to be problematic due to the participants’ familiarity with this format. In addition, the lack of visual clues is something that COAT alumni and the focus group moderator (me) are used to dealing with in their roles as online learners and instructors. The LMS used to host the focus group discussion boards is a secure site that is password-protected, and participants were given pseudonyms to protect their anonymity. The convenience of interacting asynchronously meant that geographic and time constraints were less likely to impact the feasibility of setting up the groups. Kruegar and Casey (2009) suggested inviting asynchronous focus group participants “to spend 15-30 minutes each day for several days as they review the questions and make their responses” (p. 178). By detailing the time commitment of about 15-30 minutes a day over a period of several days, participants were able to gauge whether they had the time needed to participate.

Archived online courses. This study used archived online courses that were taught by COAT alumni to collect data to answer the first part of the final research question area:

Does a sample of COAT alumni demonstrate any key competencies and instructional approaches that were included in the COAT course in their subsequent online teaching practice?

A convenience sample of all COAT alumni who taught online at one college after taking the COAT course and who had participated in the first two stages of this research study (questionnaire and focus groups) were asked if they were willing to let the online courses they taught after taking the COAT course be analyzed. The analysis tool was an *observation* protocol designed to evaluate whether key teaching competencies and instructional approaches could be seen to be demonstrated (or not demonstrated) through looking at archived online courses that were completed by groups of students taught by COAT alumni. The archived courses were copies of the taught courses and, as such, contained all the content and interactions that occurred in the LMS for the duration of the course (content and interactions that occurred through email, in-person, telephone, etc. were not part of the analysis). The analysis tool was derived from the data collected from the focus groups. As it was anticipated to be challenging to get access to archived online courses due to the sensitive nature of using student- and instructor-generated content, this study used the college that I work at as the data source with ethics approval from the college's research department.

Once participant consent was given, an archived copy of the course was made. The observation protocol was not aimed at analyzing student behaviors, but instead focused on instructor activities in the course. No identifiable student data were used in the analysis of whether the instructor demonstrated key competencies and/or instructional approaches. The sample size for this part of the study was expected to be small as only 38 COAT alumni were teaching at my college when they took the COAT course and not all of these alumni chose to participate in the first two stages of this research study or taught online at my college subsequent to taking the COAT course. Data from such a small sample cannot be generalizable as the group is only representative of itself; however, the potential richness of the data collected from an analysis of a few archived courses added to the depth of this study by facilitating an analysis of teaching practices that were demonstrated in the process of teaching an online course. In addition, a detailed discussion of the process and feasibility of developing and applying an analysis tool designed to observe teaching practices in archived online courses may prove to be useful for other distance learning practitioners working in the field of online teaching and learning.

Semistructured interviews. After the analysis of the archived online courses, it was important to share the preliminary data analysis results with the participant instructors who taught the courses to get their input and agreement (or disagreement) on the results. The primary purpose of the semistructured interviews (Kvale, 2007) was to see if the participant instructors attributed their use of the key competencies and instructional approaches that were identified in the focus groups to what they had learned

or experienced in the COAT course. In addition, these interviews were used to help clarify and confirm categories and concepts that had emerged as the questionnaire and focus group data were analyzed. Data analysis is discussed in more detail in the next section.

Data Analysis

The data collected for this research study was primarily qualitative. Before discussing how this study planned to analyze the large amount of data collected from the open-ended questions in the initial questionnaire, the focus groups, the observations of archived online course, and the semistructured interviews, the analysis of the demographic data collected from the initial questionnaire is briefly highlighted.

Demographic data. The demographic data collected from the initial questionnaire was summarized using descriptive statistics. The purpose of this analysis was to present a snapshot profile of who had taken the COAT course and to answer the first research question.

Grounded theory techniques. The purpose of this study to generate design principles from empirical research aligned with drawing on grounded theory techniques to structure the analysis of the qualitative data collected in the open-ended questions in the initial questionnaire, the focus groups, the semistructured interviews, and the observation protocol. Grounded theory (Glaser & Strauss, 1967) uses an inductive approach to generate theory using a rigorous coding process to analyze qualitative data. According to Saldaña (2009), a grounded theory data analysis process “usually involves meticulous analytic attention by applying specific types of codes to data through a series

of cumulative coding cycles that ultimately lead to the development of a theory – a theory ‘grounded’ or rooted in the original data themselves” (p. 42), and he identified six coding methods used in most grounded theory analysis: three *First Cycle* methods – in vivo, process and initial (open) coding; and three *Second Cycle* methods – focused, axial, and theoretical.

Charmaz (2000, 2006, 2008) argued that researchers working from constructivist and constructionist theoretical perspectives can use “grounded theory methods as flexible, heuristic strategies rather than as formulaic procedures” (2000, p. 510), and Saldaña (2009) recommended approaching coding method choices with a “pragmatic eclecticism” (p. 47) stance, letting initial data collection and review occur before deciding on which coding method(s) to use. The coding for this study was guided by both constructivist grounded theory techniques and some of the coding methods detailed in Saldaña’s *Coding Manual for Qualitative Researchers*. This study used the computer assisted qualitative data analysis software, Atlas.ti, to facilitate the qualitative data analysis. As part of the analysis process, and to facilitate researcher reflexivity, analytic memos were created and included in the data analysis process.

Limits and Constraints

Chen, Fang, Lee, Oh, and Wong (2006) listed six challenges related to DBR: credibility of data; generalizability; collaborative partnership; sustainability; funding and publication; and getting institutional review board ethics approval. Collaborative partnership, sustainability, funding, and publication were not a challenge for this research study as it researched an ongoing, established, self-funding project of which I am an

integral, founding member. COAT and MOL leadership formally agreed to this study in a Memo of Understanding. In addition, the COAT team has a goal of ongoing dissemination through conference presentations and journal publications (see COAT 2013a & COAT 2013b for a list of conference presentations and publications). This independent dissertation was part of COAT's research and dissemination plans.

Credibility and Generalizability

Barab and Squire (2004) addressed the challenges of credibility of data in DBR by arguing that design-based researchers need to ground their "specific work in credible, trustworthy, and useful studies" (p. 13). They saw trustworthiness and credibility as being similar to reliability and validity. Seale (2004), summarizing Lincoln and Guba's (1985) modification of the scientific paradigm's terms to naturalistic inquiry terms, listed their translation of terms: internal validity is replaced by credibility; external validity by transferability; reliability by dependability; and objectivity by confirmability (Seale, 2004, p. 77). The next sections discuss how credibility and generalizability were addressed in this study.

Credibility: triangulation. Cohen, Manion, and Morrison (2007) described triangulation as "a powerful way of demonstrating concurrent validity, particularly in qualitative research" (p. 141). This study's data collection methods included methodological triangulation through a multimethods approach, for example, using focus groups, a questionnaire, semistructured interviews, and archival data to help answer the research questions. In addition, data triangulation which "involves using diverse sources of data, so that one seeks out instances of a phenomenon in several different settings, at

different points in time or space” (Seale, 2004, p. 77) was possible as the data from the COAT alumni spanned various semester offerings of the course. Also, although the course was physically located on one server, the participants came from both within and outside of Maryland.

Credibility: additional methods. In order to address internal validity concerns, this study used member-checking with participants to validate the initial interpretation of the data and researcher reflexivity to foreground subjectivity and bias. Researcher reflexivity was facilitated by my keeping a research journal and blog throughout the data collection and analysis process, and also by my creating and analyzing analytic memos during the coding process.

Generalizability. DBR does not make generalizability claims as “the effectiveness of a design in one setting is no guarantee of its effectiveness in other settings” (Collins et al., 2004, p. 18). However, similar to ethnographic and naturalistic research methodologies, by providing rich descriptions (for example, of context/design choices and data analysis decisions), this study addressed comparability and translatability concerns.

Ethics Approval

Prior to starting the pilot study for this thesis, ethics approval was granted from both the Athabasca University Research Ethics Board and the research department at the college where I am employed. All the potential participants were adults who could choose whether or not they wanted to participate in this research study. Participants were asked to give informed and voluntary consent before participating in each stage of this

research study, and, if they chose to participate in one or more stages of this study, they had the opportunity to withdraw at any time during the data collection period with all data pertaining to them being deleted and not used in the study. All questionnaire responses were anonymous, and participants in the focus groups, observations, and interviews were given pseudonyms. No identifiable student data was used in the observations of archived courses.

Summary

DBR was an appropriate methodology for this study because, within its broad parameters, it is inclusive of using multiple theoretical perspectives to inform a mixed methods approach to data collection and analysis within the specific context of an ongoing project that included a large team of professionals over a number of years. As a doctoral dissertation, this thesis was required to be an independent research project, and using a DBR methodology allowed for this study to be a stand-alone research microcycle within the larger project. Using mixed methods data collection tools, the study was conducted in three stages. Chapter Four reports on the results of the data collection and analysis process for the first stage of this study: the initial questionnaire. Chapter Five presents findings from the second and third stages: focus groups, creation and application of the observation protocol, and interviews. Finally, Chapter Six synthesizes the results from all three stages and discusses how the findings informed the development of design principles for designing training for online instructors and a conceptual framework for the influence of training on professional practice.

Chapter 4: Questionnaire Results

This chapter presents the results from the first stage of the research design that was described in detail in Chapter Three: the initial questionnaire. The online questionnaire had multiple objectives. First was to discover if the people who took the COAT training aligned with the target audience for the course which was adjunct faculty working in Maryland higher education institutions who had experience teaching campus-based courses, but who had not yet taught online. In addition to finding out who took the training, the questionnaire was designed to elicit respondents' reasons for taking the course and to start exploring whether their experiences with COAT had influenced or impacted subsequent professional practice. This chapter begins with a brief report on the pilot questionnaire. Then the sample and data collection process for the initial questionnaire are described before the results of the data analysis are reported.

Pilot Questionnaire

After ethics approval for this research study was obtained, a pilot study was conducted to test the first two data collection methods: the initial questionnaire and the online asynchronous focus groups. The sample for the pilot study was the 17 people who had successfully completed the COAT pilot course in spring 2010. The pilot course alumni were emailed an invitation to participate in the questionnaire with two reminder emails sent to nonrespondents. The questionnaire was open for three weeks with a 65% response rate. Most of the questions worked as anticipated, but slight adjustments were made for two questions in the actual questionnaire to reduce ambiguity. An additional question in the pilot asked respondents how much time they had spent completing the

questionnaire, so that the expected time to complete could be included in the actual questionnaire. The majority (9/11 respondents) stated it took them 0-15 minutes to complete, and the other two respondents indicated 16-30 minutes.

Questionnaire Participants

All 204 COAT alumni who successfully completed one of 11 COAT courses were invited to participate in this research study. Seven sections had open enrollment for anyone who met the prerequisites and four sections were dedicated sections that had been partially customized to meet the needs of two institutions: A-University and B-University (all institution names are fictitious). Table 8 shows the COAT sections by enrollment type (mixed or dedicated to a particular university).

Table 8

COAT Alumni by Enrollment Type

Course Period	# of Alumni for Mixed Sections	# of Alumni for Dedicated Sections	Total
Fall 2010	19 (1 section)		19
Spring 2011	33 (2 sections)		33
Summer 2011	19 (1 section)	11 – B-University (1 section)	30
Fall 2011	23 (1 section)	22 – B-University (1 section)	45
Winter 2011/12	21 (1 section)	33 – A-University (2 sections)	54
Spring 2012	23 (1 section)		23
Total	138 alumni	66 alumni	204

A-University's participants were mainly nonteaching staff who were asked by their university to participate in COAT to help them understand the online learning environment, and they were contacted prior to the questionnaire invitation being sent out to see if they wanted to participate in this study. Of the 35 COAT alumni from A-

University, ten expressed interest in participating in the study and these ten were all from the dedicated sections (two A-University participants in the mixed Winter 2011/12 course chose not to participate). This meant that the final population for the questionnaire was 179 COAT alumni: the original 204 alumni minus 25 A-University alumni.

Questionnaire Logistics

An online survey tool was used to administer the questionnaire (see Appendix A for a text copy of the questionnaire). Participants were invited to complete the questionnaire through an initial email that included information about the research, voluntary consent, the expected length of time to complete the questionnaire, and a unique token to use to access the questionnaire (see Appendix B for the invitation to participate text). All responses were anonymous with no identifying information requested. No incentives were offered for participating in the questionnaire. The questionnaire ran for 12 weeks from June 25 to September 18, 2012 with the hope that the duration of three months would accommodate instructors' possibly limited availability over the summer (winter in Australia) vacation months. Three email reminders were sent out, and a total of 130 responses were started with 126 submitted. The four responses that were not submitted were discarded as deemed consent was only given if the participant clicked *Submit*. This gave an overall response rate of 70% with 69 responses to the initial invitation (39%), 30 to the first reminder (17%), 21 to the second reminder (12%), and six to the final reminder (3%). This response rate is comparable to what Cohen, Manion, and Morrison (2007) gave as a "typical pattern of responses" (p. 346) for a postal questionnaire: 40% for original dispatch, +20% on first follow-up,

+10% on second follow-up, and +5% on final follow-up. Participants were not required to answer all questions in order to complete the questionnaire with all questions being optional. In the following *Results* sections, the number of responses for each question is given as the total is never the full 126.

Results: Closed-Ended Questions

Question One: When Did Respondents Take COAT?

The purpose of this question was to identify which COAT sections the respondents represented. Table 9 shows the total number of COAT alumni in the population of 179 from each course period, how many questionnaire respondents indicated that they belonged to that group, and the % of respondents belonging to that course period in the overall numbers of responses to this question. The results from this question showed that the percentage of a course group that responded to this question had a high of 100% and a low of 47% of possible respondents from the overall course group.

Table 9

Percentage of Respondents from each COAT Course Period (n=117)

Course Period	Total # of COAT Alumni in Population	# of Questionnaire Respondents	% of Respondents in Course Period
Sept-Nov: 2010	19	10	53%
Feb-April 2011	33	17	52%
May-July 2011	19	17	89%
May-June 2011	11	11	100%
Aug-Sept 2011	22	11	50%
Sept-Nov 2011	23	17	74%
Dec-March/April 2012	10	9	90%
Jan-March 2012	19	9	47%
March-May 2012	23	16	70%

There were 55 respondents who had taken the courses over one year prior to completing the questionnaire (the four course periods Sept-November 2010 to May-June 2011) and 51 respondents from the four course periods that ran less than one year prior to completing the survey (September-November 2011 to March-May 2012).

This research study was not designed to make inferences based on when participants took the COAT course. The data from question one is just used to show that all course periods had some representation in the data collected from the questionnaire, and that respondents who had taken the course over one year prior to completing the questionnaire were just as likely to complete the questionnaire as those who had participated in COAT more recently.

Questions Two to Eight: Demographics

Questions two through eight were designed to focus on whether COAT alumni matched the target population for the COAT course: Maryland higher education adjunct faculty who had experience teaching campus-based courses, but had not yet taught online.

Question two. This question focused on what type of institution was respondents' primary workplace (see Table 10) with the majority (70 out of 124) working in two-year community colleges. Only six respondents (4%) who indicated a workplace were not working in higher education as their primary workplace with three in Kindergarten-12th Grade (K-12) and three unemployed.

Table 10

Primary Workplace (n=124)

Primary Institution Type	Respondents	Percent
2-Year Community College - highest degree = Associate	70	56%
4-Year University - highest degree = Bachelor	10	8%
Post-Graduate University - highest degree = Master	6	5%
Post-Graduate University - highest degree = Doctorate	21	17%
Kindergarten-12th Grade	3	2%
Was not employed	3	2%
Other, please give any details in "Comments" box	11	9%

Although questions two through eight were primarily closed-ended questions, a comment area was offered to respondents in some questions (questions two, three, and four) to clarify their responses or give details to their choice of the *Other* response. The total number of comments for question two was 19, 11 of which gave details for their choice of the *Other* category, and these 11 comments are in Table 11 categorized into an institution type based on the information given. The other eight comments for question two gave further information about respondents' choice of workplace with three comments describing their institution in more detail; four indicating that they worked at two institution types and using the *Comments* area to give their secondary workplace type; and one explaining her/his dual role in the institution. When the information in Tables 10 and 11 is combined, a total of 114 out of 124 (92%) of respondents indicated that their primary workplace provided higher education ranging from awarding nursing diplomas to doctorates.

Table 11

Comments to Clarify “Other” Designation for Primary Workplace

Comments	Institution Type
Online K-12 school.	Kindergarten-12th Grade
Diploma Practical Nursing program, face to face with no online offerings.	Highest Degree = Diploma
While my primary job is serving as the president of a community college, I took this course in conjunction with teaching in a doctoral program.	Highest degree = Associate
I was a science resource teacher in the public schools and an adjunct at a two year community college.	Kindergarten-12th Grade
A-University ^a	Highest degree = Doctorate
Arranged by A-University ^a for professional development purposes	Highest degree = Doctorate
T-University ^a	Highest degree = Doctorate
X-University ^a - corporate university	Adult Training
2-year Associate Degree, NOT a community college	Highest degree = Associate
I am employed by the federal government and adult training is part of my job description.	Adult Training
A-University ^a	Highest degree = Doctorate

Note. ^aReal names of institutions have been changed to protect anonymity

Question three. The purpose of this question was to determine the primary roles of respondents to see if they fit the target audience of adjunct faculty. Table 12 depicts the responses to this question with 46% (56 of 122) indicating that they were working as adjunct faculty.

Table 12

Primary Role (n=122)

Primary Role	# of Responses	Percent
Full-Time Faculty	33	27%
Part-Time Adjunct Faculty	56	46%
Administrator	16	13%
Instructional Designer	0	0%
Support Staff	7	6%
Other, please give any details in <i>Comments</i> box.	10	8%

The *Comments* for people who chose the *Other* category indicated that four respondents' secondary role was as adjunct faculty (the primary roles described in the *Other* comments included president of a community college, coordinator of instructional technology, instructional specialist, PhD student, student services specialist, instructional designer, and information technology specialist). In addition to the ten comments in the *Other* category, nine other comments were given as a follow-up to the category respondents chose. Of these nine comments, three indicated that their secondary role was as adjunct faculty. This gives an overall total of 56 respondents out of 122 whose primary role was adjunct, and seven respondents who volunteered adjunct as a secondary role.

Question four. The fourth question looked at where respondents' primary workplace was located and the results are given in Table 13 with Maryland being where most people worked overall (77 out of 122). If the data from the dedicated sections are removed (Australia and Michigan), it can be seen that 85% (77 out of 91) of the respondents from mixed-enrollment sections had their primary workplace in Maryland.

Table 13

Location of Primary Workplace (n=122)

US State/Country	# of Respondents	Percent
Australia	8	7%
District of Columbia	3	2%
Florida	1	1%
Georgia	1	1%
Maine	1	1%
Maryland	77	63%
Michigan	23	19%
Minnesota	1	1%
New Hampshire	1	1%
New Jersey	1	1%
New York	2	2%
Pennsylvania	1	1%
West Virginia	2	2%

Questions five through eight. The purpose of these questions was to see if respondents were part of the target audience: people with campus-based teaching experience who had not taught online prior to COAT. Table 14 shows that 113 respondents indicated that they had taught on campus, with 13 nonrespondents. This does not necessarily mean that these 13 did not have any campus-based teaching experience; they may have just chosen not to answer this question.

Table 14

Campus-Based Teaching Experience (n=113)

# of Years	# of Respondents	Percent
Less than 1	13	12%
1-3	28	25%
4-6	23	20%
7-9	13	12%
10 or more	36	32%

Question six asked if alumni had taught online before taking COAT, and 124 respondents answered this question with 51% of respondents (63 out of 124) indicating that they had taught online and 61 (49%) stating that they had not taught online prior to COAT. Of the 63 who had prior online teaching experience, 51% (32 out of 63) had taught one-three courses (see Table 15).

Table 15

Number of Online Courses Taught Prior to Taking COAT (n=63)

# of Online Courses	# of Respondents	Percent
1-3	32	51%
4-6	12	19%
7-9	4	6%
10 or more	15	24%

For the 61 participants who answered *No* and the two who did not answer question six, questions seven and eight were their next questions (questions seven and eight were conditional on a negative or no answer for question six). Question seven asked: Did you teach your first online course while you were taking the COAT course? Question eight asked: Did you teach your first online course after taking the COAT course? Seven respondents answered *Yes* to teaching their first online course while they were participating in COAT and 19 said that they taught their first online course after COAT. A follow-up question, which was conditional on a positive answer to question eight, asked how many months elapsed after COAT ended before they taught online, and Table 16 summarizes these answers.

Table 16

How Long was Gap between Taking COAT and Teaching Online? (n=19)

# of Months	# of Respondents	Percent
0-3	9	47%
4-6	4	21%
7-9	2	11%
10-12	1	5%
13-15	3	16%

Table 17 summarizes the answers to questions six to eight to show how many of the questionnaire respondents who answered questions six through eight taught online and whether their online teaching began before, during, or after COAT. Overall 71% of respondents (89 out of 125) started teaching online before/during/after COAT.

Table 17

First Online Teaching Experience in Relation to Taking COAT (n=125)

Online Teaching Experience	# of Respondents	Percent
Prior to COAT	63	50%
During COAT	7	6%
After COAT	19	15%
No online teaching	36	29%

Summary. The results from the data analysis of questions two through eight show that enrollment in the COAT courses was broader than originally anticipated. COAT was designed to be a training course for Maryland higher education adjunct faculty who had experience teaching campus-based courses, had not yet taught online, but who would like to teach online in the future. The results indicate that the majority (92%) of participants were working in higher education (114 out of 124 responses) with

70% choosing *2-Year Community College* as their primary workplace. Just under two-thirds of all respondents (63%) stated that their primary workplace was located in Maryland (77 out of 122 responses), but less than half (46%) indicated that their primary role was as adjunct faculty. Half of the respondents had taught online prior to taking COAT with almost a third (32%) of these experienced online instructors having taught ten or more online courses. Only 19 out of 122 respondents taught their first online course after completing COAT.

The questionnaire was open for three months. To see if early responses were different to late responses, the first and last ten respondents' answers to questions two, three, and five through eight were compared (see Table 18). No consistent pattern of differences was seen in the answers of the first ten respondents compared to the last ten.

Table 18

First and Last Ten Respondents' Answers Compared

Question	Responses	First 10	Last 10	All Responses
Institutional Type – Highest Degree	Associate	6 (60%)	6 (60%)	70 (56%)
	Bachelor	2 (20%)	1 (10%)	10 (8%)
	Doctorate	2 (20%)	3 (30%)	21 (17%)
Primary Role	Adjunct	3 (30%)	5 (50%)	56 (46%)
	Faculty	4 (40%)	3 (30%)	33 (27%)
	Administrator	1 (10%)	1 (10%)	16 (13%)
	Support Staff	1 (10%)	0	7 (6%)
	Other	1 (10%)	1 (10%)	10 (8%)
On campus teaching experience	Less than 1 year	0	1 (10%)	13 (12%)
	1-3 years	4 (44%)	2 (20%)	28 (25%)
	4-6 years	2 (22%)	0	23 (20%)
	7-9 years	1 (11%)	2 (20%)	13 (12%)
	10+ years	2 (22%)	5 (50%)	36 (32%)
1 st Online teaching experience	Prior to COAT	8 (80%)	7 (70%)	63 (50%)
	During COAT	1 (10%)	1 (10%)	7 (6%)
	After COAT	1 (10%)	2 (20%)	19 (15%)

Questions two through eight do not give any insight on whether participants took the COAT course because they had a goal to teach online. The open-ended questions, which are discussed in the following section, were designed to dig deeper into participants' anticipated and actual outcomes from their COAT experience.

Results: Open-Ended Questions

The three open-ended questions focused on whether alumni identified COAT as influencing their decision to teach online, why participants took the COAT course, and what impact COAT had on their professional practice. In addition, respondents were invited to give any additional comments about COAT. The qualitative data collected from these questions were uploaded into a qualitative analysis program (Atlas.ti) with each respondent's answers made into a primary document. This meant that I could easily look at the answers to particular questions in question groups and also look at all the responses from a particular respondent holistically. A variety of coding methods were used to analyze the data. The coding method(s) for each question is detailed in the relevant section.

Question Nine: COAT's Influence on Choice to Teach Online

For question nine, respondents were invited to give any details that they thought were relevant to the question: Did your experience taking the COAT course influence your choice to teach online? This was answered by 117 people with responses ranging from a one word *No* to several sentences. Not all responses clearly answered the question, but all responses were included in the analysis. First, the responses were grouped into

four participant types: those who had taught online prior to COAT, those who first taught online while taking COAT, those who first taught online after taking COAT, and people who had not taught online. Then each group's responses were initially coded using magnitude coding (Saldaña, 2009, pp. 58-61) to indicate *Yes*, *No*, *Somewhat*, *Required* (institution required respondent to take COAT), *Not Applicable*, and *Nonteaching Role* (see Table 19). Not many people responded with a direct yes/no, so I classified comments based on my interpretation of the answer. For example, comments such as "I was already teaching online" were classified as *No*. Answers that did not fit into this magnitude coding were counted, but not coded at this stage of the coding process.

Table 19

Did COAT Influence Your Choice to Teach Online? (n=117)

Magnitude Code	# who 1 st taught online before COAT	# who 1 st taught online during COAT	# who 1 st taught online after COAT	# who had not taught online	Percent
Yes	8	1	8	7	21%
No	36	2	7	2	40%
Somewhat	6	0	1	5	9%
Required	0	1	1	0	2%
N/A	1	0	0	0	1%
Nonteaching Role	2	0	0	5	6%
<i>Not Coded</i>	8	3	2	11	21%

The data that was magnitude coded show that only 26% (24 out of 93) of respondents identified COAT as influencing their choice to teach online with 51% (47 out of 93) saying that COAT did not influence their choice to teach online. This is not surprising as 51% (63 out of 123) respondents had already taught online prior to taking COAT. However, not all of the people who had taught online prior to COAT indicated that COAT had no influence. Of the eight people with prior online teaching experience

who identified COAT as influencing their decision to teach online, six had taught one-three online courses and two had taught four-six online courses prior to COAT. Their comments are given in Table 20, and these comments show that the data from question nine are more complex than can be captured by magnitude coding.

Table 20

COAT's Influence on Respondents with Prior Online Teaching Experience

# of Courses	Comments
Responded that they taught 0-3 online courses prior to COAT	<ol style="list-style-type: none"> 1. The COAT course did help clarify and answer a number of questions regarding online teaching which I had. So it had a positive influence in my decision to seek online teaching. 2. Absolutely! Taking the course helped me learn how to create the online learning community. It also provided excellent suggestions on how to arrange the course, monitor students' progress, and encourage collaborative student learning. I thought the class was outstanding and I thoroughly enjoyed it!! 3. Yes, I needed to train and evaluate an online course in my program. Taking this course gave me the whole perspective. 4. Yes, the COAT course was very helpful and I learned a lot of information from taking this class. 5. Yes. The course made me more confident in my abilities to teach online effectively and in the possibility of designing an effective on-line class. 6. Yes, it helped me to improve my online course structure.
Responded they taught 4-6 online courses prior to COAT	<ol style="list-style-type: none"> 7. Yes, especially with design and student preparation and involvement. 8. Yes. While I had been teaching online it did make me a bit more focused and organized. Since then, I have rethought my online courses and have taken them off line for one semester to revamp the format/content. This is in conjunction with the college deciding/needing to change LMS systems.

Magnitude coding is limited in its ability to analyze the data to the many answers (67 out of 117) that gave detailed additional information to clarify in what way(s) COAT influenced them or gave information that was not directly related to question nine. These 67 answers were further analyzed using initial coding methods (Charmaz, 2006) where data are broken down into small chunks through line-by-line coding and then these

discrete parts are closely examined and compared with each other. The initial coding process for question nine resulted in 75 quotations populating 19 codes that were grouped into a code family in Atlas.ti. Figure 9 shows the network view of this code family with codes on the left of the dividing line relating directly to question nine and codes on the right giving information about COAT that is not related to what question nine asked.

After grouping these 19 codes into a code family, all the data in these codes were compared with each other using a second cycle coding method: focused coding (Charmaz, 2006; Saldaña, 2009). According to Saldaña (2009), the goal of focused coding is “to develop categories without distracted attention at this time to their properties and dimensions” (p. 155), and highlight “codes *qua* [in the role of] categories” (p. 157). An analysis of the data from the open-ended questions did result in two codes that had the potential to develop into categories when combined with the qualitative data collected in the second and third stages of this study. These two emerging categories are indicated in the oval areas in Figure 9. The number in parentheses after each code indicates how grounded a code is in the data by indicating how many quotations were assigned to that code. More detailed descriptions of these codes and emerging categories are given in the following sections.

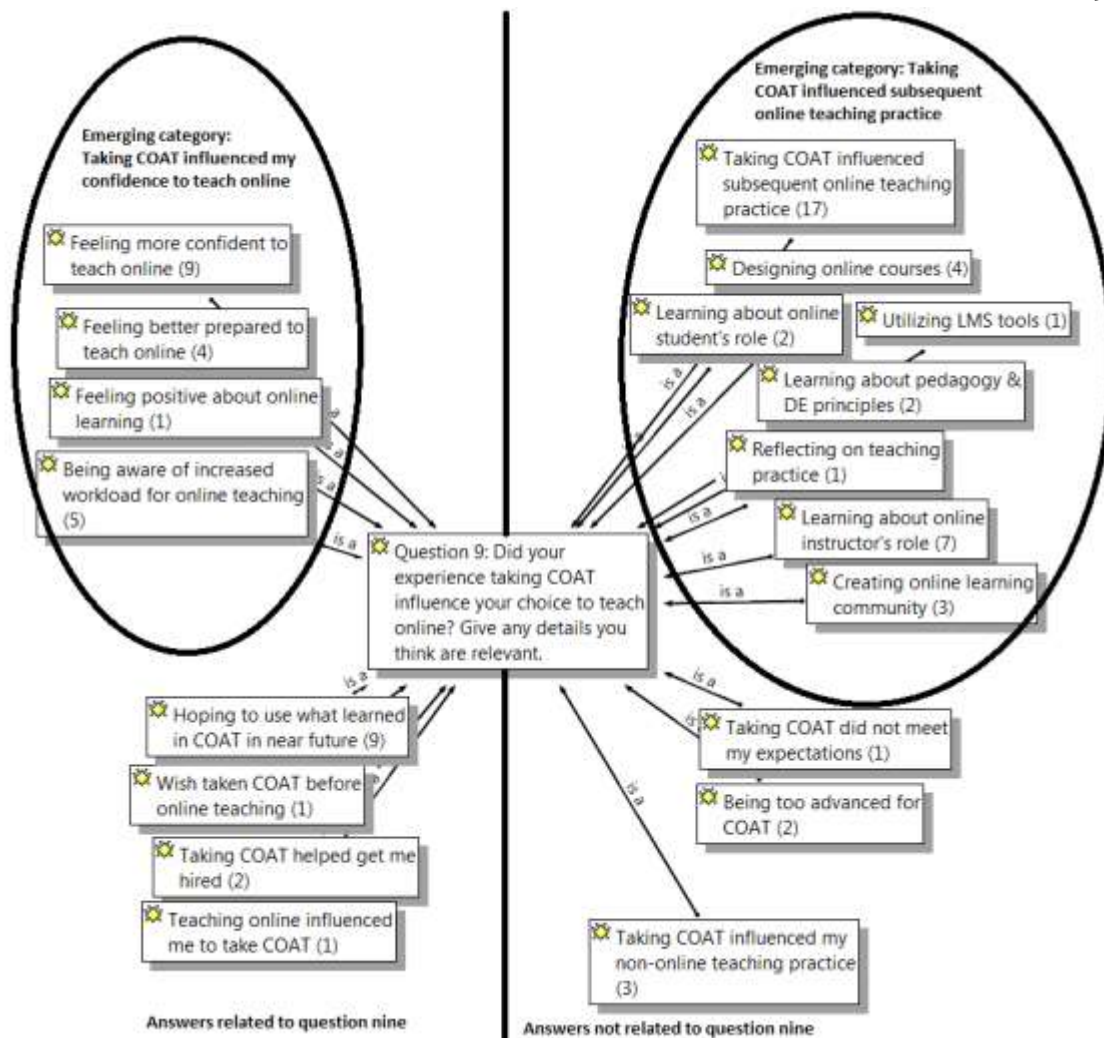


Figure 9. Question nine code family.

