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ESSENTIAL PRACTICES FOR ONLINE INSTRUCTION:

A STUDY USING DELPHI TECHNIQUES

BY

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Approval of Thesis

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Dedication

This thesis is dedicated to all online instructors with the courage to learn and adapt to new methods of course design and teaching. Their leap of faith provides learners with choice of delivery method and greater access to education. This can only lead to increased opportunities for learners to establish successful livelihoods and pay their education opportunities forward to the next generation of learners.

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Abstract

The purpose of this study was to develop a set of essential practices for online instruction at a higher education institution. The literature of online learning indicated that traditional classroom-based instructors needed support and professional development to adapt their teaching methods for effective online course delivery. Many instructors at the participant institution for this study were asked to teach online; however, they received very few guidelines for online instruction and minimal support. Using techniques based on the Delphi Method, a group of expert online instructors at the participant institution was asked to agree on a set of practices they considered essential for online instruction. The initial set of practices was developed through a qualitative analysis of 18 references from the literature of online learning. The final set of practices the participants agreed were essential, 37 items in total, may represent an effective starting point for professional development and support of online instructors at the participant institution.

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Chapter 1 – Introduction

Higher education is in the midst of significant change and online learning is a key driver. Over the past 20 years, global advances in affordable personal computers and mobile devices, along with access to the Internet have led to increased student enrolments in online courses. Allen and Seaman (2012), reporting on U.S.-based data, stated that 6.7 million students were taking at least one online course during the fall 2011 term, over 500,000 more than in 2010.

There are many ways to define and describe online learning at higher education institutions. Tallent-Runnels, Thomas, Lan, Cooper, Ahern, Shaw, and Liu (2006) described online learning as a branch and evolution of distance education. Archer and Garrison (2010) described modern distance education [online learning] as learning that occurred in a different place from teaching; it was connected, yet distant. They also indicated that online learning required special attention to course design, communication, administration, and instruction to ensure that the distance, and any technology used for delivery, did not inhibit the teaching and learning process.

There are many approaches to designing and delivering online learning. The majority of literature examined for this study described instructor-led online learning that was asynchronous, a model where instructor and students log in online to work regularly with web-based course materials and communication tools, but are not required to be working at exactly the same time. Online learning was also described as synchronous, a model where the students and instructor meet and interact at the same time [live] using web-conferencing software, telephone

conferencing, or other real-time communication tools. Blended (or hybrid) online learning was described as a mix of both asynchronous and synchronous elements. Other delivery-method factors were discussed in the literature as follows:

- online learning may be self-directed (digital materials with no instructor);

- term-based (courses must be completed in a specific time-frame, typically fall, winter and spring terms);

- open-ended (students may choose how quickly or slowly they complete the course, typically there is a one year time limit that may be extended).

In whatever way an institution defines or delivers online learning, many researchers agree that online teaching requires special skills of course design and instruction to ensure that online students are learning effectively (Anderson 2008a; Garrison & Akyol, 2009; Swan, 2010; Rochefort & Richmond, 2011).

Higher education institutions are choosing to develop and deliver online learning for many reasons. These reasons may include flexibility of learning time and place, and may allow working students to study while meeting family and career needs. Flexibility for teaching allows instructors to teach from wherever they are. This anytime, anyplace teaching and learning model is particularly effective for part-time instructors with non-university full-time careers (Larcara, 2010). Online learning offers advantages for students in geographically remote regions, providing a wider choice of institutions and programs (Menchaca & Hoffman, 2009). The final key reason why higher education institutions are

developing online learning programs is competition. Many traditional schools with strong reputations for academic excellence are offering online programs, and students have a lot more choice than in the past (Allen & Seaman, 2012).

Online learning is very new. A timeline of traditional Western higher education may be drawn beginning with the first universities in Great Britain, Italy, and France in the 11th and 12th centuries, and moving forward to include distance education, arising in the 19th and 20th centuries (Perkin, 2006; Moore & Kearsley, 2005). Through a millennium of development in education, teaching approaches and learning theories have evolved and informed practice. In this historical context, the practices of online learning, with only 10 to 15 years of development, will require time, and significantly more research, to evolve and mature.

A key issue for any organization engaged in rapid growth is quality assurance (Bates & Sangrà, 2011). This is particularly true when the growth involves a significantly different concept of practice. In the current higher education climate of change, quality assurance is a recommended component of all learning programs, but one that often presents challenges of time and priority for instructors and institutions (Bangert, 2008, Menchaca & Hoffman, 2009). In the literature on quality assurance for online learning, factors such as course design and institutional support for students are flagged as important (Chua & Lam, 2007; Crow, McGuinty & LeBaron, 2008). However, across the majority of literature reviewed for this study, online instructor practices emerged as the primary factor in the quality of online learning. The expertise of instructors and the relationship

between the instructor and the learner have long been primary elements of successful learning outcomes (Anderson 2008b). With strong consensus on this issue, a focus on research-based professional development and support of online instructors may be the key element in quality assurance for online programs.

While a focus on instructor support and professional development may be a key element for quality assurance, online learning is new for everyone. This includes higher education administrators, course designers, researchers, learners, and instructors. While the "newness" of online learning, coupled with a lack of research-based guidance, may contribute to challenges for these stakeholders, it is likely that they can all build on what is already known [1000+ years of teaching and learning practices]. Many online learning researchers are promoting theory and practice scaffolding, building on what is already known, to support quality in online instruction practices.

Pedagogic approaches and models of online teaching and learning are emerging to support successful student outcomes (Cleveland-Innes, 2010; Perry & Edwards, 2010; Rochefort & Richmond, 2011). New teaching practices are being tested to ensure online students are learning effectively (Anderson, 2008b; Archer & Garrison, 2010; Fish & Wickersham, 2009). Emerging models of online teaching and learning are based on well-researched adult and distance learning theories, but shed new light on the specific needs of online instructors and students. New areas of theory and pedagogy such as connectivism, complexity theory, networked learning, the pedagogy of nearness, and heutagogy are emerging (Anderson, 2010). Advances in the technology used to design and

deliver online instructional strategies are also emerging (Trentin, 2010; Siemens, 2008). In turn, these new pedagogic approaches and emerging technologies are contributing to the need for well-designed professional development for online instruction.

Research indicates that faculty engagement with online learning is best achieved through literature-based assurance of quality and integrity (Goolnik, 2006; Conceição, 2006). Research also indicates that institutional acknowledgement and compensation related to the time, energy, and professional development required to teach online leads to improved faculty satisfaction (Larcara, 2010). In addition to assurances of effectiveness and integrity in online learning, literature indicates that institutions should seek the support of instructors by collaboratively involving them in decisions that affect their practice (Menchaca & Hoffman, 2009; Goolnik, 2006; Meyer & Barefield, 2010). In order to support and promote course quality, institutions may benefit from working collaboratively with online instructors to define emerging essential practices that lead to effective online learning for students.

The Problem

In the literature of online learning, a primary focus of online course quality was the practice of online instructors (Chua & Lam, 2007; Crow, McGuinty & LeBaron, 2008; Fish & Wickersham, 2009; Smith, 2005). The literature also presented strong agreement that the skills required for online teaching differed from those required for traditional classroom-based teaching (Yang & Cornelious, 2005: Zsohar & Smith, 2008; Anderson 2008b; Trentin, 2010). Research indicated

that online instructor professional development and evaluation was a vital aspect of a successful online education program (Pagliari, Batts & McFadden, 2009). Despite general consensus in the literature on these issues, there was little agreement on a set of recommended practices for online instruction. This lack of research-based guidance constrained instructor and institutional understanding of recommended online teaching practices at the participant institution for this study, and limited institutional ability to provide professional development and support.

Purpose of the Study

The purpose of this study was to develop a set of essential practices for online instruction at a higher education institution. The literature of online learning indicated that traditional classroom-based instructors needed support and professional development to adapt their teaching methods for effective online course delivery. Many instructors at the participant institution for this study were asked to teach online; however, they received very few guidelines for online instruction and minimal support. Using techniques based on the Delphi Method, a group of expert online instructors at the participant institution was asked to agree on a set of practices they considered essential for online instruction. The initial set of practices was developed through a qualitative analysis of 18 references from the literature of online learning. The final set of practices the participants agreed were essential, 37 items in total, may represent an effective starting point for professional development and support of online instructors at the participant institution.

Research Questions

The research questions for this study were as follows:

1. Given a literature-based set of recommended practices for online instruction, what practices would a group of expert online instructors agree were essential in their work?

2. With respect to practices participants identified as essential for online instruction, how frequently do expert online instructors engage in these essential practices during a 13-week term?

Context of the Study

Participant institution.

The participant institution for this study was a large, North American school of continuing education. It was a separate, yet academically connected school at a larger university. This research focused on activity in the 2012 school year and, therefore, a period of one year, January 1, 2012 through December 31, 2012 was selected to gather institutional data. There were 18,952 enrollments in online courses at the institution in 2012 across a variety of disciplines. Continuing education courses were a mix of non-credit, certificate-credit, undergraduate, and post-baccalaureate certificates. The continuing education school employed 175 online instructors to deliver its programs.

At the time of the study, the school did not have a formal professional development program for its online instructors and had experienced a variety of challenges with instructor workload, student

complaints, clarity of instructor responsibilities and practices, targeted and effective support mechanisms for instructors, and consistency of quality from course to course. The school used a centralized online course development team and process in the instructional design of online courses, and collaboratively paired an instructional designer with a subject matter expert. The subject matter expert was typically an instructor who had taught the course in the classroom.

One of the outcomes the participant institution hoped for in this research was information that would help them plan for more effective professional development and support of its online instructors.

Participants.

The participants for this study were expert online instructors identified by the participant institution. Criteria for selection assured that participants were current instructors, had taught an online course for the institution within the past year; and experienced, had taught six or more online courses for the institution since 2005. A total of 122 potential expert participants were identified and invited to participate in the study. Of the potential group, 39 participants completed the round #1 study survey, and 26 completed the round #2 survey.

The participants taught in a variety of disciplines offered at the institution, including nursing, business, community service, communication and design, humanities, and other sciences. In traditional classroom teaching at the participant institution, there were significant

differences among these disciplines with respect to instructional strategy and pedagogic approach. For example, introductory accounting courses, which focused learning outcomes on terminology, concepts, and applied practice in problem solving, did not use the same types of instructional strategies as upper-level humanities courses, which focused learning outcomes on seminar-based discussion and refined essay-writing skills. Aligning with these discipline-based differences, there were variations in course design, assessment, and instructional approach in the online courses.

The majority of online instructors taught one section or more each term (fall, winter, and spring), with an institutional maximum of three sections per term possible. The majority of instructors were part-time, sessional instructors, rather than full-time, tenured faculty.

The predominant method of delivery in the participant institution's online program was asynchronous (the students and instructor were not required to be logged on at the same time); term-based (fall, winter, and spring 13-week courses); and instructor-led (an institutional requirement for instructors to monitor student progress, grade assessments, and fully administer the course was in place). The learning management system for course delivery was Blackboard 9[©] and most courses used a separate content management system to organize modules. Average class size in online courses at the institution was 30 students per section. Maximum section size for online courses at the institution was 65 students per course.

Course communication (including elements of direct instruction) was conducted through a combination of institutional email, using the messaging and announcements tools in Blackboard[©], and use of asynchronous discussion forums. However, there were few guidelines and little consistency in how much communication took place, or how much was needed to support students' learning outcomes. Content was typically pre-designed and delivered in weekly modules. Students had access to all modules from the beginning of the course enabling opportunities to work ahead as their schedules allowed. Readings (in addition to module content) were drawn from required textbooks, electronic articles through the institutional library, or in embedded links within the content. The number of hours of module-by-module student work per course varied with instructor preference.

Assessments in online courses at the participant institution often aligned with traditional classroom designs. This represented some assurance that the online version of a degree-credit course was equivalent to the classroom version. For example, if a classroom version of the course had a mid-term and final exam, the online version of the course would adopt these assessment types. It was important to many departments at the institution that online courses demonstrate equivalent rigour to classroom courses, and for many stakeholders this equated to aligned assessment types. When a course was certificate-based (rather than degree-credit),

assessments tended toward real-world practice opportunities to ensure the

applied learning outcomes of the certificate were achieved.

Limitations

A limitation, as described by Mauch and Park (2003), was "a factor that

may or will affect the study, but is not under control of the researcher" (p. 114).

Describing limitations also provided information that informed how findings

might or might not be generalized. The limitations for this study were as follows:

- the availability of participants identified as expert online instructors to

  complete the data collection;

- acceptance that the participants were experts in online learning

  practices;

- acceptance that the literature-based recommended practices used in the

  preliminary instrument represented a complete and accurate set; and,

- acceptance that the discipline-specific instruction requirements in

  online courses may have challenged the participants to reach agreement

  on a generalized set of recommended practices.