Related to question nine. The eight codes in Figure 9 on the left of the dividing line gave more detailed responses than was captured in the magnitude coding to the question: Did your experience taking the COAT course influence your choice to teach online? First, the codes outside of the oval are mentioned before a detailed discussion of the emerging category is given.

Thirteen respondents gave additional information about COAT's influence on their choice to teach online. Two respondents credited the COAT course as helping them

get hired; one said that teaching online influenced her/his decision to take COAT; and one respondent, who was first teaching online while taking COAT, wished “I had taken COAT before teaching the online course.” Nine respondents who had not yet taught online were hoping or planning to teach online soon. Of these nine, five indicated that they were planning to apply for an online teaching job at some point in the future, and the other four said that they wanted to teach online, but were unable to find positions: “I wanted to prepare myself to teach online courses in Nursing. Unfortunate thing is I cannot find an online adjunct position even after obtaining COAT.” Not being able to find online teaching work after taking COAT is also highlighted by some respondents in their answers to question ten (see later section).

Quotations in the first code in the left oval in Figure 9: *Feeling more confident to teach online* contained the words *more confident*, *confidence*, and *brave*. Table 21 shows that taking COAT affected the confidence levels of all four categories of participants: those who taught prior/while/after COAT and those who had not yet taught online.

Table 21

Code: Feeling More Confident to Teach Online

1 st taught online	Comments
Prior to COAT	1. The COAT course provided me with more confidence when teaching online. 2. It did give me more confidence to know I was doing it [teaching online] correctly. 3. I felt more confident to teach online. 4. I feel more confident now teaching online. 5. The course made me more confident in my abilities to teach online effectively. 6. After the course [COAT] I was finally brave enough and armed with the knowledge necessary to teach online courses.
While taking COAT	7. The COAT course helped me gain experience, some expertise, and lots of confidence about the process [of teaching/designing online courses]
After taking COAT	8. I felt more confident in my ability to teach an effective online course.
Not taught online	9. I feel that the course gave me the confidence I need to teach an online course.

The second code in the left oval: *Feeling better prepared to teach online* had one response from someone who taught online after taking COAT, “Yes - I was well prepared after taking the course,” and three from people who had not yet taught online; for example: “It helped me feel that I would be prepared to teach an online course.” One quote from a respondent who had taught online prior to COAT fit into a code on its own in Group A: *Feeling positive about online learning*: “I have been leaning more toward teaching online than face-to-face classes after having finished the COAT course. The COAT class reinforced my idea that learning should be fun. I thoroughly enjoyed the class! (:-)”

For the above 14 respondents, participating in COAT gave them confidence to teach online, but for the other five respondents, taking COAT made them aware of the increased workload associated with online teaching. All five had not taught online, with one of these indicating that taking COAT had influenced her/him not to teach online unless additional administrative support is offered:

I am much more hesitant about teaching a 100% online course after taking the COAT course & seeing how much work is required.... I know more now than I did before, & hesitate to get involved without more administrative support.

The other four responses are given below and suggest that being aware of the increased workload does not necessarily mean that the respondents will not teach online, but that they have a more realistic view of what online teaching entails:

- YES! I want to, but know it’s more work than I previously realized.
- I am now more motivated to teach a course online (though a bit intimidated by the

- amount of prep work required)
- I absolutely learned through COAT that much more went in to the online teaching experience than I had previously thought.
 - It was a very great experience and it also showed that putting together an online course is more rigorous than I originally anticipated.

These five responses were grouped into the fourth code: *Being aware of increased workload for online teaching*. After comparing all the codes created during the initial coding for question nine responses, the four codes discussed in this section were grouped into an emerging category: *Taking COAT influenced my confidence to teach online*. To be included in this category, data indicated that the experience of taking COAT influenced participants' confidence to either teach subsequent online courses or possibly not teach online due to becoming aware of the increased workload.

Not related to question nine. The remaining codes in Figure 9 did not answer question nine directly, but these codes introduce ideas that are also included in responses to question eleven and are discussed at length in the second stage of this research study: the asynchronous focus groups. The ungrouped codes on the right-side of Figure 9 include the ideas that: COAT influenced respondents' nonteaching practice (three responses), COAT did not meet a respondent's expectations of learning how to design a course (one response), and COAT was too basic for experienced online instructors (two responses). Of the 37 responses grouped in the eight codes in the right oval, 17 were comments that indicated in a general way that taking COAT influenced subsequent online teaching practice with most comments (14 out of 17) made by participants with prior

online teaching experience. Table 22 gives excerpts from this code, and the comments show that COAT's influence can be seen to range from "I totally changed my online instruction" to "gave me more tools." The other seven codes in the right oval gave more specific information on how COAT influenced later online teaching practice: learning about online instructor's role, learning about online student's role, creating an online learning community, designing online courses, reflecting on teaching practice, utilizing LMS tools, and learning about pedagogy/distance education principles. Focused coding of the codes in the right oval resulted in a possible emerging category: *Taking COAT influenced subsequent online teaching practice*. This idea is explored in more detail in the later section in this chapter on COAT's impact on professional practice.

Table 22

Code: Taking COAT Influenced Subsequent Online Teaching Practice

When 1 st taught online	Comments
Prior to taking COAT	<ol style="list-style-type: none"> 1. helped me greatly improve my class 2. enabled me to become a better online instructor 3. I totally changed my online instruction 4. helped clarify and answer a number of questions regarding online teaching 5. enhanced my ability to teach more effectively 6. made me a stronger instructor. 7. enhanced my online teaching experience 8. improved my teaching style 9. greatly influenced the design of the course and the way that I taught 10. instrumental in providing me strategies and techniques 11. gave me a better insight of teaching an online course 12. very helpful and I learned a lot of information 13. provided me with insight for improvements 14. gave me more tools to make me more comfortable
While taking COAT	15. helped me to teach in a new medium.
After taking COAT	16. greatly helped my understanding of best design and implementation practices
	17. gave me the ability to teach online

Question Ten: Respondents' Goals

COAT was designed for a target audience of adjunct faculty who had a goal to make the transition to teach online and who would find a certificate that was portable to multiple institutions useful. Question ten focused on collecting data to see if this assumed goal was the actual goal of COAT participants, and if not, why people did take COAT. The majority of respondents answered this question (124 out of 126) and their responses were coded using initial coding methods that focused on identifying goals using infinitives where possible to name each code. Some respondents had more than one goal which resulted in a total of 162 data chunks being coded into 15 codes. These 15 codes were made into a code family in Atlas-ti and the network view is shown in Figure 10.

The codes were arranged in a clockwise fashion with codes in the first segment containing 43% of all coded responses that aligned with the assumed goals of the targeted audience; the second segment containing goals from people who had prior teaching experience before taking COAT (those with prior teaching experience also populated other codes, but the four codes in this segment were only populated by prior online instructors); the third segment being a standalone code that was not associated with any particular classification of COAT respondents (prior/while/after/not taught online); the fourth segment containing goals related to more administrative nonteaching activities of supporting/supervising/training online instructors; and the fifth segment having two codes where the participants stated they had been required or encouraged to take COAT.

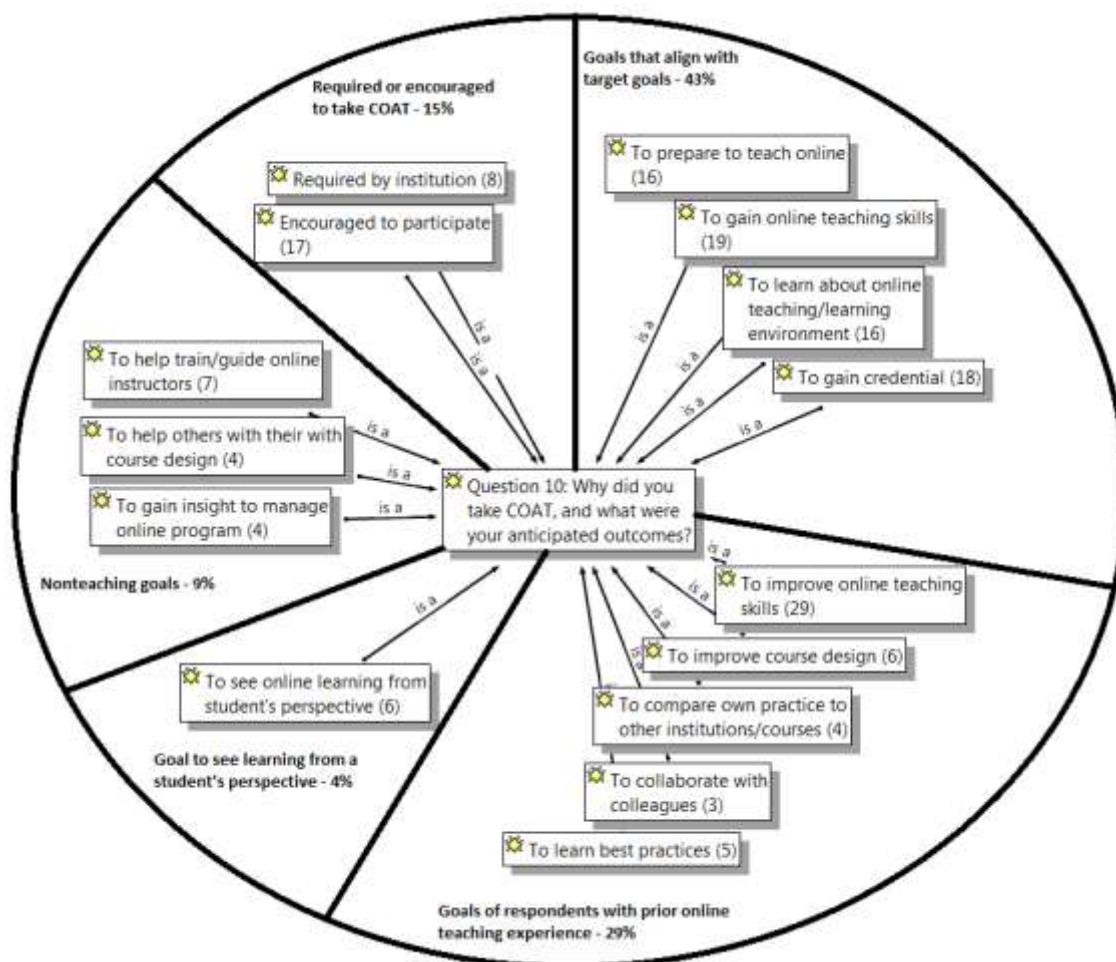


Figure 10. Codes relating to question ten (n=162). Note: In the interests of readability, the figure is not drawn to scale.

The first segment in Figure 10 (43% of coded quotations for question ten) represents the goals of COAT participants that closely align with the goals the COAT design team assumed participants would have: to prepare to teach online, to gain online teaching skills, to learn about the online teaching/learning environment, and to gain a credential in online teaching. A total of 63 respondents made comments that were included in the 69 coded items: 48 of these respondents had not taught online prior to taking COAT, 12 had taught online prior to COAT, and three had nonteaching roles.

The first two codes represent the goals of participants who had no prior online teaching experience when they took COAT who either specified that they wanted to gain online teaching skills (19 responses) or more generally stated that they wanted to prepare to teach online (16 responses). For this group, three stated they had no immediate plans to teach online, but wanted to professionally develop themselves and be prepared; for example:

I took the course primarily to learn about online teaching and gain exposure to the skills involved. I did not anticipate teaching online, but felt that it would be good to begin to learn about online instruction in case some opportunity arose in the future.

Others (six) had plans to teach online immediately after they took COAT: “I was scheduled to teach online during the winter 2012 semester and I wanted to feel prepared. I wanted to make sure I was not the reason the students would not be successful in my course.” The other seven (who had not yet taught online when they completed the questionnaire) talked about their hopes to teach online: “I wanted to teach online and still do.” The 16 respondents who identified learning about the online teaching/learning environment were a mixture of all four categories of respondents (prior/while/after/not taught online), and they identified different aspects they wanted to learn about such as the difference between online and face-to-face teaching, the current online environment, research on online teaching/learning, issues to do with online learning, etc. The code *To gain a credential* was populated with responses from people who had taught before/after taking COAT and who had not yet taught online. Six of these respondents highlighted

that their goal had not been met: the credential had not helped them find an online teaching position.

The quotations that were coded into the five codes in the next segment represent 29% of stated goals and all came from people who had taught online prior to taking COAT. Their hoped for outcomes from taking this training were to improve their online teaching skills: “My anticipated outcome was that I would be able to identify what I was doing correctly and what needed to be improved by me;” to improve their course design: “To help me to better develop our online courses to make them more student-friendly and interactive;” to compare their own practice with other institutions/courses: “Acquire new techniques for teaching online from a different institution's standpoint;” to collaborate with colleagues: “Just hoped to hear what others were doing with their courses;” and to learn best practices: “I was hoping to learn hopefully more best practices for online teaching and learning.” Five of these respondents explicitly stated that their goals were met. For example, one person said that COAT “did have a large impact on my ability to set up and lead a successful online class.”

One code is grouped on its own in Figure 10, and although it contains only six responses, it is important to mention it here, as this idea of seeing online learning from a student’s perspective was discussed at length in the focus groups, and it developed into an important category when alumni reflected on how the COAT experience impacted their later teaching practice. This is discussed in detail in Chapter Five.

There were 15 respondents to question ten who identified one of their goals for taking COAT as not being for direct student teaching purposes (9% of all coded

responses). Seven people took COAT to help them in their roles as faculty trainers (“I took the course because our institution was interested in offering similar training for our faculty members. In effect it was a train-the-trainer experience”) or university leaders (“to provide better guidance to others who are teaching online through my leadership role at the university”). Four respondents managed online programs and wanted to take a training that would help them in this role: “I coordinate a primarily online program and wanted a better perspective of what it took to take/teach an online course.” Four other respondents had a role to work with instructors in online course design: “to be better informed when planning online course content with academics.”

The last segment represents the 25 respondents (15% of all coded responses) who identified that they were either encouraged (17 people) to take the training (by their dean, chair, lead faculty, director, or colleague) or required (8 people) to take it by their institution. Of these respondents, 14 identified other personal goals as well (ten from the *Encouraged* group and four from the *Required* group).

The following sections discuss the answers to the final open-ended question: Is there anything that you would like to add about your experience taking the COAT course and/or any impact COAT may have had on your professional practice? First general comments about COAT are grouped into codes and discussed. Then, the relevant codes from question nine are combined with the responses from question eleven to identify what elements of their COAT experience respondents identified as having impacted/influenced their practice.

Question Eleven (1): Comments on COAT Experience

Question eleven was answered by 112 respondents with some making comments on the COAT experience, others talking about the impact on their practice, and others commenting on both parts of the question. Figure 11 shows the network view of the 98 quotations that were coded using initial coding techniques to group responses that made comments on the COAT experience. Most comments (71 out of 98) were positive and these are grouped in the left oval in the figure. The other oval groups the comments (22 out of 98) that gave recommendations on how to improve COAT, leaving three ungrouped codes that focused on how COAT was being used as a credential on resumes (two responses), that COAT was too basic for two respondents, and that one respondent felt that the COAT instructor was not a good role model (this is discussed later). The next sections discuss the grouped codes in more detail.

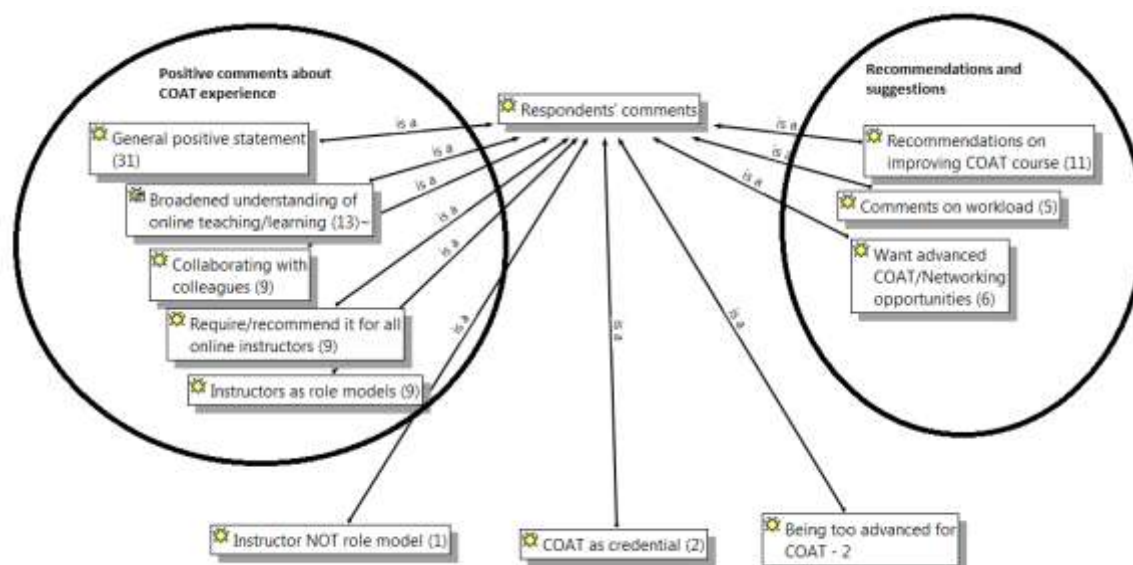


Figure 11. Respondents' comments on their COAT experience.

In the *Positive Comments* group, 31 comments were brief general statements such as “I have had a wonderful experience during this course,” “it was outstanding,” and “I thought that it was a very effective learning experience.” Positive adjectives were repeated by all groups of respondents (those who taught online prior, while, after COAT or who had not taught online); for example, *excellent* (5 responses), *great* (5), *helpful* (5), *good* (3), and *valuable* (3). For 13 respondents (who had taught online prior and after COAT and who had not yet taught online), the COAT experience broadened their understanding of online teaching and learning and in some cases helped people revisit their assumptions about online learning:

- It was an eye-opener! I had no idea that the online courses were designed to be so involved. Initially, I avoided online because I felt they were too sterile. No so! I learned more than I bargained for!
- [COAT] shattered my stereotypes about online learning and teaching.
- It really dispelled many myths that exist about online teaching and helped to make it seem very reasonable and attainable.
- It broadened my thinking about a number of issues like the ways in which students with disabilities can be accommodated online and how social activity can happen online.
- It was transformative - both in my ideas about online teaching and my role in the classroom.

Other codes in the positive comments group show more specificity on what respondents found to be positive. Nine comments identified how well the COAT instructors modeled

the role of a good online instructor:

- The instructors were great role models for me and quite open to a range of off-the-topic discussions about implications for public policy.
- The instructor was a great role model.
- The instructors were well informed about the topic area. They engaged the students appropriately. They were understanding in addressing the challenges of students taking the course. That is my one of my main takeaways from the course.

However, one respondent (who had taught one-three online courses prior to taking COAT) commented on how the COAT instructor did not model what s/he considered good online teaching practice: “I was disappointed that the teacher did not hold us to the requirements of the course.”

In addition to learning from the COAT instructors, nine respondents highlighted that learning from each other as they collaborated in the training was beneficial:

- I got a lot of good teaching ideas from fellow classmates, which was an unexpected and positive outcome.
- I was able to "go behind the COAT course" and digitally talk with so many classmates who had expertise and wonderful suggestions.
- My interaction and feedback/shared experience from the other students was phenomenal.

Finally, other respondents talked about how COAT is, or should be, required for other instructors (three comments) or they stated that they recommend COAT to others (six comments):

- I think that every new instructor should be required to take this COAT course so that they can feel more comfortable with the experience of teaching online. It would also be a valuable course for experienced instructors to take who teach online courses as I think there would be a tremendous help for them as well.
- I have recommended the course to my college and will continue to recommend it to any new adjunct.
- As an instructional designer working with online faculty, I have strongly recommended they take the course.

The right oval in Figure 11 groups three codes that focused on recommendations to improve the COAT training (11 quotations), suggestions on further professional development opportunities COAT could add beyond the nine-week introductory course (six quotations), and comments about the workload (five). Recommendations included improving the navigation of the course within the LMS (four comments), marketing the certificate for improved job placement opportunities (two comments), changing the schedule of the course (two comments), enforcing the prerequisite of having basic computer skills (one comment), giving alumni access to the course once it is completed (one comment), and a general complaint from someone who first taught online after taking COAT that “the course contained a lot of busy work in my opinion.” Five respondents highlighted how much work the COAT course had been. For example, “I felt that the enormity of the material was quite overwhelming. The course took over my life while I was in it.” One of these respondents stated:

The information started to become redundant or potentially unnecessary to learn

at my early stage. A shorter course would have been more effective to take prior to teaching with the opportunity to keep going back to different types of short courses to keep learning. It was a bit of information overload.

This idea of having other courses was echoed in the code: *Want advanced COAT/Networking opportunities*. The six comments grouped in this code suggested a variety of further development opportunities such as having advanced course(s): “However, I would like to see more advanced courses offered... there is a market for COATII, III and so on ... or COAT courses that are more LMS-specific even;” and setting up opportunities for the cohort to be in contact after the course is over: “I wish there was a part II or an online community where the people from that specific class still get to be in touch with one another, as well as with the teacher.”

Question eleven had two parts: an invitation to make general comments about the COAT experience and a question on possible impact to professional practice which is discussed next.

Question Eleven (2): COAT’s Impact on Professional Practice

As previously discussed in the section on question nine, eight codes from question nine data were grouped into a possible emerging category: *Taking COAT influenced subsequent online teaching practice*, and this category was shown as a group in Figure 9. I revisited the codes from question nine to focus my coding of the responses to question eleven. Figure 12 shows the code family created from the 74 impact-related quotations from question eleven on the left-side of the figure, and on the right are copied the relevant codes from question nine that were shown on the right-side of Figure 9.

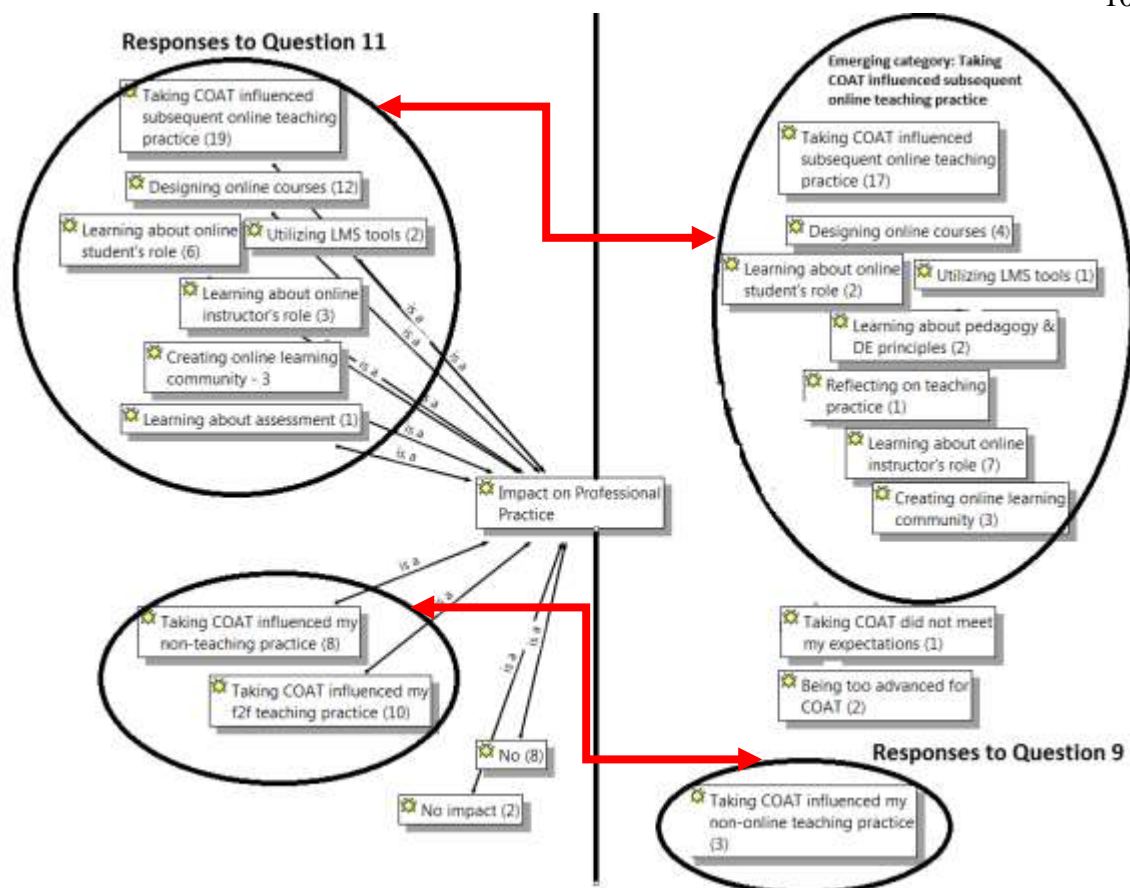


Figure 12. Code groups from questions nine and eleven on how COAT impacted professional practice.

Two codes in Figure 12 are ungrouped: *No* and *No impact*. Eight people responded with a brief *No* to question 11. It was impossible to interpret whether the *No* meant that the participant had no comments or whether they were saying that COAT had no impact on their professional practice. However, two responses explicitly stated that COAT had no impact:

- Has not had an impact on my professional practice, as I cannot find any open positions to apply for.
- The COAT course helped me in structuring and delivering the online course that I

taught. It has had no impact on my professional practice.

The last quotation suggests that the *Help* prompt may have been confusing, as the respondent indicates in her/his first statement that COAT did influence the design and delivery of her/his online course. The help prompt said:

Please include any areas of your professional practice that COAT may have impacted. For example, did taking the COAT course influence your face-to-face teaching, your course design experiences, your administrative decisions for online courses etc.?

With the omission of *online teaching* in this prompt, the respondent may have inferred that professional practice excluded online teaching practice.

The top left group of codes in Figure 12 contains the 46 out of 74 quotations that were coded into the emerging category: *Taking COAT influenced subsequent online teaching practice* with 19 quotations being coded as *Taking COAT influenced subsequent online teaching practice*. The responses in this code were general comments that COAT positively impacted practice, and while some specifics were mentioned, the emphasis was on COAT as a whole impacting later practice:

- I have added so many things to the class I am teaching that resulted in greater student success!
- I did learn from it and was able to install many of the principles to insure that my students get the best product from me.
- I use all of the information from the COAT course in my online/hybrid courses.

The other six codes in this group were almost identical to the seven additional codes in

the emerging category *Taking COAT influenced subsequent online teaching practice* from question nine, and these codes gave more specific information on how COAT influenced later online teaching: learning about online instructor’s role, learning about online student’s role, creating an online learning community, designing online courses, utilizing LMS tools, and learning about assessment. Figure 13 combines the data from responses to both questions to show the category *Taking COAT influenced subsequent online teaching practice* as a code family with eight subcodes. The quotations included in this code family were made by 57 different respondents. This category is explored in detail in Chapter Five.

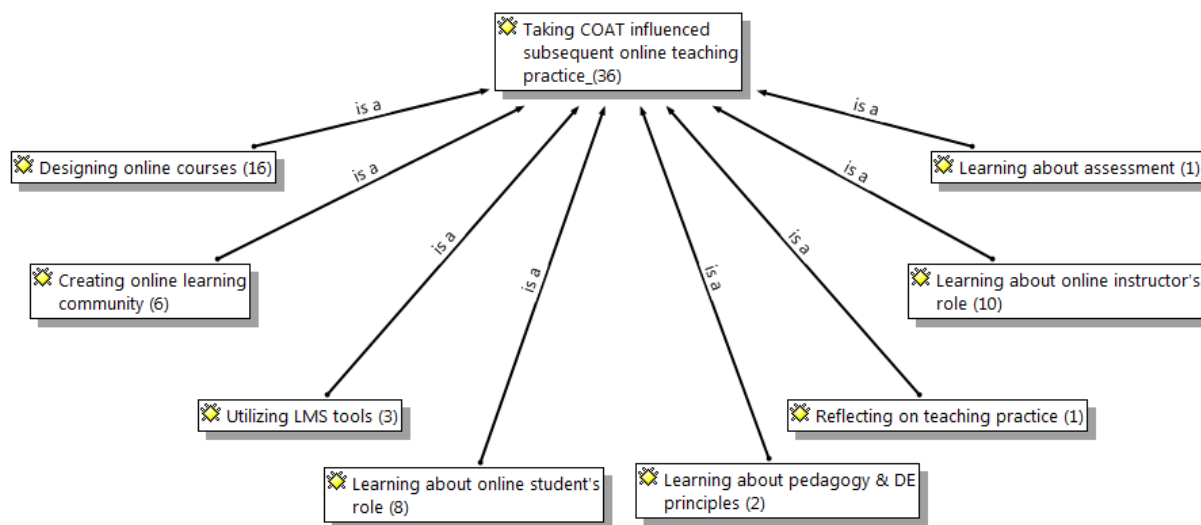


Figure 13. “Taking COAT influenced subsequent online teaching practice” as a code family.

Three codes in Figure 12 have not yet been discussed, and they are related to how taking COAT influenced: *my nonlinear teaching practice* (from question nine), *my f2f teaching practice*, and *my nonteaching practice*. After comparing the three quotations coded in question nine with the question eleven data, this code was separated into two

codes: one that looked at campus-based teaching and one that looked at nonteaching activities. Combining the data led to 11 quotations for the campus-based teaching code and ten for the nonteaching code. Table 23 gives excerpts from these codes.

Table 23

COAT's Impact on Professional Practice Other Than Online Teaching

Practice	Comments
Campus-Based Teaching	<ol style="list-style-type: none"> 1. I brought in "how to direct" the class and prevent students from falling through the cracks or becoming disinterested 2. ... having other resources available to the student besides lecture. 3. The COAT course was the first course in which I have learned pedagogy and my teaching has really benefitted. 4. The COAT experience transformed the way I teach... it made me a better F2F teacher because I was forced to reconsider a variety of educational elements. 5. I use a lot of the resources we were given during the course in my F2F classes and students seem to have more fun learning. 6. The COAT course exposed me to a different way of looking at teaching. Many of the things that I learned can be applied to my in-class teaching as well 7. Taking COAT will influence my online interactions with students via [LMS] that are part of my face-to-face course. 8. An unanticipated outcome was that I also use much of what I learned in other F2F courses. 9. Affecting both design and practices (f2f and online) 10. I became more aware of what my LMS used in conjunction with my f2f class could do. 11. The tips offered to write a syllabus have helped me with my f2f and online classes.
Not Teaching -Related	<ol style="list-style-type: none"> 12. The COAT course helped me understand better the issues and frequent problems that faculty face when teaching online. 13. [I] can serve as a resource to other instructors looking to teach online. 14. I plan to offer an in service to other educators on basic online teaching/facilitation strategies. What I learned in COAT will be very valuable for the project. 15. The rigidity (the need to complete certain components by a particular time each week) of the program highlighted the need to include flexible design in our course structures - Our students and indeed myself require more flexibility than the design of this course allows... 16. The impact COAT has had on my professional practice is to share with academics the many insights I gained through doing this course; especially the "real" learning that take place - the transformative learning and personal growth. 17. My role is changing from computer publishing operator to Learning Resources Development and Support and the COAT course was very valuable to this end. 18. ... helped me help teachers and students understand their own experiences better by being able to relate to the demands and potential pitfalls that can happen in an on-line school. 19. I needed to train and evaluate an online course in my program. Taking this course gave me the whole perspective. 20. Be[ing] able to create course from the beginning and incorporate the COAT objectives. 21. I have found the knowledge I gained... to be helpful in my work in designing courses.

Comments on how COAT had impacted practice other than online teaching practice included participants using resources and strategies learned in COAT in their campus-based teaching; rethinking/transforming their teaching role; understanding the issues, problems and pitfalls that online instructors and students experience; influencing others' teaching practice; and using their experiences (both positive and negative) as students in an online course to design better courses for their student populations.

The data collected in the online questionnaire about COAT's impact on professional practice (both online and not online teaching practice) help answer the guiding question of this research study: *What characteristics of the COAT course, if any, made a difference to alumni's professional practice?* The data and the codes related to this guiding question are discussed in more detail in Chapter Five.

Summary

The online questionnaire was designed to answer the first research question area:

- Did COAT alumni participate in the COAT training because they were Maryland higher education adjuncts who wanted to make the transition to teaching online?
- Did COAT alumni first teach online after taking the training course?
- Do COAT alumni identify taking the COAT course as influencing their choice to teach online, and, if yes, in what way(s) did COAT influence them?

With an overall 70% response rate to the questionnaire, it was found that 114 (92%) of respondents worked in higher education with 56 (46%) identifying their primary role as adjunct faculty. A further 7 (6%) identified working as an adjunct as their secondary role. The majority (77) of respondents worked in Maryland (63% overall and 85% of the seven

mixed-enrollment courses), and 113 (90%) respondents had campus-based teaching experience. Only half of respondents had no online teaching experience before they took COAT with 50% (63) having already taught online before participating in COAT. Of those who did not teach online prior to taking COAT, 36 respondents still had not taught online when they completed the questionnaire. However, this does not mean that these 36 respondents had a goal to teach online.

The reasons people took COAT were varied with 43% of all stated goals aligning with the assumed goals that the COAT design team had predicted participants would have: to prepare to teach online, gain online teaching skills, learn about the online teaching/learning environment, and gain a credential. For those who had already taught online, many wished to improve their skills; collaborate with colleagues; and compare their own practice with best practices, other institutions, and other online courses. Some institutions required their faculty and staff to take the course, and others encouraged people to participate. A small group (9%) of respondents participated in COAT because they wanted to gain insight into online teaching for nonteaching purposes such as faculty training, managing online programs, and working with instructors to design online courses.

Only 24 respondents identified taking the COAT course as having any influence over their decision to teach online, and their responses indicated that COAT's main influence was on their confidence in their ability to teach online. For one respondent, this meant that s/he decided not to teach online due to the perceived increased workload.

Code families related to the guiding question of this research study: "What

characteristics of the COAT course, if any, made a difference to alumni's professional practice?" began to emerge from the data analysis of the online questionnaire.

Respondents indicated that taking COAT had influenced their subsequent online teaching practice in general and specifically in the areas of assessment, course design, online roles, pedagogy, and LMS tools. COAT was also identified as having impacted some respondents' campus-based teaching and nonteaching activities.

In summary, the audience for the COAT training was more diverse than anticipated. The analysis of the questionnaire data shows that COAT participants did work in higher education in a variety of roles with full-time faculty and nonteaching staff comprising over half of respondents. Although the majority of participants worked in Maryland, people from other states and one other country also participated. COAT was designed for instructors who had not yet taught online; however, 50% of respondents already had online teaching experience when they took the training. The data analysis in this chapter has given an overall picture of who participated in the training. The following chapter explores in more depth the elements of the COAT course that were identified by COAT alumni as informing their subsequent online teaching practice.

Chapter 5: Focus Group, Observation Protocol, and Interview Results

This chapter presents the results from the second and third stages of the research design that was described in detail in Chapter Three: focus groups, application of an observation protocol to archived courses, and follow-up interviews. The primary objective for the focus groups was to discover if a sample of COAT alumni who had taught online after taking COAT could identify elements of the training course as being important (or unimportant) in helping them teach their subsequent online courses. Findings on key competencies and instructional approaches identified in the focus groups led to the development of an observation tool for archived online courses. This tool was used to analyze the LMS content of online courses, and follow-up interviews were conducted with COAT alumni to see if these instructors attributed their use of key competencies and instructional approaches to what they had learned or experienced in the COAT course.

Chapter Five begins with a brief discussion of the pilot focus group before the results from the analysis of the three focus groups are reported. Then the data analysis from the application of the observation tool and the follow-up interviews is presented.

Pilot Focus Group

Five (out of 11) respondents to the pilot questionnaire indicated that they were interested in participating in the pilot focus group, but the scheduled date was only convenient for two participants. In addition, the proposed five-day length for the pilot focus group was seen to be too long, and respondents recommended three days as being preferable. Although the pilot focus group had limited group interaction due to the small

group size, the experience of facilitating this group led to the following changes being made to the subsequent focus group design. These changes included more emphasis on initial group building on the first day; releasing each day's prompt in a sequence and not having them all be available from the start; and having the facilitator begin each day's discussion with a rephrasing of the prompt and a brief summary of the previous day's discussion.

Focus Group Participants

The purposive sample for the focus groups was derived from the respondents to the questionnaire who had taught online after participating in the COAT course. All 126 respondents to the online questionnaire were sent an invitation to participate in the focus groups in the automatic *Thank You* email that was generated by the survey software once a response was submitted (see Appendix C for a text copy of this email), and 22 people expressed an interest in participating, one of whom later withdrew. In addition, three respondents to the pilot questionnaire who were unable to attend the pilot focus group volunteered to participate in subsequent focus groups which led to 24 COAT alumni participating in three focus groups. Of these 24, two had not taught fully online courses, but instead had taught hybrid courses after taking COAT (hybrids are courses that have both online and campus-based teaching components, often in a 50:50 split). Data analysis from the questionnaire and first focus group indicated that COAT had influenced teaching practices for more than just fully online courses, so these two alumni were invited to join later focus groups to include the perspectives of some hybrid course instructors.

Focus group participants represented most COAT course periods except for the dedicated sections for A-University, which were taken by primarily nonteaching staff, and the January-March 2012 mixed enrollment section (see Table 24). Each of the three focus groups had a mixture of participants from different course periods.

Table 24

Percentage of Focus Group Participants from COAT Course Periods

Course Period	# of Questionnaire Respondents	# of Focus Group Participants	% of Participants from Course Period
Pilot April-June: 2010	11	3	27%
Sept-Nov: 2010	10	3	30%
Feb-April 2011	17	2	12%
May-July 2011	17	6	35%
May-June 2011	11	1	9%
Aug-Sept 2011	11	1	9%
Sept-Nov 2011	17	6	35%
Dec-March/April 2012	9	0	0%
Jan-March 2012	9	0	0%
March-May 2012	16	2	13%

Participants were offered a choice of five dates for the focus groups. Two dates were not popular which resulted in three separate groups that ran in July, August, and September: focus group one (FG1), focus group two (FG2), and focus group three (FG3). After signing the informed consent agreement (see Appendix D), participants were enrolled in the LMS focus group site using a numeric identifier to maintain anonymity. Table 25 shows which participants belonged to which focus group and gives some numerical data related to their activity in the groups. All names are fictitious.

Table 25

Focus Group Participants

Focus Group & Participants' Names	# of Posts	# of Words
<u>FG1, July 9-11, 2012</u>		
Alex	8	923
Brenda	2	507
Carol ^a	2	354
Dave	24	2145
Eva	9	1111
Frank	11	1239
Ginny	8	1195
(Researcher)	(42)	(3807)
<u>Total</u>	<u>64</u>	<u>7474</u>
<u>FG2, August 6-8, 2012</u>		
Carol ^a	9	525
Helen	1	124
Irene	25	3116
Jane	40	2496
Kim	6	405
Leslie	11	930
Mary	6	716
Nancy	11	1156
Olivia	28	1945
Paul	22	2890
(Researcher)	(52)	(4098)
<u>Total</u>	<u>159</u>	<u>14303</u>
<u>FG3, Sept. 25-27, 2012</u>		
Quinn	8	1178
Rich	7	1019
Sam	6	755
Tammy	4	785
Uri	5	1128
Val	10	1158
Wendy	14	1728
Xara	1	145
(Researcher)	(41)	(3168)
<u>Total</u>	<u>55</u>	<u>7896</u>

Note. ^aCarol started in Focus Group 1, but decided to continue in Focus Group 2.

The numerical data in Table 25 is given to show that participants varied in the amount they posted. Not surprisingly, more people in a focus group led to more words

being produced. My role in each focus group was to welcome people to the group, facilitate the conversations, and provide summaries of the discussions for member-checking. My contributions in terms of numbers of postings and words are given in parentheses for each focus group in Table 25.

Focus group participants were not asked to give detailed demographic information about themselves, as this may have compromised their anonymity and would have repeated information they had already given in the questionnaire. As the questionnaire had been completed anonymously, focus group participants could not be linked to their questionnaire responses, so it is not possible to give a complete demographic picture of focus group participants. However, some participants did disclose personal information in their introductions. This demographic data was analyzed using attribute coding methods (Saldaña, 2009, pp. 55-58) focused on the following attributes: professional role, institutional type, prior online teaching experience, prior online student experience, and subjects taught. A summary is given next to show that the different groups identified in the questionnaire responses were represented in the focus groups.

Participants held a number of professional roles within education with ten people saying they had worked or were currently working as adjuncts, five as administrators, three as faculty, two as instructional technologists, and seven as K-12 instructors. These roles were often held simultaneously with the K-12 instructors, administrators, and technologists working as higher education adjuncts too. Other participants' roles had changed over time; for example, Helen stated in her introduction:

Originally, my background began in Elementary Education, but quickly took a turn toward the field of nursing. I earned both my Bachelor and Master of Science degrees in Nursing in the online environment and immediately fell in love with this type of learning. I have taught F2F at the community college and university level. Currently, I am teaching both F2F and online at the university level.

Seven people worked in only one institution with two identifying that they worked at more than one institution simultaneously. The institutions people worked at were varied with ten community college, two university, and one K-12 institutional type identified. Six people had not taught online prior to taking COAT, and 11 people had prior online teaching experience ranging from one course to over ten years.

Additional information about participants included prior experience as online students with 15 people having taken online courses before participating in COAT and three saying they had no online student experience prior to COAT. Participants also talked about the subjects they taught online which included: accounting, art, astronomy, business, child development, communication, computer science, English, health, history, medical assisting, research methods, and statistics.

Focus Group Logistics

The three focus groups were conducted using the data collection methods detailed in Chapter Three. Each group was held asynchronously using the discussion board feature of the LMS that had hosted all of the COAT courses. Each focus group was held over three days with a separate discussion prompt for each day. The duration of the focus groups followed Kruegar and Casey's (2009) suggestion of inviting asynchronous focus

group participants “to spend 15-30 minutes each day for several days as they review the questions and make their responses” (p. 178). FG1 and FG2 had identical prompts, and FG3’s *Day One* prompt was also identical. However, changes were made to the prompts for the second and third days of FG3 based on the ongoing data analysis results from FG1-2. Appendix E gives the *Welcome* announcement and the daily discussion prompts for FG1-3.

Each focus group was opened a few days early for participants to preview. The focus groups were left open for a week after day three finished, so that participants could make any changes or additions to their postings before the data collection period closed and data analysis began. No changes were made, but three participants (one in each focus group) did add a post the day after the third day. I provided summaries for each day’s discussion and a final summary of the whole focus group. Participants were invited to make changes and corrections to my summaries to make sure I had represented their viewpoints. Only one clarification was suggested, and three participants verified that my summaries had captured what was important from their perspectives. Data analysis was ongoing with preliminary coding from FG1 informing data collection for FG2, and initial and focused coding from FG1-2 influencing data collection decisions for FG3.

Results: Focus Group

The focus groups were aimed at gathering additional data to answer the guiding question: “What characteristics of the COAT course, if any, made a difference to alumni’s professional practice?” and, more specifically, to answer the second research question area:

Can a sample of alumni who taught online after completing the COAT course identify any elements (content, structure, instructional approaches, etc.) of the COAT course as being notably important in helping them teach their subsequent online course(s)? If yes, which elements? Do they identify any elements as being unimportant or even misleading in informing their subsequent online teaching practice? If yes, which elements?

The specific questions detailed in the research question areas were used to guide the purpose of the interactions with the research participants in the focus groups and interviews. These closed-ended *yes/no* questions were developed further in the data collection process with focus group question prompts and interview questions focused on digging deeper into what emerged from the qualitative data on *how* COAT may have impacted later practice. This chapter first reports on the data analysis that addressed these research questions about COAT's influence on subsequent practice. Then the process of creating an observation protocol from the data gathered in the focus groups is described.

Data Analysis Methods

Data analysis for the three focus groups was ongoing with preliminary analysis beginning after FG1 ended and further analysis continuing through iterative cycles of initial and focused coding which informed data collection decisions for FG2 and FG3. Constant comparison (Strauss & Corbin, 1998; Charmaz, 2006) of new data against previously collected data and existing codes against new codes and emerging categories occurred throughout the process. Detailed notes were kept in reflection blogs and analytic

memos during the focus group data collection and analysis period. The next paragraph draws on these reflective documents to give a brief summary of this process.

As discussed in Chapter Three, this study drew on grounded theory techniques to inform data analysis decisions and followed Saldaña's (2009) recommendation to approach coding method choices with "pragmatic eclecticism" (p. 47) by letting initial data collection and review occur before deciding on which coding method(s) to use. Charmaz (2006, 2008, 2011), Friese (2012), and Saldaña were the primary analysis guides for this study. Preliminary coding of FG1 resulted in 123 codes derived from seven of Saldaña's different first cycle coding methods: process, in vivo, magnitude, attribute, simultaneous, initial, and evaluation. In order to compare the data from FG2 to existing FG1 data, no changes were made to the FG2 prompts. Codes from the FG1 analysis were applied to FG2 data and new codes were created leading to a total of 176 codes. The next step was to recode using focused coding which uses "the most significant and/or frequent earlier codes to sift through large amounts of data. Focused coding requires decisions about which initial codes make the most analytic sense to categorize your data incisively and completely" (Charmaz, 2006, p. 57). Based on the results of focused coding, changes were made to the FG3 prompts in order to present some preliminary findings from FG1-2 and to seek FG3 participants' input on the usefulness or relevance of my interpretation of the data thus far. Finally, the data, codes, and emerging categories from all three focus groups were combined and recoded for categories following Saldaña's *streamlined codes-to-theory model* (Figure 14).

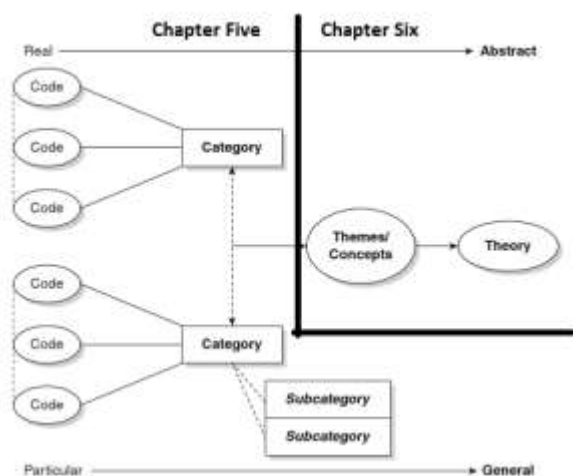


Figure 14. A streamlined codes-to-theory model for qualitative inquiry. Adapted from *The coding manual for qualitative researchers* by J. Saldaña, 2009, p. 12.

The next sections report the results of the final coding process which resulted in categories emerging from the initial coding process. The final stage of this DBR study of creating themes/concepts and design principles/theory from the data analysis process is discussed in Chapter Six.

COAT's Influence on Subsequent Online Teaching Practice

Part of the day two focus group prompt invited participants to discuss what elements, if any, of the COAT course had influenced their subsequent online teaching practice. The combined data from FG1-3 were coded using a process code derived from the second research question area/focus group prompt topic and also from a category that emerged from the data analysis of the questionnaire: *Taking COAT influenced subsequent online teaching practice* (see Figure 13, p. 111). Using line-by-line coding, any data chunk in the focus group transcripts that explicitly stated a specific impact on online teaching practice was coded, and these coded chunks were compared with each other in an iterative analysis process. Multiple comments on the same topic by the same

participant were looked at in the coding process with only one instance being chosen as the representative quotation per participant for each code or subcode. The autocoding feature of Atlas.ti allowed for verification that a particular participant's similar comments were not coded multiple times, as each participant's contributions were grouped into one participant code. Using these participant codes, all instances of codes/subcodes that had been applied to an individual's postings were manually put into a spreadsheet to check that each participant had no more than one quotation per code. This process resulted in 138 quotations that were then organized into a code family of 18 items (see Figure 15).

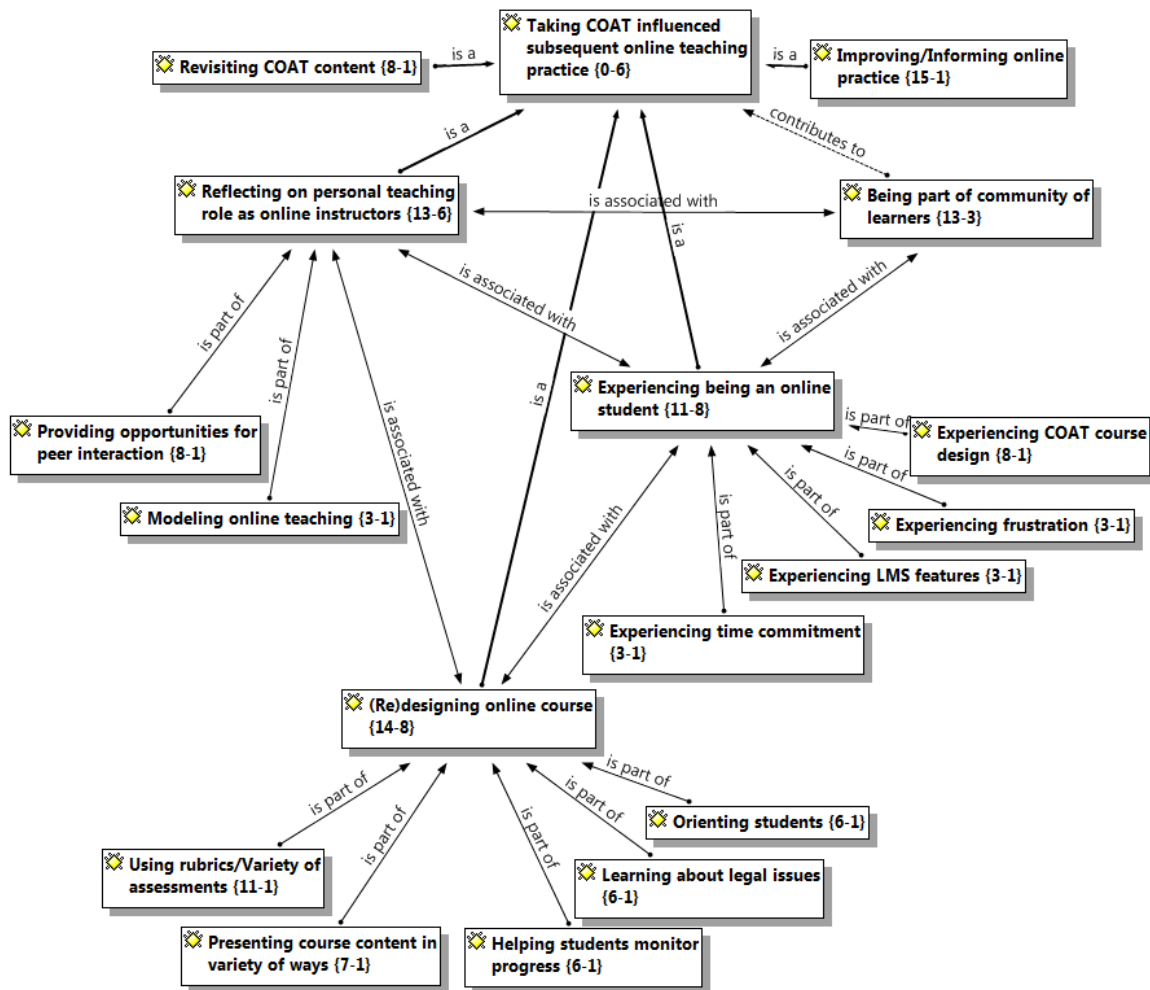


Figure 15. Category: Taking COAT influenced subsequent online teaching practice.

This code family included one category (placed top center in Figure 15); five codes that stated a particular element of taking COAT which influenced later practice or a specified impact on later practice that was attributed to taking COAT (shown with the relationship *is a* in Figure 15); one code that was seen as contributing to later teaching practice (shown with the relationship *contributes to*), and 11 subcodes relating to various codes (shown with the relationship *is part of*). Some of the codes are associated with more than one code and these relationships are depicted in Figure 15 with *is associated with* relationship arrows. The numbers after each code in Figure 15 show the groundedness and density of the code. “Groundedness counts the number of links to quotations; density counts the links to other codes and memos” (Friese, 2012, p. 140). For example, the code *(Re)designing online course {14-8}* is directly linked to 14 quotations and eight other codes. Higher groundedness numbers indicate that the code can be seen to be more closely linked to multiple instances in the data, as 14 people highlighting that (re)design issues were important to them presents a stronger, more grounded code than if just two people’s comments were tied to this code. In Figure 15, the density numbers portray the relationship of a code with multiple other codes/subcodes.

Before giving a more detailed report of this category family, it is important to note that no participants stated that taking COAT had not influenced their later online teaching practice with all 24 participants identifying at least one element that they associated with influencing their later online teaching practice.

General comments on COAT’s influence on online practice. Two codes, with densities of one, were populated with general comments that participants made about

COAT influencing later teaching practice. Eight quotations referred to participants revisiting COAT content as reference materials for later teaching practice. For example, Kim stated “I was part of the pilot group in the first section of the course, and I still find myself going back to the course materials for references,” and Alex commented “I keep a lot of my COAT material close when planning each semester.” The code *Improving/Informing online practice* contained 15 general comments about COAT’s influence on later practice ranging from COAT being seen as an essential part of later online teaching success: “Let’s just be honest and admit that without the COAT course, my online course would have been a complete flop” (Dave); to enhancing existing online teaching practice:

As a result of the COAT class previously taken, I’ve added the strategies learned and have incorporated them into my online classes. As a result, one of the comments made at the end of the semester course evaluation is, ‘this is how an online course should be taught’; (Olivia)

to COAT being seen as a minor aid to later teaching practice: “While COAT covered the basics, it did give me a wake-up on how to improve my courses. The reminders are very helpful when you get into a groove and forget to refresh, whether it is content or delivery” (Alex). The majority of quotations (115 out of 138) were more specific about what elements of the COAT course influenced later practice and these quotations were grouped into four codes which are presented next in conjunction with their subcodes.

Experiencing being an online student. As shown in Figure 15, this code has four subcodes with a combined total of 28 linked quotations that were made by 16 (out of

24) focus group participants. To be included in this code, quotations had to explicitly highlight that the experience of being positioned as a student in the COAT course influenced participants' subsequent online teaching practice. These experiences could be positive or negative. The 11 quotations directly linked to the code were all positive comments about experiencing life as an online student affecting later online teaching practice. For some participants COAT was their first experience as an online student:

I think participating as a student in the COAT training was of utmost importance. As a novice to online teaching, I really needed to be a student. Plus participating as a student opened my eyes to so many things I would have never even considered if I was just reading about these topics. I remember being so excited to see each new topic, and being even more excited when the conversation got going - especially when other classmates commented on something I had said - and even better when the instructor commented! (Wendy)

Others had taken online courses: "I have been an online student before, but this course helped me to focus on the student experience a little better because I was taking the course as an instructor wanting to provide a better experience for my students" (Quinn). This concept of benefiting from looking at their own teaching practice through the lens of an online student was mentioned by multiple participants; for example, Sam stated:

I could see what instructional techniques worked well, and which ones did not. Being in the student role made me look at both sides of a situation. Did I as a student learn something from the exercise? Would I as an instructor get valuable feedback from this exercise. If it doesn't meet both criteria, it must be changed.

This idea of learning from what participants did not like about experiencing life as an online student in COAT was detailed more in two of the four subcodes. Three different participants described feeling frustrated by parts of their COAT experience with Dave commenting that:

The COAT course was – different. I groused constantly because I was frustrated by [the LMS], scared of learning new things, and unsure of my ability to cope with so much new material. I didn't think I'd be able to effectively facilitate an online course. But the COAT experience gave me the information, expertise, and curiosity I needed to teach online. I loved teaching online.

For Ginny, the frustration led her to be mindful of students' possible frustration with the same element in her own courses:

(positive) I had not been in the 'online' student role for ~7 years when I took the COAT course. I was not familiar with the learning platform used to deliver the COAT course... This unfamiliarity gave me an opportunity to become frustrated and remember many students will experience this when they are in my class.

This idea of negative experiences in the COAT course leading to more awareness of their own students experiencing the same feeling was also apparent in the quotations linked under the subcode *Experiencing time commitment*. Irene stated that:

I also felt that there was an enormous amount of material presented, and was overwhelmed near the end of the class with all of the requirements. I actually went back to my classes again and rethought some of my expectations, juggling assignment positions within the time frame.

Experiencing the COAT course design as a student also led to changes in participants' later practice with eight quotations related to this idea. For example, Val highlighted copying design features from COAT that she liked into her own courses:

As a result of taking the COAT course I modified my own courses to incorporate some of the instructional design features from the COAT course - - - - for example, a separate button for "Weekly Course Work," and separate folders for each week.

Dave's negative experience with the design of the COAT course also resulted in design decisions for his online course: "COAT's navigation system frustrated me (I had no experience with online courses). As a result, I created a significant navigation system in my own course using hyperlinks. Student responses were incredible and positive."

Three participants mentioned that COAT introduced them to features of the LMS they had been unaware of which led to them using these features in their own practice.

COAT was designed to give participants the experience of being an online student in a paced, cohort-based course while learning about teaching in the online learning environment. The code *Experiencing being an online student* and its four subcodes had 28 quotations that specifically highlighted that the way the course was purposefully structured to position participants as online students had an impact on later practice. This code is also associated with three other codes which were populated with quotations that can be seen to relate in part to participants' experience in the course as students, but primarily highlight different elements of the COAT course, some of which were expected results that aligned with the COAT project's planned outcomes, and others which were

unexpected outcomes. An expected outcome was for participants to reflect on the role of an online instructor. The next section reports on discussions in the focus groups that focused on how the COAT course influenced their later teaching role and practice.

Reflecting on personal teaching role as online instructors. This code and its two subcodes encompassed 24 quotations that focused on how taking the COAT course prompted participants to reflect on their role as an instructor and to make changes to both the types of activities they included in their subsequent online courses and their presence in their courses as a result of this reflection. For five participants, a key takeaway from COAT was their role shifting to being a facilitator of the learning process (see Table 26). The other eight quotations in the code *Reflecting on personal teaching role as online instructors* referred to how COAT had made participants think about their readiness for teaching in the online environment, the importance of their response time to students, how to deal with disruptive students online, and the need for setting up open-ended activities to engage students in the learning process.

Table 26

Online Instructor as a Facilitator

Participant	Comments
Eva	1. I think the most valuable thing I took away from the COAT course was I was the facilitator not teacher of my online course.
Dave	2. In retrospect, the single most important thing I took from COAT was the idea that I'm facilitating the course, not teaching it, and my presence in the course has to be daily and as immediate as possible.
Mary	3. Making the shift from instructor to learning facilitator was perhaps the biggest "ah-ha" for me and most helpful as I developed and taught my course.
Jane	4. I think I've learned more about HOW to facilitate by following how others do it, vs. reading about it. That included the COAT course I was in...I enjoyed COAT because I was able to really try out my facilitation techniques.
Xara	5. COAT course allowed me to see my role as facilitator in a more effective way

A subcode that dug deeper into the idea of student engagement grouped together eight quotations about providing opportunities for peer interaction. Five of these quotations referred to using group work/wikis; for example:

I was personally terrified of the idea of working in a team online, but my COAT experience was exceptional and I vowed to use team experiences whenever possible in my online courses. This has been difficult for some of my students, and some of my student evaluations have been quite negative because of the group work I require, but some of the students share the wonderful experience I got during my group work in COAT and I think the potential for this experience is worth the risk and negativity some will maintain. I feel working in an online group takes the online educational experience to a whole different level, and really represents the best of what online teaching can offer. I only wish it could be a good experience for them all. (Wendy)

This previous quote also demonstrates how this subcode/code can be viewed as being associated with the code *Experiencing being an online student*, as the experience of doing group work in COAT led to the participant incorporating group work into her subsequent courses which resulted in continued reflection on her teaching practice. Another subcode that is also associated with the experience of being an online student in COAT is *Modeling online teaching*. This subcode contained three quotations that referred to participants learning from the COAT facilitator modeling good online teaching practice; for example, Leslie, commenting on a post from Irene, said that “The instructor was fantastic, I agree. She seemed to perfectly model each of the skills that we were trying to

learn, making it easy to see the benefits of those characteristics in an online instructor.”

However, Nancy made a comment, (which is reported later as part of a different code family that is focused on misleading/unimportant elements of the COAT course), that for her the COAT instructor modeled behavior that was misleading:

The weekly topics or questions were dodged around by participants and the discussions frequently went off on tangents.... Responses to the actual questions and/or questions related to the learning topic did not get acknowledged by the instructor at all... this sets a really bad example because it was exactly what you don't want your students to do in an academic discussion board.

Two participants responded to the above post by saying they had not had the same experience in the discussions: “That's a shame. In the course I took, everyone was serious about the discussions, and I learned so much from the participants” (Carol). This idea of learning from others was highlighted by many participants, and their comments were collected in a code which is discussed next.

Being part of a community of learners. Just over half of the focus group participants (13 out of 24) identified that a positive benefit of taking COAT was that it provided them with the opportunity to interact with other instructors who were participating in the course, and these interactions played a part in influencing later practice (shown as the relationship *contributes to* in Figure 15). For example, Mary, who had not taught online prior to COAT, stated:

During the COAT class I appreciated learning from other students who either had taught online already or who were teaching in real time while taking the COAT

class. Their stories and examples were invaluable. In fact, most of my "takeaways" listed above were demonstrated very well during the class. Participants like Ginny who had already taught online before COAT also found being part of a community of instructors/learners beneficial: "I agree, the COAT course gave me a place to talk to other teachers, to troubleshoot issues with like-folks. We do tend to teach in isolation." Those who had taught online prior to COAT acknowledged that they helped other less experienced online instructors: "I personally think that my experience as an online student and online teaching experience helped a lot, so I was sort of a resource for input in the COAT class" (Nancy). Irene expressed the wish that the community of learners had survived the end of the course:

My COAT class introduced me to some dynamite educators, and we traded interesting ideas, successful assignment structures and so on--then the class is over and the friendships fade away too quickly. I'm at fault with this too, as although I have an email address for all of them, life demands get in the way.

This desire to interact with other instructors separate from the assigned course curriculum or discussion prompts was demonstrated in the focus groups with the many side discussions that took place between focus group participants that were not directly related to the focus group discussion prompts. These side discussions are briefly presented next.

The format of online asynchronous focus groups allowed for participants to interact with each other in response to topics and questions that were instigated by the participants. These side discussions were coded as *Networking Conversations* using descriptive coding (Saldaña, 2009, pp. 70-73) to identify the topic of the discussion. As

can be seen in Figure 16, nine people expressed a desire to network in the focus groups; for example, Val ended her introduction with: “I look forward to getting to know everyone in this focus group and hearing about your teaching.”

There were five unsuccessful attempts to network when a participant posted an off-topic question that was not followed up on by other participants. However, 12 successful side discussions took place with a total of 131 quotations, giving a mean of 11 responses per topic. As can be seen in Figure 16, topics ranged from sharing good online teaching books to sharing resources for setting up wikis in online courses.

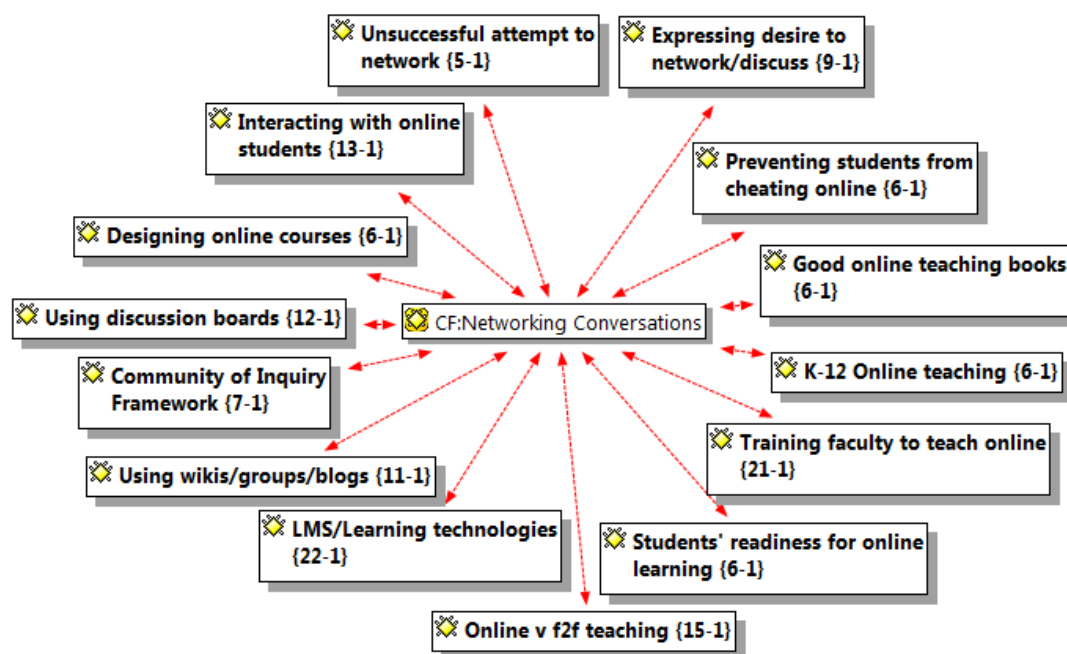


Figure 16. Networking conversations.