The first factor in limitations, the availability and willingness of invited

participants to complete the study, was identified because the participants were

voluntary. Based on a preliminary invitation list of all available experts at the

participant institution, it was possible that the number of volunteer participants

would have been too low. A study using the Delphi Method typically includes

between 12 and 20 experts (Manizade & Mason, 2011).

The second limitation, acceptance that the participants were experts in online instruction, was included to acknowledge that expertise was challenging to establish. As stated in the main introduction section, Internet-based online teaching may be considered new, with only 10 to 15 years of practice, development, and research. Expertise in online instruction was therefore difficult to confirm, based on the lack of standards and research-based guidelines for comparison or evaluation. The participant institution was unable to make student-defined teaching evaluation data available to the researcher. These data were held very privately at the institution, and required the permission of the instructor for release. This confirmation of expertise seemed prohibitive to the scope and timeline of the research. In addition, the teaching evaluations at the participant institution were in no way specific to online instruction versus classroom-based instruction, and therefore would not have provided additional data qualifying the participants as experts in online instruction. The criteria used to determine expertise for participants in this study, at minimum, that the instructor has delivered at least six course terms of his or her online course(s) for the institution (experience), and was a current online instructor (had taught an online course within the last year), may not have been sufficient criteria to qualify the instructor to other researchers as "expert" but were considered the best available criteria in the context of the participant institution's measures.

The third limitation listed, the possibility that the set of literature-based recommended practices may not have been an accurate or complete set, is a concern derived from the qualitative analysis approach used. Qualitative analysis

of phrases and common practices in literature is a difficult process to accurately replicate.

The final limitation for this study, that diverse instructional practices across disciplines may have impeded agreement on general practices, accounted for the possibility that the participants might have disagreed on practices [failed to reach agreement] for discipline-specific reasons. The researcher chose to invite a diverse group of experts, across all program areas at the participant institution, to ensure that the final set of essential practices represented the institution's programs effectively. The program areas were arts, business, communication and design, community services, and engineering and architectural science. Focusing the diverse practices of these online instructors on a set of generally recommended practices may have reduced their ability to agree.

In order to consider the findings of this study as general, the following limitations, and the researcher's efforts to address them must be accepted:

- the final number of participants aligned with accepted Delphi techniques;

- the participants were experts in online instruction;

- the literature-based preliminary instrument was accurate and complete; and

- the discipline-specific differences in online instruction practices did not interfere with the participants' ability to reach agreement.

Delimitations

According to Mauch and Park (2003), delimitations were those aspects of the research design that purposefully limited or narrowed the scope of the investigation. They found that delimitations, "tell the reader what will be included, what will be left out and why" (p.115).

Intentionally included in the scope of this study were the following:

- Online instructors identified as experts from one participant institution;

- a preliminary survey instrument derived from a qualitative analysis of 18 literature sources; and

- a two-round design, using techniques related to the Delphi Method, which invited participants to reach agreement about online instruction practices.

Intentionally left out of this study were the following:

- Additional participant institutions with similar programs;

- Other stakeholders at the participant institution with responsibility for online programs;

- Multiple research methods to triangulate data.

With respect to the first decision of delimitation, the choice to use expert online instructors only, there may have been diverse opinions among administrators, students, and instructors at the proposed institution with respect to the practices that online instructors should engage. However, data collection and analysis encompassing all three perspectives was unattainable within the

researcher's available time and capabilities. The choice was therefore made to purposefully focus on a group of expert online instructors, rather than using a random sample from available populations, or another participant choice method.

With respect to the second delimitation, the choice to develop an original preliminary instrument, the researcher felt that there was no single literature source for an instrument that was simple, accurate, and recent. The development of an original instrument was a recommended practice from Delphi Method descriptions (Larcara, 2010; Manizade & Mason, 2011). For this study, the instrument was based on common online instruction practices as described in a variety of literature references.

The final delimitation, narrowing the study's scope to a two-round design using Delphi techniques, rather than a full Delphi Method with three or more rounds, was chosen based on the preliminary instrument. The researcher's work developing the literature-based set of recommended practices described in Chapter 3 ensured the participants had a literature-based starting place to approach agreement. Two rounds were therefore perceived as sufficient.

With respect to elements of the research intentionally left out, additional participant institutions would have increased the researcher's time for permissions and data collection, and represented difficulty in securing additional research coordinators to keep participant identities anonymous. The researcher felt that Delphi Techniques recommendations specifically pointed to the use of experts to reach agreement. The most effective experts in online instruction practices at the institution were determined to be online instructors. Therefore the involvement of

other populations with a stake in online programs (non-experts) was deemed
unnecessary. The choice of using a primary method, survey-based research using
techniques based on the Delphi Method, t, rather than an alternate or additional
research methods, contributed to manageable timelines for the researcher in a
masters-level research project.

Significance of the Study

Although this study focused on one institution, a set of expert-identified
essential practices may be useful at other institutions with similar online learning
programs. The ability to use an expert-developed set of practices for online
instruction may allow institutions to develop more effective professional
development and support programs, ensuring their online instructors have the
skills and confidence they need. The set of literature-based recommended practices
used to develop the preliminary instrument in this study might have been
developed and shared as "common findings from the literature." However, in the
context of a study using techniques adapted from the Delphi Method, which relied
on expert agreement rather than consensus, the final set may accurately reflect the
real-world experiences of online instructors.

The preliminary instrument was situated as a starting place for the
participants, and was then focused according to their opinions and experience.
While the research design provided a starting point for consideration of online
instructor practices, the collective process of review by the participants created a
set that was much more likely to be accepted and adopted by institutional
stakeholders, than a list defined by research or institutional administrators alone.

Role of the Researcher

My interest in this particular research and method stemmed from my need to complete a master's thesis within a specific timeframe in the context of part-time education. I worked at the participant institution as an online instructional designer in 2012. In my role, I collaborated with traditional classroom instructors on a course-by-course basis, and assisted them to develop new online courses. Some instructors had no online course development or online instruction experience when they began the collaborative process of course development. Based on what I observed and heard from instructors, students, and administrators, institutional professional development programs needed to be improved to increase the quality of the online instruction and the overall quality of the institution's online learning program.

The institution relied, almost exclusively, on my small team of online learning experts to provide them with guidance and research for recommended practices in the design and delivery of online learning. This study's methods and outcomes may have added a level of empowerment to the population most effected by institutional policy for online instruction, the instructors themselves. Rather than a group of instructional design and web-development experts providing advice regarding essential practices, it was the instructors identifying what was essential in their opinion. The outcome of this research, a set of essential practices for online instruction, may contribute in the future to the development of widely accepted and motivating professional development and support programs at the institution.

This was my first major research project. I chose to use techniques based on the Delphi Method based on descriptions in the literature of Delphi Method as an effective approach to achieve agreement among a group of experts. Delimitations of the study, for example fewer rounds of survey than typical Delphi Method, use of agreement rather than consensus, as well as the decision to use percentage agreement rather than quartiles in the analysis, led to the description of the research method as "techniques of a Delphi Method." I did everything within my competency to ensure that the qualitative analysis of the recommendations of the literature, during which I examined 18 references to develop the preliminary instrument, was accomplished with rigour. I conducted a quantitative survey exploration, using the preliminary instrument with the expert instructors. As detailed in the methodology section of this study, intentional research design elements were used to reduce researcher bias and increase the accuracy of the overall findings.

Operational Definitions

Agreement.

For this study, a participant agreement measure was set at % of agreement (a) was equal to =, or greater than, > 95% agreement for each practice reviewed, $a \geqq 95\%$. Agreement may be defined as, "The fact or condition of agreeing; harmony of opinion, feeling, or purpose; unanimous concurrence on an opinion, proposal, etc.; absence of dissent." (OED Online, 2013). However, in the context of an adapted two-round Delphi techniques design, and with the possibility of error in an open web-based

survey format, a small margin of error was considered appropriate for this study. Therefore a 5% margin for agreement was decided. For all survey items where participants responded Agree or Strongly Agree to a level a $\geqq$ 95%, the item was included in the final set of essential practices for online instruction.

Delphi method.

According to Skumolski, Hartman and Krahn (2007), the Delphi Method is "an iterative process to collect and distill the anonymous judgments of experts using a series of data collection and analysis techniques interspersed with feedback" (p. 1). In this study techniques, inform the Delphi Method were used. This use included two quantitative surveys with a purposefully selected group of expert participants from a higher education institution. The participants' task was: to review a literature-based instrument; determine whether they agreed or disagreed that the practices in the instrument were essential in their work; add any practices they felt were missing. They were asked to review a second instrument containing one added practice and a request for any additional agreement possible.

Essential practice.

This study defined an essential practice as *an online instruction activity that contributes to student achievement of learning outcomes.* The agreed-upon set of practices were therefore essential at the participant

institution, based on expert agreement, but may not be generalized to other institutions offering online learning.

Expert online instructor.

For purposes of this study, expert online instructors were identified by specific criteria and a list was requested from the participant institution. Criteria for recommendation of on online instructor as an expert included, at minimum, that the instructor had delivered at least six course terms of his or her online course(s) for the institution, and was a current online instructor (had taught an online course within the last year).

Online instructor.

The definition of an online instructor varies from institution to institution. Some institutions use their faculty and associate faculty as instructors, some institutions use part-time adjunct faculty and some have contract or sessional instructors leading online courses. In some online programs tutors and graduate students are the primary facilitators. The primary definition of online instructor at the institution for this study was, *a sessional or contract-based subject matter expert, often with a Masters degree or higher educational qualification, hired to teach online at the continuing education school.*

Online learning.

For purposes of this study, online learning was operationally defined as, *a fully web-based, asynchronous, instructor-led course delivery method.* This is the primary online delivery model at the participant

institution. A typical online course at the institution contained 13 modules

of learning (aligned with the parent university's 39-hour term-based

model) with a mix of course materials, learning activities, rich media, and

assessment. Course completion was expected within a term (there were

three terms, fall, winter and spring). The majority of online learning at the

institution was conducted this way, using the Blackboard© learning

management system for administrative instructor tasks, and the Ektron©

content management system for presentation of course materials.

Quality assurance.

Quality was a difficult word to define in the context of higher

education, and particularly in the new delivery mode of online education.

There were few standards in the literature for comparison of course

offerings or teaching practices. Aligning with a needs analysis approach, to

ensure that effective learning takes place, this study used the following

definition, "quality means identifying the needs of the student, then taking

steps to meet those needs." (Endean, Bai & Du, 2010, p. 54)

Recommended practice.

A variety of terms were used in the literature of online learning to

describe what online instructors should be doing (practices) to deliver

online instruction. There were online instructor skills, abilities, activities,

best practices, competencies and tasks, to name a few. This study defined a

recommended practice as, *an activity, cited at least five times across the*

literature of online learning as important, or key, to the success of student

achievement of learning objectives in an online course. A single practice

described in the literature may have required a set of skills and abilities to

achieve, and several works described very detailed competencies (Varvel

2007; Smith, 2005), but it was the broader context of recommended

practices, rather than specific skills for online instruction, that were the

focus of this study.

Organization of the Thesis

Chapter 1 provided a brief overview of global trends in online learning and

higher education practices, discussed implications of the lack of consensus

involved in the determination of recommended practices, and established the

study's problem. Chapter 2 was a review of literature describing current online

learning and reviewing the evolution of online learning in the context of adult and

distance education. Research and theories related to emerging technology and

pedagogy, challenges for institutions in quality assurance, and the need for online

instructor training and evaluation were included. Literature relevant to the study's

research design was also included.

Chapter 3 provided a review of 18 references from the literature of online

instruction chosen for qualitative analysis to develop the study's preliminary

instrument. The chapter described how the selections were made, a description of

the process used for analysis, and the resulting preliminary survey instrument for

the study. Chapter 4 described the methodology and research design for the study.

Issues of ethics were included. Chapter 5 narrated the findings of the adapted

Delphi techniques that were used with the participants.. The findings and

discussion were included. Chapter 6 described conclusions, addressed the accuracy and applicability of the final participant-developed set of essential practices, and articulated a call for further research.

Chapter 2 – Literature Review

Introduction

This study examined the practices of online instruction from the perspective of expert online instructors. There were many perspectives on how to approach teaching online in the literature, and many articles that provided methodological advice from the perspective of active practitioners. The literature review explored several different areas of online learning research, theory and practice including: definitions of distance education and online learning; online learning trends; adult, higher education, and distance education theory; practices of quality assurance; and the Delphi Method as a research design. Three perspectives, that of the student, the instructor, and the institution were explored.

Distance Education and Online Learning

There were a wide variety of descriptions of distance education and online learning in the literature reviewed for this thesis, and a wide variety of terms used to describe similar programs. Tallent-Runnels, Thomas, Lan, Cooper, Ahern, Shaw, and Liu (2006) conducted an in-depth review of the literature on online higher education and noted a challenge in the consistency of terminology. Their review was conducted to address an expected increase in the use of web-based teaching and learning models, to assess current research in online instruction and learning, and to help guide effective ways to teach online.

In their review, the authors conducted an extensive search of online learning journals and education databases and arrived at 91 articles. They used a

wide variety of search criteria including: online course and instruction; cyberspace course; e-learning; web-based teaching and over 15 additional variations (p. 94). Fifteen studies were discarded because they related to general distance education, and not specifically online. Forty quantitative and 20 qualitative studies were ultimately selected for analysis.

One of the initial barriers Tallent-Runnels, et al. cited was the number of different terms used to describe online learning, such as web-based education, online classes, hybrid or blended courses, distance education and e-learning. Although the authors found this variety of terms a challenge to conducting a thorough search for related studies, they concluded that there was a common focus in the terminology and research, and that online courses may be identified as a branch or an evolution of distance education.

Archer and Garrison (2010) proposed a definition of distance education that described online instruction as different from face-to-face classroom instruction. The difference, in their view, and in the view of other authors, was significant enough that it required attention to specialized professional development (Rochefort & Richmond, 2011; Bolliger & Wasilik, 2009; Bates & Watson, 2008). Archer and Garrison (2010) stated,

> Distance education is all planned learning that normally occurs in a different place from teaching, requiring special techniques of course design and instruction, communication through various technologies, and special organization and administrative arrangements (p. 317)

This definition did not attempt to define a specific environment of learning, or

technology involved. Archer and Garrison stated that distance education took

place where students and the instructor were simply in different locations. The

distance was enough, from the authors' perspectives, to warrant special techniques

of design and instruction, a frequent statement across many chapters, articles and

studies in the literature (Anderson 2008a; Swan, 2010; Garrison, Anderson &

Archer, 2000).

One of the purposes of Archer and Garrison's (2010) chapter was to

describe the history of distance education from the perspective of communication

channels that have connected students and instructors over time. They classified

types of two-way communication into three generations of distance education. The

first generation was described as slow asynchronous. It required the use of the

postal system for students to register for courses, receive materials, and submit

assignments. The second generation, was called synchronous, and was closest to

traditional classroom instruction. Students and the instructor were communicating

at the same time by live (real-time) teleconference or web conference

communication methods. The third generation was fast, asynchronous, described

by Archer and Garrison as, "a mode of communication enabled by advances in

personal computing, and particularly the evolution of the WWW" (p. 322).

Archer and Garrison's (2010) description of distance education generations

also illuminated the importance and influence that twenty-first century advances in

communication held for distance education and global dissemination of

information. Their chapter highlighted the need for competency in learning

design, e.g., choice of course resources such as readings; writing and organization

of content; choice of examples such as images, diagrams, and audio or video

components; choice of practice-based activities, collaborative activities, and

simulations or other interactive elements; and methods of assessment that would

be used to establish achievement of stated learning objectives. In addition, the

authors described instruction methods that supported effective utilization of

emerging communication tools in higher education. It was Archer and Garrison's

Generation 3, fast, asynchronous description that aligned most closely with the

course design and delivery methods of the participant institution for the thesis.

     Swan (2010) provided a description of online learning in her chapter that

explored the differences between Industrial Era and Post-Industrial Era distance

education. Her study was both literature and practitioner-based. She stated, "as it is

practiced at the post-secondary level, Post-Industrial distance education is different

enough that it is most commonly referred to as 'online learning' to distinguish it

from Industrial Era 'distance education' (p. 108). Swan (2010) was making a

distinction between eras and delivery methods of distance education. In her view,

Industrial Era focused on correspondence-type courses that provided students with

books and readings for self-guided study with culminating exams. Post-Industrial

focused predominantly on instructor-led, online, and asynchronous delivery

methods. There was alignment between Swan's description of Post-Industrial

methods of design and delivery, and the practices of the participant institution for

the thesis. In addition, the participant institution used the term "online learning" to

describe its courses and programs.

Online Learning Trends

Since 2002, Allen and Seaman (2012) have supplied an annual survey-based report for the Sloan Consortium, a U.S. organization that represents online learning individuals and institutions. These reports have been widely cited in the literature of online learning (Bangert, 2008; Pagliari, Batts, & McFadden, 2009; Varvel, 2007, Larcara, 2010), primarily for their statistics regarding the growth of student choice for online learning. In their 2012 report, Allen and Seaman described potential survey participants as public degree-granting, higher education institutions and cited a total number of 4,527 possible institutions. The 2,820 responses received in the 2012 survey, represented a participation rate of 62.3% (p. 32). Data from the participants indicated a current high of 6.7 million students taking at least one online course, a 9.3% increase from 2011. This 9.3% increase was described by the authors as the lowest percent increase in the history of their reports, but similar to last year's growth rate. (p. 4)

As evidence that higher education institutions acknowledged this growth and trend, the authors reported that 69.1% of the institutions responding to their survey in 2012 stated that online learning was a critical part of their long-term strategy (p. 16). Allen and Seaman's 2012 report statistically demonstrated the growth of online learning and confirmed its importance as part of strategic planning for many U.S. higher education institutions. Adding data about the perspective of institutional administrators and online instruction, the authors asked "Does it take more faculty time and effort to teaching online?" (p. 22). In their findings, Allen and Seaman (2012) stated,

In 2006 40.7 percent of academic leaders reported they believed that it

required more faculty time and effort to teach an online course. Six years

later the belief is held even more strongly – the most recent results show

44.6 percent of chief academic officers now report this to be the case, with

only 9.7 percent disagreeing. (p. 22)

Outside of their finding that institutional administrators believe that online

teaching requires more time and effort, there were no additional questions in Allen

and Seaman's (2012) survey about instructor practices in online courses.

There was another U.S. annual survey, ITC (2012) that tracked online

learning trends for the higher education school year fall 2011 to Spring 2012. ITC

stands for Instructional Technology Council. ITC (2012) claimed that survey data

represented opinion and information from online learning programs for members

of the *American Association of Community Colleges*.

From 375 institutional invitations, ITC received 143 completed surveys,

confirmed by them as, "an acceptable response rate, and an acceptable distribution

of completed surveys from a range of institution sizes and locations" (p.6). ITC

(2012) specifically targeted distance education administrators at the as participants

to complete the survey. ITC asked a variety of administrative questions, e.g., what

are your greatest challenges in distance education administration, what learning

management system do you use, what is your level of confidence in accessibility

compliance, what is the status of your student support programs, what are your

challenges with distance education Faculty and more. Findings from this survey

indicated the following trends among the online learning administrators:

- The two greatest challenges for online learning administrators were "Adequate student services for distance education students" and "Adequate assessment of distance education classes." (p. 9);

- BlackBoard® was listed as the predominant learning management system (LMS) reported, at 52%; however, 36% of participants indicated they were considering switching their LMS in the next few years (p. 9);

- A trend away from fully online course delivery toward blended and hybrid deliveries was noted, 55% of reporting institutions stated that they would continue to increase the number of blended/hybrid courses each term (p. 14);

- The two greatest challenges facing online learning faculty were listed as 1. Workload, and 2. Training, by the participants. Training was the number 2 challenge in the previous year's survey, workload has risen as a higher concern (p. 16).

The following observations and trends were reported in the ITC (2012) survey findings:

- demand for online learning continues to grow at a rate much higher than demand for traditional courses;

- institutions see a pressing need to address course quality and design, faculty training and preparation, course assessment, and better student readiness and retention;

- many campuses continue to lack compliance with accessibility legislation for online materials and instruction (p. 20).

An encouraging finding was that the gap between retention rates in classroom and distance delivery was narrowing (ITC, 2012, p. 20). Community colleges in the U.S., the participant institutions for ITC's survey, were comparable in higher education focus and approach to the current study's participant institution.

In addition to the examination of Industrial and Post-Industrial distance education, Swan (2010) provided some observations and statistics about the shifting global landscape of knowledge and information [online learning trends]. She cited that 108,810,358 distinct publicly accessible websites [a number that has surely expanded significantly since 2010], containing approximately 29.7 billion pages of information, were available to those with Internet access. She indicated that this type of growth provides educators with the opportunity, and possibly the responsibility, to help students make sense of an overabundance of information and to support their efforts to use it to create knowledge (p. 111). She also described Wikipedia's success and model with "over 75,000 active contributors working on over 10 million articles in 250 languages read by more than 684 million visitors a year" (p. 112). She stated that, "large-scale collaboration, and not the individual labors of an elite few, will drive knowledge creation in the 21st century" (p. 112).

Higher, Adult and Distance Education Theories Related to Practice

The literature reviewed for this thesis indicated that online learning was very much in the early stages of pedagogic and technologic development (Anderson, 2008b; Garrison & Akyol, 2009; Anderson & Dron, 2011). Despite this early stage of development, the literature included discussions of learning

theory and recommended practices for instructors engaged in online learning

(Smith, 2010; Varvel, 2007; Boon & Sinclair, 2010). Several authors

recommended that the practice of online instruction be rooted in established

higher, adult, and distance education theory (Cleveland-Innes, 2010; Swan, 2010;

Garrison & Archer, 2009).

Anderson (2008a, 2008b), Swan (2010), and Smith (2010) described well-

established higher, adult, and distance education theory and practice as

foundations, or starting places, for online instructors to consider for online

instruction. Anderson (2008a) explained the importance of theory to online

teaching stating, "Good theory builds upon what is already known, and helps us to

interpret and plan for the unknown. It also forces us to look beyond day-to-day

contingencies, and ensure that our knowledge and practice of online learning is

robust, considered and ever-expanding" (p. 46). The self-examination of practices

with the participants in this study may have helped to establish the day-to-day

contingencies at the participant institution. Once established, the participants

might be better prepared ensure their practices are robust, and to consider the ever-

expanding possibilities.

Several articles highlighted the unique instructional strategy potential that

online learning presented, and therefore the unique professional development

opportunities for online instructors to explore (Henry & Meadows, 2008; Zsohar &

Smith, 2008; Boon & Sinclair, 2010). Swan (2010) held that one of most

compelling advantages of the evolution of the World Wide Web was the

possibility for online instructors and online students to build new knowledge in

true social constructivist models. This shift to student-centred, networked models in online learning was the focus for several authors (Trentin, 2010; Siemens, 2008; Garrison & Akyol, 2009).

Smith (2010) addressed current adult education theory, particularly the strong move toward constructivist and social-constructivist models of teaching and learning, in all modes of adult education delivery [including online learning, although it was not specifically addressed]. She found that a primary challenge for adult educators was the disparity between espoused theories and theories in use, and a "separation of mind, body and spirit in learning" (p. 148). Smith recommended an intentional change in perceptions of teaching and knowing, and advised that instructors should be conscious that facilitative models of teaching and learning [which may also include online learning] were not only new for them, but new for most students. This "newness" required additional guidance and support from instructors as well as an adjustment to new perceptions of power in education. Smith (2010) advised that, "a change to learner-centred instruction, therefore, requires a change from foundational educational to nonfoundational models, or a change in teacher epistemological beliefs" (p. 148).

There was strong agreement in the literature that the quality of online courses did not rest with emerging technology, but rather with the potential of technology to support and enable sound pedagogic approaches (Swan, 2010; Garrison & Akyol, 2009; Anderson & Dron, 2011; Cleveland-Innes, 2010). Among some authors, there were critical views regarding emerging technologies, and calls for additional research. Some authors felt that a closer examination of the

large variety of education-specific, and communication technologies emerging was

needed to determine if they were truly effective tools in an online teaching and

learning context (Garrison & Akyol, 2009; Anderson, 2010).

Anderson (2010) provided a review of emerging technologies in distance

education using a theory perspective. Describing a clear connection between

constructivist theory and applied online learning practice, he emphasized that

active, engaged learning in online delivery methods is critically important, and that

diverse student and instructor perspectives in sustained dialogue lead to effective

online learning. Anderson added, "learning happens most effectively when the task

and context are authentic and hold meaning for the learners" (p. 27). This

articulation of tenets for the design of online learning [linked with the delivery of

online learning] flowed into definitions of the skills that online instructors needed

in order to demonstrate online learning theory-based approaches.

Examples of Anderson's specific online instructional practices included the

following: focusing on problems and active inquiry techniques with learners;

helping and encouraging learners to explore the abundance of available

information in the world and to discern validity; upholding learner capacity to add

user-created content to courses and to edit and enhance the work of others; and

supporting learners "in a journey to capacity rather than competency" (p.33).