These side discussions did not contribute directly to answering the research questions in this study, but did indirectly demonstrate the desire of the online instructors who participated in the focus groups to network with each other on topics focused on online teaching and learning. This was an unexpected outcome of both the COAT course

and the focus groups which is discussed in Chapter Six. The following section looks at another unexpected outcome of taking the COAT course, and it concludes the report of the category *Taking COAT influenced subsequent online teaching practice*.

(Re)designing online course. This code is the largest group of codes within the category *Taking COAT influenced subsequent online teaching practice* with 14 participants' comments directly linked to the code, five subcodes populated with 36 additional quotations, and two other codes associated with it. COAT was designed "to introduce instructors to teaching (facilitating) an online course that has already been developed. This course does not train faculty how to develop an online course" (COAT, 2013d, Course Description section). However, 18 (out of 24) focus group participants identified that taking COAT had influenced subsequent course development, design, and redesign. Over half of the participants (14 out of 24) made general comments about COAT influencing later course design ranging from developing a new online course: "I had to develop the class entirely on my own, and thanks in part to the COAT experience, I think it went fairly well" (Frank); to redesigning an existing course:

Taking the COAT course allowed me to look at the course as an instructor and make necessary changes to make the course flow and work better for my students. Since taking the course, I have completely redesigned my course using a new textbook and many new resources. (Eva)

The five subcodes that are part of this code gave more specifics on what COAT course content influenced later course design decisions:

- (a) using rubrics and a variety of assessments (11 quotations); for example, Brenda highlighted that:

Managing Assessment - has been very instrumental in my instructional approach. I enjoy presenting information to my students and seeing how their completed projects turn out. A rubric is used to grade each assignment, and students are aware of how their grades are calculated using the rubric;

- (b) presenting course content in a variety of ways (seven quotations); for example:

“After working on the COAT course and then teaching online, the part that stuck with me more than practically anything else was the emphasis on different learning styles and the need to make everything clear and redundant” (Frank);

- (c) helping students monitor their progress through using *To Do* lists and *Reviewed* buttons (six quotations); for example, Jane, agreeing with Carol and Dave, stated:

“Thanks for reminding me of the COAT's To Do List. That was a definite 'take away' for me from COAT that I currently use. My students love it, just like I did when I was in COAT;”

- (d) learning about legal issues (six quotations) with Rich saying: “I must admit that the material on legal issues was a revelation to me. It was not an area to which I had given much consideration in my f2f classes and I am grateful for the resources that were provided;” and

- (e) orienting students to the online learning environment (six quotations): “Designed a course information page that mirrored what was in COAT course; basically a

one-stop place where students could get syllabus, content information, communication information, and technical information. I found that page really made a difference” (Carol).

As shown by the *is associated with* arrows in Figure 15, participants felt that they made course design decisions not just based on learning from the COAT content, but also from their experience of being online students (e.g., being on the receiving end of online course navigation) and from reflecting on their role as online instructors (e.g., seeing the need to design for peer-to-peer learning opportunities as a facilitator of learning).

The data analysis that resulted in the category *Taking COAT influenced subsequent online teaching practice* showed that alumni who taught online after completing the COAT course did identify elements of the COAT course that were important in helping them teach their subsequent online course. The participants also identified elements of the COAT course that were misleading or unimportant and these elements are reported next.

Unimportant or Misleading Elements

Part of the day two focus group prompt for FG1 and FG2 invited participants to discuss what elements, if any, of the COAT course were unimportant or misleading for their subsequent online teaching practice. On day two in FG3, participants were asked if there was any COAT content that had not been useful. Seven participants stated that they could not identify any unimportant/misleading/not useful elements. Ginny pointed out that although she could not recall any unimportant or misleading elements:

I was not the ideal target audience for the course, which reduced the novelty of the information for me and my motivation to ‘review’ the information in the learning modules. I should clarify that this is totally my personal problem and in no way reflects the course content, which I think is perfect for the intended purpose.

Two other participants acknowledged that the course contained content that they already knew, but this did not mean that the content was not relevant for novice online instructors: “I do not think that there were any elements that were not relevant, just basic and great for a newbie online” (Alex). Wendy, who had no prior online teaching experience, commented:

I think all the topics covered in COAT were excellent! It may be because I had absolutely no experience teaching online, but I remember being amazed at just how important each topic was and how each opened my eyes in a new way.

Six participants did identify elements that they considered unimportant, not so important, expendable, or even misleading and these are presented in Table 27. In addition to the seven comments on unimportant/misleading elements of the COAT course, 19 participants did have recommendations or comments on others’ recommendations on specific aspects of the COAT course and these are reported next.

Table 27

Unimportant and Misleading Elements

Keyword	Participant	Comment
Unimportant	Mary	Unimportant for me was the "back of the house" material that did not directly pertain to the course content.
Not so Important	Jane	Student Integrity information, FERPA [Family Educational Rights and Privacy Act], etc. Maybe because... I work with non-credit courses?
Least Helpful	Frank	There were some "cutsie" activities that were shared during COAT that were interesting and I tried to use, but found they were not useful. I'm referring to Voki types.
	Mary	I found that my students had no energy for the social aspects of their learning community. I did not set up a "cafe" nor did they ask for it. Perhaps this was the nature of my students who are in a cohort group... Least helpful was information about orienting students to the online environment and policies.
	Dave	The least helpful unit in the COAT course was the material from the textbook.
Expendable	Irene	Busy work. Once you have the COAT student experience how a check list works, how to write reflections as part of the assignment, how to journalize their activities/experiences as students, then perhaps those chores could become optional.
Misleading	Nancy	The class discussions were not taken seriously and the forums were used to vent about participants' busy day or how hard the class was, and the instructor kind of went along with it instead of railing participants back on topic.... My concern with this was that for someone learning how to manage online discussions; this sets a really bad example because it was exactly what you don't want your students to do in an academic discussion board.

Participant Recommendations for the COAT Course

Throughout the focus groups recommendations and related comments about these recommendations were made about improving the COAT course. These comments were coded and counted using descriptive coding to capture the topic with one instance per recommendation per participant coded. The autocoding feature of Atlas.ti allowed for verification that participants' similar comments had not been coded multiple times.

Figure 17 shows the eight codes/topics that participants commented on with the most commented on recommendations on the right side.

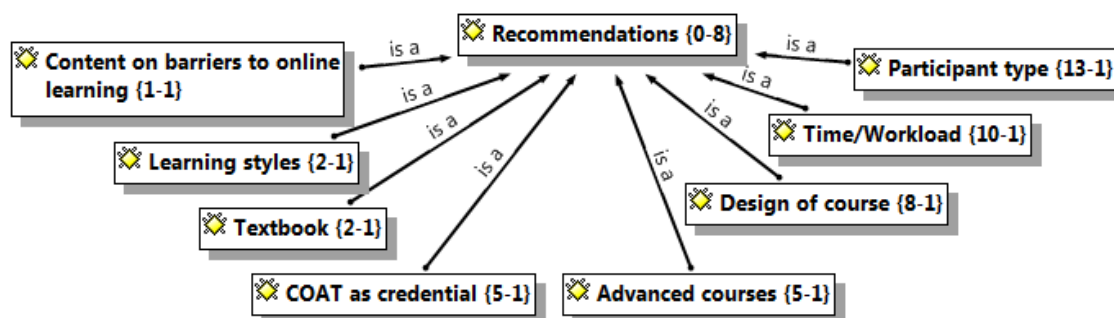


Figure 17. Recommendations.

The three codes with one to two quotations presented topics that participants felt were missing or could be improved; for example, Quinn would have liked information on barriers to online learning:

What are the obstacles, hurdles, barriers etc. to online learning from students, teachers, the organization providing the online education, the IT groups who support the technology that make online learning possible, and on and on. I think something that provides a heads up on where you might find walls would have been a great addition to the course.

Tammy felt that: “An area that needed to be covered more was how to create things for your online course that meets the needs of students with different learning styles. Offer suggestions on how to develop content for visual and kinesthetic learners,” and Quinn would have liked “to have had more information regarding the arguments against learning styles in addition to information about learning styles.” Two people talked about

the textbook with Dave saying he did not like it and Val recommending another (free) textbook that she is using in her own faculty training program.

Five participants wanted COAT to offer more advanced courses and gave suggestions on what these courses could include. Three participants wanted a *Level Two* added for alumni of the first COAT course with Jane agreeing:

I like the idea of a Second Level for COAT... maybe it could even be driven by the cohort? The students could decide what topics/strategies, etc. need to be emphasized. It wouldn't have to be as intense as the first level COAT. I know oftentimes in online classes, a group starts to 'gel' and then, boom, it's over:)

Wendy wanted to revisit concepts she had been introduced to in COAT as a novice instructor:

I would love to see some additional instruction. I think all the topics covered in COAT would be good to revisit. Now that I have some experience teaching online (and when I originally attended COAT I was a novice), I think it would be a different experience. It would also be good to have some specialized sessions, for example, 'Dealing with Difficult Students' or 'Maximizing Conference Discussions.'

The code *Design of course* (with eight quotations) had recommendations on possible design improvements. For example, both Jane and Olivia felt that the final module on legal issues "was very dry material and was a chore to complete towards the end of the class" (Olivia), and it might be better to end with a more interesting topic.

Carol felt that there was too much online reading (and therefore printing); Nancy recommended introducing the wiki earlier so groups had time to work together productively; Irene did not like the pass/fail grading (“all that work should have a score” with the “ability to redo different challenges with no penalty”); and three people felt that a good addition to the course would be "to see other examples of well-designed courses" (Tammy). Adding content to the course though would increase the workload and/or time commitment to take the course, and ten participants had opinions on this topic with people feeling that the course had been "intense," "overwhelming," and "took a lot of time," but nobody suggested cutting out parts of the course to reduce the workload. Wendy stated "I would argue NOT to cut anything. It should have significant workload - you earn a certificate for completion." Two people recommended that the course be extended to 15 weeks, but two others said they liked the nine-week span. A fifth, Val, commented:

I did find the workload challenging because I was involved in so many other things simultaneously. I have also heard this from faculty at my institution who participate in the training. I would have liked the training to be extended over a longer time frame - - - perhaps 15 weeks? However, the nine week format works out nicely for people who want to do this over the summer when they are not teaching or between the fall and spring semesters when just a few weeks will overlap with regular classes.

Recommendations were also made about COAT as a credential. Dave pointed out that COAT was not well-known as a certificate credential: “I haven't noticed any special

awareness from the folks who hire. I'm not entirely certain that my own department chair knows what COAT is." Four people felt that taking the word *adjunct* out of the name and maybe replacing with another A word like *adult* to keep the acronym *COAT* would better reflect the diversity of roles COAT participants have. Uri (a full-time faculty member who was an adjunct and administrator when he took the COAT course) considered that:

My skill set that I learned from COAT is not limited to teaching as an adjunct and I believe that in some cases, my training and preparation that I sought out by enrolling in COAT and paying for it out of pocket, may be in some cases, more preparation and training than some full-time faculty have received prior to taking their class online. Nothing really jumps out to me that was geared specifically designed for adjunct faculty.

This idea was expanded by comments grouped together in the code *Participant type* which included 13 participants' recommendations/comments on who the target audience should be for COAT with four people saying that COAT was relevant for new and experienced online instructors. For example, one experienced online instructor, Quinn, who had been teaching online since 2000 said that:

All of the content was relevant to me because it helped me understand why I did some of the things I did, why choices I'd made in the past failed spectacularly and why some methods succeeded. The content was surprisingly relevant because it gave me something concrete in place of instinct. I have resources instead of ideas and an electronic support system instead of books/articles to search.

For another four people, training similar to the COAT course “should be mandatory for anyone who wants to teach online” (Olivia). Leslie felt that “most of this [COAT content] is easily transferable to middle and high school level teachers,” and three people considered that COAT would be useful for campus-based instructors too. Finally, Ginny, commenting on the fact that some administrators at her university took the course with her, felt that nonteaching administrators benefitted from taking COAT as “this course was concrete evidence for administrators that online teaching was DIFFERENT from face to face teaching.”

The previous sections on unimportant/misleading elements of COAT and recommendations for COAT foregrounded that for some participants improvements could be made to the training. Although seven participants stated that there were no elements that were unimportant/misleading for their later online teaching practice, six participants did identify areas that were not so useful for their later practice (legal issues, social aspects of online learning, textbook, etc.) and one felt that the way the COAT facilitator modeled online discussions set a bad example for future online teaching practice. However, for each of these comments, other participants had identified the opposite; for example, three participants stating that the instructor had modeled good teaching practice for them and two liking the textbook. In the recommendations, elements that participants felt were missing from the COAT course were discussed: ways to create content for diverse learning styles, a balanced presentation on both sides of the learning styles debate, and a discussion on barriers to online learning. According to a number of participants, the course design and workload could be improved as there was not enough

time to reflect on the content during the course. Participants also thought that COAT was applicable for campus-based instructors and nonteaching administrators as well as all online instructors. The next section reports on these other professional practices.

Taking COAT Influenced Subsequent Nononline Teaching Practice

Respondents to the questionnaire identified that COAT impacted their subsequent campus-based teaching practice and their administrative professional practice (see Table 23, p. 112), and these ideas were also discussed in the focus groups with four participants identifying an impact on their campus-based teaching and six on their training role for other online instructors (See Table 28, p. 148). These comments were grouped into a category: *Taking COAT Influenced Subsequent Nononline Teaching Practice*. The quotations in Table 28 show that the elements of COAT that made a difference to alumni's campus-based teaching included: content on managing assessment; using online discussions and resources; and learning about the instructor as a facilitator of learning. For alumni who identified that COAT influenced their own instructor training/mentoring role, the elements that resulted in making a difference included: content related to learning styles, reflecting on the instructor's role, utilizing the LMS, and learning about QM (Quality Matters, 2010) for online course design.

The first two days of each focus group prompted participants to reflect on their experiences when taking the COAT course and identify any key elements of the COAT course that had proved to be useful, unimportant, or misleading in their subsequent online teaching practice. The final day of the focus groups asked participants to draft and discuss an observation protocol that could be applied to archived online courses to see if

any key COAT elements were seen to be demonstrated. The next section reports on the results of the day three discussions.

Table 28

COAT's Influence on Subsequent Nononline Teaching Practice

Practice	Participant	Comment
Campus-based teaching	Brenda	1. I was able to apply the module [on managing assessment] objectives to my f2f class. As a result, my evaluation numbers improved.
	Jane	2. Learning about facilitative teaching techniques has really helped in any face to face teaching opportunities I offer now, too.
	Leslie	3. I've added on-line discussion board "conversations" as part of my face-to-face instruction, because after taking this course, I believe even more strongly that the online classroom allows more opportunities for each learner to fully be part of the class discussions.
	Uri	4. Enter COAT and QM [Quality Matters]. I took both training/courses within a month of each other and felt that the material was great and really solidified my F2F instruction while allowing students to make additional connections through the use of online resources.
Training other online instructors	Olivia	5. I've been able to share many of the things learned with the faculty. The various learning styles were especially important and the various tools used to help assist with those learning styles was equally important.
	Kim	6. Training online instructors in my institution
	Leslie	7. I found this course incredibly useful in helping me train other instructors as well. I felt as though the course made me think much more deeply about the role of the instructor, making it easier for me to convey that importance to the new teachers.
	Val	8. A major change as a direct result of the COAT course was that my institution received permission to use the COAT curriculum for training our full-time and part-time faculty to teach online. The course has been received very well, and the training is now mandatory for anyone who will be teaching online for the very first time. I teach the course along with one other faculty member who completed the COAT training.
	Tammy	9. I took the COAT mainly to see if I was missing things not covered in my own training. What I discovered was that I was covering almost everything in the faculty training that was being covered in COAT EXCEPT using QM.
	Sam	10. I have had no formal training in [LMS] so it was an opportunity to see what some of the capabilities are of the software. I use it a great deal but there were some areas that I had not touched yet, and am now using. I will pass on this knowledge to other instructors.

Observation Protocol

The final research question area focused on whether COAT alumni could be seen to demonstrate any key competencies and instructional approaches that were included in COAT in their subsequent online teaching practice. To address this question, FG1 and FG2 participants were asked to help create an observation protocol that could be applied to archived online courses that were taught by COAT alumni after they had completed the COAT training. Using the input of the nine participants (out of a possible 16 FG1-2 participants) who responded to the day three prompt on creating the observation tool, and drawing from the key competencies and instructional approaches identified in FG1-2, a draft observation protocol was created that was then presented to FG3 to ask for their feedback. From the initial data analysis for FG1-2, 12 codes/subcodes were grouped into a code family in Atlas-ti (see Figure 18). As this was initial coding, multiple comments on the same topic by the same participant were included.

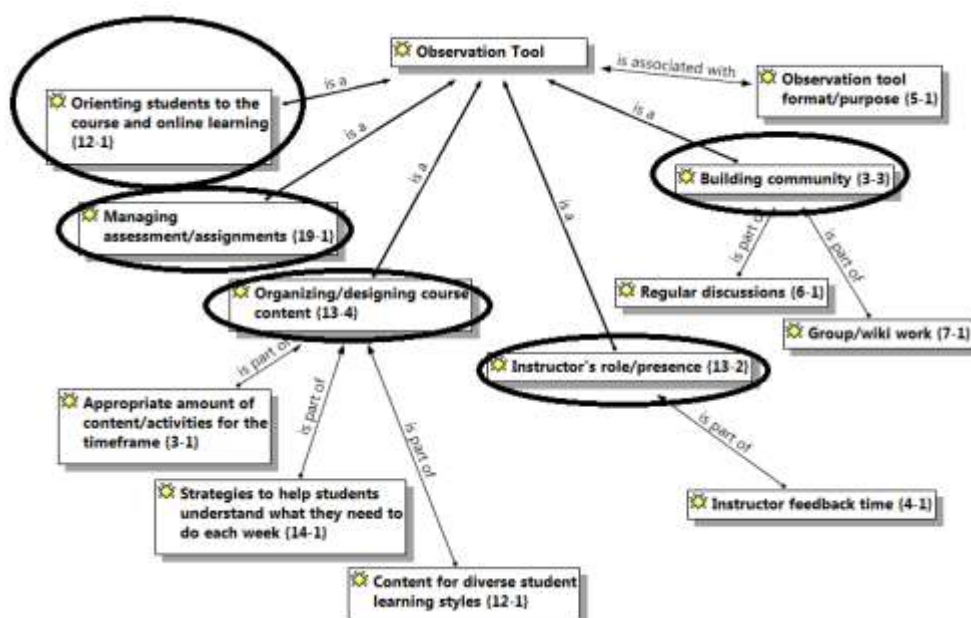


Figure 18. Codes for FG1 and FG2 coconstructed draft observation tool.

The draft observation tool was grouped into five areas (shown as ovals in Figure 18) with six subcodes. The twelfth code, *Observation tool format/purpose*, grouped together five suggestions participants made on the format and purpose of the tool. They wanted it to have a format that was simple to use, and for the protocol to be a reflection tool for instructors to look at their own teaching practice. For example, Irene posted:

My thoughts lean toward making a survey, a tool of reflection, that takes limited amounts of energy for the respondent to complete. If this tool were to be used by educators that have taken the COAT class, then successfully taught an online course on their own, I might structure it as follows requiring participants to simply check boxes showing their experiences. At the end I would allow for an area where they might wish to expand their feedback through a written response.

Paul agreed that a keyword was *reflection*, and, like others responding to the day three prompt, he gave a detailed list of what could be included in the tool:

Not course specific

Faculty Self-Assessment – Re-examine preparedness/attitudes/biases/strengths as an online instructor

Within the course

Orienting Students - Is there sufficient information or resources for a new student to get acquainted with the LMS features?

Basic Instructional Design Principles - Is my material well organized? Have I established a routine for students?

Instructor Presence - Do students feel confident that I am there for them? Do my evaluations indicate that I have been responsive?

Facilitating Discussion - What is my discussion style? Am I getting everyone involved in the discussion?

Monitoring student progress - What forms of feedback have I given students? How often do I give it? How have students responded to it?

Assessment - Are there rubrics I need to improve? Is there an assignment for which I don't have a rubric?

Legal Issues - Verify inclusion of ADA [Americans with Disabilities] policy and use of course material (copyright) outside of the online course.

Institution specific-policies - Verify inclusion of information on plagiarism and withdrawal policies.

Using the FG1-2 input, the draft tool was created and presented to FG3, so that they could give their reactions. Out of a possible eight FG3 participants, three gave feedback on the tool with all three saying that they liked the content areas, “I think the observation tool is well thought-out and comprehensive from a conceptual standpoint” (Rich), but recommended changing the format from a *yes/no* criteria on whether key competencies/instructional approaches were observed in the course to a scale; for example, Wendy suggested:

You might want to score on a scale of 1 to 3 or 1 to 5 rather than Yes/No. That way you could indicate the presence of the topic being rated, but also room for improvement. It would be nice to have that flexibility in the scoring, and could open the tool up for more precise statistical analysis (if that was desired).

Quinn agreed that “the questions are great and I am actually thinking about borrowing some of it for my classes that are online and self-paced with very little instructor support,” and she followed up with me through email to ask if she could pilot the tool within her organization which is a global healthcare business. We agreed to keep in touch on how we used the tool within our own organizations in order to document changes we made and possible usefulness of the tool for diverse learning environments.

The final draft of the observation tool, with FG3 comments incorporated, was sent to FG3 participants in the cumulative summary at the end of the focus group. Nobody

suggested further changes, and so this tool was the one used in the three observations of archived online courses which are discussed in the next section.

Before moving to the next section, it is important to note that a draft of the preceding Chapter Five content was sent to all 24 focus group participants with the invitation to provide feedback on whether my interpretation of the data seemed to be an accurate portrayal of what they felt was discussed in their focus group from their perspective. Seven participants responded with no changes requested. For example, “I read your chapter and felt that it accurately reflected my impressions of, and input into, the focus group discussions” (Rich, personal communication, November 28, 2012).

Results: Observations and Interviews

The observations and follow-up interviews were designed to collect data to address the third and final research question area:

Does a sample of COAT alumni demonstrate any key competencies and instructional approaches that were included in the COAT course in their subsequent online teaching practice? If yes, how do these alumni demonstrate these competencies and instructional approaches, and do they attribute their use of them to what they learned in the COAT course?

This section first introduces the participants, then describes the application of the observation protocol and interview process. Finally the results from applying the observation tool and the follow-up interviews are reported.

Observation Protocol and Interview Participants

The convenience sample was drawn from alumni who had participated in the first two stages of this study (the questionnaire and the focus groups) and who had taught online at my college after taking the COAT course. Only two people met these criteria, Dave and Irene, with a third, Nancy, having taught a hybrid course after taking COAT. All three were invited to participate in this stage of the study, as including the input of a hybrid instructor at the final stage of the research study could be seen to partially align with a grounded theory criterion of using theoretical sampling. According to Breckenridge and Jones (2009), “theoretical sampling progressively and systematically tailors data collection to serve the emergent theory. Theoretical sampling is thus always purpose-driven; the sample is selected for the purpose of explicating and refining the emerging theory” (p. 118). The data analysis of the first two stages of this study, the questionnaire and focus group, indicated that COAT had influenced more than just fully online teaching practice. Although limited to using a convenience sample of instructors who taught online at my college, interviewing an instructor who had taught a hybrid course allowed for possible further exploration of this emerging concept that was focused on the impact taking COAT had on participants’ teaching practice in general: online, hybrid, and face-to-face.

All three participants were working as adjunct faculty when they participated in COAT and this study. Dave described himself in FG1 as having worked as an “adjunct at a community college for the past two years (after 30 years working for a public school system). I had... never taken or taught an online course until last summer.” Irene also

talked about her K-12 and higher education teaching experience: “I am an adjunct instructor for a two-year community college working with hybrid and online courses.... By day I am a public high school teacher.” Like Irene, Nancy had hybrid teaching experience prior to taking COAT, and her FG2 introduction stated: “I am an adjunct instructor at a community college and I have been teaching hybrid... classes for the past 4 years.” All three participants agreed to let me apply the observation tool they had helped create in FG1-2 to an archived copy of the online/hybrid course they taught the semester immediately after completing the COAT course (see Appendix F for a copy of the informed consent form). Before the application of the observation tool and follow-up interview process are presented, it is important to foreground and discuss my relationship with the three participants.

The three interview participants teach at the college where I am currently employed which means that I have a professional relationship with the interviewees, and I have worked with them on course design projects and college committees. However, I have not had any supervisory responsibilities for the participants, and none of the participants have supervised me. My volunteer work with the COAT project meant that participants may associate me with COAT, but my role was not as the COAT facilitator teaching them as students. I was concerned that my professional relationship with participants and my status as a COAT project member would lead to them not being frank about any perceived shortcomings of COAT. However, on looking at the focus group data analysis that focused on misleading or unimportant elements of the COAT course (see Table 27, p. 141), of the six people who identified negative elements, three of

them were the three COAT alumni who agreed to participate in the final stage of the study. Dave identified that he did not like the textbook, Irene gave suggestions on how to reduce the overwhelming workload by eliminating what she considered *busy* work, and Nancy was the only focus group participant to identify an element of COAT that she found misleading, as she criticized the COAT facilitator's management of online discussions. Their comments on more negative elements of COAT suggested to me that our relationship did not impede their ability to provide critical feedback.

Application of Observation Tool and Interview Process

The archived copies of the three courses contained all the content and discussion board postings that occurred in each course within the LMS. No email, synchronous, or in-person interactions were included in the observation. In order to protect the identity of students within the course, the courses were recreated using the *import* feature of the LMS which did not recreate identifiable user records. This meant that, although the student discussion board postings were copied, they were all shown as being posted by *Anonymous*, and the grading area was not restored, so no instructor feedback to individual student graded work was accessible. The three observations were conducted by me and were written up in draft form and sent to the participants for comment and review before the interview (see Appendices G-I for completed observations). I then met with each participant individually for an in-person interview. The semistructured interviews, which lasted from 29 to 51 minutes, were recorded and then transcribed. The transcriptions were sent to the interviewees for comment and editing before data analysis began. Kvale's (2007) recommendation that "interviewer's questions should be brief and

simple” (p. 60) was followed using his guidance on how to frame open-ended and follow-up questions. I went into each interview with a list of question areas, (see Appendix J), some of which were common for all three interviews, and others which were specific to a particular interviewee’s observation and focus group comments. These question areas were used as a guide during the interviews with follow-up questions being used as appropriate and in response to how the interview unfolded.

Each observation took me from four to seven hours to complete, and I did encounter some problems with using the observation tool. There was redundancy in a number of items to do with the instructor’s role, and, from an observer’s perspective, it would make sense to move all items to do with the instructor’s role into the third section: *Establishing Instructor Presence* to avoid duplication of comments. The primary problem I had doing the observations was using the categories *Needs Improvement*, *Satisfactory*, and *Exemplary*, as these categories had not been defined when creating the tool. When I sent out the draft write-up to the participants, I highlighted that I had found the categories hard to use as they involved a level of evaluative judgment on my part, and I expressed the hope to discuss this in the interview, suggesting that we may want to change the categories to *Not Evident* and *Evident*. In the interviews, Nancy agreed that my suggested categories would be better:

So if it's not evident, you can reflect and go, "Oh, maybe I need to be working on that," or "Yeah, I can improve on that." I don't know what exemplary is. It's like okay, I've got a star, but I don't know what that means;

whereas Irene expressed a preference for keeping the *Exemplary* etc. categories and defining the parameters of what each category means.

Results: Observations

The observation tool was designed to include all the key competencies and instructional approaches that were identified in the focus groups as being notably important in helping alumni teach their subsequent online courses. These key competencies and instructional approaches were grouped into five sections in the observation tool: (a) orienting students to the course and online learning; (b) organizing and designing course content; (c) establishing instructor presence; (d) facilitating discussions and building community; and (e) managing assessment. The results from each section are discussed next (see Appendixes G-I for the complete three observations). The courses to which I applied the observation tool were all three-credit, first- and second-year undergraduate courses from two different academic departments (in order to protect the anonymity of such a small sample, course subject areas are not specified).

Orienting students. Each course contained strategies for orienting students to the course. Dave had a *Start Here* area which contained a welcome message, the syllabus, detailed information on how to navigate the course, an overview of course organization, a review of expectations/grading methods, FAQ, etc. Even though Nancy indicated that she oriented her students to her hybrid course in the first on campus meeting, “a lot of stuff is also done in class, and you might say initially my class is given a tour to [the LMS] and to the syllabus and to the resources and how to get to the student helpdesk,” she still built orientation strategies into her course by using the questions in the first discussion board

to direct students to navigate the course site and access specific documents such as the syllabus and college policies for online learning. Irene also had an *About this Course* area in the LMS and a very detailed syllabus that contained course orientation information. All three courses had a *General Information* area that housed institutional-specific information about where students could access various types of support. All three instructors had guidance for students on how they could be successful in the course, and each course contained a detailed syllabus. Both Dave and Nancy talked about how much time students should expect to spend on the course each week, but Irene did not mention time commitment.

Organizing and designing course content. All three courses were easy to navigate with content and assignments organized in a logical and consistent structure throughout the courses. Each instructor used a folder system to organize content with Dave and Irene organizing content in individual folders for each week, and Nancy organizing her content by chapter. Weekly or chapter objectives were articulated and were seen to align with course objectives. Activities were fairly evenly spaced throughout the courses, with *preminders* (in Dave's course), or reminders in Irene and Nancy's courses that deadlines or more intense weekly content were coming up, so students could plan their workload accordingly. All three courses were primarily text-based around the use of a textbook. Dave's course had the most use of externally created videos and graphics which he embedded within his course without citing the sources.

Establishing instructor presence. The instructors could be observed as being active in the archived courses through their announcements and discussion board

postings. Dave posted 24 announcements in his 15-week course, Irene posted 16 announcements in her 15-week course, and Nancy had 17 announcements in her seven-week course. The announcements were friendly in tone and gave information on weekly workload and expectations; assessment due dates; comments on assignments; encouragement to contact instructors for help; etc. Nancy was the most active in the discussion boards with 11 posts that were supportive, encouraging comments that praised good answers and gave additional input where needed. Both Dave and Irene had minimal presence in the discussion boards, with Dave posting six and Irene posting seven comments which were all at the start of the discussions. Dave did highlight in his *Welcome* announcement: "I follow your discussion posts with great interest and will jump in with comments from time to time, but it's better if I remain as a presence in the background and don't dominate the discussions." In all three courses, the discussions were a place for student-to-student interaction and there were examples of peer support as students responded to each others' questions and comments. All three instructors detailed multiple ways for students to contact them: LMS, email, telephone, in-person, and office hours, and they all stated their response time to student questions. Dave introduced his instructor role in the syllabus as a *guide* and in the instructor's introduction on the discussion board as a *facilitator*. Neither Irene nor Nancy explicitly mentioned within the LMS their instructor role in the course, but their actions in the course seemed to indicate that they positioned themselves as facilitators or guides of student-centered learning. For example, in Nancy's course there was evidence that students were able to provide input

on what type of activities they preferred to do with one announcement stating: “As we voted in class, our final will be a hands-on troubleshooting lab.”