Anderson (2010) examined several learning theories in the context of

emerging technologies, and articulated pedagogic practices that might be

considered by institutions and instructors. Describing Complexity Theory,

Anderson stated, "Complexity Theory teaches us to look for the emergent

behaviours that arise when autonomous, yet interdependent organisms interact with each other" (p. 28). Anderson's applied context for this theory in pedagogic practices included the concepts that social structures must be created to manage learning, organizational structures within courses should not limit or constrain the actors engaged in the learning process, and the actors should be encouraged to "surf at the edge of chaos." (p. 28) As a second example of learning theory, Anderson described the Pedagogy of Nearness as, "the capacity of learning to flow seamlessly between online and face-to-face contexts…online interaction is neither valued nor devalued as compared to interactions with those near at hand" (p. 32). This description was paired with Anderson's applied advice that learners and instructors must develop strategies and literacies to help them be effective in both online and off-line learning contexts and be able to shift effectively between those contexts (p. 33).

As part of Archer and Garrison's (2010) review of the communication evolution of distance education, they discussed several theories of distance education and related them to their three generations framework (the three generations were slow asynchronous, synchronous and fast asynchronous). Theories they included were Peters' (2007) evolving theory of distance education as an industrial process, Moore's (2007) Theory of Transactional Distance, and the authors' own Community of Inquiry Theory (Garrison, Anderson, & Archer, 2000). Archer and Garrison's inclusion of Peters' theory, described as "an industrial process, involving systematic planning, division of labor, automation, mass production, and economies of scale" (p. 58), provided a practice-based

context for a typical "centralized" model of online course design and delivery. The participant institution for the current study develops online courses with a centralized, team approach, including instructors as collaborative partners. The set of essential practices, an outcome of the current study, supported an understanding of the online instructor's role within an industrial model of the development and realization of an online distance course.

Archer and Garrison (2010) simplified Moore's (2007) Theory and found that, "more dialogue reduces the transactional distance" (p. 323), the proposition that students and instructors felt more in real relationship and less "virtual" when discussion took place through a variety of communication channels. The application of this theory for online learning, and for the current study, suggested an emphasis on essential practices that encouraged dialogue.

A third, and key, theory in Archer and Garrison's (2010) chapter was their own Community of Inquiry Theory, which described elements of social, cognitive, and teaching presence ideally combined for quality online learning. Most relevant to the current study was the statement that, "The third element, teaching presence, describes the techniques facilitators use to ensure that the proximate goals (social presence) and ultimate goals (cognitive presence) are attained" (p. 324). These "techniques" used to attain goals, may be translated into the recommended practices of online instructors.

Garrison and Akyol (2009) explored the relationship between collaborative constructivist ideas and instructional technologies, which they believed were transforming higher education. Using the Community of Inquiry framework

described above, they articulated ways that higher education had promising potential to benefit from a fundamental shift to student-centered ways of teaching and learning, but contended that, "To date, the impact of instructional technologies has not reached the tipping point in terms of transforming higher education" (p. 25). Their concluding remarks summarized the key points of their position, that educators must gain insight into the ways that technological breakthroughs can create and sustain learning communities, and that educational leaders must display courage supporting the transformation of higher education practice (p. 27).

Garrison and Akyol's (2009) concluding remarks were supported by several studies and articles reviewed for the current study (Bates & Sangrà, 2011; Anderson 2010; Hartman, Dziuban & Brophy-Ellison, 2007). Garrison and Akyol believed that educators and educational leaders needed to support the evolution of technology-based instruction in order to build and sustain educational communities of inquiry.

Quality Assurance

Several studies identified the skill of online instructors as a key factor in the quality of online courses (Bangert 2008; Cook; 2007; Li & Irby, 2008); however, there were few studies or articles that specifically addressed quality assurance or evaluation practices in online teaching and learning. According to Menchaca and Hoffman (2009), the recent onset and rapid growth of online learning has left institutions with little time to establish policies and procedures for ensuring the quality of online instructors (p. 46).

Chua and Lam (2007) described their institution's practices of quality assurance (QA), in part, to establish their program as a competitive equal to "brick and mortar" universities. They emphasized that formal quality assurance practices have become increasingly important and serve to allay stakeholder concerns about the overall effectiveness of online learning. They described their institution, Universitas21 Global (U21G), as having a rigorous QA program that targeted the following five areas: content authoring; courseware development; adjunct faculty recruitment; pedagogy; and delivery. U21G's focus on the quality of online instruction began with recruitment and hiring processes (ensuring all online instructors held PhD level education and scanning resumes for prior online instruction experience), continued with extensive pre-instruction training, and concluded with detailed monitoring and evaluation of online instructors from student and institutional standard perspectives. Online instructors that did not comply with clearly stated standards or respond to formative evaluation findings were not invited to instruct again. Chua and Lam (2007) noted, however, that the QA processes used at U21G were expensive and time consuming.

Crow, McGuinty, and LeBaron (2008) described a formative quality assurance procedure for online instructors called the Online Small Group Analysis (OSGA) that they used in their institutional practice. In the introduction to their article they stated that formative evaluation and assessment is valuable in all instructional delivery modes, but that it is particularly important for the new practice of online learning. The authors felt it was important both because the practice is new, and represents a mode of instruction that may reduce student

feedback [compared with traditional classroom visual feedback such as student facial expression and body language] for the instructor.

Crow, McGuinty and LeBaron (2008) addressed challenging issues of instructor evaluation by providing a tested solution. The OSGA method was conducted in response to a voluntary request from an online instructor to improve his or her teaching practice. The authors conducted internal action research at their institution, using several instructor cases, to assess the effectiveness of their method. While admitting that the tool needed refinement, the authors concluded the OSGA offers one new measure of instructional quality in an era marked by a rapid growth of online learning programs.

Endean, Bai, and Du (2010) reviewed a variety of organizations that claimed to offer online learning evaluation standards in order to confirm whether or not a global "standard" was emerging, as well as to prompt debate on how online learning programs might approach quality assurance in an era of exceptionally rapid online learning growth (p. 55). They sought a clear definition of quality, and stated first that "Quality is an elusive concept" (p. 53), but settled on a definition that "quality means identifying the needs of the student, then taking steps to meet those needs" (p. 54).

In their study, Endean, Bai and Du (2010) compared websites and documents from ten unique global organizations, including European, African, United Kingdom (UK), U.S., and Chinese sources, that claimed to provide standards of quality in online education. The authors sought to determine if a "universal standard" for quality in online learning was emerging. The

organizations reviewed presented a range of quality assurance models and practices. In the UK, for instance, they identified the Quality Assurance Agency for Higher Education (QAA) as having the power to ensure that individual Higher Education Institutions (HEIs) were taking responsibility for "identifying good practice and making recommendations for improvement" (p. 56). They described how the QAA acted on this power by providing quality management guides including the "Code of Practice" that covered a variety of areas such as program design, assessment of students, and students with disabilities.

Endean, Bai and Du's review of the quality assurance practices of the Open University of China (OUC) revealed that the management of the quality of distance learning referenced five core elements (teaching resources, delivery processes, learning support and student services, teaching administration, and teaching infrastructure) and that three of the five core elements referenced the quality of instruction. The authors described a complex, hands-on quality management system at the OUC called the "97 Policies and Documents," and confirmed that it was a top priority for the OUC to revise and simplify their practice through alignment with an international standard.

However, conducting a similar level of detail and description of European and U.S. quality standards, Endean, Bai and Du (2010) indicated that individual and diverse approaches to design and delivery pointed toward a need for internal standards and evaluation procedures unique to each institution. These internal standards could then be compared with whatever arose as an external "standard" for the field of online education, thereby improving a global standard of quality.

Institutional Perspectives

While the literature represented both institutional and instructor perspectives about recommended practices for online instruction, there was little agreement on how such practices should be defined, supported with professional development opportunities, or used for evaluation. For a variety of emotional, political, administrative, and labour-related reasons, institutions and instructors often presented different perspectives of what academic quality meant, and how that quality might be evaluated in an online learning context (Li & Irby, 2008; Goolnik, 2006; Bedford, 2009, Tipple, 2010). The existence of these diverse perspectives challenged institutions and instructors to engage in collaborative planning, or agree on course design and instructional strategies for quality online instruction. The method of this thesis targeted an opportunity for the participants to engage in a consensus-building activity, and develop a set of essential practices for online instruction that might eventually be used for institutional professional development and support.

Studies pertaining to the professional development, support, and evaluation of online instructors were scarce (Tallent-Runnels et al, 2006). Although there was consensus that training and support of online instructors was important (Pagliari, Batts & McFadden, 2009; Puzzifero & Shelton, 2008; Goolnik, 2006; Rochefort & Richmond, 2011), few examples were provided of successful or proven programs that clearly demonstrated the connection between online instructor training and quality online instruction.

Pagliari, Batts, and McFadden (2009) conducted a small qualitative study that provided an example of current practice and the need for online instructor training [their term for professional development]. They surveyed online faculty at two-year colleges in the U.S. on the types of training available for the online instructor participants. They also asked how often instructors participated in training. Of the 22 respondents in their research, approximately 40% had not attended any type of training, and that rates of participation for internally offered training were consistently below 20%. They recommended that institutions needed more effective mentoring and web-based training opportunities for online instructors, and emphasized that distance education administrators needed to develop a more consistent and modern infrastructure.

Cook (2007) described the experiences of 18 potential online instructors being trained in an immersive online environment, demonstrating the importance of high quality training for online instructors in the same environment they would use for teaching. The purpose of her action-based research study was to work with learners while they were taking an online course in order to develop a method for analyzing online discourse archives. The purpose of this analysis was to determine if students and instructors were building content and activities together. Cook encouraged students to develop and contribute to a "hypertext archive," which represented a variety of discourse tools, including forums and journals.

Cook (2007) conducted both qualitative and quantitative analyses of the online discourse archives. She posed the question, "What do prospective online instructors need to know, and what should they be able to do, before they welcome

their first students into an online teaching environment?" (p. 79). The subjects in

her study explored these questions through experiential learning. They used

discussion forums and reflection journals to document their challenges as they

"walked in student shoes" through an unfamiliar learning environment. Cook

reported that students learned to "post by posting, to chat by chatting and to build

an online class by actually building one" (p. 79). Cook's study reinforced the

findings of other research in distance and adult education (Anderson, 2010;

Garrison & Akyol, 2009; Swan, 2010) and asserted that educational technology is

a means to a pedagogic end. Cook asserted that effective pedagogic use of

technology, and the adoption of recommended practices, would lead to quality

construction and instruction of online courses.

Rochefort and Richmond (2011) described institutional concerns about

support and professional development of online instructors from the perspective of

experienced online instructional designers. The purpose of their research was to

address the role of the instructional designer in faculty and online course

development by examining some of the challenges for all collaborators in design

and delivery. A key question in their study was, "Why bother with connected

professional development?" In their findings, they articulated a view of emerging

social networking practice in online learning and its impact on teaching and

learning for students and instructors. Their primary recommendation was that

online instructor professional development be conducted in partnership with

instructional designers, online (in an immersive environment), following a

connectivist learning approach. During their exploration, they also found that, "In

addition to the potential for creating better instructors, professional development

can create better learning experiences for students" (p. 227).

Rochefort and Richmond (2011) admitted that there was no single solution

for supporting online instructors to approach professional development. They

recommend an immersive, collaborative method that involved an online

instructional designer, content and activity-based representations of new ideas in

teaching and learning, and identification of the most effective delivery methods to

support online faculty professional development (p. 223).

Student Perspectives

Little research has been conducted to date on student perspectives

regarding the quality of online instruction, or the practices online instructors

should be engaging. Young (2006) conducted a study of effective online teaching

with 199 undergraduate and graduate online student participants. The participants

completed a 25-item questionnaire containing correlates of effective teaching,

combined with characteristics of online teaching, and identified a list of items that

described effective online teaching. The study found that, from the student

perspective, the following contributed to effective online teaching, "adapting to

student needs, providing meaningful examples, motivating students to do their

best, facilitating the course effectively, delivering a valuable course,

communicating effectively, and showing concern for student learning" (p. 73).

Many of the online instruction practices described in Young's findings formed the

basis of the preliminary instrument for the thesis study.

Bangert (2008) cited several studies evaluating the effectiveness of online teaching, and noted that a major limitation was the lack of "psychometrically sound instruments" (p. 27) to assess the perspective of students in an online course. To address the lack of a "sound" instrument, Bangert developed the Student Evaluation of Online Teaching Effectiveness (SEOTE). The SEOTE instrument was validated using 807 responses from mixed undergraduate and graduate students in online courses. The instrument consisted of 23 items that asked students about their experience of the online instructor and the online course. Due to its specific and validated references to recommended practices from the student perspective, Bangert's (2008) SEOTE instrument was used in the thesis study as one of the literature sources for qualitative analysis for the preliminary Delphi Method instrument. A more in-depth review of Bangert's findings is included in Chapter 3 of the thesis.