Facilitating discussions and building community. All three courses had whole class, regular discussions including a discussion area for students to introduce themselves. Both of the fully online courses had ungraded *Cyber Cafés* for more informal, student-led discussions. Only Dave did not use group work. In Irene’s course there was group work in the form of an ongoing wiki, and Nancy had a group assignment that included an ongoing blog and class presentation. Both group work activities were introduced early in the courses so students had ample time to get organized in their groups and complete the assignment. Expectations for student participation were posted in all three courses.

Managing assessment. Explanations about the types of assessments with due dates and reminders were posted in multiple places in all three courses. Each course included multiple assessment types ranging from multiple-choice chapter tests, group work, discussion boards, class presentations, labs, short-answer assignments, research papers, audio assessments, and proctored exams. Dave had rubrics for all of his assessments, Nancy had one rubric (for the group assignment), and Irene did not use rubrics. Dave used announcements to let students know when he would get graded assignments back to students, but Irene and Nancy did not post information on instructor feedback time. All three instructors posted information on academic honesty and withdrawal policies with Dave and Nancy having assignments that focused on plagiarism.

Summary of observations. The observation tool was organized into five sections that contained 29 items posted in five tables. These 29 items were all identified in the focus groups as being important to include in an observation tool focused on whether alumni of the COAT course demonstrated key takeaways from COAT in their subsequent teaching practice. Combining the observations for the three courses, 72 instances of the 29 items were observed as being demonstrated at the *Satisfactory* or *Exemplary* level in the three courses with seven instances of *Needs Improvement* and eight instances of *Not Applicable*. Dave's course was not seen as being compliant with copyright requirements, both Irene and Nancy's courses did not have grading rubrics for all assignments and did not give instructor feedback time on assignments, Irene's course did not specify the time commitment students needed to complete course activities, and her course was seen to be text-based without content for diverse learning styles. These findings were discussed with the participants in the interviews which are reported on in the following section.

Results: Interviews

The primary purpose of the interviews was to see if instructors attributed their use of the key competencies and instructional approaches that were identified in the focus groups to what they learned or experienced in the COAT course. The interviews were also important for getting instructors' input and agreement (or disagreement) on my write-up of the observations. Finally, the interviews were used to clarify emerging categories and themes from the data analysis of the questionnaire and focus group data. The interviews were compared to the data, categories, codes, and subcodes in the focus groups with particular attention to the codes that had been applied to what interviewees

had said in the focus groups about what elements of the COAT course had impacted their subsequent practice. Table 29 presents what COAT elements the three participants identified in the focus groups and the interviews as impacting their later online or hybrid teaching practice. The first column contains the codes/subcodes from the category: *Taking COAT influenced subsequent online teaching practice* (see Figure 15, p. 126) and two new codes that were identified in the interviews.

Table 29

COAT Elements Interviewees Identified as Impacting Practice

<u>Code</u> <u>Subcode</u>	Identified by participant in FG as impacting her/his subsequent practice	Identified by participant in interview as impacting her/his subsequent practice
<u>Improving/informing online practice</u>	Dave	Dave / Irene
<u>Revisiting COAT content</u>	Irene	Irene
<u>(Re)designing online course</u>	Dave / Irene	Dave / Irene
<i>Orienting students</i>	Dave	
<i>Using rubrics/variety of assessments</i>	Dave / Irene	Dave
<i>Presenting course content in variety of ways</i>	Irene	
<i>Helping students monitor progress</i>	Dave	Dave
<i>Learning about legal issues</i>	Dave / Nancy	Dave
<u>Experiencing being an online student</u>	Dave / Irene	Irene
<i>Experiencing COAT course design</i>	Dave / Irene	Dave / Irene
<i>Experiencing frustration</i>	Dave	Dave
<i>Experiencing LMS features</i>	Dave / Irene	Nancy
<i>Experiencing time commitment</i>	Irene	Irene
<u>Being part of a community of learners</u>	Dave / Irene / Nancy	Dave / Irene / Nancy
<u>Reflecting on instructor's role</u>	Irene / Nancy	Irene
<i>Providing opportunities for peer interaction</i>	Dave	
<i>Modeling online teaching</i>	Irene	Dave / Irene
New codes from interviews		
Identifying institutional resources		Nancy
Experiencing feedback on assessments		Irene

The following sections report the interview data. First the interviewees are briefly compared to the participant types identified in the questionnaire. Next data related to whether participants attributed any use (or nonuse) of key elements in their later online teaching practice to their taking the COAT course are presented. Then COAT's influence on nononline teaching practice is reported. Finally some of the limitations of the observation protocol are highlighted.

Participant type. Dave was part of the target audience for COAT: an adjunct with no prior online teaching experience when he took the COAT course:

I had never seen an online course before that. I had never taught one. I had never taken one. I had never talked to anybody who had taken one, so I was a complete novice when it came to online courses.

Like 6% of the questionnaire respondents, he started teaching his first online course while taking the COAT course: "I was building and teaching the course while taking COAT. COAT started a month before my class did, and that was the only way that I got through, by talking to other people online, by [COAT instructor]'s help." Irene had taught her first online course, (which she designed herself), in 2000, so her prior experience aligned with the 50% of questionnaire respondents who indicated that they had online teaching experience prior to taking COAT. Nancy began teaching hybrid courses four years prior to taking COAT, but, like 29% of the questionnaire respondents, has not yet taught a fully online course. Whereas Dave and Irene had never taken an online course as a student before COAT, Nancy had taken her undergraduate and graduate degrees online.

Dave's key elements for online teaching practice. The application of the observation tool to Dave's archived 15-week online course that was taught after he had completed COAT showed that he demonstrated 25 out of 29 possible key competencies and/or instructional approaches identified in the focus groups. His comments on his use of some of these 25 items are reported first, before the four items that were not demonstrated are discussed.

For the items in the observation tool area: *Orienting students to the course and online learning*, Dave attributed most of his use to institutional requirements:

One of the things that you mentioned in here had something to do with the initial approaches to it, the *Where to Start, Technical Support*. Much of that was automatically generated from [the college], and [X] handed it over and said, 'You will include this.' So I had a number of constraints, which I was glad to have, because I wouldn't have known where to start.

This is true for all the observations, as the college where the interviewees work requires all online and hybrid courses to include a *General Information* area which details where students can access technical and student support services. The *Where to Start* or *About this Course* student orientation area is also required for online courses.

Dave attributed his use of some elements to directly taking them from the COAT course. For example, his discussion board rubric "was a rubric I got from COAT. It was one of the several that you gave us, and I just lifted it and tweaked it a bit and used that," and one of his strategies to help students understand what they needed to do each week, the *Mark Reviewed* feature in the LMS, "was something else that [COAT instructor]

showed us how to do.” Dave acknowledged that “a good quarter of the COAT course was [COAT instructor]'s willingness to share things she was doing online,” so having the COAT instructor talk about why and how she was facilitating the course added to the learning experience. Dave also identified that the COAT instructor modeling online teaching affected his own online teaching practice. For example, in response to my question about his comment in FG1 that creating an appropriate instructor presence was difficult, Dave said:

That was the main thing that I heard over and over and over again, and then realized, as I watched [COAT instructor]. And then as I started teaching, and watched [COAT instructor] even more, and thought, ‘Oh, my gosh, how difficult it is to do this, and do it well.’

In addition, Dave agreed that being part of a community of peer learners was a key element of the COAT course that helped him with his online teaching:

We had a subcourse operating within the COAT course. We would see things we had questions about, and I don't who started it - maybe it popped up in the little Cyber Café, ‘Has anybody ever...?’ And then, once the first person did that, it was like graffiti. It opened it up. ‘Well, how about this?’ And then every single set of discussions that we had - and to be fair, COAT's questions, I think, gave us an opportunity to ask those questions, to go off in those directions. But that was where an awful lot of the learning took place. ‘I've never done this. In your experience, what would you do?’ in practical matters. ‘Okay, this is theory, but theory is theory and practice is practice. Does it work this way?’ And then you'd

get a number of people saying, 'Yes,' and 'I'm in this discipline,' or 'Well, we tried it here, this didn't work, but we did this instead.' You were getting so many extras out of the class, by virtue of those discussions.

In fact, Dave attributed his decision to have minimal instructor presence in the discussion boards in his online courses to what he learned from the other COAT participants, not from what he observed from the COAT instructor's practice or from the content of the COAT course which had promoted the idea of instructors being very active in online discussions:

There were one or two things that I noticed, from taking the COAT course that I'm not sure you could pick up on or evaluate, and that's the amount of information that we got from other instructors that wasn't part of the formal instructional materials from COAT. When the questionnaire talks about the discussion boards and instructor presence, I deliberately kept myself out of it. As you noticed, I had said that I would back out, which was something that I had gotten from other participants in the course. I don't think it came from [COAT instructor], and I don't remember it, necessarily, in any of the readings. But it was very strongly felt by the other participants that the minute you jump in as an instructor, in a discussion, it comes to a halt, because you're supposed to be the authority, the last word, and nobody is going to differ with you, or, if they do, they're a very strong personality, but they're the exception and not the normal student.

In addition to *Active in discussion boards* and *Clear expectations for instructor participation*, one other item that had a *Not Applicable* designation was group work. This was not an element that Dave had mentioned in FG1 as being one of his takeaways from COAT, and he did not use group work in his subsequent course. In that course, one student had posted a request in the Cyber Café for peer-to-peer review on a paper and when I asked Dave about this in the interview, he said:

I think it would've been helpful, and I'm guessing that the person - because there was only one, in all the courses. No one else asked for it.... It's something that could be set up, but there is a lot of work in this particular course, just the reading and the writing, and I don't know how, in a limited class like this, I could have worked it in and forced everybody to do it.

Being aware of the workload in his course and not wanting to overwhelm students is something Dave talked about in FG1 in relation to his feeling overwhelmed by the heavy workload he experienced as a student in COAT. Although not explicitly stated by Dave in his interview, combining his FG1 and interview comments suggests that his experiencing COAT as a student influenced later decisions about what not to include in his own teaching practice.

One item was deemed in the observation as needing improvement: *Compliant with copyright and students with disabilities laws*. Dave had highlighted in FG1 that learning about legal issues (which included copyright as well as FERPA – a US student privacy law – and accommodating students with disabilities) was a key takeaway for him,

but in his course videos were not closed captioned and, in my opinion, nontextbook external resources that were embedded within the course were not compliant with US copyright laws. In his interview Dave acknowledged:

However, one of the things that I got the most out of [the COAT course] is one of the things I didn't do well in my own course, which was the compliance with copyright and students' disability laws, and I think that was partially because I was just struggling to get a course up in three weeks and didn't have time to pay attention, and was using someone else's materials I didn't know what it was or it wasn't, so I was borrowing here and there. But that was one of the most interesting sections to me, and one of the most revealing. It was information I needed to know and did not know. I had no clue about FERPA. But I don't know how that would come across in a course that you could look at, and that it was something I was sensitive to.

In addition to highlighting the inability of the observation protocol to notice his sensitivity to student privacy issues (FERPA), Dave discussed other limitations related to observing archived online courses, and these are reported in a later section of this chapter.

Irene's key elements for online teaching practice. The application of the observation tool to Irene's archived 15-week online course that was taught after she had completed COAT showed that she demonstrated 23 out of 29 possible items. Her comments on her use of some of these 23 items are reported next along with the six items that were not demonstrated.

One of the key takeaways from the COAT course for Irene is that she redesigned her online course after taking COAT, and she attributed that decision to her experiencing COAT's course design and "looking at how the course was laid out and saying: This would make my course much better. I'm going to emulate it." In addition, Irene's experience of being frustrated by the workload in COAT led to her revising the workload in her online courses:

It [COAT] made me more aware of their [her students] time commitment and what I was expecting of them. And in some cases I got rid of entire projects or assignments or I moved them. So one of the big things that I noticed was a pileup of the things expected at the end. And because of that, I moved the wiki project so it no longer is in week, like, eight. It's now back in week six, to give them - able to spread out more - you know, more equally amongst their weeks of work.

Experiencing being an online student also affected Irene's later practice in terms of how she responded to students. Irene mentioned that before taking the COAT course, she used automatic *canned* comments in her feedback to students' graded work, but her experiencing the COAT instructor's personalized responses to her graded work led to Irene incorporating that into her later teaching practice:

And now, though, one of the things [COAT facilitator] did was she would make a real effort to comment, and to comment on tests and quizzes. And sometimes, even as detailed as your - she would have a response for a question, like an individual question inside the question. And I would sit and think, she must have no life. I can't see how she can do this. So what I did was I picked up from her

that every message contained the person's name, so I personalized it. And then every message was written so that you knew, or you thought, it was not from a template. So I thought, how can I do this? So I went back and I looked at how many - like sometimes they have ten assignments a week and I can't do it, so I would choose different ones but always one a week. And so if you were looking at [X course] for, say, spring 2012, you would have seen that, oh, look at all these responses under the quizzes for the feedback. That's a big difference.

The course I observed was taught in the fall of 2011, and the previous quote highlights that Irene's implementation of key takeaways from the COAT course was not all at once, but evolved over time. Irene pointed out that her immediate takeaways that were demonstrated in the fall 2011 course were course redesign decisions in terms of course navigation, and she added other key elements in subsequent courses such as personalizing her feedback to students.

In the observation, I had said that her role seemed to be as a guide who made herself available to help students as needed. Irene corrected me on this assumption, saying that before she took COAT, she would have categorized her role as a guide, but after COAT, her role was as a facilitator of student learning. For Irene, the difference between the two is a "facilitator is more hands-on, where a guide is 'Okay. Go there. Do that. I want this done by'... that's a guide." She attributed this change in the way she approached her role not to what she experienced as a student in COAT, but to what she learned from the COAT content "from some of the assignments that we had to do that I got the feeling that I need to be more involved. I need to be more present." Irene's

instructor presence in the discussion boards was minimal, and I categorized items to do with participation in discussion boards as *Not Applicable* because Irene, like Dave, had talked about her conscious decision to have minimal presence in discussions in the focus group. We talked about this in her interview, and she mentioned that she had tried having high instructor presence in her online courses prior to taking COAT and it had not worked out:

And my presence - in one of the classes I taught I was much more vocal, and then I saw them parroting my thoughts. So I removed me. I just, in the beginning, said a couple of things so they knew I was there. And once in a while I'd bounce in and say, 'Hi, how are you doing,' but that was it.

Although taking COAT did not change her decision to continue having a minimal presence in her online course discussions, Irene did change the way she introduced herself to her students after the COAT instructor modeled a way of building community that Irene liked:

Now in the courses, instead of just having the, 'Okay, you see me,' whatever it is.... I have 25 things you don't know about me, and then I have an assignment where they have to share ten things I don't know about them. And that also brings us closer together.

The final element that affected Irene's teaching practice that she attributed to taking COAT was her being part of the community of peer learners in COAT. Even with her extensive prior online teaching experience, she felt that the community of other instructors was a good learning environment for her. Irene compared her mentoring work

with high school teachers to her involvement in the community in COAT in that as a “been-around-forever” instructor, she still learned from less experienced instructors. Within COAT she identified one particular participant who impacted her later practice by his suggesting that she:

make them [her students] go back - make them go back to what they've done and tell you what they think about their achievement or their failure. And I had never done that before either. So that came out of that course, but that came from the intermesh of the other instructors.

Irene and this participant still interact with each other 18 months after they completed COAT with Irene bouncing online teaching ideas off him for his feedback which she values.

Like Dave, Irene attributed her student support items in the *Orienting students to the course* section in the observation tool to her college's requirements rather than to taking COAT. In particular, her not demonstrating the item *Expectations: Time commitment* in her fall 2011 course was due to her department not requiring it at that time:

Now, down here where you have the time commitment, in 2011, under [Y], we did not have to put any hours, minutes, time, but working under [Z] in the [A] department, you did. So I think it's only - I think it's only last year that I actually revamped the [X course] to include in its syllabus and its timeline the hours.

In her fall 2012 course, the time requirements are now detailed.

Three other items were evaluated in the observation as *Needs Improvement*, one of which had been identified by Irene in the focus group as a positive part of the COAT course, having a “large variety of available experiences with ‘something for everyone’ strategies employed.” Her fall 2011 course was textbook-based with no supplementary video, audio, or interactive content. When we discussed this item, Irene stated that she felt that she had accommodated diverse learning preferences, and she attributed her already having incorporated this into her teaching practice prior to COAT to what she had learned in another professional development program:

I'm a county public high school teacher, and about five years ago we all had to go through modalities as our summer lecture program. And so because of that I was already taking the textbook in [X subject] and looking through it to see, okay, we're not just answering questions, we're not just learning vocabulary; we're actually thinking. And each project was different. So they wound up doing decision matrixes rather than just editing a letter. So I had already figured I was doing that.

Irene gave examples of her diverse projects within the course (e.g., audio assignments, in-person or video presentations), and we brainstormed ways she could add media other than text to her course. As had happened in the focus groups, we went off topic in the interview and came up with a video assignment Irene is going to try.

Two other items that I had categorized as needing improvement were areas that Irene felt strongly that she did not want to include in her teaching practice. She acknowledged that she did not give students information on her feedback time for

assignments, but with her heavy workload, she did not want to give an exact date; she preferred to give a grading window of a couple of weeks. In FG2 Irene had made a comment on what aspects of COAT had changed her later teaching practice which was coded: *Using rubrics/variety of assessments*:

Tried to use various types of assignments to spur interest and to keep an eye on the different types of learners. Specifically, I'm adding a WIKI assignment, some small group challenges, several discussion board topics per class, a reflection opportunity, and a Cyber Café.

This quotation shows that her comment was included in this code not for *using rubrics* but for *using a variety of assessments*, and in the interview Irene made it clear that she had tried grading rubrics in the past and disliked them. Her prior use of rubrics was attributed to her high school work, not COAT, and she felt that rubrics stifled students' creativity:

My past experience with rubrics was very confusing in that I had learned how to do a 1-to-5 and I had learned how to do a 0-to-3. And then I had learned that you don't have the zero.... So everybody who spoke about rubrics was giving me different information that conflicted. And then when I, at my high school position, - because we all had to do rubrics for everything - tried to implement them, I found that my students then, all they would do was try to aim for exactly what the rubric said. And so to me it was pigeonholing their imagination and stifling their creativity, so I knocked them out. Now, when I get observed, that is usually a

sticking point: 'Why don't you have a rubric for X, Y, Z?'.... But that's one of my failings, because I'm so negative about what I saw them do that I hate to use them. When I suggested that it was not necessarily a failing, just an informed choice of an experienced educator, she agreed that she had tried rubrics and decided they did not work for her as an instructor working in her particular environment.

Nancy's key elements for online teaching practice. The application of the observation tool to Nancy's archived seven-week hybrid course that was taught after she had completed COAT showed that she demonstrated 24 out of 29 possible key competencies and/or instructional approaches identified in the focus groups. The three *Not Applicable* designations were due to this being a hybrid course, as Nancy introduced herself and the course in her face-to-face part of the course, and felt no need for an informal Cyber Café. One item categorized as needing improvement: *Instructor feedback time* was also addressed in the face-to-face component. The campus-based part of her course was a hands-on lab with most of the content, required discussions, assessments, etc. being part of the online component of the course.

For Nancy, a key word that she repeated throughout her interview was *reaffirm*, and her main takeaway from the COAT course was that it reaffirmed her existing good practice that she had developed from her experiences as an online student in undergraduate and graduate programs:

For me, it was sort of like a reaffirmation of what I was doing, like a confirmation, 'Oh, so I'm doing -- you know, this is what I'm supposed to do, and I've been doing this.' By my own experiences, I have been taking my online

classes, so part of that also complemented with what I was doing in the COAT training. So it reaffirmed for me that this is what you're supposed to be doing. Nancy acknowledged that she did learn a few things from taking COAT that she had not known before which helped her in her subsequent practice. One was seeing features of the LMS being used that she was not aware of such as the wiki. Another was the part of the COAT course that focused on participants identifying institutional resources at their institution which encouraged Nancy to seek help from people at her institution:

At first, when I got into teaching, you feel like this is your responsibility, especially when you're an adjunct, is really what's heavy on you - so what am I supposed to be doing? Sometimes that resource for help is not there. But then you reaffirm that these people are - this is where you need to go, so you're not on your own. That's one of the things that I can remember. Okay, so now I'm not shy to go anymore, and knock on their door, and 'You really need to be helping me out.'

One of the areas that Nancy felt she should turn to her institution for guidance was the use of rubrics. Using rubrics was not one of COAT elements that Nancy had talked about in FG2 as impacting her later practice. She had a grading rubric for her group work, but not for other assessments in her course. She acknowledged her missing rubrics and highlighted that if she needed help, she would turn to her department chair:

It [using rubrics] is definitely something I need to work on with the chair of my department, to make sure that we have that kind of - that part was a lot of work and I know that from the COAT class. I remember this is kind of confusing to me. I know that was one of the assignments that I kind of skipped.

Nancy's previous comment about skipping content in the COAT course highlighted what she considered to be an overwhelming amount of work within the COAT course: "Even though I had some experience taking online classes, I didn't expect that much work," and she recommended that COAT should have a clearer statement for participants about the expected workload.

As in Dave and Irene's interviews, I asked Nancy about two of the concepts that emerged from the focus group data analysis to see if they resonated with her experience: *Being part of a community of learners* and *Experiencing being an online student*. Nancy felt that she benefited from being part of a community of peers in COAT. She recognized that her role as a more experienced online learner and hybrid instructor meant that she helped others in the course, and she was happy to share her experiences. In addition, she saw that she also benefited from the peer-to-peer learning:

I can say it was good to see things from different eyes and other perspectives and other fields and other experience. Yes, definitely I really did enjoy reading those experiences that people were sharing, so, again, you realize, 'Yeah, I'm not alone in this. This happens to everyone.' I think that based on those experiences they posted; I think it was a good learning experience for me to see that.

Although Nancy did not identify the experience of being an online student in COAT as impacting her teaching practice, she did highlight that her prior online student experiences in other courses had influenced her teaching. Nancy's concluding comment in the interview related to this topic of experiencing online learning as a student:

I thought it [COAT] was a good experience, and actually I think that every instructor teaching online should take that class, and I even think for that... you have to deal with that overwhelming feeling that that's what your students are going to go through. It's not just posting stuff and expecting people to turn in work. You have to walk the walk. So I would highly recommend to every instructor that if they are going to be teaching online or a hybrid, that they should take something like that.

According to Dave and Irene's experience, this recommendation could also be extended to campus-based instructors as both identified that taking COAT influenced their later nononline teaching practice.

Nononline teaching practice. In addition to talking about what elements of the COAT course had proved to be key takeaways in helping participants teach their subsequent online courses, both Dave and Irene discussed another outcome from their COAT experience that aligned with the category that emerged in the focus group data analysis: *Taking COAT influenced subsequent nononline teaching experience*, although neither of them had mentioned this outcome for themselves in the focus groups. At the end of the interview, when Dave was invited to add any further comments, he said:

In retrospect, I enjoyed it all and learned from it, and ended up using things I swore to the people in the COAT course I would never have any use for. I use it in face-to-face classes. Almost every class I run now is an unofficial hybrid class, because of the COAT course. Students seem to enjoy it. It makes it easy to collect materials, to get feedback back to students, to make assignments available to

them. I almost feel that I'm teaching online classes but I'm here in the room with them to help them with their online class.

Irene pointed out that what she learned from the COAT instructor's personalized feedback on her graded assignments "not only changed it [her grading practice] for [the college], it changed it for the high school kids too. It changed me in both places."

Reflecting as an ongoing process. The idea of reflection being an ongoing process emerged from the focus groups with seven participants (not including the three interviewees) making comments that were grouped in a code: *Reflecting on teaching practice/design as ongoing process*. All three interviewees also talked about their reflecting on their teaching practice as an ongoing activity. For example, as we looked at Dave's archived online course together in the interview, he made the point that "there were one or two things that I was very interested in, and would change now, were I doing it all over again." Both Irene and Nancy also made comments in their interviews that were coded as ongoing reflection.

Limitations of the observation tool. I had used a comment from Dave about instructor presence in FG1 when I decided that his minimal presence in the discussion boards was purposeful. Dave had mentioned that:

I discovered that I email students who lag a bit, and always add encouraging notes to discussion board scores.... So for me, preliminary lecture notes at the beginning of each module, coupled with fairly detailed announcements at the beginning of each week, replace classroom discussion.

One of the limitations of the observations of archived courses was that I did not have access to instructor emails or grading comments on students' work, so these interactions with students were not observed. Irene mentioned in her interview that the observation of her archived online course was not only missing the emails and phone interaction, but:

missing also the reflection that I work through with them after their presentations in front of me or after I receive their videotaped presentation of them speaking or them doing a videotape, because that gets a lot of attention from me to them, how to make this better.

Dave also acknowledged this in the interview when he talked about how he checked his online course "10 or 12 times a day" and this aspect of his instructor presence was not captured in the observation, but was commented on in his student evaluations: "I was gratified, on the evaluations, to see people say that I was always available to them. They didn't have any difficulty in getting in touch. They would send something, and often within an hour they'd have a response."

Summary

Chapter Five presented the results from stages two and three of this study. The analysis of the focus group data identified that the structure of the COAT course which placed participants in the role of an online student in a paced, graded, instructor-led course was seen to influence later teaching practice. This was confirmed by the three interviewees who all agreed that their experiences as an online student (not necessarily in the COAT course) had an impact on their online teaching practice. The instructional approach of modeling good teaching practice within an online course while building and

demonstrating a CoI using a constructivist framework, led to participants reflecting on their online instructor role and identifying that being part of a community of learners contributed to helping them teach their later online courses. The interviews confirmed that learning from peers in unstructured discussions was an important part of the COAT experience. The content of the course that was notably important in influencing later practice was identified in the focus groups as being related to course design issues such as using rubrics; providing multiple assessment and content presentation types; having student orientation and self-monitoring strategies; and complying with accessibility, copyright, and student privacy requirements. Some participants (6 out of 24) also identified a few areas that were not so useful for their later practice (legal issues, social aspects of online learning, textbook, etc.) and one felt that the way the COAT instructor modeled facilitating online discussions was misleading. Finally, COAT was seen to also influence later campus-based teaching and instructor training responsibilities.

The first two focus groups cocreated an observation tool that was presented to FG3 participants who agreed with the content of the tool while making minor changes to the evaluation scheme. When this tool was applied to three archived online courses, most of the items (72 instances out of a possible 87) were demonstrated through the instructors' course design and interactions in the LMS. The interviewees attributed their use of some key competencies and instructional approaches to what they had learned or experienced through taking the COAT course. Other influences such as prior online student learning and institutional requirements were also identified. The results from the interviews, combined with the results from the questionnaire, focus groups, and

observations are discussed in relation to the research questions in Chapter Six.

Chapter 6: Discussion, Significance, Limitations, and Recommendations

This chapter integrates the findings from each stage of the research study, and the combined data analysis results are discussed in relation to the research questions presented in Chapter One. Design principles for training for online instructors are articulated based on the findings and supporting literature, and a conceptual framework for the influence of training on professional practice is presented. The significance and limitations of this study are then highlighted before recommendations for further research are suggested.

Discussion: Research Question Area One

The first research question area focused on whether COAT alumni aligned with the target population for the COAT course of Maryland higher education adjunct faculty who were experienced in teaching campus-based courses. The expectation was that participants would not have prior online teaching experience, but they would have a goal to teach online in the future.

Who Took the COAT Course?

The results from the online questionnaire indicated that the population who participated in the COAT course was more diverse than anticipated. With a 70% response rate, it was found that 92% of COAT respondents from the 11 sections of the course that ran from fall 2010 to spring 2012 were working in higher education with 113 stating that they had campus-based teaching experience. Respondents held a variety of roles at these institutions with 46% stipulating that their primary role was as adjunct faculty and a further seven respondents stating that their secondary role was as an adjunct. Other

primary roles included full-time faculty (27%), administrators (13%), and support staff (6%). Most respondents (63%) worked in Maryland institutions, with the majority of out-of-state participants coming from the four dedicated course sections with 19% working at B-University in Michigan, and 7% working at A-University in Australia. The other 11% of respondents worked at institutions in ten different US states. Exactly half of all respondents had taught online prior to taking COAT, with 24% of these (15 out of 63) having taught ten or more online courses prior to COAT. Of the other 50% of respondents, 6% taught their first online course while they were taking COAT, 15% after taking COAT, and 29% had not yet taught online when they completed the questionnaire.

Although the focus groups were not designed to elicit detailed demographic information, some participants did volunteer personal information in their introductions. This data confirmed the diversity of participant types identified in the questionnaire results with adjuncts, full-time faculty, administrators, and K-12 instructors participating from more than one US state, 11 of whom had taught online prior to COAT and six without prior online teaching experience before taking COAT.

In their recommendations for the COAT project, 13 out of 24 focus group participants felt that the target audience for COAT should be broadened with suggestions ranging from including: new and experienced online instructors; full-time and part-time online faculty; middle and high school teachers; and campus-based instructors. Four people felt that the word *adjunct* should be taken out of the COAT name. Some respondents to the questionnaire also commented that COAT was relevant for a broader

audience; for example: “It would also be a valuable course for experienced instructors to take who teach online courses.”

The data collected in this study confirmed data recently compiled by the COAT project on course participants from fall 2010 to summer 2012 that were taken from participants’ enrollment information:

Since the first offering of the course in 2010, a total of 295 people have participated in the course. Of those, 45% were adjunct instructors, 25% were full time faculty, and 10% were instructional designers, faculty support personnel, or fulfilled multiple roles at their institution. (COAT, 2013c)

Having a broader audience to the one that was originally targeted by the COAT project necessitates the COAT team considering alternate expectations, experiences, and commitments of participants outside of the original target group. Clearly, the audience for COAT is heterogeneous, and thus flexibility in activities, the inclusion of additional learning outcomes, and increased opportunities for participants to share information about their prior online teaching experiences should be taken into account in COAT redesign decisions for the next iteration. These ideas are included in the strategies for implementing the first principle for designing training for online instructors which is discussed in a later section of this chapter.

Why Did Participants Take the COAT Course?

Respondents to the questionnaire gave a variety of reasons as to why they took the COAT course with 43% (69 out of 162) of coded goals aligning with the COAT design

team's anticipated goals of the target audience: to prepare to teach online, to gain online teaching skills, to learn about the online teaching/learning environment, and to gain a credential. Of the respondents who had not taught online prior to taking the COAT course, 76% (48 out of 63 respondents) gave a goal that was interpreted as aligning with the goal of wanting to make the transition to teach online. Other goals for taking COAT included those of existing online instructors who wanted to improve their online teaching/course design skills and to collaborate/compare practices with colleagues (29% of stated goals); nonteaching goals of helping with online faculty training, working with others on online course design, and managing online programs (9% of goals); and a goal to see online learning from a student's perspective (4% of goals).

Some questionnaire respondents were required (8 respondents) or encouraged (17 respondents) to take COAT. Two institutions, A-University in Australia and B-University in Michigan, had requested dedicated COAT sections for their faculty and staff. The data suggested that more than just these two institutions required their faculty and staff to take COAT with five questionnaire respondents working in Maryland and District of Columbia institutions indicating that they had to take COAT in order to teach online at their institution. The focus group data included the information that at least one participant took COAT so that she could then adapt the COAT course to offer it as a required training course for all her college's online instructors. A questionnaire respondent also indicated that her/his institution had customized the COAT course to create internal training for online instructors: "My institution obtained permission to use the curriculum and has implemented regular sessions for our faculty members."

Did COAT Influence Participants' Decision to Teach Online?

The analysis of the questionnaire results showed that only 24 respondents identified COAT as influencing their decision to teach online. One category emerged from the analysis: *Taking COAT influenced my confidence to teach online* with 14 people identifying that COAT's influence was to positively increase their confidence in their ability to teach online. Five other respondents found that taking COAT made them aware of the increased workload related to online teaching, with one of these identifying that COAT influenced her/him not to teach online.

Target Audience versus Actual Audience

COAT was designed to meet a perceived need for a training course in Maryland for higher education adjuncts who wanted to make the transition to online teaching. The training was aimed at adjunct faculty with the intention that both adjuncts and administrators who hired adjuncts would benefit from having a certificate that was recognized by multiple institutions. This intention of creating an online teaching certificate for adjuncts seemed justified in the literature. For example, studies presented in Chapters One and Two of this thesis indicated that:

- the ratio of adjunct faculty to full-time faculty was increasing (e.g., National Center for Educational Statistics, 2010),
- the number of students taking online courses was growing (e.g., Allen & Seaman, 2013),
- administrators were finding it hard to hire qualified online instructors (e.g., Instructional Technology Council, 2012), and

- training was less accessible/available for adjunct faculty than for full-time faculty (e.g., Kezar & Sam, 2010).

Although no research studies were identified that suggested training for adjuncts should be separate or different to training for full-time faculty, studies did recommend that training for online teaching should be designed to be accessible for adjuncts in terms of providing training in an online, asynchronous format (e.g., Blodgett, 2008).

Recent studies confirmed that professional development workshops focused on teaching and learning in general (not necessarily online teaching) are more available for full-time than for adjunct faculty. The Coalition on the Academic Workforce's (2012) study of over 20,000 contingent faculty members' working conditions found that only 28.7% of workplace support for adjuncts included professional development workshops, while a national US survey on college and university faculty found that "roughly two-thirds of assistant professors (66.6%) and 60.7% of associate professors participated in a teaching enhancement workshop, whereas less than half of full professors (46.9%) reported that they did so in the past two years" (Hurtado, Eagan, Pryor, Whang, & Tran, 2012, p. 15). The results of these studies suggest that the premise on which COAT was based of filling a need for accessible training for adjuncts was warranted.

The Coalition on the Academic Workforce's (2012) study also found that 78% of adjuncts teach at a single institution which challenges the assumption the COAT team had that many adjuncts teach at more than one institution and, therefore, would benefit from having a certificate that was recognized by multiple institutions. This assumption was grounded in previous studies as discussed in Chapter Two (Bedford, 2009;

Anderson, 2002). The focus group participants were asked if they taught at one or more institutions and, of the nine people who responded, seven taught at one institution, one taught at two institutions simultaneously, and one indicated that she taught at multiple institutions. However, of the seven who taught at one institution, four indicated that they would like to teach at more than one institution with one person pointing out that COAT as a credential was not recognized by hiring personnel. This was also mentioned by six of the questionnaire respondents who identified that having the COAT certificate had not helped them find an online teaching position; in contrast, two questionnaire respondents stated that taking COAT had helped them get hired, and two more said it was a positive addition to their resumes. This finding on a lack of recognition of COAT as a credential for some alumni suggests that the planned for outcome of having a certificate that would be recognized by multiple institutions has not been fully realized as yet.

My reflecting on the findings to the first research question area brought to the foreground two key concepts that emerged from the data analysis, both of which were unexpected outcomes for the COAT project. First, even though the COAT course was designed for and explicitly marketed to adjunct faculty, half of the participants were not adjuncts, and an unexpected outcome was that full-time faculty and nonteaching administrators would choose to take a training course that was called: *Certificate for Online Adjunct Teaching*. Second, a training course that was designed for and marketed to novice online instructors proved to be attractive to, and useful for, experienced online instructors with 50% of respondents to the questionnaire indicating that they had taught online prior to COAT.

Design Principle One

The first principle for designing training for online instructors emerged from the findings related to research question area one:

Training for online instructors should be as inclusive as possible for participants with diverse professional roles and varied prior online teaching experiences.

Possible strategies for accomplishing the first design principle that are derived from the input of the COAT alumni in this study are as follows:

- Design training to be accessible for part-time instructors, but do not explicitly reference a particular target audience such as adjunct faculty.
- Include items in the course description/objectives/marketing that are similar to the goals COAT alumni with prior online teaching experience gave for taking COAT (see Figure 10, p. 100).
- Utilize design strategies that allow participants with diverse prior experience to omit activities/content that are not necessary/appropriate for their level of experience. By making some activities/content optional for participants, the feelings of being overwhelmed or being asked to do *busy work* should be reduced.

It is important to stress that all the design principles that emerged from this study are situational principles for designing faculty training. “Situational principles are ones that are not universal – they only apply in some situations. They exist on a continuum from situations that are very common (close to universal) to ones that are highly local (apply very rarely)” (Reigeluth & Carr-Chellman, 2009, p. 57). As a DBR project, this

study aimed to produce design principles and contribute to theoretical understanding.

Ormel, Pareja Roblin, McKenney, Voogt, & Pieters (2012) highlighted that:

As a scientific endeavor, new insights generated from design [based] research is [sic] at least public (that is, accessible and usable by others) and also often local (for example, contributing to the practical knowledge of researchers and practitioners participating in a particular project). (pp. 970-971)

By describing the environment in which COAT was situated in detail, and by including the voices of the diverse professionals who participated in COAT, it is hoped that practitioners working in similar situations will find these design principles useful and possibly transferable to their teaching and learning environments.

Discussion: Research Question Area Two

The second research question area focused on whether elements of the COAT course had been important, unimportant, or misleading in helping alumni teach their subsequent online courses. Unimportant or misleading elements are presented first before important elements that impacted online teaching are discussed.

Unimportant or Misleading Elements

Focus group participants were asked to discuss any elements of the COAT course that were unimportant or misleading. Seven people stated that they could not identify any such elements, and six participants identified a variety of elements that they found less helpful or even misleading (see Table 27, p. 141). There were few commonalities among these elements with individual participants identifying different aspects of the course ranging from student integrity information to the choice of textbook. A concern in any

research where the researcher is known to the participants, either as a colleague or as someone associated with the phenomenon being studied, is that participants are less likely to make negative comments. Of the 24 focus group participants, three work at the same college as me and we have a professional, collegial relationship. All three made comments in the focus groups that were coded as identifying unimportant or misleading elements which suggested that my colleagues were not held back by their relationship with me from giving negative feedback.

Other participants made comments in the questionnaire and focus groups that were critical of the COAT course, though not coded as identifying unimportant or misleading elements. For example, constructive criticism in the form of recommendations were made by both questionnaire respondents and focus group participants with comments ranging from what was seen as an overwhelming amount of work to improvements to the course design. In the focus groups, it seemed that some participants saw my role as a conduit to the COAT project team in terms of giving feedback on how to improve the course for future participants. For example, in Dave's introduction he said: "Looking forward to working with this focus group over the next few days. Hope I can add something that will 'pay forward' for other online facilitators." This willingness to critique the COAT course by participants suggested that my presence did not deter some participants from giving negative feedback, though the small amount of negative feedback compared to positive input may have been influenced by my role in the COAT project. This is discussed further in the later Limitations section.

In addition to providing feedback on the COAT course, participants in all three stages of this study made suggestions on further training or networking opportunities that the COAT project should consider. Of the six comments coded *Want advanced COAT/Networking opportunities* in the questionnaire (see Figure 11, p. 104), three mentioned the possibility of COAT-related social networking sites; for example, “I appreciate the ongoing support and online network through social media sites like facebook.” In addition, some respondents wanted to learn about and explore additional and emerging learning environments and situations:

I would like to see more advanced courses offered. The students, the technology, the LMS systems and new resources that pop up daily, I think that beyond the social network for post-COAT grads, there is a market for COATII, III and so on. In the focus groups, five participants talked about wanting more advanced courses with Alex specifying that she wanted to experience additional LMSs, mobile learning, and other learning environments. These recommendations for COAT to consider training for online teaching in nonLMS learning environments are included in the later section on design principle two.

Important Elements

Although the focus groups were specifically designed to answer the second research question area, the data analysis of all three research stages in this study contributed to exploring elements of COAT that impacted or influenced online teaching practice. In the questionnaire, 57 respondents’ comments were grouped into an emerging category that was depicted in Figure 13 (p. 111): *Taking COAT influenced subsequent*

online teaching practice. COAT's influence ranged from comments about COAT's positive impact on practice in general to eight specific areas of influence: designing online courses; creating online learning community; utilizing LMS tools; learning about online student's role; learning about pedagogy and distance education principles; reflecting on teaching practice; learning about online instructor's role; and learning about assessment. These areas and others were discussed in detail in the focus groups.

All 24 focus group participants identified at least one element of COAT that had positively influenced their subsequent online teaching practice, and their comments were grouped into the category: *Taking COAT influenced subsequent online teaching practice*. This category encompassed 138 quotations (see Figure 15, p. 126) which were organized into six codes: improving/informing online practice, revisiting COAT content, experiencing being an online student, reflecting on online instructor's role, being part of a community of learners, and (re)designing online course. These six codes and their associated 11 subcodes were further grounded in the interview data with all three interviewees agreeing that experiencing being an online student, being part of a community of learners, and reflecting on online instructor's role, had impacted later teaching practice and helped them with (re)designing their online/hybrid courses (see Table 29, p. 162).

The above findings show that triangulating the data collected in the three tools (questionnaire, focus groups, and observation protocol/interviews) gave a simple answer of *yes* to the research question: "Can alumni who taught online after completing the COAT course identify any elements (content, structure, instructional approaches, etc.) of

the COAT course as being notably important in helping them teach their subsequent online course(s)?" The second part of that question: "If yes, which elements?" is explored next as the categories and codes produced in the data analysis stage are reflected on for emerging concepts.

Reflection is an essential part of the third phase of McKenney and Reeves' (2012) GMDR: Evaluation and Reflection. They began their section on reflection with a quote from Kant: "Concepts without experiences are empty, experiences without concepts are blind" (as quoted by McKenney & Reeves, 2012, p. 151). Chapters Four and Five of this thesis reported on the analysis of the data collected on alumni's experiences with the COAT project. In order to reflect on the categories and codes that emerged from these experiences, I used metaphor to help me try to abstract my findings to a more conceptual level. Metaphors of immersion in a foreign/alien culture and of COAT being a pebble making ripples in pools of practice led to a further review of relevant literature to help me understand what had emerged from this reflection process.

Immersion in an Online Learning Environment

Although only 4% (6 out of 162) of the reasons questionnaire respondents gave for enrolling in COAT were grouped in the code: *To see online learning from a student's perspective*, 67% (16 out of 24) of focus group participants identified that their experience of being an online student in the COAT course had influenced their subsequent online teaching practice. Their comments about seeing an online course from a student's perspective, experiencing frustration with the course navigation, and feeling overwhelmed resonated with a metaphor I have used in the past when talking to students

and colleagues about how making the transition to online learning and teaching can be compared to living in a foreign country. Being immersed in a new environment and faced with a different culture can first cause frustration, confusion, and fear, but can then lead us to rethinking what we have taken for granted as *normal* or *commonplace* behaviors. In a similar way, moving from a campus-based to an online learning environment can be a discombobulating experience that can make us question what we feel we know as *truths* about teaching and learning. In FG3, Wendy made the comment that:

I think participating as a student in the COAT training was of utmost importance. As a novice to online teaching, I really needed to be a student. Plus participating as a student opened my eyes to so many things I would have never even considered if I was just reading about these topics.

Tammy pointed out that:

Upgrades in the learning [management] systems have helped give instructors a view of ‘what’ the student sees, but not how the student ‘learns’ from within the environment. It [being an online student] is an excellent way to train an online instructor.

Being situated as a student who is learning new things, completing graded assignments, and “navigating the class in a structure you did not create” (Paul), led to participants changing their online courses to make them more student-friendly. Irene identified that:

[The] opportunity to work with a wiki, work with SoftChalk exercises, see a small group dynamic in action on the discussion board, experience a checklist as a

student, all of these items and more made me more empathetic regarding my students.

This idea of experience leading to empathy was discussed by Brookfield (1993) who argued that “experiencing what it feels like to learn something unfamiliar and difficult is the best way to help teachers empathise with the emotions and feelings of their own learners as they begin to traverse new intellectual terrains” (p. 21). The findings from the COAT alumni research study extends this idea to experiencing what it feels like to learn something *in an unfamiliar and difficult learning environment* helps instructors approach their subsequent online teaching from a more student-centered perspective.

This idea of comparing learning how to behave in new academic environments to immersion in new cultures is not original, and examples can be found in the literature of situated learning and communities of practice. For example,

To talk about academic disciplines, professions, or even manual trades as communities or cultures will perhaps seem strange. Yet communities of practitioners are connected by more than their ostensible tasks. They are bound by intricate, socially constructed webs of belief, which are essential to understanding what they do (Geertz, 1983). The activities of many communities are unfathomable, unless they are viewed from within the culture.... In a significant way, learning is, we believe, a process of enculturation. (Brown, Collins, & Duguid, 1989, p. 33)

COAT participants, as adult learners, found that the sometimes frustrating experience of being situated as a student within an unfamiliar, authentic online learning environment

contributed to them rethinking their roles and professional practice as online and campus-based instructors; instructional designers; faculty developers; and academic managers.

The instructional approach of learning from the COAT facilitator modeling online teaching practice was informed by Bandura's (1977) social learning theory. This approach also aligns with cognitive apprenticeship (Brown, Collins, & Duguid, 1989) where "learners observe how instructors solve problems and develop their own solution paths. The tools of cognitive apprenticeship include discussion, reflection, evaluation, and validation of the community's perspective" (Stein, 1998, p. 5). The idea of apprenticeship also appears in research focused on the teaching beliefs and practices of higher education instructors with Kane, Sandretto, and Heath (2002) arguing that:

As preparation for teaching, university academics can be said to have completed an 'apprenticeship of observation' during their years as undergraduate and graduate students (Lortie, 1975). Their beliefs and conceptions of good teaching are a result of this apprenticeship and a 'trial by fire' in the lecture theatre, classroom, or laboratory. (p. 199)

Teaching online adds a new dimension to this *trial by fire*, and in FG1 one of Paul's comments echoed the ideas in the above quotation:

I second the point about experiencing an online class as a student. We all sat in the traditional classroom, so we know what takes place - what we like and what we didn't like. An instructor who has not taken an online class is at a real disadvantage.

Being situated as a student in an online course, that had content focused on online teaching theories and practice, allowed participants to observe the COAT facilitator model online teaching skills and strategies while she also participated in discussions about what she was doing and why she was doing certain actions. Dave commented in his interview that “a good quarter of the COAT course was [COAT facilitator]'s willingness to share things she was doing online,” and he gave an example of how the COAT facilitator used a real problem that occurred with the LMS grade center during the course to have a discussion on how to deal with technology issues in an online course while modeling her way of dealing with such issues.

In addition to learning from the COAT facilitator, alumni also learned from the other COAT participants, especially those who had prior online teaching experience. Nine questionnaire respondents commented that learning from each other as they collaborated in the COAT course was beneficial, and 13 (out of 24) focus group participants identified that taking COAT provided them with the opportunity to interact with other instructors and these interactions played a part in influencing later practice. All three interviewees talked about how the peer learning that occurred in COAT had impacted their later teaching practice with Dave highlighting that his COAT colleagues' recommendations for minimal facilitator presence in online discussion boards had influenced his subsequent online teaching practice more than the COAT content and the COAT facilitator's emphasis on having a high facilitator presence. The peer learning was seen to be an added extra of the COAT course that had happened on the periphery of the organized COAT content in the Cyber Café area. In his interview, Dave referred to this

peer learning opportunity as a *subcourse* within COAT “where an awful lot of the learning took place.” Irene pointed out in her interview that she was still in contact with one COAT colleague whom she used as a sounding board for new online teaching ideas.

The code, *Being part of a community of peers*, that emerged from the analysis of the data in this study is not a new concept and is embedded in the literature on communities of practice (CoP). Hildreth and Kimble (2008) argued that: "Teaching is a very personal and ‘individual’ activity, yet teachers benefit greatly from links with other teachers, both with colleagues in their own establishment and with colleagues in the wider teaching community" (p. x). My reflecting on the learning that occurred in the community of COAT peers while they were immersed in an authentic online learning environment as students led to a review of the literature on situated cognition (Brown, Collins, & Duguid, 1989); CoP (Lave & Wenger, 1991); practice fields (Barab & Duffy, 2000, 2012); and collectives, networks, and groups (Dron & Anderson, 2007). A situated cognition perspective of learning considers that:

Learning occurs in a social setting through dialogue with others in the community (Lave, 1988). Learning becomes a process of reflecting, interpreting, and negotiating meaning among the participants of a community. Learning is the sharing of narratives produced by a group of learners. (Stein, 1998, p. 4)

Lave and Wenger (1991), in their book on situated learning, introduced CoP as nonacademic learning environments where novices learn from more experienced practitioners through legitimate peripheral participation, a form of apprenticeship. CoP as a concept has been applied to many fields since its inception, and Hildreth and Kimble

(2008) considered it to have evolved into an “umbrella term” (p. xi) that now covers a range of group types with similar characteristics of being informal learning environments with voluntary membership of people interested in discussing practice and learning from each other while sharing resources and knowledge in a specific area. This knowledge is often tacit in nature. Wenger (1998) argued that “*a community of practice acts as a locally negotiated regime of competence*” (p. 137), and a key concept of CoP is that professional competencies are established and evolve through the practice of communities that are situated in a specific context, often with colocated practitioners. With the affordances of the web, collocation no longer needs to be physical with distributed CoP emerging around common professional practices such as teaching. For example, *Connected Educators*, with a mission of “strengthening connected online communities of practice in education,” (Connected Educators, n.d.) serves as a hub for a number of distributed CoP. The findings from Alvarez et al.’s (2009) research study on socially situated competencies (discussed in Chapter Two) align with Wenger’s argument that competencies are established in the practice of specific communities.

Andriessen (2005), in his research into the classification of knowledge community archetypes, concluded that “the same term of ‘community of practice’ has been applied to different types of communities, that is, to strategic communities, to informal communities and to informal networks” (p. 209). Wenger, Trayner, and de Laat (2011) considered that community and network are “two aspects of social structures in which learning takes place” (p. 9) with the community aspect referring to how shared identities are developed in relation to common areas or challenges, and the network

aspect referring to “the set of relationships, personal interactions, and connections among participants who have personal reasons to connect” (p. 9). According to Dron and Anderson (2007) “individuals join Networks to associate with others of like interest or vocation, or who know more, or who would like to learn similar things” (p. 2461). They differentiate between groups as formal, structured, closed phenomena and networks as being informal, unstructured, and open. The COAT course is an example of a group and the COAT Facebook presence that was created by a COAT participant, independent from the COAT project, is an example of an emerging network. The side discussions in the focus groups that were coded *Networking Conversations* were a demonstration of COAT alumni’s desire to network informally.

In a similar manner, using Barab and Duffy’s (2012) definition of educational practice fields: “Contexts in which learners, as opposed to *legitimate participants*, can practice the kinds of activities that they will encounter outside of school” (p. 34), COAT can be seen to be a type of practice field where participants practice online teaching and learning activities and skills separate from their real-life teaching situations. However, what is missing from this picture of COAT as a practice field is the reality that COAT participants were also already legitimate participants in communities of educators, and some had extensive prior online teaching experience which was demonstrated in the learning afforded by the community of peers that operated in what Dave described as a subcourse. Figure 19 draws together ideas of formal, semistructured, and informal learning spaces in relation to the concept that emerged from this study of immersion in an online learning environment helping participants become enculturated into the practice of

online teaching and learning. In Figure 19, the left oval represents COAT participants being positioned as students in an authentic, structured, facilitator-led training course. Within that learning space, opportunities were designed for semistructured peer-to-peer discussions in the Cyber Café where colleagues, with varying levels of experience of online teaching, gathered around topics of their own choosing. Experiences with elements within the formal COAT course and the semistructured internal network of peers were identified as influencing later teaching practice. The area to the right of Figure 19 represents informal learning spaces that COAT alumni, as practitioners in the workplace and as members of communities of online educators, may choose to join to network and contribute to communities of practice.

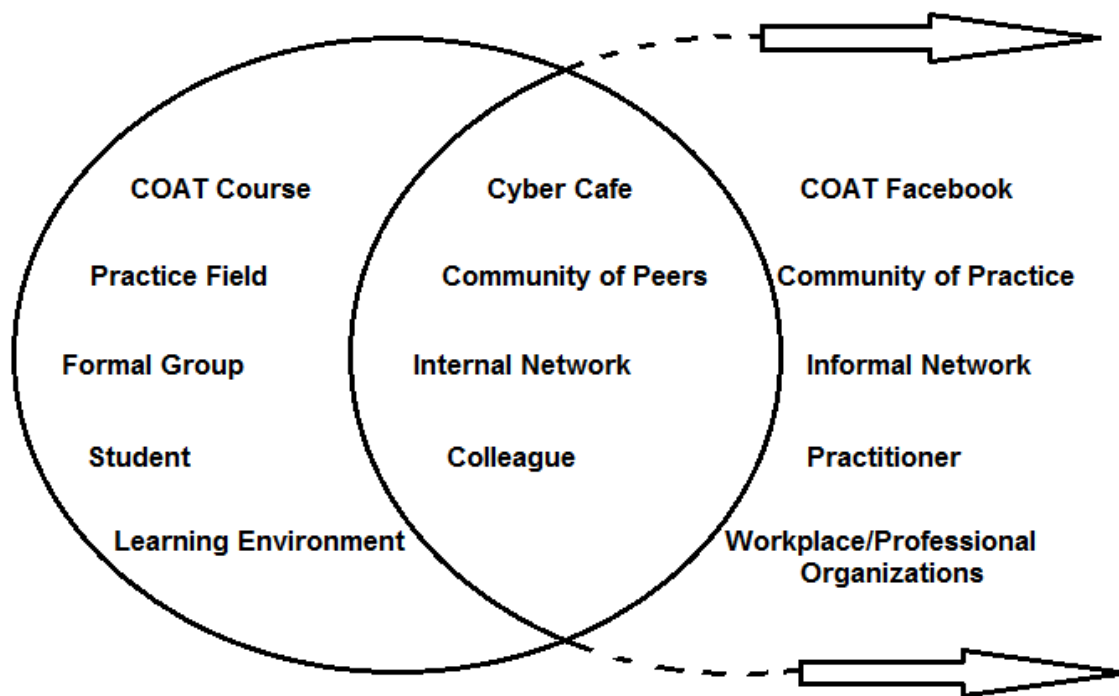


Figure 19. Networks of Practice.

Design Principle Two

The second principle for designing training for online instructors emerged from the concept of being immersed in an unfamiliar online learning environment:

Training for online instructors should be designed using a situated learning perspective that positions instructors as students in an authentic learning environment that is similar to the targeted teaching environment.

The recommendations that participants made for COAT to consider training for online teaching in nonLMS learning environments resonate with design principle two as the authentic learning environment could include any number of new and emerging learning technologies and social media. Possible strategies for accomplishing the second design principle are taken directly from Herrington and Oliver's (1995) important characteristics of situated learning environments:

- Provide authentic context that reflect the way the knowledge will be used in real-life;
- Provide authentic activities;
- Provide access to expert performances and the modelling of processes;
- Provide multiple roles and perspectives;
- Support collaborative construction of knowledge;
- Provide coaching and scaffolding at critical times;
- Promote reflection to enable abstractions to be formed;
- Promote articulation to enable tacit knowledge to be made explicit;
- Provide for integrated assessment of learning within the tasks. (p. 3)

This design principle of being immersed in an authentic learning environment has also been found in other doctoral studies focused on professional development for online instructors. For example, Reushle's (2005) study of online educators in Singapore found that: "Being immersed or situated in an authentic online learning and teaching environment..., accompanied by reflection on that experience, and shared discourse about that experience, enables participants to consider new perspectives of learning and teaching" (p. 141). Reflection on learning experiences as they relate to individual practice is discussed further in the next section.

Pools of Practice

All 24 focus group participants and 57 questionnaire respondents identified at least one element of COAT that influenced their subsequent online teaching practice. A primary influence for both groups was on course (re)design with 16 questionnaire respondents and 18 focus group participants making comments on how taking COAT had influenced their subsequent online course development, design, and redesign. Research participants also identified other influential elements of COAT such as learning about LMS features, pedagogy, online instructor role, etc. In addition, other influences on online teaching practice were identified such as prior teaching experiences, other professional development opportunities, and institutional input. For example, all three interview participants attributed their use of orientation resources in their online courses to institutional requirements.

Using the metaphor of the COAT course being one of many pebbles making ripples in individual pools of practice helped me conceptualize some of the ideas

captured in the data analysis. In the same way that a pebble is a concrete object with defined edges, COAT is a specific course with defined learning outcomes. The number and type of ripples from a pebble being thrown into a pool may be expected or unexpected depending on the situational circumstances. The impact of COAT on an individual's practice may align with the defined learning outcomes of the training, but may be unexpected depending on the instructor and the teaching context. Figure 20 portrays that a training course such as COAT is one of many possible influences on the professional practice of individual instructors and that the ripples from a training course are diverse, specific to a particular teaching context, and may be unanticipated. Figure 20 shows some examples of other possible influences on practice, but more *pebbles* are possible depending on the instructor's prior and current learning and work-related experiences.

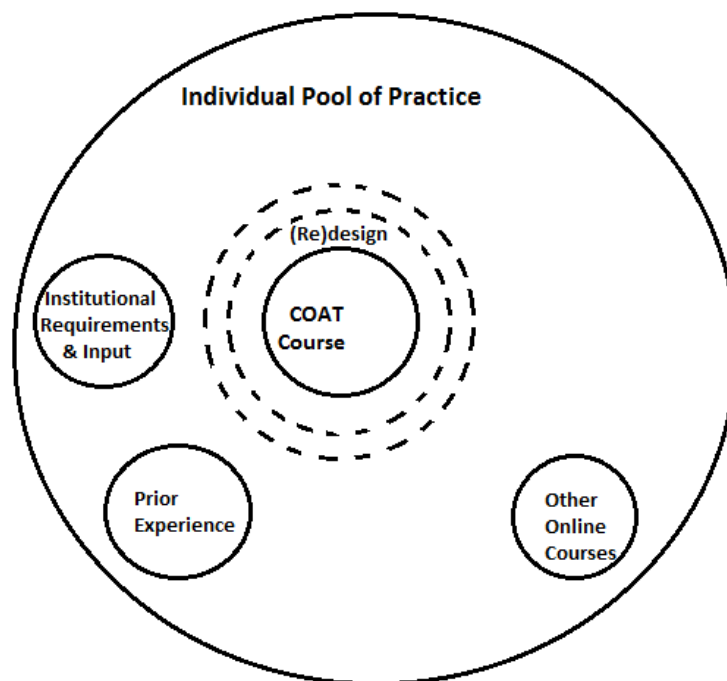


Figure 20. Individual pool of practice.

(Re)designing online courses. COAT was designed to prepare instructors to teach predesigned courses, and, although basic instructional design principles were introduced in the COAT course, the emphasis of the COAT content was on the delivery not the design of online courses. Two participants in this research study were disappointed with the lack of emphasis on designing courses; for example, one questionnaire respondent said “I thought COAT would instruct how to create an online class and how to ‘get in up and running,’ which it did not,” and Dave commented in FG1 that “I hoped the course would help me design my own online materials, and it didn't -- but then it wasn't designed to do that.” The data collected in this study highlighted that for many instructors course design issues were one of their major concerns, as they are asked to design and then teach online courses with limited, and sometimes nonexistent, prior online teaching and instructional design experience or institutional support. For example, in her interview Irene talked about how she designed her first online course after a two-hour introduction meeting to online teaching and with no instructional design experience or support. Taking the COAT course helped her redesign her course, not through learning about instructional design in the COAT course content, but by her “looking at how the [COAT] course was laid out and saying: This would make my course much better. I'm going to emulate it.” The assumption of the COAT project that participants would teach courses predesigned by teams proved to be incorrect. The findings demonstrated that COAT's impact was broader than planned with an unexpected outcome being that a key takeaway from the COAT course was its impact on participants' (re)designing online courses which highlighted the need for attention within

the COAT project for offering optional skill development in course design. Participants in this study made suggestions that COAT could consider on how course design could be further explored either in the current course or in potential advanced courses. For example, Tammy made a suggestion in FG1 that “it would also be nice to see other examples of well-designed courses, for all of us visual learners... :)” and Wendy agreed:

I also liked your idea of having access to other well-designed courses as part of COAT. I would have loved to snoop around some other classrooms - good and bad. One of the schools I did online training for provided us with a poor classroom example and I found it very valuable.

In Dave’s interview he suggested a follow-up COAT course “for people who have a course up and running, if you could work in a small group of two to three people, and have two other people looking... and help me tweak things that needed to be done.”

As discussed in Chapter Two, the COAT course design drew on the CoI framework with a particular emphasis on social presence and the facilitation component of teaching presence. In the CoI, teaching presence is defined as “the design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes” (Anderson, Rourke, & Archer, 2001, p. 5). More recent studies on the CoI (Arbaugh et al., 2008; Shea, Li, & Pickett, 2006) suggested that the teaching presence construct had “a two, not three, factor organization..., made up of ‘design’ and ‘directed facilitation’ (an amalgamation of the facilitation and direct instruction categories) elements” (Díaz, Swan, Ice, & Kupczynski,

2010, p. 23). In the CoI survey instrument developed by Arbaugh et al. (2008), four items were associated with the design and organization category of teaching presence:

1. The instructor clearly communicated important course topics.
2. The instructor clearly communicated important course goals.
3. The instructor provided clear instructions on how to participate in course learning activities.
4. The instructor clearly communicated important due dates/time frames for learning activities. (p. 135).

These four items indicate that the *design* category in the CoI aligns with more than just the *Instructional Design Basics* COAT core competency (see Figure 2, p. 15). Alvarez et al.'s (2009) designer/planning role ties in with the design category of the CoI framework, and Alvarez et al. argued that “it is important to highlight that in practice teacher functions and competencies integrate and complement each other, sometimes even overlapping” (p. 334). The findings from this COAT alumni study suggested that the separation of skills and knowledge for designing online courses from competencies for delivering online courses is not appropriate when designing training for online instructors. Design issues, broadly defined to include strategies highlighted in the (re)designing online courses subcodes (e.g., orienting students, helping students monitor progress, using rubrics/variety of assessments) were seen to be a primary concern for the participants in this study, and this was demonstrated by many identifying that COAT influenced their later online course (re)design decisions.

Other professional practice. Another unexpected outcome of participating in the COAT course was the impact the training had on professional practices other than online teaching practice. Eleven questionnaire respondents, four focus group participants, and two interviewees commented that COAT had affected their campus-based teaching practice. This outcome was documented in another research study focused on online faculty training. McQuiggan (2011) researched a blended program that prepared faculty to teach online, and one of her findings was that:

Learning to teach online and actually teaching online can impact face-to-face teaching practices. There seemed to be a move from teacher-centered to more learned-centered teaching with less reliance on lecture. Faculty learned more about their students' understanding and were able to change what happened in the classroom as a result. (p. 265)

In addition to COAT's impact on campus-based teaching, ten questionnaire respondents and six focus group participants said COAT had impacted their nonteaching practice in the areas of instructional design, managing online programs, and training faculty.

Design Principle Three

The third principle for designing training for online instructors emerged from the findings on unexpected outcomes from taking COAT:

Training for online instructors should prepare participants for diverse teaching situations which might include requirements to (re)design online courses and opportunities to teach in emerging learning environments.

Possible strategies for accomplishing the third design principle are as follows:

- Foreground the responsibility online instructors often have for course design and create learning opportunities focused on course (re)design decisions and practices.
- Provide opportunities for participants to reflect on their teaching role holistically in terms of both online and campus-based teaching practices.
- Provide examples of the many existing and emergent types of online learning technologies, designs, learning environments, and assessment activities.

Discussion: Research Question Area Three

Does a sample of COAT alumni demonstrate any key competencies and instructional approaches that were included in the COAT course in their subsequent online teaching practice? If yes, how do these alumni demonstrate these competencies and instructional approaches, and do they attribute their use of them to what they learned in the COAT course?

In order to answer the above question area, an observation tool was cocreated in the focus groups. It was designed to include the key competencies and instructional approaches that were identified by alumni as being notably important in helping them teach their subsequent online courses. The application of the observation tool to three archived courses showed that instructors did demonstrate most of the items (72 instances out of a possible 87) through the instructors' course design, facilitation of learning, and interactions in the LMS. However, the interviews highlighted that the application of the observation tool was limited in terms of looking at the instructor's teaching practice holistically as the nonLMS interactions were not available.