Instructor Perspectives

Several studies described instructor experiences of their transition from traditional to online teaching and learning environments (Bates & Watson, 2008; Boon & Sinclair, 2010; Conceição, 2006; Dykman & Davis, 2008, Henry & Meadows, 2008; Zsohar & Smith, 2008). Three of these studies, Bates and Watson (2008), Henry and Meadows (2008), and Zsohar and Smith (2008) were extremely specific in their recommendations for practices, and are described in Chapter 3 of this thesis.

Boon and Sinclair (2010), practicing online instructors, described their own experiences, feeling out of their element as traditional instructors using social

networking tools to deliver and analyze discourse as part of professional

development for their academic peers. Their article told the story of their

participants [academics transitioning to online teaching roles], immersed in action-

based research. Describing their intent, Boon and Sinclair stated, "In exploring

transformation in transition from traditional spaces to networked learning

environments, we seek to highlight how academics are variously encouraged or

discouraged, inspired or hindered, empowered or disconnected" (p. 52). As part of

their narrative, Boon and Sinclair provided the following example of how a dual-

mode instructor felt about her multiple roles:

> My day is divided in two: in the morning I stand in front of a class full of
>
> students, teaching in a traditional classroom to a traditional audience, but in
>
> the afternoon I'm online and then it's all different - I'm a different "kind" of
>
> teacher then with a different 'kind' of audience in a space that's anything
>
> but traditional (p. 55).

This example illustrated the confusion that online instructors working in dual-

mode institutions often experienced in their practice, and highlighted the challenge

of working with "one foot in the real and the other in the virtual world" (Boon &

Sinclair, 2010, p. 55). The authors' use of narrative, based on archives of their

training process, illuminated the emotional issues that might arise in academic

instructor transition from classroom to online teaching. Their article also aligned

with findings from other literature sources in this thesis, that online teaching was

"different" from traditional teaching, and required special techniques for effective

delivery.

Puzzifero and Shelton (2009) provided an update on an earlier report, (Puzzifero-Schnitzer, 2005), on institutional practices that supported online instructors. They combined their experience with research evidence from the literature and concluded that, since 2005, online teaching and learning, as well as the higher education landscape, had changed and was continuing to be transformed. The authors stated that it was important to reexamine what changes to faculty role, position, and perspective best supported the changing values of higher education in an online learning context (p. 1).

Both studies, (Puzzifero-Schnitzer, 2005; Puzzifero & Shelton, 2009), used Chickering and Gamson's (1991) *Applying the Seven Principles of Good Practice for Undergraduate Education* as the basis of a checklist to support and communicate with their online instructors during the transition from traditional teaching to online instruction. The seven principles were described by Puzzifero and Shelton, they stated that good practice: encourages contact; encourages cooperation; encourages active learning; provides prompt feedback; emphasizes time on task; communicates high expectations; and respects diverse talents and ways of learning (Puzzifero & Shelton, 2009, pp. 5-12).

Chickering and Gamson's (1991) principles have been used in other studies to evaluate whether or not instructors were applying good practice in their teaching (Cobbett, 2007; Pagliari, Batts & McFadden, 2009; Schulte, 2009); however, it was an unusual choice to use the principles as a means for instructors to evaluate institutional engagement and support of faculty. In their conclusion, Puzzifero and

Shelton (2009) explained their reason for using the principles in this way, and stated the following:

> There is an abundance of literature written on what factors contribute to an effective learning environment for students. However, if you are involved in faculty support and development, every time you read those articles, you should replace the word *student* with *faculty*. In many ways, online adjunct faculty are exactly the same as online students (p. 12).

Bolliger and Wasilik (2009) conducted a study to identify factors affecting the satisfaction of online faculty at a small research university. Part of their study focused on the validation of an instrument to measure faculty satisfaction in the context of online learning, which they defined as the perception that teaching in the online environment is effective and professionally beneficial (p. 105). The researchers developed an online faculty satisfaction survey consisting of 36 items including 28 questions with 4-point Likert-type scale. Items regarding student, instructor and institution issues were included. Based on results from 102 participants, they reported the following conclusions:

- Quality is important in the delivery of all courses and programs, regardless of the environment in which they are delivered (p. 104);

- Faculty satisfaction is generally high when the institution values online teaching and has policies in place that support the faculty (p. 106).

These findings indicated that the faculty members who completed Bolliger and Wasilik's (2009) survey valued quality in instruction (any environment), and were more satisfied when their institution considered online teaching valuable and

demonstrated that value through supportive policies. These faculty values were echoed in other studies across the literature (Larcara, 2010; Tipple, 2010; Meyer & Barefield, 2010).

Hartman, Dziubian, and Brophy-Ellison (2007) explored the new role of online instructors within the context of Net Generation students. They described the general characteristics of Net Gen students as follows: between 12 and 25 years old; they use of a range of technology and information sources that may be new to their instructors; their writing capabilities and preferences may not align with higher education expectations; and they are much more graphic-oriented (visual learners as opposed to text learners). The researchers observed that faculty roles and Net Generation student expectations were changing rapidly in new technology-rich teaching and learning environments, leaving some faculty feeling, "a bit like the character Valentine Michael Smith in Robert Heinlein's 1961 novel *Stranger in a Strange Land*" (p. 62).

Hartman, Dziubian and Brophy-Ellison (2007) provided peer advice, "online instructor to online instructor," and described several perspectives of teaching excellence. They contended that a full understanding of teaching excellence was a complex undertaking, and that consideration of Net Generation students, who value recognition, respect, responsiveness, and reward from teachers, and variety of alternate perspectives from higher education stakeholders, such as CIOs, campus administrators, faculty and parents of students, would need to occur. They added that there would be both common ground and great divergence among these stakeholder perspectives.

Several implications for this thesis resided in Hartman, Dziubian, and Brophy-Ellison's observations, and in the observations of other literature sources reviewed, as follows: that teaching and learning are changing; that students are changing in their expectation of technology use and knowledge among instructors; and, instructors need guidance (guidelines, training and support) to help them navigate the "strange land" of online instruction (Anderson 2010; Swan, 2010; Garrison & Akyol, 2009; Boon & Sinclair, 2010).

Hartman, Dziubian, and Brophy-Ellison's indication that there would be great divergence of opinion among stakeholders about online instruction practices, supported the researcher's design choice in this thesis to focus on one group of stakeholders, expert online instructors at the participant institution, to develop a set of essential practices.

Delphi Method

The use of the Delphi Method for quantitative education research has been described by a number of researchers as an effective, convenient, and valid choice where the purpose of the research is to articulate, distill, and confirm expert opinion (Skumolski, Hartman & Krahn, 2007; Franklin & Hart, 2007; Manizade & Mason, 2011; Larcara, 2010).

Skumolski, Hartman, and Krahn (2007) provided a literature review of the use of the Delphi Method for graduate research. They described the history and general use of the Delphi Method in a variety of disciplines, with particular emphasis on their positive experience using the method for graduate research in information systems (IS). They defined the method as "an iterative process to

collect and distill the anonymous judgments of experts using a series of data collection and analysis techniques interspersed with feedback" (p. 1). They described the Delphi Method's origin in the RAND Corporation as part of a military project in the 1950s to obtain expert opinion across a variety of issues.

Four key features and benefits of the classic Delphi Method were described by Skumolski, Hartman, and Krahn as follows:

1. Anonymity: allows the participants to express their opinion without peer influence.

2. Iteration: allows the participants to refine their views in light of the progress of the group round by round.

3. Controlled feedback: informs the participants of the other participants' perspectives and provides the opportunity for them to change their views.

4. Statistical aggregation of group response: allows for a quantitative analysis and interpretation of data (pp. 2-3).

Skumolski, Hartman and Krahn (2007) also found the Delphi Method to be a mature and adaptable research method. As part of their literature review, the authors generated a table categorized by Study Title, Delphi Focus, Rounds and Sample Size, across seven non-IS/IT (Information Systems/Information Technology) studies, and eight IS/IT studies. Among the non-IS/IT studies, the number of rounds and number of participants varied significantly and the authors observed that there was no "typical" Delphi Method. The authors also found that the Delphi Method was used across a wide variety of research areas, and believed

that the research reports they reviewed represented valid findings through the use of the Method.

Skumolski, Hartman and Krahn (2007) stated that expertise criteria in selecting participants may address a range of considerations and options but that participants selected for the Delphi process should meet four requirements: i) knowledge and experience with the issues under investigation; ii) capacity and willingness to participate; iii) sufficient time to participate in the Delphi; and iv) effective communication skills (p. 10). The authors stated it was an important aspect of a Delphi Method to include the instruments used and provide examples of the data collected in a study's final report.

Elements of this study that guided this thesis were the descriptions of expertise criteria for potential Delphi participants, a finding that the Delphi Method was flexible based on the needs of the research and researcher (i.e., there was no typical number of rounds), and anonymity of participants and statistical aggregation of quantitative data were benefits of using a survey-based method.

Other works from the literature described broad methodological considerations for the Delphi Method in a variety of contexts (Manizade & Mason, 2011; Franklin & Hart, 2007) and specific use of the Delphi Method in larger research studies (Egan & Akdere, 2005; Larcara, 2010).

Egan and Akdere (2005) sought to compare graduate student and senior practitioner perspectives of distance education roles and competencies using student data and practitioner literature. They focused on two studies to develop their preliminary Delphi Method instrument and sought student feedback for

purposes of their comparison. The instrument they developed was used to survey a final group of 106 graduate students from 11 U.S. higher education institutions through four rounds of data collection, analysis, and feedback to achieve consensus. The researchers concluded that there was significant alignment in the student and practitioner perspectives of roles and competencies in distance education, however, the students eventually promoted technical expertise higher than practitioners did.

Describing the value of using the Delphi Method in educational research, Egan and Akdere (2007) stated that the method is based on a desire to understand a narrowly defined issue. Of particular relevance to this thesis and participants, was Egan and Akdere's position that when a Delphi study as focused on competencies, it was "aimed at clarifying, updating, and supporting related future development" (p. 92) of those competencies.

The purpose of this thesis was to develop a set of practices [called competencies in several works from the literature reviewed] as a starting place for professional development and support at the participant institution. Egan and Akdere's study provided confirmation that the Delphi Method was specifically recommended for this purpose.

Manizade and Mason (2011) used the Delphi Method to develop an instrument that middle school-level (typically grades 6-8) administrators might use to evaluate Pedagogical Content Knowledge (PCK) for specific and key aspects of geometry teaching ability among math teachers. The researchers found that the Delphi Method was well suited to support a group of experts to examine an issue

and achieve consensus about a given set [given from the literature as a preliminary instrument] of beliefs (p. 191). They reviewed current literature to develop their preliminary instrument, conducting a review of 12 studies that were synthesized to produce a draft definition of the PCK instrument for various aspects of teaching ability. The draft definition was then provided to expert teacher evaluators for the first of a three-round survey review.

Manizade and Mason recommended using a group of 12 to 20 expert participants to allow for attrition, and only achieved five (from 15 initial) participants in all three rounds of data collection. They reported that the difficulty finding experts to volunteer their time was a major limitation of the process and advised that researchers using the approach plan for delayed responses from experts and use online methods for data collection to improve response speed.

With respect to validity, Manizade and Mason (2011) concluded that the Delphi Method helped established the trustworthiness and rigour of their preliminary, literature-based instrument through three rounds of expert review. Although there were many suggested adjustments based on multiple open-ended questions in their process, the core principles of their initial literature-based instrument were upheld by the expert participants.

In this thesis, a similar research outcome occurred, core recommended practices, derived from the literature of online learning were used to develop the preliminary instrument. These recommended practices were strongly upheld by the participants in their survey process. Manizade and Mason's finding that 12 to 20 expert participants were representative of a population within a Delphi Method,

provided confidence that the 39 participants in this research were an effective representation of all online instructors at the participant institution.

Franklin and Hart (2007) described the Policy Delphi Method, a variant of the classical Delphi Method, in order to identify the benefits and limitations of the method for educational research. They stated that researchers use the method to "explore a complex topic with little historical context that requires expert opinion to fully understand underlying issues" (p. 237). The authors had used the Policy Delphi Method in one of their own research studies, Franklin and Hart (2005). The purpose of their 2005 research was to examine academic department chair perceptions about web-based distance education. Through the authors' use of the Delphi Method, the academic chairs eventually distilled 29 predictive statements (from an initial instrument with 76 statements) about web-based distance education across six themes (Franklin & Hart, 2005, p. 213).

Franklin and Hart (2007) confirmed several benefits and limitations described in the extant literature about the Policy Delphi Method and categorized findings from their research by panel selection, questionnaire development, data analysis, and research bias. They stated that panel selection and commitment of panelists was vital to the success of their original study, and the maintenance of interest and motivation among participants was a significant challenge to the research method. Of 22 initial panelists in their study, only 17 continued to the most vital aspect of their work, the final questionnaire.