The interviewees attributed their use of some key competencies and instructional approaches to what they had learned or experienced through taking the COAT course. For example, Dave copied rubrics and design features from COAT into his own course, Irene revisited the workload in her online courses as a result of what she experienced in COAT, and Nancy felt that COAT introduced her to some LMS features she was unaware of prior to taking COAT. Other influences on online teaching practice such as prior online student learning, the input of COAT colleagues, and institutional requirements were also identified. The application of the observation tool and interviews reaffirmed that participants took away elements from the COAT course that were important for their individual practice. For example, Irene did not use rubrics in her subsequent online courses even though the use of rubrics was identified by many instructors as a key takeaway (though not by Irene). These findings confirmed what I have already depicted in Figure 20: A training course such as COAT is one of many possible influences on the professional practice of an individual instructor, and instructors take from a training course what is important for them. Two areas of discussion arose from my reflecting on the application of the observation tool in conjunction with findings from the interviews and focus groups: instructors as reflective practitioners and descriptive versus prescriptive competencies as related to the development of an observation tool. These areas are discussed next.

Instructors as Reflective Practitioners

In the focus groups, 13 participants identified that one of the elements that influenced their subsequent online teaching practice was that COAT prompted them to

reflect on their personal teaching role as online instructors. In addition, seven participants made comments that were grouped in a code: *Reflecting on teaching practice/design as ongoing process*. For example, Jane stated “I distinctly remember cobbling together my first online class, 10 years ago, and staring at the screen and thinking... ‘now what?’ That question led me on a wonderful professional development journey that included the COAT course.” Paul pointed out that he “would guess that not many of us have time to reflect, let alone make a lot of changes,” and this led him to express the wish that the observation tool should be designed as a reflective tool for instructors to apply to their own courses for the purpose of self-assessment. All three interview participants talked about how reflecting on their teaching practice was an ongoing activity.

The concept of a reflective practitioner was introduced by Schön (1983) in his critique of how the positivist epistemology of technical rationality had informed views of professional practitioners as people who “solve well-formed instrumental problems by applying theory and technique derived from systematic, preferably scientific knowledge” (Schön, 1987, pp. 3-4). Schön (1987) argued that in reality practitioners are faced with messy, complex situations that often involve multiple problem areas, and they deal with these indeterminate situations through their tacit “knowing-in-action” (p. 22); “reflection-in-action” (p. 26) where practitioners, faced with an unexpected problem or situation, reshape what they are doing while they are doing it; and “reflection-on-action” (p. 26) where the reflection occurs after the situation has passed. Jung and Latchem (2012), applying Schön’s reflection types to online education, postulated that:

‘Reflection-in-action’ and ‘reflection-on-action’ is [*sic*] required to build new understandings and inform actions in unfolding situations. All too often in distance and online education, there can be a divide between the thinking of the theorists, the findings of the researchers and the perceptions, procedures and practices of many of those involved with developing and delivering ODL [open and distance learning] and e-learning. (p. 237)

Jung and Latchem argued that online instructors should be provided with reflection opportunities through the design of situated learning opportunities. As discussed in Chapter Two, Baran (2011) also concluded from her critical literature review of online teacher competencies that online instructors should be considered “reflective practitioners who make their own decisions about preferred goals and practices of online teaching” (p. 37). This aligns with design principle two and its strategy of promoting reflection.

Observation Tool for Evaluating/Reflecting on Practice

Most of the online teaching competencies studies presented in Chapter Two were primarily based on describing what good online instructors do in practice. The competencies studies were informed by multiple sources, including online educators, literature reviews, student input, and the standards of accrediting agencies. The articulation of competencies is useful for creating training opportunities and evaluating performance. As already discussed in this chapter, my research study findings, along with other studies (see, for example, Alvarez et al., 2009; Baran, 2011), indicated that as competencies move from describing practice to being used to prescribe practice through training and evaluation tools, it is important to add the dimension of situational

applicability with instructors' reflection on what competencies are appropriate for their teaching contexts.

A review of the literature shows that there are a number of observation tools for evaluating online instructors that have been created to meet institutional and accrediting agencies requirements as well as faculty professional development needs (see, for example, Mandernach, Donnelly, Dailey, & Schulte, 2005; Palloff & Pratt, 2011; Schulte, Dennis, Eskey, Taylor, & Zeng, 2012). A recent compilation of two studies researching faculty and administrators attitudes and practices related to online education reported that when online and campus-based instructors were asked for their opinion on their institution's ability to assess the quality of its online and campus-based courses, "under half of all professors say their institution has good tools in place to assess the quality of in-person instruction, while only one-quarter think the institution has good tools for assessing online instruction" (Allen, Seaman, Lederman, & Jaschik, 2012, p. 20). The creation of an evaluation tool from focus group participants' input in this study was an attempt to allow for a bottom-up process of practitioners articulating what was important to include in an observation/assessment tool that evaluated their practice. The application of the tool demonstrated that it could be used to assess whether certain competencies had been demonstrated through interactions and content posted in the LMS. The provision of a *not applicable* designation, combined with a space for extended text, allowed instructors to indicate that a particular competency or instructional approach was not useful or appropriate for their teaching situation.

Design Principle Four

The fourth principle for designing training for online instructors is derived from the discussion of the third research question area:

Training for online instructors should include opportunities for reflection and discussion of practice in specific situations.

Possible strategies for accomplishing the fourth design principle are as follows:

- Provide opportunities for scenario-based activities and discussions based on participant-generated cases and contexts.
- Utilize reflection tools including the use of an observation tool that can be used by instructors for self-assessment of their online teaching practice.

Discussion: Guiding Question

The guiding question for this study was: *What characteristics of the COAT course, if any, made a difference to alumni's professional practice?* This research study found that the structure of the COAT course which situated participants as students in an authentic online learning environment influenced alumni's later teaching practice. In addition, the instructional approach of modeling good teaching practice within an online course while building and demonstrating a CoI using a constructivist framework, led to participants reflecting on and making changes to their teaching practice. Alumni identified that being part of a community of peers who had diverse prior online teaching experience contributed to helping them teach their later online courses. Parts of the course that were identified as being notably important included content on using rubrics; providing multiple assessment and content presentation types; having student orientation

and self-monitoring strategies; and complying with accessibility, copyright, and student privacy requirements. One of the major influences on later practice was on online course (re)design. Competencies and instructional approaches that were identified by alumni as being important were seen to be demonstrated in their subsequent practice through the application of a cocreated observation tool. Finally, alumni highlighted that COAT also influenced their professional practice as adjunct faculty, full-time faculty, administrators, and support staff at a broader level than just online teaching with later campus-based teaching and nonteaching responsibilities being impacted.

DBR projects have an ultimate goal of theory development, but this may only occur after multiple iterations of the DBR process (Amiel & Reeves, 2008; McKenney & Reeves, 2012). An initial step toward theory development is the articulation of design principles, and the findings from this DBR study led to four design principles with suggested strategies for implementation. Phillips, Kennedy, and McNaught (2012) called DBR design principles *proto-theories* (p. 1114) which, although context-specific, can be used as “heuristic guidelines to help others select and apply the most appropriate knowledge for a specific design task in another setting” (Nieveen, McKenney, & van den Akker, 2006, p. 153). Brookfield (1993) argued that: “In the process of practical theory development, the inductively derived, situational insights regarding practice which are embedded in particular contexts and experiences can be reviewed through the more universalistic lens provided by formal theoretical perspectives” (p. 31). Reflecting on the findings from this study led to my applying a variety of theoretical lenses to the categories that had emerged from the grounded theory approach to data analysis. These

theoretical perspectives included situated cognition (Brown, Collins, & Duguid, 1989); CoP (Lave & Wenger, 1991); CoI (Garrison, Anderson, & Archer, 2000); and reflective practice (Schön, 1983). Drawing on these theoretical perspectives as they related to my research findings led to my creating a personal conceptual framework to help me visualize how a training course might influence an individual participant's later professional practice. According to Miles and Huberman (1994), "conceptual frameworks are simply the current version of the researcher's map of the territory being investigated" (p. 20) and can "evolve and develop out of the fieldwork itself" (p. 21). The conceptual framework that emerged from my reflecting on the research results from this study is presented next.

Conceptual Framework

A conceptual framework for the influence of training on professional practice is presented in Figure 21, and it combines and expands on the ideas presented in Figures 19 and 20. In constructing the framework, my intent was to present visually the findings from my study and depict important elements that should be considered when discussing the influence training has on individual professional practice. These elements include the idea that individual practitioners work within CoP and specific *real-world* professional situations in the wider workplace, and practitioners are both influenced by these CoP and their workplaces and influence them in reciprocal relationships. In addition to CoP and workplace influence on individual professional practice, there are multiple other potential influences which include training courses, prior experiences, personal reflection, professional development opportunities, etc. Any one of these influences can have both

intended and unintended effects on practice. Individual practitioners take from these potential influences what resonates with their specific situations and professional interests. This study found that both participating in formal groups in authentic learning environments that mirrored the targeted professional environment and participating in semistructured internal networks with peers in the COAT course led to alumni making changes to their professional practice.

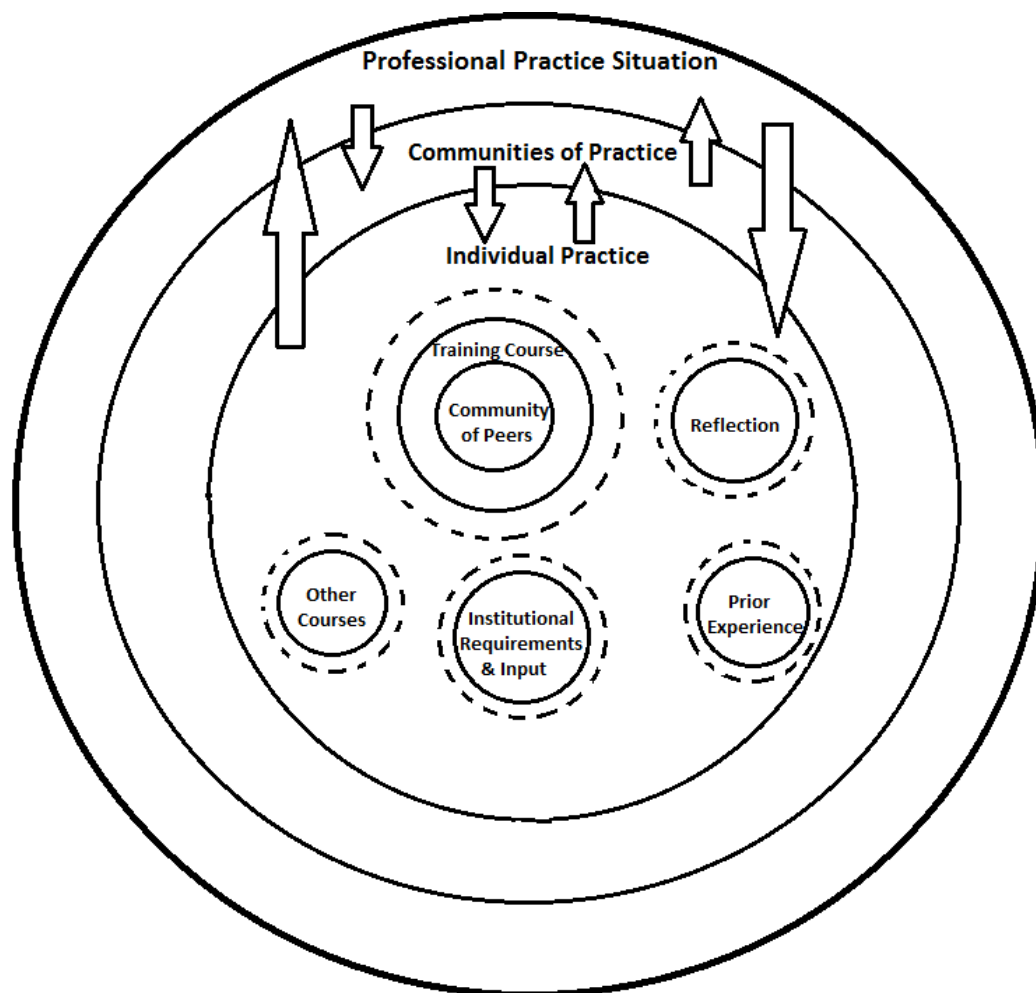


Figure 21. Conceptual framework for the influence of training on professional practice.

Significance

This study invited COAT alumni to reflect on the impact of a training course on their subsequent practice. Their collective voices contribute to the research literature on which skills, knowledge, and competencies are important to include in training that prepares instructors to make the transition to teaching online. In addition, as part of the design of this research study, alumni cocreated a data collection tool for use in self-reflection or evaluation of online teaching. According to Dede et al. (2009):

Researchers and designers studying teachers' practices may embed assumptions about participants' needs, beliefs, and motivations in their design of a survey or observation protocol. These assumptions are often made without input from teachers themselves and may or may not accurately reflect the actions and intentions of that group. (p. 14)

The observation protocol that was created in this study was inclusive of participants' input on what should be considered when conducting an analysis of archived online courses to evaluate whether content from a training course had impacted teaching practice. An unanticipated outcome of this process was that the product, the observation tool, was seen to be useful to practitioners outside of the scope of this study. For example, one of the focus group participants is adapting the tool to pilot it within her organization. The inclusion of the observation tool in the appendices of this thesis allows for other researchers and practitioners to adapt it for use in their specific contexts.

In addition to possibly finding the observation tool useful, the design principles and conceptual framework that emerged from this study may be of interest to researchers

and professionals who are involved in developing training for instructors who teach online. The findings from this study expand knowledge and contribute to the research literature on training for both experienced and inexperienced online instructors. Other recent studies focused on training for online instructors have resulted in similar findings to this study (see, for example, Eliason & Holmes, 2010; Kukulska-Hulme, 2012; MacDonald, 2010; McQuiggan, 2011; Storandt, Dossin, & Piacentini Lacher, 2012; Terantino & Agbehonou, 2012). By combining our findings from these research studies that were conducted in different contexts, the resulting design principles become more grounded in diverse situations and learning environments thus adding to the likelihood of transferability of the design principles to additional contexts.

This study may be of use to the COAT project when making ongoing and further implementation decisions. Results of the evaluation of COAT alumni's use of new knowledge and skills can be used to inform decisions about possible changes to the COAT course design and target audience. In addition, the recommendations that COAT alumni had for advanced COAT offerings may be used by the project team to develop new professional development opportunities; facilitate social networking for alumni; and design training for teaching in nonLMS and emerging learning environments.

Finally, this thesis demonstrated how a DBR methodology can be successfully used to promote an iterative and collaborative approach to the analysis, design, implementation, and evaluation of an online training course. This study also modeled one way of addressing the challenge of how to conduct an independent doctoral study focused on an ongoing project that has involved multiple researchers and practitioners over a five-

year time period. For example, other postgraduate researchers may find that focusing on one of the phases of McKenney and Reeves (2012) GMDR within a DBR project may make researching a large, ongoing project more feasible for a doctoral study.

Limitations

The Limits and Constraints section of Chapter Three highlighted credibility and transferability as some of the potential limitations of DBR. These two qualitative research criteria were declared by Guba and Lincoln (1985) to be analogous to the internal and external validity criteria of quantitative research. According to Guba and Lincoln, the trustworthiness of a qualitative study can be judged on four criteria: credibility, transferability, dependability, and confirmability. This section first discusses trustworthiness before presenting the limitations of this research study.

Trustworthiness. The transferability of the findings from this study was discussed in the previous Significance section. By providing rich descriptions of the context in which this study was situated, readers can judge how applicable the findings may be for their own particular situation. The data used to answer the research questions of this study were collected by mixed methods tools, and the participants represented COAT alumni from 11 different sections of the COAT course that had been offered over a two-year time span. By triangulating data collection methods and including alumni input from multiple course offerings taught by two different instructors, this study planned to address questions about confirmability, dependability, and credibility, as the data collection tools allowed for different ways for diverse research participants to voice their perspectives and opinions: anonymously in a questionnaire, as members of groups

through discussion, and one-to-one in semistructured interviews. Member-checking was conducted throughout the focus group and interview data collection and analysis process. The asynchronous, written method of the focus group allowed for participants to reread their posts, make changes, and provide feedback on my daily summaries of what I had perceived to be the main points of the discussions. In addition, I sent all focus group participants a draft of Chapter Five inviting them to let me know if my analysis seemed to be an accurate portrayal of what they felt was discussed in their group from their perspective and to give feedback on how I had represented them in the text. The three interviewees were asked to provide input on how I had applied the observation tool to their archived courses, and the interview transcripts were shared with them for editing before data analysis began. The iterative process of constant comparison in the data analysis phase is a technique that helps alleviate the potential for researcher bias of finding in the data what the researcher wants to find. However, even with the above-mentioned strategies in place, there are a number of limitations to the trustworthiness of this study and these are discussed next starting with my influence on the study.

Researcher influence. Researcher objectivity is an oxymoron for researchers working within an interpretivist research paradigm and from a social constructionist epistemology that acknowledges the existence of multiple realities. As a social constructionist researcher, I foregrounded my role as a nuisance variable (McKenney & Reeves, 2012, p. 150) through utilizing techniques designed to encourage reflexivity and transparency. According to Lincoln, Lynham, and Guba (2011):

Reflexivity is the process of reflecting critically on the self as researcher, the 'human as instrument' (Guba & Lincoln, 1981)... It is a conscious experiencing of the self as both inquirer and respondent, as teacher and learner, as the one coming to know the self within the processes of research itself. Reflexivity forces us to come to terms not only with our choice of research problem and with those with whom we engage in the research process, but with ourselves and with the multiple identities that represent the fluid self in the research setting. (p. 124)

In order to foster reflexivity, I kept a private research journal and a semipublic blog on Athabasca University's social networking site throughout the data collection and analysis phases. My original intention for weekly blogging was to allow for audit checking and to provide for the transparency of my decision-making process. As a first time blogger, an unexpected outcome was how much I benefitted from making my internal monologue about my research journey into a potential dialogue with others through the possibility of peers and faculty responding to my blog posts. I had some great discussions with others through my blogs which helped me move forward with my understanding and make research decisions. Even if people did not respond to my posts, the process of anticipating a response or a follow-up question helped me document what I felt were important stages of my research study and justify why I made certain decisions.

Another benefit was that I used my blogs in my data analysis and chapter writing to help me remember what I had done and why. On looking back over my blogs, I found a concern I had on the dependability of my study:

At the beginning of this week I attempted to finalize categories that have emerged from the data and I realized that all my categories align neatly with my own preferences for professional development. This was a huge red flag as I'm now very concerned that researcher bias has guided my analysis process. So, I need to take a step-back from this data analysis and reanalyze all the data from scratch again using a method that will hopefully help me look at the data afresh.

(Shattuck, 2012, October 24)

I reanalyzed my data using a technique of listening to my data rather than reading them, and I focused particularly on parts I had not coded previously to see what I had missed. This reanalysis did not change my resulting categories, but a limitation of this study is that I was the only person who analyzed and interpreted my data. Having other researchers and/or research participants analyze the data would have brought more voices to the process and may have resulted in additional or different categories and interpretations emerging.

Another influence I had on this study is through my relationships with the participants. As discussed in the Unimportant or Misleading section of this chapter, my relationship with the COAT project and COAT alumni, along with other professional relationships I have with some participants who are colleagues of mine, may have impacted participants' willingness to criticize COAT. All the data collected in the questionnaire, focus groups, and interviews were self-reported, and as such, may have been influenced by my involvement in the COAT project.

Self-selection of participants. Self-selection of the participants in this study operates at a number of levels, and each level can be seen to be a limitation of this study. First, the majority of COAT participants voluntarily chose to take a paced, instructor-led, online training course. This suggests that this training format was attractive to them, and this may have led to their positive comments about learning from this type of training course. People who do not like to access professional development through structured, formal groups were not as likely to have been included in this study. For example, the eight people who completed the questionnaire and the one focus group member who stated that they were required to take COAT were a minority of this research study's participants. Second, participation in each phase of the study was voluntary, but built on the requirement that each person had to have participated in the previous stage of the study in order to join the subsequent one. This may have excluded the voices from the focus groups of some potential participants who chose not to participate in the questionnaire. Third, as participation in the study was voluntary, it is possible that people who were unhappy with their experience in COAT chose not to participate in the study.

Observation tool and interview participants. The observation tool was applied to only three courses, all of which were from the same college. This limits the scope of the findings of this study in two ways. First, the convenience sample led to just three participants' perspectives being included in this study. Second, having only one institution represented meant that the institutional policies and procedures of that particular college limited the findings of the application of the observation tool in terms of which of the competencies that were observed were attributed to the COAT experience

and which to institutional mandates on core course design requirements. An additional limitation of the observation tool was that it only focused on the LMS content and interaction that were copied in the archive process. This meant that not only were all the nonLMS interactions excluded (in-person, email, telephone, etc.), but also any student-specific data within the LMS were excluded such as instructor feedback on students' assignments.

Self-reporting. The scope of this study was to focus on the perspectives of COAT alumni on how a training course had impacted their subsequent professional practice. Self-reporting of effects on professional practice may have led to people representing their practice in the most positive light. The inclusion of student perspectives and student outcomes data would have added to the depth of the findings from this study.

Despite the limitations described above, I trust that this study will contribute to the literature and practice on training for online instructors, and several products from the study may prove to be of use to other researchers and practitioners working in the area of online instructor training: four situational design principles with suggested strategies, the development of an observation tool that can be adapted and used by others, and a conceptual framework for the impact of training on professional practice. This research study was the first evaluation/reflection microcycle of the GMDR for the COAT project, and other research studies are necessary to continue the iterative process of researching and refining the COAT project in particular and contribute to empirically-based knowledge on training for online instructors in general. The next section recommends areas for further research.

Recommendations

This study focused on Level 4 of Guskey's (2000) model of five critical levels of professional development evaluation. As mentioned in Chapter One, Levels 1 and 2 have already been addressed through ongoing data collection and analysis during and immediately after each COAT course that is run. Level 3, organization support and change, is currently being researched through a separate COAT research project. Level 5, student learning outcomes, is the next area I plan to focus on through a proposed research study at my institution that will begin by looking at student evaluations of online courses taught by COAT alumni and courses taught by instructors who have not taken COAT. This research will hopefully be strengthened by involving more institutions that use COAT as one of their training strategies.

Only eight participants in my research study indicated in the questionnaire that they were required to take the COAT course in order to teach online. As already mentioned, having a majority of research participants who had voluntarily chosen to take a paced online course may have resulted in them highlighting that they preferred to take group-based, formal courses. In order to see if results would be similar for instructors who are required to take COAT, a recommendation is to duplicate this study using only participants working at institutions that require instructors to take COAT.

One of the outcomes of this study was that some instructors indicated that taking COAT had impacted their campus-based teaching and their nonteaching professional practice. This unexpected outcome warrants further investigation into how training developed for one specific purpose and audience had broader impact than anticipated.

Although the conceptual framework for the influence of training on professional practice is grounded in the data from this study, it may be applicable to training for other professional practice both within and outside of education. Further research into professional training courses that are not designed for online instructors working within an LMS could look at whether this conceptual framework is transferable and useful to other training contexts.

A final recommendation is to conduct research into the usefulness of the observation protocol developed in this study. I hope to pilot an adapted version of the tool at my institution, and one of the focus group participants is doing the same. Researching this process and combining the results of our pilot studies, together with other potential users, could trigger a new DBR project on the refinement of an observation/self-reflection tool that may be applicable for a number of contexts.

Conclusion

The COAT project originated in the desire of a group of instructional designers from various institutions to collaboratively tackle the growing problem of how to best provide quality, accessible training for adjuncts who are making the transition to online teaching. Using a DBR methodological approach within an overall interpretivist research paradigm, this study evaluated whether the content, structure, and instructional approaches of the COAT course effectively helped instructors teach their subsequent online courses, and extracted design principles that could prove useful for other researchers and practitioners working in the field of online instructor training. Although limited to a particular context, the original contribution to scholarship of this study was

the articulation of design principles and a conceptual framework on the impact of a training course on professional practice. The findings from this study provided detailed feedback for the COAT project. The unexpected outcome that experienced online instructors, full-time faculty, and nonteaching professionals voluntarily enrolled in and benefitted from taking from a course designed for adjunct faculty who had not yet taught online suggested that the scope of the COAT project was broader than expected. The recommendations, comments, and perspectives of COAT alumni on how COAT influenced their later professional practice are not only useful for the COAT project, but also add to the research literature on online instructor training and professional development.

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Appendix A: Text Copy of Questionnaire

This questionnaire consists of 11 questions and it should take you less than 15 minutes to complete. The questions are focused on who took the "Certificate for Online Adjunct Teaching" COAT course, for what purpose, and what effect, if any, the course had on your professional practice.

Thank you for agreeing to participate in this study focused on evaluating the "Certificate for Online Adjunct Teaching" (COAT) course from your perspective as COAT alumni. I really appreciate you sharing your time and expertise.

Before participating in this study, please carefully read the informed consent agreement below:

Title of the project: Training higher education adjunct faculty to teach online

Purpose of the research project: To evaluate whether the COAT training course effectively helped prepare instructors to teach online, and to extract design principles that both supported and hindered the development of effective teaching skills and attitudes. In addition, I am interested in whether participating in the COAT course had any impact on COAT alumni's other professional practice which may include nonteaching responsibilities or on campus teaching practice etc.

Risks and benefits: There are no known risks and no direct benefits associated with participation in this phase of the study.

Right to refuse: Participation in this study is voluntary, and you do not have to answer any questions that you do not want to answer. You have the right to withdraw from the questionnaire at any time before you click the "Submit" button without any negative consequences.

Privacy, confidentiality, and anonymity: All information collected in this questionnaire will be completely anonymous and no participants' names will be identifiable.

Participation in this questionnaire (the first phase of this study) does not obligate you in any way to participate in further phases of this research study.

Results of the study: Results from this study will be disseminated through Athabasca University Library's Digital Thesis Room and available for anyone interested in accessing it.

Contact information: If you have any questions or desire further information, please contact me, the principal investigator, Julie Shattuck (jshattuck@frederick.edu), or Dr. Terry Anderson, my dissertation Supervisor, at Athabasca University (terrya@athabascau.ca). This study has been reviewed by the Athabasca University Research Ethics Board. Should you have any comments or concerns regarding your treatment as a participant in this study, please contact the Office of Research Ethics at 780-675-6718 or by e-mail to rebsec@athabascau.ca

Deemed consent: You are giving your consent to participate in this study when you click "Submit" after you have completed this questionnaire.

1. Which COAT course did you take?

Please choose one of the following:

- Sept-Nov: 2010
- Feb-April 2011
- May-July 2011
- May-June 2011
- Aug-Sept 2011
- Sept-Nov 2011
- Dec 2011-March 2012
- Dec 2011-April 2012
- Jan-March 2012
- March-May 2012

Help: Please choose the course by start/end date and by instructor (to preserve anonymity, names have been removed in this copy of the questionnaire). If you took more than one course, choose the course that you successfully completed and for which you received your certificate.

2. When you took the COAT course, which type of institution were you working at?

Please choose **only one** of the following:

- 2-Year Community College - highest degree = Associate
- 4-Year University - highest degree = Bachelor

- Post-Graduate University - highest degree = Master
- Post-Graduate University - highest degree = Doctorate
- Kindergarten-12th Grade
- Was not employed
- Other, please give any details in "Comments" box

Make a comment on your choice here:

Help: If you were working at more than one institution, choose your primary workplace where you worked the most hours/taught the most courses. You can add comments about your workplace in the textbox if you wish.

3. When you took the COAT course, what was your primary role at your institution?

Please choose **only one** of the following:

- Full-Time Faculty
- Part-Time Adjunct Faculty
- Administrator
- Instructional Designer
- Support Staff
- Other, please give any details in "Comments" box.

Make a comment on your choice here:

Help: If you had multiple roles at one or more institutions, choose your primary role for which you worked the most hours. You can add comments about your role in the textbox if you wish.

4. Where was your primary workplace located?

Please choose **only one** of the following:

- Australia
- AZ
- CA
- DC
- FL
- GA
- MD
- ME
- MI
- MN
- MO
- NH
- NY
- OH
- PA
- VA

- WA
- WI
- WV
- Other

Help: Please give US state or country.

5. If you taught on campus prior to taking the COAT course, for how many years had you taught?

Please choose **only one** of the following:

- less than 1 year
- 1-3 years
- 4-6 years
- 7-9 years
- 10 or more years

Help: "On campus" teaching is often called face-to-face or traditional teaching. This is not considered teaching at a distance or teaching online.

6a. Did you teach any online courses before you took the COAT course?

Please choose **only one** of the following:

- Yes
- No

Help: An online course is defined as being 80+% online where most or all of the content is delivered online.

6b. If you taught online prior to taking the COAT course, how many online courses had you taught?

Please choose **only one** of the following:

- 1-3 courses
- 4-6 courses
- 7-9 courses
- 10 or more courses

Help: An online course is defined as being 80+% online where most or all of the content is delivered online.

7. Did you teach your first online course while you were taking the COAT course?

Please choose **only one** of the following:

- Yes
- No

8. Did you teach your first online course after taking the COAT course?

Please choose **only one** of the following:

- Yes

- No

8b. If you taught your first online course after taking the COAT course, how long as the gap between taking the COAT course and teaching online?

Please choose **only one** of the following:

- 0-3 months
- 4-6 months
- 7-9 months
- 10-12 months
- 13-15 months
- 16-18 months
- 19-21 months
- 22 or more months

9. Did your experience taking the COAT course influence your choice to teach online?

Please give any details you think are relevant.

Please write your answer here:

10. Why did you take the COAT course, and what were your anticipated outcomes from taking the course?

Please write your answer here:

11. Is there anything that you would like to add about your experience taking the COAT course, and/or any impact COAT may have had on your professional practice?

Please write your answer here:

Help: Please include any areas of your professional practice that COAT may have impacted. For example, did taking the COAT course influence your face-to-face teaching, your course design experiences, your administrative decisions for online courses etc.?

Thank you for completing this questionnaire. If you have any questions or desire further information, please contact me: Julie Shattuck (jshattuck@frederick.edu).

Appendix B: Copy of the Questionnaire Invitation

Dear [Name of Alumni],

I am e-mailing you to ask if you would be willing to participate in the first phase of a three-phase research study focused on the impact, if any, that taking MarylandOnline's Certificate for Online Adjunct Teaching (COAT) course had on your subsequent professional practice. I am Julie Shattuck, a doctoral candidate at Athabasca University in Canada, studying in the EdD in Distance Education program there. You may recognize my name as I am part of the COAT project team, and I was the Learning Management System (LMS) contact person for the COAT courses, all of which were hosted on [B-College's] LMS which is the college where I work full-time in Maryland. Separate from my usual, volunteer activities in the COAT project, and in partial fulfillment of my doctorate, I am engaged in a research study focused on the evaluation of the COAT course from the perspectives of the COAT alumni.

The purpose of my research project is to evaluate whether the COAT training course effectively helped prepare instructors to teach online, and to extract design principles that both supported and hindered the development of effective teaching skills and attitudes. In addition, I am interested in whether participating in the COAT course had any impact on COAT alumni's other professional practice which may include nonteaching responsibilities or on campus teaching practice etc.

I would like to invite you to complete a short (11-question) online questionnaire. Participation in this study is voluntary, and you do not have to answer any questions that you do not want to answer. All information collected in this questionnaire will be completely anonymous and no participants' names will be identifiable. There are no known risks associated with participation and no direct benefits for you for participating in this phase of the study. Your involvement in the first phase of the study does not obligate you to participate in any further phases. On completion of my dissertation, results from this study will be disseminated through Athabasca University Library's Digital Thesis Room and available for anyone interested in accessing it.

If you are willing to participate, please click on the link below to access the questionnaire. The questionnaire should take less than 15 minutes to complete. If you have any problems accessing the questionnaire, please e-mail me directly at the e-mail given below. I would be most grateful if you could complete the questionnaire by July 23, 2012.

If you have any questions or desire further information, please contact me, the principal investigator, Julie Shattuck (jshattuck@frederick.edu), or Dr. Terry Anderson, my dissertation Supervisor, at Athabasca University (terrya@athabascau.ca).

Thank you in advance for your cooperation and support.
Julie Shattuck

Click here to do the survey:

[https://rsurvey.athabascau.ca/limesurvey/index.php?lang=en&sid=58665&token=xxx
xxxxx...](https://rsurvey.athabascau.ca/limesurvey/index.php?lang=en&sid=58665&token=xxx
xxxxx...)

Appendix C: Copy of the Invitation to Participate in Focus Groups

Dear X,

This email is to confirm that you have completed the questionnaire titled COAT Alumni Questionnaire and your response has been saved. Thank you very much for participating in this first phase of my research study.