Franklin and Hart (2007) found the development of the initial questionnaire, based on an extensive review of the literature, was time consuming

and they expressed concern that key issues related to the topic might be missed if they were only recently experienced and not yet in the literature. They highlighted the importance of rigour in developing the preliminary instrument from the literature. Methodologically, they attempted to offset these concerns about the preliminary instrument by ensuring their participants were true experts [whose review would add validity to the items in the instrument], and including an open-ended comment section in their survey to ensure their experts had the opportunity to voice an opinion or include an item that may not have appeared in the preliminary instrument.

Franklin and Hart (2007) found the data analysis process in the Delphi Method was time consuming and labour intensive, particularly analyzing the qualitative [open-ended] responses under consideration for the second-round instrument. The authors also stated that elements of the data analysis process for the Delphi Method were subjective and this presented the potential for researcher bias, particularly in the analysis and decision-making process of qualitative survey responses. They chose a member-checking process in the second-round instrument, asking the experts for confirmation of their analysis, to attempt to offset the potential for researcher bias. An additional limitation of the Delphi Method Franklin and Hart described was a lack of outcome data other than a statistical rendering of participant opinion and perception.

Franklin and Hart's (2007) perspective added effective guidance to this thesis. They found that the benefits of the Policy Delphi Method included the advantage of using experts, adequate time for experts to think and reflect during

each round, and increased ability to remain problem-centered and focused. In addition, the use of survey instruments rather than face-to-face focus groups avoided debate or confrontation, the influence of dominant opinions, and group-influenced thinking. These positive aspects of the Delphi Method, and the benefits for the participants described by the authors, contributed to the rationale for using techniques adopted from the Delphi Method in this thesis.

Larcara (2010) examined the perceptions of online adjunct faculty to ascertain what was important in their work, including issues of finding and retaining work in online teaching, motivation to teach online, and participating in professional development. Through three rounds of a Delphi Method, participants reached consensus on 23 items (from a preliminary instrument containing 32 items) of importance to them including defining quality online teaching, competitive pay, opportunities for professional development, a reasonable guarantee of work and increased respect between adjuncts and full-time faculty.

Larcara recommended the use of the Delphi Method "for problems that are long-range, multi-disciplinary, lacking in theoretical foundation, and urgent" (p. 59). She stated that a flexible Delphi process uses a literature review to formulate a Likert-type scale for the first round as a means of focusing the research quickly on literature derived content. She described her preliminary instrument as a "rich review of the literature" (p. 62). Larcara also found that the use of an online survey tool represented convenience for both the researcher and participants, increased the speed of the Delphi Method process (thereby reducing participant attrition),

allowed for a more diverse participant group, and reduced errors from research processes that might involve transcription (p.62).

Larcara settled on a three-round Delphi for her method and set a rapid analysis pace to increase participant motivation and reduce attrition. Each round was sent to participants, returned to the researcher, analyzed, and sent out again within a cumulative two-week period. Referencing a variety of literature about Delphi validity, Larcara felt that if the experts were shown to be representative of the group or area of knowledge under study, if they were presented with accurate, literature-based instruments, if the method included at least two rounds of data collection and analysis then, "Through inquiry based on the literature, and feedback from the participants, consensus establishes validity" (p. 74).

Larcara's use of the Delphi method to explore concerns among emerging online educators, and her positive descriptions connecting the development of a literature-based preliminary instrument for the review of experts, were contributing factors to the researcher's choice of techniques based upon the Delphi Method for this thesis.

Likert-type Scale

Likert, Roslow and Murphy (1934) presented a reliable means of scoring the Thurstone Attitude scales. Their five-option response has come to be known as Likert-scale, Likert-type scale, or Likert-item, as a questionnaire response method for survey research participants to express their attitudes on a variety of issues. Likert, Roslow and Murphy's (1934) response method has been adopted by many researchers since its original development, and is considered an effective approach

to measure participant opinion and attitudes (Larcara, 2010; Bangert, 2008; Gaytan & McEwen, 2007).

Scheibe, Skutsch, and Schofer (2002) focused on the benefits and challenges of abstract scales in research that seeks to achieve consensus, in particular Delphi Methods. They found that the two most common methods of scaling used in Delphi Methods were simple ranking and a Likert-type rating. Narrowing further, they felt that Likert-type rating scales were quick, easy to understand and psychologically comforting for participants (p. 267).

The most common items listed in Likert-type scale are (5) Strongly Agree, (4) Agree, (3) Neither Agree nor Disagree, (2) Disagree, and (1) Strongly Disagree. In this thesis, a Likert-type scale was used to determine the opinions of the expert online instructors; however, a four-point Likert-type scale was chosen to eliminate the neutral option. Participants were asked to reach consensus on inclusion or rejection of recommended practices for the final set of essential practices. Limiting their responses to either agree or disagree narrowed the focus of opinion and helped ensure consensus.

Summary

Institutions, online instructors and online students are learning, in partnership with researchers, about the new field of online learning. There was strong agreement across the literature that support and professional development for online instructors was key to the success and quality of online programs (Archer & Garrison, 2010; Rochefort & Richmond, 2011; Chua and Lam, 2007). While the literature of historic higher, adult and distance education practices

provided a rich history of research and theory that informed methods of online

instruction (Anderson, 2008a and 2008b; Smith, 2010; Garrison & Akyol, 2009),

there was little empirical research, or consensus, clearly defining a recommended

set of practices for online instruction.

From the institutional perspective of online learning, the literature pointed

to challenges in developing and delivering professional development for online

instructors, and motivating online instructors to participate (Pagliari, Batts &

McFadden, 2009). From the student perspective, there was little research

referencing online instruction practices; however, Young (2006) described student

needs for support and interaction with online instructors, and Bangert (2008)

presented an empirically tested survey instrument, the Student Evaluation of

Online Teaching Effectiveness, that offered one possibility to explore online

student needs.

Within the instructor perspective of teaching online, and in particular

transitioning from traditional teaching to online methods, instructors identified the

need for policy and professional development support for online teaching from

their institutions (Bolliger & Wasilik, 2009). Instructors also identified the

emotional challenges of learning about networked teaching methods, and included

issues of language, identity, engagement and time among their concerns (Boon &

Sinclair, 2010).

A review of online learning trends revealed that online student enrollments

have increased exponentially over the past several years (Allen & Seaman, 2012;

ITC, 2012), and that institutions were now seeing a clear need to address faculty

training and preparation to teach online (ITC, 2012).

The literature describing the Delphi Method pointed to benefits, that it was

an easy-to-design method for a novice researcher, and provided anonymity and

ease of use for participants (Larcara, 2010; Egan & Akdere, 2005). In addition, the

Delphi Method presented some challenges. It was found that the preliminary

instrument was time-consuming to develop, and that participant attrition between

rounds of survey might ultimately reduce the number of experts achieving

consensus (Franklin & Hart, 2007). Finally, as part of a Delphi Method and

survey-based research, the Likert-type scale was described as an effective scale for

measuring opinions, and easy to understand for participants (Scheibe, Skutsch &

Schofer, 2002).

Chapter 3 – Development of a Set of Recommended Practices

Introduction

In Delphi Method literature, many researchers indicated that they

developed an original literature-based preliminary instrument as the basis from

which experts began the process of consensus (Skumolski, Hartman & Krahn,

2007; Franklin & Hart, 2007; Manizade & Mason, 2011; Larcara, 2010). The

literature reviewed in Chapter 2 of this thesis indicated that there was no

"standard" set of recommended practices for online instruction. Therefore, the

development of a literature-based set of recommended practices, derived through

qualitative analysis, was deemed an effective approach as the basis for the

preliminary instrument for this study.

To develop a preliminary set of recommended online teaching practices

[recommended in the literature], 18 published references were identified from the

literature on the practices of online instruction. The references were identified

through the following digital searches:

- the main catalogue of the Athabasca University library was accessed

   with the following search terms: online instruction, online teaching,

   distance education, distance instruction, teaching online, and practices

   of online instruction;

- from the databases list of the Athabasca University Library, the

   Education and Distance Education link was used to access sub-

   resources;

- sub-resources included Academic Search Complete, Ed/ITLib,

  Education Research Complete, ERIC, and Proquest Dissertations;

- Similar search terms to those listed for the main catalogue search were

  used. Additional terms included: instructor perspective online teaching;

  student perspective online teachers (and online instructors); and

  institutional perspective online learning (online teaching);

- from references selected, a review of their reference lists (snowball

  reference process) added to the final set for this analysis;

- a general Internet search was also conducted using the search terms

  listed above to determine if non-academic resources might contribute

  any additional references.

Criteria for including a reference were as follows:

- the reference contained specific recommendations for practical

  activities that online instructors might engage in the delivery of

  online courses;

- the reference represented an institutional, instructor or student

  perspective;

- the reference was published between 2002 and 2012; and

- the reference was in a published book or was an article from a peer-

  reviewed journal.

Details for each reference are listed in Table 1 *Summary of the Selected References*

in the Qualitative Analysis Literature section of this chapter. In the context of

emerging and scarce research on the practices of online instruction, the 18 references selected were considered a representative sample.

Description of the Qualitative Analysis

A qualitative analysis process was undertaken to extract phrases from the selected references described in this chapter. The following steps describe the reading and coding process used to extract relevant phrases for the analysis:

- the researcher read each reference a through, highlighting key phrases that described applied activities or practices of online instruction. Criterion for selection was that the phrase specifically and uniquely described a task that online instructors might perform during online instruction;

- beginning alphabetically with the first reference, the researcher assigned codes to the highlighted phrases based on categories of online instruction practices. For example, an initial code assigned in Anderson (2008a) was APK, Assess Prior Knowledge, and was tied to this phrase, "Thus, a teacher makes efforts to gain an understanding of students' prerequisite knowledge, including any misconceptions that the learner starts with in their construction of new knowledge" (Anderson, 2008a, p. 47). Further on alphabetically, in Cobbett (2010), the same code, APK was assigned to this phrase, "Information related to students' learning styles, interests or backgrounds are sought at the beginning of each course" (p. 2326);

- the researcher kept a list of emerging codes and input plain-text versions of the literature references and emerging codes into digital format using the qualitative research capture and analysis software HyperResearch[©]; and

- an initial code book of 70 codes was developed within the HyperResearch©

  software, and was reduced through grouping of similar codes to 57 final

  codes. For example, a code titled SPE by the researcher, Set Participation

  Expectations arose in one reference, but was combined with, SSE, Set

  Student Expectations, as it was considered a similar and effective

  description of the practice.

These steps were undertaken for each of the 18 references. All references were

reviewed once all codes were input and merged, to confirm that the 57 codes

continued to be appropriate to the phrases they represented.

Qualitative Analysis Literature

Table 1 provides information for each reference selected for the qualitative

analysis and includes: the author(s); title; the cited purpose; type of publication;

and research method (if applicable). The types of references used were described

using American Psychological Association (2010) terms as follows: chapters from

books; and journal articles that included empirical studies, literature reviews, and

methodological articles.

Table 1

Details of the 18 Selected References

Author(s)	Title and Purpose	Type	Methodology
Anderson (2008a)	"The intent of this chapter is to look at learning theory generally, and then to focus in on those attributes of the online learning context that allow us to focus and develop deeper and more useful theories of online learning." (p. 45)	Book Chapter	No specific research was reported in this chapter. It represented the author's cumulative research and practice-based experience and an extensive reliance on the literature of distance education theory

Author(s)	Title and Purpose	Type	Methodology
Anderson (2008b)	"This chapter focuses on these component parts of teaching presence, by defining and illustrating techniques to enhance this presence and providing suggestions for effective teacher practice in an online learning context." (p. 346)	Book Chapter	No specific research was reported in this chapter. It represented the author's cumulative research and practice-based experience and an extensive reliance on the literature of distance education theory and instructional practice
Aubteen Darabi, et al. (2006)	"…to present the findings of the study and discuss the implications for recruiting, selection and training purposes." (p. 107)	Empirical Study	• Literature based survey • 20 competencies for validation • Participants - online instructor experts, n=18
Bangert (2008)	"to develop and validate the Student Evaluation of Online Teaching Effectiveness (SEOTE)" (p. 25)	Empirical Study	• 35 item Likert -scale questionnaire • Chickering and Gamson (1991) *7 Principles* instrument • Round 1 = 498 undergraduate and graduate students enrolled in fully online or blended courses across a variety of disciplines • Round 2 = 807 students similar to first round • High quantitative validity
Bates & Watson (2008)	"…little coverage of the challenge to professors to re-learn how to teach is available. The purpose of this paper is to address this gap in the literature and to highlight the areas in which traditional teaching will be challenged." (p. 38)	Methodological Article	Referenced 28 sources from the literature
Bawane & Spector (2009)	"to explore the research literature pertaining to online instructor competencies that might prove useful in developing training and curricula for online teachers in India and elsewhere." (p. 384)	Empirical Study	• Comparison of Literature to derive a "Comprehensive List of Roles" (p.390) • 15 studies compared • Priority Ranking of the roles by experts (n=21 of 30 contacted) via questionnaire

Author(s)	Title and Purpose	Type	Methodology
Cobbett (2007)	"focus on the application of an evaluation matrix that will provide faculty with an evaluation tool that is easy to use and grounded in the known best practices related to online teaching and learning." (p. 2324)	Methodological Article	Referenced 18 sources from the literature
Egan & Akdere (2005)	"to further clarify distance learning roles and competencies through the exploration of advanced graduate student-practitioner perspectives and comparison to those of experts and scholars in the field." (p. 88)	Empirical Study	• Delphi Method • Literature based instrument describing 12 roles • Participants n=106 graduate students in distance learning practitioner programs from 11 universities in the central U.S.
Fish & Wickersham (2009)	"factors identified in this review of literature serve as reminders that should be considered by higher education faculty to enhance the quality of their online courses." (p. 279)	Literature Review	The authors examined 20 references from the literature and organized findings into five main categories
Gaytan & McEwen (2007)	"to better understand the instructional and assessment strategies that are most effective in the online learning environment." (p. 119)	Empirical Study	• Descriptive research • Faculty and students in online courses • Survey Questionnaire • Participants: Faculty n = 29 of 85 Students n = 332 of 1963
Henry & Meadows (2008)	"This list is not intended to be an exclusive set of principles or a comprehensive guide to online teaching. Rather it is a collection of important ideas and suggestions for teaching excellence in the online world." (p. 75)	Methodological Article	• Referenced 43 sources from the literature

Author(s)	Title and Purpose	Type	Methodology
Pagliari, Batts & MacFadden (2009)	"…this study seeks to investigate preparation and best practices among faculty of technology-oriented coursework in North Carolina Community Colleges." (p. 1)	Empirical Study	• Survey examined what types of training faculty were taking for online teaching • Part 2 – practices that were used in online courses • 2-year college faculty teaching online in North Carolina Community Colleges • Participants n = 22 of 60
Smith (2005)	"The focus of this paper is to review 51 instructor competencies deemed necessary for an effective online learning program and outline key components of a training program…" (p. 2)	Literature Review	• List of 51 competencies pulled from 12 distinct works from the literature • Compared with Phipps and Merisotis (2000) Institute for Higher Education Policy (IHEP) Benchmarks
Swan (2010)	"…explore why, and more importantly, how online learning is embracing both emerging digital technologies and social constructivist epistemologies." (p. 109)	Book Chapter	No specific research was conducted for this chapter. It represented the author's cumulative research and practice-based experience and an extensive reliance on the literature of distance education theory
Tallent-Runnels, et al. (2006)	"to review the empirical literature related to online course instruction." (p. 94)	Literature Review	• Total of 76 works reviewed • 40 quantitative • 20 qualitative • 16 mixed-methods • 4 major themes in the organization, course environment, learners' outcomes, learners' characteristics, institutional and administrative factors

Author(s)	Title and Purpose	Type	Methodology
Varvel (2007)	"Herein, the competencies required or at least recommended for a quality instructor are discerned." (p. 2)	Empirical Study	• Multiple data sources that lead to a list of 246 competencies • Survey data from 248 pre- and 47 post-program students in the MVCR (Making the Virtual Classroom a Reality program) • Comparison of survey data to 51 works from the literature • Validation from 4 instructors and 3 administrators of the program • Validation with 68 conference participants at 2 conferences
Yang & Cornelious (2005)	"This paper will examine new challenges and barriers for online instructors, highlight major themes prevalent in the literature related to 'quality control or assurance' in online education, and provide practical strategies for instructors to design and deliver effective online instruction." (p.1)	Methodological Article	Referenced 56 sources from the literature
Zsohar & Smith (2008)	"Practical, evidence-based aspects of designing, conducting, and evaluating web-based courses are presented." (p. 23)	Methodological Article	Referenced 18 sources from the literature of online learning

Review of Selected Literature on Online Teaching Practices

Anderson (2008a) stated, "As yet, we are at the early stages in the technological and pedagogical development of online learning" (p. 361). Three years later, Staley and Trinkle (2011) stated, "The landscape of higher education is changing rapidly and disruptively." (para. 1) It was stated several times in the literature of online learning reviewed for this thesis, that online learning [and by extension, online instruction] was new. Because it was new, there was little empirical research that identified practices of online instruction, and no recognized standard among researchers. Therefore, a need arose in this thesis to develop a set of recommended practices (literature-based) that could be used to develop the preliminary instrument for round #1 of the survey. The literature review contained in this chapter specifically refers to the literature that was used for qualitative analysis to develop a set of recommended online instruction practices.

Literature reviews.

Smith (2005) and Tallent-Runnels et al. (2006) approached the issue of recommended practices for online instruction through literature review. Tallent-Runnels, et al. proposed that the scope of their work summarized current research in online teaching and learning [current in 2006]. The authors conducted an in-depth review of the literature on online higher education, conducted to address an expected increase in the use of web-based teaching and learning models, to assess current research in online instruction and learning, and to help guide effective ways to teach online.

Within their findings they discovered many conclusive guidelines for online teaching.

Tallent-Runnels, et al. conducted an extensive search of online learning journals and education databases and arrived at 91 articles. They used a wide variety of search criteria including: online course and instruction; cyberspace course; e-learning; web-based teaching, and over 15 additional variations (p. 94). Fifteen studies were discarded because they related to general distance education, and not specifically online. Forty quantitative and 20 qualitative studies were ultimately selected for analysis.

As part of the qualitative analysis described in this Chapter, 49 coded phrases articulating online instruction practices were distilled from this reference. Example coded phrases included, "students learn online when their current view of knowledge is challenged, reformed, and synthesized through their interaction with others," (p. 99) and "instructors in online courses, like their counterparts in regular classrooms, play a crucial role in student's knowledge construction by scaffolding the learning process for them " (p. 100).

Smith's (2005) primary purpose for reviewing the literature was to develop a professional development program at his institution that would help instructors. He focused on meeting three of the 24 benchmarks described in Phipps and Merisotis (2000). Smith stated that, "faculty members should be assisted in transitioning to the online environment

(Benchmark 19), trained and mentored (Benchmark 20), and provided with written resources regarding issues that are likely to arise in online course (Benchmark 21)" (Smith, 2005, p. 11). As a beginning point for his work, Smith described how vital it was, and would continue to be, for higher education institutions to move toward learner-centered delivery models.

Aligning with other works of the literature (Varvel, 2007; Bawane & Spector 2009; Anderson, 2008b), Smith stated that teaching in an online environment requires a specific set of competencies. Smith deliberately chose to use the word "competencies," among a variety of possibilities, to describe the qualities online instructors might need, and recommended a holistic approach that "sees competence as a complex combination of knowledge, attitudes, skills, and values displayed in the context of task performance" (p. 6).

Smith (2005) reviewed and cited 12 works from the literature in his final list of 51 competencies. He organized his list by competency, source, and whether or not the competency was most relevant before, during, or after the course was offered. Items included in his final competencies included:

- Act like a learning facilitator rather than a professor;
- Be clear about course requirements; and
- Deal effectively with disruptive students (p. 16).

These three statements, and many similar items from Smith's findings were included in the coding for the qualitative analysis for this thesis. In addition

to Smith's (2005) list of competencies, he stated, "initial and ongoing training, mentoring, and assessment of effectiveness are keys to the success of any new online learning program" (p. 11).

Fish and Wickersham (2009) provided a review of literature aimed at faculty best practices in online teaching. At only five pages, the article did not represent an exhaustive literature review, but rather literature-based recommendations. The authors proposed that literature-based items identified in their review should be considered by higher education faculty to enhance the quality of their courses.

Fish and Wickersham (2009) provided several topics faculty might consider with respect to online instruction: think differently; the adult learner; faculty support and collaboration; student support; quality design; and implementation. In their conclusion, the authors summarized their perspective stating, "Teaching online requires a faculty member to think differently about teaching and learning, learn a host of new technological skills and engage in ongoing faculty development for design and development of quality online instruction" (p. 283).

Fish and Wickersham (2009) listed 20 references in their article. Some of these were selected and included in the literature review for this thesis (Dykman & Davis, 2008; Li & Irby, 2008), and one was selected as additional references for this qualitative analysis (Zsohar & Smtih, 2008). These references represented currency and relevance to recommended practices of online instruction.

Fish and Wickersham's articulation of details from the literature contributed 77 coded phrases for this qualitative analysis including, "The instructor serves as a facilitator of learning rather than a distributor of content," "Effective online learning environments engage students toward higher levels of thinking," and "Meaningful interaction that motivates students to think critically is dependent upon effective content presentation" (Fish & Wickersham, 2009, p. 280).

Book chapters.

Anderson (2008a, 2008b) described specific literature-based recommended practices for online instruction. Anderson (2008a) represented a primary focus on general learning theories, and their influence on online teaching and learning practice. Anderson (2008a) described several ways that the evolution of the Internet has significantly increased communication and interaction possibilities for online learners and instructors. He considered this increase "the greatest affordance of the Web for education" (p. 54). While Anderson's (2008a) descriptions of the new opportunities of online education were not explicit recommendations for online instruction practices, his chapter supported other practice recommendations in the literature across a spectrum of tasks. A total of 54 coded phrases were included in the comparison analysis from Anderson (2008a) including, "Online learning teachers must make time at the commencement of their learning interactions to provide incentive and opportunity for students to share their understandings, their culture, and the

unique aspects of themselves," and "the effective online teacher is constantly probing for learner comfort and competence with the intervening technology, and providing safe environments for learners to increase their sense of internet efficacy" (p. 48).

Anderson (2008b) examined theory-based recommended online instruction practices using the Community of Inquiry (CoI) model (Garrison, Anderson & Archer, 2000), and focusing on one specific element of the model, that of establishing teaching presence in online courses. Included in Anderson's examination were practices related to the design and organization of courses and methods for facilitating discourse. He described qualities of the e-teacher as follows:

> First and primarily, an excellent e-teacher is an excellent teacher. Excellent teachers like dealing with learners; they have sufficient knowledge of their subject domain; they can convey enthusiasm both for the subject and for their task as a learning motivator; they are equipped with a pedagogical (or andragogical) understanding of the learning process, and have a set of learning activities at their disposal by which to orchestrate, motivate, and assess effective learning (Anderson, 2008b, p. 360).

This statement consolidated several of the recommended practices for online instruction described in the other references. A total of 62 phrases were coded for inclusion in the qualitative analysis from Anderson's chapter including, "The teacher regularly reads and responds to student

contributions and concerns, and constantly searches for ways to support understanding in the individual student, and the development of the learning community as a whole" (p. 350) and "Setting and adhering to appropriate timelines helps students to hold realistic expectations and relieves teachers of the unrealistic expectation of providing instantaneous 24/7 feedback" (p. 356).

Swan (2010) described some of the shift in teaching and learning approaches that online learning has enabled in the context of changing eras of distance education, Industrial to Post-Industrial. She focused on the ways that social constructivist learning theory has influenced both classroom-based and online higher education teaching practices. Swan analyzed social constructivist teaching methods, such as support for large-scale collaboration and knowledge creation, and the need for effective communication and interaction among learners and teachers. She provided a description of the function of the World Wide Web, noting two key issues: (a) that the way in which the WWW works may present educators with an imperative to shift their pedagogic focus from an expert-centred transmission of knowledge model to a student-centered, knowledge building model, and (b) that educators must also guide learners to make sense of "an overabundance of information" (p. 111)

Swan's chapter described and supported many of the recommended practices examined in the qualitative analysis for this thesis. A total of 38 phrases from her chapter were coded including, "Opportunities for self-

assessment should occur continuously and be embedded within learning activities" (p. 119), and "Where students were challenged to resolve a problem and explicit facilitation and direction provided, students did progress to resolution" (Swan, 2010, p. 126).

Methodological articles.

To give voice to institutional and instructor stakeholders on recommended practices for online instruction, five practice-based journal articles were used in the qualitative analysis for the set of recommended practices. Each article was selected for its unique articulation and perspective on specific recommendations for online instruction. Many of the practices described in these references were echoed and supported in other sources used for the analysis.

Bates and Watson (2008) provided findings from their experience transitioning from classroom teaching to online teaching. They included a literature review of studies comparing online teaching with traditional teaching and found no significant difference in learning outcomes between traditional classroom-based and online learning. The authors presented their perspective in several key areas of online teaching and course design/ They focused on areas that they felt required attention in the transition from traditional teaching techniques to online techniques. The areas of focus were lectures, testing, assignments, grading, allocation of time, and relationships. For each area they provided a narrative that described traditional techniques (what they had been doing in the classroom), how

they had transitioned to online (describing some of the challenges in the transition, mistakes they had made, etc.), and, finally, new online teaching techniques (advice on how to mitigate the challenges described in the transition).