If you have taught online courses since taking the COAT course, are you interested in participating in the second stage of this research study: an online focus group? The focus group will run asynchronously (with no required, set time for you to be online) using the group discussion board feature of the password-protected Learning Management System that was used to conduct the COAT course you took. COAT alumni will be enrolled in LMS using a pseudonym to protect anonymity. The focus group will consist of about four to six participants who agree to spend about 15-30 minutes a day over three days discussing online teaching and whether or not the COAT course proved to be useful in informing your teaching practice.

If you are interested in participating in a focus group, please reply to this email, and your response will come directly to me, the researcher: Julie Shattuck - jshattuck@frederick.edu or call me at XXX XXX XXXX. There are a choice of dates for the focus groups in July, August, and September, so you will be able to choose a date that works best for you.

If you have any further questions about this email, please contact me, Julie Shattuck on jshattuck@frederick.edu.

Appendix D: Focus Group Informed Consent

Title of the project: Training Higher Education Adjunct Faculty to Teach Online

Purpose of the research project: To evaluate whether the COAT training course effectively helped prepare instructors to teach online, and to extract design principles that both supported and hindered the development of effective teaching skills and attitudes.

Risks and benefits: There are no known risks associated with participation in this phase of the study. You may benefit from this stage of the study by having the opportunity to discuss and reflect on online teaching practices with other online instructors.

Right to refuse: Participation in this study is voluntary, and you do not have to answer any questions that you do not want to answer. You have the right to withdraw from the focus group at any time during the three-day focus group period without any negative consequences. The asynchronous discussion board will be set up to allow for you to edit or delete the content of any of your posts at any time during the focus group period. You will have access to the focus group for one week after the focus group finishes, and you will be able to edit or delete the content of any of your comments during that time. After this one week post focus group period, your discussion postings will be grouped anonymously with responses from all other participants, and data analysis will begin.

Privacy, confidentiality, and anonymity: All information collected in the focus group will be completely anonymous and no participants' names will be identifiable. All participants will be using a pseudonym and will be asked to not give personal identifiable information in their discussion postings. Given the group format of the asynchronous online discussions, please keep in confidence any information that could potentially identify other participants and/or their comments.

Results of the study: Results from this study will be disseminated through Athabasca University Library's Digital Thesis Room and available for anyone interested in accessing it.

Contact information: If you have any questions or desire further information, please contact me, the principal investigator, Julie Shattuck (jshattuck@frederick.edu), or Dr. Terry Anderson, my dissertation Supervisor, at Athabasca University

(terrya@athabascau.ca). This study has been reviewed by the Athabasca University Research Ethics Board. Should you have any comments or concerns regarding your treatment as a participant in this study, please contact the Office of Research Ethics at 780-675-6718 or by e-mail to rebsec@athabascau.ca

Informed consent: Please sign the following informed consent form (see next page) and return to the principal investigator, Julie Shattuck: jshattuck@frederick.edu. You can digitally sign the form and return by e-mail, or print and sign the form and return a scanned copy electronically, or send a physical copy through the mail to:

Julie Shattuck

(Home Address)

Thank you once again for your willingness to participate in my research study,
Julie

Agreement to participate in the focus group

I have read and understood the information contained in this document about the online, asynchronous focus group being facilitated by Julie Shattuck, and I agree to participate in this study, on the understanding that I may refuse to answer certain questions, and I may withdraw at any time during the data collection period. I have been given a copy of this form.

I agree, of my own free will, to participate in this focus group and to keep in confidence any information that could identify specific participants and/or the information they provided.

Print name

Signature

Date

Appendix E: Focus Groups Welcome Announcement and Discussion Prompts

Welcome Announcement:

First of all, a big thank you for volunteering to help me with my research study that is focused on what, if any, impact the COAT course had on your online teaching practice. This focus group is the second phase of my study and it will be conducted in a similar way to the discussions you participated in for the COAT course. Each of the three days has a unique question area for you to respond to which I will make available at 5:00pm (Eastern Standard Time) the day before the discussion is scheduled to start. Day 1 is already open, so please feel free to post your Day 1 comments before the group "officially" starts on X date. To participate in the discussion, please click on the *Focus Group Discussion* button in the left-hand menu, then click on *Day 1*.

In the same way that online course discussions require more than an initial posting, my hope in this focus group is that you respond to each others' comments with your thoughts, questions, reflections, ideas etc. as you collaborate in constructing a lively discussion. I'll be facilitating the discussion and adding my comments and questions too as appropriate. So that you don't have to keep logging in to see if anyone posted new comments, I have set up the discussion forums so you can chose to subscribe to each forum if you want to. If you subscribe to a forum, all new posts will be emailed to you, so you can read and think about them before logging back into this [LMS] site to post your own comments. I've also set up the discussions, so you can edit and make changes to any of your comments at any time before this focus group closes.

Please remember not to post any identifying information in order to protect your anonymity. Let me know if you have any questions. You can call me at XXX XXX XXXX, email me at jshattuck@frederick.edu (use the "Email Julie" button in the left-hand menu), or post your questions to the *Any Questions?* discussion board.

Once again, many thanks for your participation.

Julie

Day One Prompt: Introductions

Please introduce yourself to the group here (in order to maintain anonymity, please do not include identifying personal information such as your last name, name of the institution where you work etc.). You can tell us about your teaching experiences before/after taking the COAT course (both online and face-to-face), the courses that you've taught, how many institutions you teach for, what other professional development/training you have participated in for online teaching, other courses you have taken as an online student etc.

Day Two Prompt for FG1 and FG2: Reflecting on the COAT Course

For Day 2 I'd like to focus our discussion on your thoughts about the COAT course and any impact it may have had on your subsequent online teaching practice. **First**, please

think back to when you took the COAT course. Discuss anything about the COAT course that particularly stood out as being either positive or negative for you while you were participating in the course. Are there any experiences of being a participant in the COAT course that you'd like to share with the group? **Then**, think about the online course(s) you've taught after taking the COAT course. What elements (content, structure, instructional approaches, etc.), if any, of the COAT course had any influence on your online teaching practice? Were there any elements that were unimportant or misleading for your subsequent online teaching practice?

If you want to refresh your memory about the COAT course, please look at the *COAT Syllabus* and *COAT Competencies* buttons on the left-hand menu in this [LMS] site.

Day Two Prompt for FG3: Reflecting on the COAT Course

For Day 2 I'd like to focus our discussion on your thoughts about the COAT course and any impact it may have had on your subsequent online teaching practice.

First, earlier focus groups have suggested that the experience of being an online student in the COAT course affected their later teaching practice. Do you consider that participating in the COAT course as a "student" impacted your online teaching? If yes, please can you give any details on what effects this experience had on your teaching practice.

Second, did the content of the COAT course (e.g., learning about rubrics, learning styles, learning theories, legal issues etc.) affect your teaching? If yes, what content, if any, stands out for you as being most influential? Was there any content that was not useful for you to learn about, or anything that would have liked to learn about in the COAT course, but did not?

Is there anything else that you would like to say about your COAT experience?

If you want to refresh your memory about the COAT course, please look at the *COAT Syllabus* and *COAT Competencies* buttons on the left-hand menu in this [LMS] site.

Day Three Prompt for FG1 and FG2: Observation Tool?

In yesterday's discussion we focused on what key elements of the COAT course proved to be useful to your subsequent online teaching. Imagine your group is asked to start drafting a professional development "observation" tool for COAT alumni to apply to an archived copy of one of the online courses they taught after taking the COAT course. What might you include in that tool that would help COAT alumni see if they were putting into practice key competencies and/or instructional approaches that were discussed or demonstrated in COAT?

After today's discussion ends, I'll summarize what I think were the main points discussed

in this three-day focus group. I'll post my summary here tomorrow and also email it to you, so you have the opportunity to let me know if my summary accurately captures what you and the group said. You can let me know, either through email or in this discussion board, if there any changes that are needed to be made to my summary. Also, you can add anything that you wanted to say about the COAT course or online teaching that you didn't get to say in this focus group.

Day Three Prompt for FG3: Observation Tool and Wrap Up

In my previous COAT alumni focus groups, I asked participants to imagine their group was asked to start drafting a professional development "observation" tool for COAT alumni to apply to an archived copy of one of the online courses they taught after taking the COAT course. They were asked to discuss what they might include in that tool that would help COAT alumni see if they were putting into practice key "takeaways" that were discussed or demonstrated in COAT. The first thread of this discussion board gives the draft observation tool that I created from the focus groups' input. What I'm hoping you will do today is give me feedback on your reactions to this tool. For example, does it cover what's important for an online instructor to think about/do when teaching online? What's missing? Is it "usable" for either instructor self-reflection or for more formal peer/supervisor required observations? Any suggestions/recommendations on how it can be improved (and it's OK to say we need to start all over with a completely different tool!).

After today's discussion ends, I'll summarize what I think were the main points discussed in this three-day focus group. I'll post my summary here tomorrow and also email it to you, so you have the opportunity to let me know if my summary accurately captures what you and the group said. You can let me know, either through email or in this discussion board, if there any changes that are needed to be made to my summary. Also, you can add anything that you wanted to say about the COAT course or online teaching that you didn't get to say in this focus group.

Appendix F: Observation/Interview Informed Consent

Title of the project: Training higher education adjunct faculty to teach online

Purpose of the research project: To evaluate whether the COAT training course effectively helped prepare instructors to teach online, and to extract design principles that both supported and hindered the development of effective teaching skills and attitudes.

Risks and benefits: There is possibly a minimal risk to you associated with participation in this phase of the study. You may feel an element of judgment on your teaching practice which may lead to you feeling uncomfortable, embarrassed, anxious, or upset. Please be assured that any results from my applying the draft observation protocol to your archived course will not be part of any official or work-related evaluation of your teaching practice. As you know, I do not have a supervisory relationship with you, and I have no role in your evaluation process at X College. I will share all my preliminary findings with you in optional follow-up interviews in which you will be able to critique my interpretation of the results of the observation of your archived course.

You may benefit from this stage of the study by having the opportunity to reflect on your online teaching practice and to contribute to the possible refinement of an "observation" tool that can be used by online instructors as part of their professional development strategy.

Right to refuse: Participation in this study is voluntary, and you do not have to answer any questions in the follow-up interview that you do not want to answer. You have the right to withdraw from this stage of the research study at any time during the data collection period without any negative consequences. After the application of the observation tool to your archived course, I will share my findings with you and you will be able to require me to delete or edit any findings that you disagree or feel uncomfortable with. After the optional follow-up interview, I will share the interview transcript with you, and you will be able to ask for any parts of the transcript to be deleted or edited.

Privacy, confidentiality, and anonymity: All information collected in the observation and interview will be completely anonymous and no identifiable information will be used. For example, any report that I produce from this data will not include the title of your course, the semester it was taught, the subject area of the course etc.

Results of the study: Results from this study will be disseminated through Athabasca University Library's Digital Thesis Room and available for anyone interested in accessing it.

Contact information: If you have any questions or desire further information, please contact me, the principal investigator, Julie Shattuck (jshattuck@frederick.edu), or Dr. Terry Anderson, my dissertation Supervisor, at Athabasca University (terrya@athabascau.ca). This study has been reviewed by the Athabasca University Research Ethics Board. Should you have any comments or concerns regarding your treatment as a participant in this study, please contact the Office of Research Ethics at 780-675-6718 or by e-mail to rebsec@athabascau.ca. In addition, this phase of the study that focuses on X College's archived online courses has been approved by X College's Executive Director of Assessment and Research.

Informed consent: please sign the attached informed consent form and return to the principal investigator, Julie Shattuck – jshattuck@frederick.edu. You can digitally sign the form and return by e-mail, or print and sign the form and return a scanned copy electronically or send a physical copy through the mail to: XXX.

Agreement to Participate in the Observation of the Archived Online Course and Optional Follow-Up Interview

I have read and understood the information contained in this document about the observation of archived online courses and follow-up interviews being facilitated by Julie Shattuck, and I agree to participate in this phase of the study, on the understanding that I may refuse to answer certain questions, and I may withdraw at any time during the data collection period. I have been given a copy of this form.

I agree, of my own free will, to participate in this third phase of the research study:

Print name

Signature

Date

Appendix G: Copy of Dave's Observation

Directions: Using a copy of an archived online course, consider the following:

(Please note: Each question should be answered with a short narrative. The table after each question is meant to help focus your answer. Not every course will include all items in the table and a "N/A" (not applicable) designation may be appropriate for a particular course/instructor with the reason indicated in the narrative area.

Observation One:

Course observed: 15-week online course that was taught fall 2011 which was the semester following the instructor taking COAT. This was the instructor's second online course (first one was taught while he was taking COAT). The course was redesigned by the instructor.

Orienting Students to the Course and Online Learning: Was there sufficient information for students to get started in the course and become familiar with general expectations/policies for online learning?

Narrative:

In the first course announcement, students were directed to a "Start Here" menu button which included a welcome message, the syllabus, detailed information on how to navigate the course, an overview of course organization, a review of expectations/grading methods, FAQ, etc. The content was clearly laid out in folders and sub-folders. All the content was text-based with no video or audio elements. The "General Information" and "Writing Resources" menu buttons gave links to places where students could get institutional technical, student, and academic support services. An interactive LMS 101 course area was available for students who wanted to learn more about using the LMS. Expectations for students were highlighted and the instructor gave clear details of how students could be successful in the course. Netiquette rules were given on appropriate ways to communicate in an online classroom. The instructor role was mentioned in the syllabus as a "guide" and in the instructor's introduction on the discussion board as a "facilitator." Instructor contact information was available and posted in multiple areas. The time needed to complete the course, various activities etc. was mentioned in a number of places.

	Needs Improvement	Satisfactory	Exemplary	N/A
Help: Where to start		Yes		
Help: Technical support		Yes		
Help: Student support		Yes		
Expectations: Student and instructor roles		Yes		
Expectations: Syllabus			Yes	
Expectations: Time commitment			Yes	
Other(s)?				

Organizing/Designing Course Content: Was the course clearly organized from the students' perspective with content that was appropriate for online students?

Narrative:

The course was organized with a coherent and logical structure throughout. Students were able to use a "Mark Reviewed" tool on all content to monitor their progress. The instructor used the "Assignments" menu button as an organizational tool with students being able to find all that they needed to do for each module in one place. Each module had core learning outcomes which aligned with the course objectives. There were no activities or content that did not fit with the stated goals. The content was text-based with multiple uses of video and pictures. Work was evenly spaced throughout the course with "pre-minders" of upcoming assessments, so students could plan their workload. Videos were not closed captioned and not all external resources were copyright compliant.

	Needs Improvement	Satisfactory	Exemplary	N/A
Strategies to help students understand what they need to do each week			Yes	
Course navigation organized systematically			Yes	
Alignment of course objectives with content and assessments			Yes	
Content for diverse student preferences/learning styles		Yes		
Appropriate amount of content/activities for timeframe			Yes	
Compliant with copyright and students with disabilities laws	Yes			
Other(s)?				

Establishing Instructor Presence: Was the instructor active in the course and responsive to students? What role(s) did the instructor take in the course?

Narrative:

The instructor introduced himself in the "Faculty" menu button and the introductory discussion board. His introduction included a blend of professional and personal information with photographs. He posted interesting, motivating, and graphically pleasing announcements each week, sometimes more frequently. His announcements used an informal, friendly, humorous tone with reminders that he was there to help students. The instructor stated "I follow your discussion posts with great interest and will jump in with comments from time to time, but it's better if I remain as a presence in the background and don't dominate the discussions," and he had minimal presence in the discussion boards with six posts. The discussions were a place for student-to-student interaction with examples of peer learning and support. There were numerous ways for students to contact the instructor and feedback time for student questions were posted in the syllabus. As already mentioned, the instructor positioned himself as a guide and facilitator of learning.

	Needs Improvement	Satisfactory	Exemplary	N/A
Instructor introduction			Yes	
Regular class announcements			Yes	
Active in discussions boards				Yes
Office hours/methods for 1:1 communication			Yes	
Feedback time for student questions stated			Yes	
Appropriate instructor role(s): Facilitator, coach, guide, lecturer, etc.		Yes		
Other(s)?				

Facilitating Discussions/Building Community: Were there opportunities for multiple interaction types with expectations clearly stated?

Narrative:

Each module had an associated discussion board where students posted responses to question prompts about the module content and responded to each others' comments. There was some evidence of debate with students disagreeing with each other in respectful terms. There was an ungraded Cyber Café set up for students to interact with each other. Student expectations for posting in the discussion boards were detailed. There was no group work assigned to this course, and one student asked for peer-to-peer review of writing assignments in the Cyber Café, but no responses was given within the discussion board to that request. The instructor did not participate in the module discussions (except for the introductory one).

	Needs Improvement	Satisfactory	Exemplary	N/A
Whole class, regular discussions		Yes		
Group work				Yes
Student space (Cyber Café)		Yes		
Clear expectations for instructor participation				Yes
Clear expectations for student participation		Yes		
Other(s)?				

Managing Assessment: Was there an appropriate variety of assessment types? Were assessment requirements clearly stated so that students understood what they needed to do to be successful in the course?

Narrative:

Explanations about the types of assessments with due dates and reminders were posted in multiple places: syllabus, “Start Here” area, in weekly modules, and in a separate “Tests/Exams” area. There was a variety of assessment types ranging from quick multiple-choice quizzes to help students check their understanding of the readings; essays; exams with short answers and essay questions; discussion boards; and a research project. There were rubrics for all subjectively graded assignments. The instructor posted information on his grading and feedback time in the announcements. Students were required to submit an academic integrity pledge, and they completed graded work in an assignment on plagiarism. The withdrawal date was posted in the syllabus.

	Needs Improvement	Satisfactory	Exemplary	N/A
Assessment instructions with due dates			Yes	
Grading rubrics for all assessments			Yes	
Variety of assessment types			Yes	
Instructor feedback time		Yes		
Academic honesty policy stated			Yes	
Course withdrawal policy stated		Yes		
Other(s)?				

Any other comments?

I enjoyed “observing” this course. It was easy to navigate with clear directions on where to find what needed to be completed each week. The instructor’s announcements were warm, friendly, and informative, and he presented a very approachable teaching presence.

Appendix H: Copy of Nancy's Observation

Observation Two:

Course observed: 7-week hybrid course that was taught fall 2012 with 50% of the course delivered face-to-face and 50% delivered online. The face-to-face (f2f) component was a hands-on lab. The instructor took the COAT course in spring 2012. The instructor had taught multiple hybrid courses prior to taking COAT.

Orienting Students to the Course and Online Learning: Was there sufficient information for students to get started in the course and become familiar with general expectations/policies for online learning?

Narrative:

As this was a hybrid course, the instructor introduced herself and oriented students to the course, online resources, and the online learning environment in the first f2f lab. A discussion board had questions that required students to navigate the course site and access specific documents such as the syllabus and college policies for online learning. The "General Information" and "Library" menu buttons gave links to places where students could get institutional technical, student, and academic support services. In addition, in the first announcement the instructor gave information on how students could get technical help, and she directed students to an interactive LMS 101 course area for them to learn more about using the LMS. The instructor emphasized that this was a fast-paced intensive course, and she gave clear instructions on how students could expect to be successful in the course. Netiquette rules were given on appropriate ways to communicate in the online classroom. The syllabus specified what students were expected to do in the online component and what they did in the f2f labs. Instructor contact information was available and posted in multiple areas. The syllabus specified how much time students should expect to spend each week on online activities.

	Needs Improvement	Satisfactory	Exemplary	N/A
Help: Where to start				Yes
Help: Technical support			Yes	
Help: Student support		Yes		
Expectations: Student and instructor roles		Yes		
Expectations: Syllabus			Yes	
Expectations: Time commitment			Yes	
Other(s)?				

Organizing/Designing Course Content: Was the course clearly organized from the students' perspective with content that was appropriate for online students?

Narrative:

The instructor used the "Announcements" area to give an agenda of the activities and assessments students needed to complete each week. The course navigation was organized in a coherent and logical way with menu buttons for different activities and content such as the labs, the textbook supplementary content, and assessments. There were no activities or content that did not fit with the stated goals which were stated in the chapter PowerPoints and the syllabus. The content was text-based with graphics. There were no video or audio components embedded within the course, but there was a link to external video resources that the instructor recommended. Activities were spaced throughout this course with time expectations detailed in the syllabus. The instructor had multiple reminders about what assessments were coming up. All content was appropriately cited.

	Needs Improvement	Satisfactory	Exemplary	N/A
Strategies to help students understand what they need to do each week		Yes		
Course navigation organized systematically			Yes	
Alignment of course objectives with content and assessments		Yes		
Content for diverse student preferences/learning styles		Yes		
Appropriate amount of content/activities for timeframe			Yes	
Compliant with copyright and students with disabilities laws		Yes		
Other(s)?				

Establishing Instructor Presence: Was the instructor active in the course and responsive to students? What role(s) did the instructor take in the course?

Narrative:

The instructor introduced herself in the first f2f lab. Her first online announcement was friendly in tone, and she encouraged students to contact her for help if needed. She posted regular announcements with information about the weekly workload, supplementary content, assessment due dates, comments on graded work, etc. She was active in the discussion boards without dominating them. She posted supportive, encouraging comments that praised good answers and gave additional input where needed. There were numerous ways for students to contact the instructor, and feedback time for student questions was posted in the syllabus. The instructor's role appeared to be as a facilitator of learning with evidence that students were able to provide input on what type of activities they preferred to do. For example, one announcement states: "As we voted in class, our final will be a hands on troubleshooting lab."

	Needs Improvement	Satisfactory	Exemplary	N/A
Instructor introduction				N/A
Regular class announcements			Yes	
Active in discussions boards			Yes	
Office hours/methods for 1:1 communication			Yes	
Feedback time for student questions stated			Yes	
Appropriate instructor role(s): Facilitator, coach, guide, lecturer, etc.		Yes		
Other(s)?				

Facilitating Discussions/Building Community: Were there opportunities for multiple interaction types with expectations clearly stated?

Narrative:

There were four discussion boards for this 7-week course where students posted responses to question prompts about the content and responded to each others' comments. There was evidence of peer learning and support with students responding to each others' posts and sharing resources. There was a group assignment that included an ongoing blog and class presentation. The groups were set up early in the course, so that students had ample time to work together. A Cyber Café was not set up within the LMS, but all students had external blogs and were encouraged to read and respond to each others' blogs. The syllabus stated that the instructor would "monitor" the discussion boards for grading purposes. Students were directed in the syllabus to "respond to fellow students at least 2 times in three days for a total of 6 posts separate from the discussion questions."

	Needs Improvement	Satisfactory	Exemplary	N/A
Whole class, regular discussions			Yes	
Group work			Yes	
Student space (Cyber Café)				Yes
Clear expectations for instructor participation		Yes		
Clear expectations for student participation		Yes		
Other(s)?				

Managing Assessment: Was there an appropriate variety of assessment types? Were assessment requirements clearly stated so that students understood what they needed to do to be successful in the course?

Narrative:

Explanations about the types of assessments with due dates and reminders were posted in multiple places: syllabus, announcements, and in separate “Assignments” and “Tests” areas. There was a variety of assessment types ranging from multiple-choice chapter tests; group learning blogs; discussion boards; class presentations, labs, short-answer assignments, and a final exam (the format of which was voted on in class). One rubric was posted in the LMS for the blogs, but there were no rubrics posted for the other assessments. The instructor did not post information on her grading feedback time in the LMS, but she did make announcements for when grades had been assigned. Students were required to submit an academic integrity pledge and answer a question in a discussion board on plagiarism. The withdrawal date was posted in the syllabus.

	Needs Improvement	Satisfactory	Exemplary	N/A
Assessment instructions with due dates			Yes	
Grading rubrics for all assessments	Yes			
Variety of assessment types			Yes	
Instructor feedback time	Yes			
Academic honesty policy stated			Yes	
Course withdrawal policy stated		Yes		
Other(s)?				

Any other comments?

I enjoyed “observing” this course. It was easy to navigate with clear directions on where to find what needed to be completed each week. The instructor’s announcements were informative, and she presented an approachable and involved teaching presence.

Appendix I: Copy of Irene's Observation

Observation Three:

Course observed: 15-week online course that was taught fall 2011 which was the semester following the instructor taking COAT. The instructor had been teaching online courses since 2000. The course was designed by the instructor.

Orienting Students to the Course and Online Learning: Was there sufficient information for students to get started in the course and become familiar with general expectations/policies for online learning?

Narrative:

In the first course announcement, students were directed to an "About this Course" menu button to access the syllabus which contained a detailed overview of course organization, a review of expectations/grading methods, topical outline, and a section on "Introductory information on getting started." The "General Information" menu button gave links to places where students could get institutional technical, student, and academic support services. An interactive LMS 101 course area was available for students who wanted to learn more about using the LMS. The instructor directed students to access these resources and the LMS handbook in the introductory section of the syllabus. The instructor gave clear details of her expectations of students in her course in terms of communication, attendance, participation, etc. Netiquette rules were given on appropriate ways to communicate in an online classroom. Multiple ways to contact the instructor were given. The observer did not see a reference to the time commitment needed for the course.

	Needs Improvement	Satisfactory	Exemplary	N/A
Help: Where to start		Yes		
Help: Technical support		Yes		
Help: Student support		Yes		
Expectations: Student and instructor roles		Yes		
Expectations: Syllabus			Yes	
Expectations: Time commitment	Yes			
Other(s)?				

Organizing/Designing Course Content: Was the course clearly organized from the students' perspective with content that was appropriate for online students?

Narrative:

The course was organized with a coherent and logical structure throughout. The instructor used the "Assignments" menu button as an organizational tool with students being able to find all that they needed to do for each week in one place. In each weekly "Assignments" folder there was a detailed preliminary post detailing all the activities that had to be completed that week. There were no activities or content that did not fit with the stated course objectives. The course was designed around the textbook with no supplementary video, audio, or interactive content. Work was evenly spaced throughout the course with reminders of upcoming assessments, so students could plan their workload.

	Needs Improvement	Satisfactory	Exemplary	N/A
Strategies to help students understand what they need to do each week		Yes		
Course navigation organized systematically		Yes		
Alignment of course objectives with content and assessments		Yes		
Content for diverse student preferences/learning styles	Yes			
Appropriate amount of content/activities for timeframe		Yes		
Compliant with copyright and students with disabilities laws		Yes		
Other(s)?				

Establishing Instructor Presence: Was the instructor active in the course and responsive to students? What role(s) did the instructor take in the course?

Narrative:

The instructor introduced herself in the "Faculty" menu button and the introductory discussion board. Her introduction included a blend of professional and personal information with a photograph. She posted informative weekly announcements that had a friendly tone with reminders that she was there to help students. The instructor had minimal presence in the discussion boards with seven initial posts. The discussions were a place for student-to-student interaction with examples of peer learning and support as students discussed the prompts. There were numerous ways for students to contact the instructor and feedback time for student questions were posted in the syllabus. The instructor's role seemed to be as a guide who made herself available to help students as needed.

	Needs Improvement	Satisfactory	Exemplary	N/A
Instructor introduction			Yes	
Regular class announcements			Yes	
Active in discussions boards				Yes
Office hours/methods for 1:1 communication			Yes	
Feedback time for student questions stated			Yes	
Appropriate instructor role(s): Facilitator, coach, guide, lecturer, etc.		Yes		
Other(s)?				

Facilitating Discussions/Building Community: Were there opportunities for multiple interaction types with expectations clearly stated?

Narrative:

There were five discussion boards where students posted responses to question prompts about the content and responded to each others' comments. There was a lot of evidence of group interaction in the discussion boards. There was a Cyber Café set up for students to interact with each other and ask questions and this area was also very active. Student expectations for posting in the discussion boards were detailed in the syllabus. The observer could not find stated expectations for instructor participation. There was group work in the form of an ongoing wiki which was introduced early in the course so students' had ample time to get organized in their groups and complete the assignment.

	Needs Improvement	Satisfactory	Exemplary	N/A
Whole class, regular discussions			Yes	
Group work			Yes	
Student space (Cyber Café)			Yes	
Clear expectations for instructor participation				Yes
Clear expectations for student participation		Yes		
Other(s)?				

Managing Assessment: Was there an appropriate variety of assessment types? Were assessment requirements clearly stated so that students understood what they needed to do to be successful in the course?

Narrative:

Explanations about the types of assessments with reminders were posted in multiple places: syllabus, in weekly “Assignments” folders, and in announcements. Due dates were not posted for all assessments; instead they were posted as being due at the end of week 3 for example. Some dates were posted in the announcements for major tests and assessments. There was a variety of assessment types: textbook assignments; three current events; one wiki group project; two voice mail assignments; one presentation; five discussion board assignments; and four major tests. There were no rubrics posted. The instructor did not post information on her grading feedback time. Students were required to submit an academic integrity pledge at the start of the course. The withdrawal date was posted in the syllabus.

	Needs Improvement	Satisfactory	Exemplary	N/A
Assessment instructions with due dates		Yes		
Grading rubrics for all assessments	Yes			
Variety of assessment types			Yes	
Instructor feedback time	Yes			
Academic honesty policy stated		Yes		
Course withdrawal policy stated		Yes		
Other(s)?				

Any other comments?

I enjoyed “observing” this course. It was easy to navigate with clear directions on where to find what needed to be completed each week. The instructor’s announcements were informative and she presented a very approachable teaching presence.

Appendix J: Interview Question Guide

Common Question Areas:

1. Can you tell me about your reaction to the draft observation write-up I sent you?
2. Do you feel that you demonstrated in that course key takeaways from your COAT experience that were important to you? Was your use of these takeaways a result of what you learned in the COAT course?
3. My analysis of the data from the focus groups and the questionnaire has highlighted that experiencing life as a student in an online course was a key component of COAT. Was that important for you?
4. Another outcome from my data analysis was the importance of being part of a community of instructors learning together. Do you have any comments about the peer to peer learning or learning from the COAT facilitator?
5. Do you think that this observation tool can be used as a peer observation tool or as an instructor self-reflection tool, or both? How can it be improved? Did you find the narrative appropriate and/or useful?
6. Any final comments about your COAT experience and your online teaching?
7. Do I have your permission to post this observation narrative in my dissertation appendices?

Examples of specific question areas for a particular interview:

8. One of the key takeaways that was identified in the focus groups was teaching presence in discussion boards. In this observed course, your presence in the discussion boards was minimal. Can you tell me about your reasons for having a minimal presence in the discussions? Do you use email, feedback on assignments, or other forms of communication more?
9. One of the key takeaways that was identified in the focus groups was group/wiki work. I noticed that you began your wiki assignment early on in your course. Was that a direct result from your negative experience in COAT?

Appendix K: Ethics Approval



MEMORANDUM

DATE: October 17, 2012

TO: Julie Shattuck

COPY: Dr. Terry Anderson (Research Supervisor)
Dr. Rick Kenny, Chair, CDE Research Ethics Review Committee
Dr. Simon Nuttgens, Chair, Athabasca University Research Ethics Board

FROM: Janice Green, Secretary, Athabasca University Research Ethics Board

SUBJECT: **Ethics Proposal #CDE-12-05: “Training Higher Education Adjunct Faculty to Teach Online: A Design-Based Research Study”**

This acknowledges receipt of your revised application on May 23rd—your cooperation in revising to incorporate minor required changes was greatly appreciated—and the Observation Tool/Protocol provided on October 17th. Accordingly, this confirms that all required file items arising from the CDE Research Ethics Review Committee’s “Approval to Proceed” decision of May 22, 2012, have now been received.

On behalf of the Athabasca University Research Ethics Board, I am pleased to confirm that this project was granted **FULL APPROVAL** on ethical grounds, and all contingent requirements have been met.

The **approval for the study** “as presented, including required changes and additional documentation provided” **is valid for a period of one year from the date of original approval (to May 22, 2013)**. If required, an extension must be sought in writing prior to the expiry of the existing approval. A Final Report is to be submitted when the research project is completed. The reporting form can be found online at <http://www.athabascau.ca/research/ethics/>.

As implementation of the proposal progresses, if you need to make any significant changes or modifications prior to receipt of a final approval memo from the AU Research Ethics Board, please forward this information immediately to the CDE Research Ethics Review Committee via rebsec@athabascau.ca, for further review.

If you have any questions, please do not hesitate to contact Janice Green at rebsec@athabascau.ca

Centre for Distance Education Research Ethics Review Committee

(A Sub-Committee of the Athabasca University Research Ethics Board)

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