It was the new online techniques segment that described the largest number of recommended practices for quality online instruction. Descriptions such as, "The online professor is required to be adept at using technology for a computer based course" (p. 38), "What is required is not a wide-ranging understanding of technology but, rather, specific knowledge of how this technology can be used with *these* students to accomplish *this* purpose" (p. 38), and "Action learning projects become more important in the online learning environment" (Bates & Watson, 2008, p. 42), plus 26 other phrases were included in the qualitative analysis from this reference.

Cobbett (2010) used a descriptive model of "good online teaching and learning practices" that relied on some of her prior work (Cobbett, 2006). Cobbett's (2010) model included five elements: Communicative Learning (as a central element), surrounded by Teacher, Informed Confidence, Knowing & Sharing, and Student; all displayed as interlocking pieces of a puzzle (p. 2325)

Cobbett described these elements of good online teaching and learning in an evaluation matrix that institutions might use to evaluate the quality of an online course [and, indirectly, the quality of the instructor]. Several detailed indicators related to online course design and instruction

were articulated. Some indicators from in the communicative learning

category of the evaluation matrix are provided below.

1. Students in this course had the opportunity to interact with

   persons from other nations/disciplines.

2. Students are assisted to set challenging goals for their own

   learning.

3. Students are asked to explain difficult ideas to each other.

4. Students are encouraged to challenge faculty ideas, the ideas of

   other students, or those presented in readings and course

   material (Cobbett, 2010, p. 2326).

These course elements, particularly items 2, 3, and 4, would require

facilitative direct instruction support from the online instructor. Cobbett's

article contained six or more indicators for each category of her model. Her

work contributed 66 phrases to the qualitative analysis for this thesis.

Henry and Meadows (2008) provided an article aimed toward

online faculty with recommendations to improve their online instruction

practice. The authors used a combination of experience and literature [and

elements of humour] to describe techniques an online instructor might use

that would make an online course "absolutely *riveting*." The authors

described the purpose of their article as follows:

One thing that most tend to agree on is that online education is here

to stay. Because of this and because the Dean of our faculty had

heard the wide array of views about this field, she came to us and

said: "What would you do if I asked you to develop an absolutely

riveting online course?" This paper is our response to her question

(p. 76).

Henry and Meadows' (2008) response to the question was framed using

nine principles, such as "the online world is a medium unto itself," "in the

online world content is a verb," and "technology is a vehicle not a

destination" (pp. 77-86). These principles were presented in an informal

manner; however, literature was frequently cited in the authors' articulation

of practices. The following example of a recommended skill is

representative of their approach:

> In our view, an excellent online course is one in which the student
>
> is able to focus on the course itself and the medium of delivery
>
> becomes transparent to this process. It is one that is designed for
>
> delivery within the online medium and as such makes sound
>
> pedagogical use of the tools available in order to engage and
>
> immerse the student in the learning experience. It also creates
>
> learning groups, activities and situations that put the students in
>
> charge of their own learning (Henry & Meadows, 2008, p. 76).

Arising from this description and others in their article, 78 phrases were

included in the qualitative analysis for this thesis.

Yang and Cornelious (2005) reviewed the literature of online

learning to develop a series of recommendations for practical strategies

online instructors may use to design and deliver effective online

instruction. Their article was a response to concerns and problems they perceived in online education, particularly challenges of online instructor quality. The authors presented a literature review, describing the quality of online education compared with traditional delivery methods, and stated that regardless of differing opinions about online learning effectiveness, instructors need to "seriously consider what they can do and should to provide quality online instruction to students" (p. 3).

Yang and Cornelious organized their review into categories, such as New Roles of Instructors, New Roles of Online Learners, and New Technologies. The detail of their categories provided 89 phrases describing specific practices that were used in the qualitative analysis. Examples included "Besides being a facilitator, the instructor should also be an instructional designer…It is important for the instructor to motivate students to adjust their roles when becoming an online learner" (p. 4) and "An instructor's attitude, motivation, and true commitment affect much of the quality of online instruction" (Yang & Cornelious, 2005, p. 5).

Zsohar and Smith (2008) presented an instructor-based article for nursing faculty who were developing and delivering online courses. Much of their advice was applicable to online courses in other disciplines as well. They had several years of experience teaching blended and fully web-based nursing courses and offered practical advice and evidence-based strategies to engage students and instructors in online courses.

Zsohar and Smith titled their segments, *A Module Approach to Online Courses*, *Setting Assignment Deadlines*, and *Building Thoughtful and Provocative Discussion Questions*. Within each segment were examples of specific skills online instructors would need in order to design and deliver a quality online experience. Two examples were "emphasis should be on activities that are meaningful to accomplishing course objectives," and "Readings and other web links need to be carefully selected to avoid redundancy and minimize overload for the learner" (Zsohar & Smith, 2008, p. 24). These and other recommended practices from their article contributed 36 phrases for the qualitative analysis.

Empirical studies.

Aubteen Darabi, Sikorski, and Harvey (2006) developed a set of competencies for distance educators as part of a U.S. Naval contract. They followed a literature review-based methodology for designing their preliminary instrument, which was then validated by experts, and aligned with competency development standards described by the International Board of Standards for Training, Performance and Instruction (IBSTPI). From 73 literature references, 20 competencies were derived and presented to 18 internal experts for review and consensus. Validation was done using a convenience sample of 148 multinational instructors. The final set of competencies was rated by participants using the following criteria:

- percentage of performance (how often they performed this task);

- relative importance (how important was this task to them compared with the other tasks on the list); and

- perception of relative time spent (how much time was spent on this task compared with the other tasks on the list).

The value of Aubteen Darabi, Sikorski, and Harvey (2006) for this thesis was the articulated competencies of the final list. Items such as, "manage logistical aspects of the course," "exhibit effective written, verbal and/or visual communication skills," and "provide learners with course-level guidelines" (p. 119) contributed 38 phrases to the qualitative analysis.

Bangert (2008) cited several studies evaluating the effectiveness of online teaching, and noted that a major limitation was the lack of "psychometrically sound instruments" (p. 27) to measure student perceptions of online instruction practices. To address this lack of instrumentation, Bangert developed the Student Evaluation of Online Teaching Effectiveness (SEOTE). The SEOTE was validated using 807 responses from mixed undergraduate and graduate students in online courses. It consisted of 23 items asking students about their experience of the instructor and the course. Items included, "My questions about course assignments were responded to promptly," "The amount of contact with the instructor was satisfactory," and "I was provided with supportive feedback related to course assignments." (Bangert, 2008, p. 39)

While these items represented student statements about instructors and instruction, they might be rephrased as recommended practices for

online instruction. For example, recommend practice statements derived from the phrases above might be as follows: answer student questions promptly; maintain adequate contact with students; and provide supportive feedback related to course assignments. Based on Bangert's (2008) literature review and findings, 27 phrases were coded and contributed to the qualitative analysis for this thesis.

Bawane and Spector (2009) developed what they called "a prioritization of online instructor roles" (p. 384) in their exploration of research literature. They were focusing on practices that might be useful in developing courses for online instructors in India and other regions. Their exploration ultimately distilled a list of eight roles with an associated set of competencies for each role. Bawane and Spector (2009) then developed a ranking tool and obtained a priority ranking of the roles from 30 international experts. Bawane and Spector's literature-derived preliminary list of roles contributed 30 phrases to the qualitative analysis for this thesis. Examples were "Sustain students' motivation," "Select the appropriate resource for learning," and "Interpret and integrate research findings in teaching" (Bawane & Spector, 2009, p. 390).

Egan and Akdere (2005) used Delphi Methodology to compare graduate student-practitioner perspectives of distance education roles and competencies with "expert practitioners and scholars" (p. 91). They focused on two studies, Thach (1994) and Williams (2003), to develop a preliminary Delphi Method instrument. The researchers stated that Thach's

(1994) competency study was the first [or among the first] to identify the

roles, outputs, and competencies of online instructors. They noted that the

Williams (2003) study extended the examination of roles and competencies

and included a menu of roles and related competencies reviewed by

experts. After developing their preliminary instrument, Egan and Akdere

(2005) chose a large sample of graduate-student experts for their Delphi

Method. Their instrument was used to survey the graduate students through

four rounds to achieve consensus on the most important roles and

competencies from the participants' perspectives. The researchers

eventually completed their survey with 106 participants from 11

universities in the central U.S who participated in all four rounds,

demonstrating a 79.7% participation rate (p. 93). Based on the results of

the Delphi Method, Egan and Akdere (2005) found 21 of 30 competencies

to be common across three studies -- their research, Thach's (1994)

research, and Williams' (2003) -- and concluded that, "These results

provide some affirmation that a general set of distance education

competencies have emerged from the three studies" (Egan & Akdere, 2005,

p. 97).

Egan and Akdere (2005) provided a comparison table listing 30

distance education competencies in four categories: C = communication

and interaction; M = management and administration; T = technology; and

I = learning and instruction (p. 96). This table was a valuable resource for

the qualitative analysis and contributed 36 phrases for coding.

Gaytan and McEwen (2007) surveyed online instructors and students to determine their perceptions of effective online instructional and assessment strategies. A key research question related to this study was, "How is instructional quality measured in online courses?" (p. 119). Other questions in Gaytan and McEwen's study related to the demographics of the faculty and student participants, assessment strategies, effectiveness of assessment strategies, and the extent to which students considered the online environment to be an effective learning place.

 Gaytan and McEwen approached all online faculty and students at two southern U.S. universities in the Fall 2004 term for participation in their study. Their sample included 85 faculty and 1,963 students, with a response rate of 34% (29 of 85) for faculty, and 17% (332 of 1963) for students (p. 120). They chose to use a web-based survey and a descriptive statistical analysis was used to summarize faculty and student perceptions of online instruction and assessment methods, and their overall perceptions of online courses.

Gaytan and McEwen (2007) compared faculty and student responses across 11 key quality indicators, such as "Continual, immediate, and detailed feedback is required regarding student understanding of course materials," and "A variety of instructional strategies (e.g., visual, audio, kinesthetic) are being used to address various learning styles of students" (p. 124). Based on their findings, Gaytan and McEwen (2007) concluded that fully understanding online learning and assessment is

crucial at a time when there is exceptional growth, and a need to account for excellence across online learning programs (p. 130). The depth of description in Gaytan and McEwen's study, and the student perspective they included were valuable inputs for the qualitative analysis for this thesis. A total of 27 phrases were coded and included from this article.

Pagliari, Batts, and McFadden (2009) focused their study on online teaching faculty at member institutions in the North Carolina Community College System (NCCCS). They sought to determine the types of training the participants had taken, and what the participants perceived to be best practices of instruction. The participants in the study represented 22 of 60 instructors from technology-oriented disciplines instructing in the NCCCS organization. Questions concerning participant attendance at off- and on-campus training, and the types of training were asked of the participants.

Some elements of the "best practices training" discussed in the study were general online practices, such as providing timely feedback, supporting students through online communication, and setting up group activities and group pages. Other elements were software specific, for example, questions about the effective use of Camtasia$^©$ for instruction and Centra$^©$ for live voice chat. In their conclusion, the researchers identified the following: a strong need for further research in the area of faculty training for online courses, a lack of offering and participation in either on- or off-campus training, the acknowledgement that technology is advancing

rapidly, and the recommendation that faculty members need training to maintain competency (Pagliari, Batts, & McFadden, 2007, p. 9).

An important element of Pagliari, Batts, and McFadden's (2009) research report, in the context of the qualitative analysis for this thesis, was their *Best Practices Used in Online Courses* segment. Two examples of best practices from this section were "Redesigning (chunking) learning resources," and "Including graphics, sound and video to create a sense of 'place'" (p. 7). An additional 30 phrases were coded and included in the qualitative analysis.

In his introduction, literature review, and competency document preparation segments, Varvel (2007) articulated recommended practices that aligned with many of the references in this thesis (Yang & Cornelious, 2005; Smith, 2005; Bawane & Spector, 2009; Anderson 2008a). He provided a simple definition of online learning as, "the use of asynchronous (and sometimes synchronous) computer networks in order to instruct students" (p. 1), and indicated that both course quality and the quality of instruction were important in online contexts. Varvel (2007) provided information about the number of online instructors and stated, "a conservative estimate would place the number at over 50,000 in the United States." (p. 1). He also asserted that many online instructors have no formal training in online practices and they rely primarily on their experiences as former students and face-to-face instructors (p. 1).

Varvel (2007) described three possible purposes for an online instructor competency document. First, it may define, in functional and observable terms, the abilities and expected actions of someone labeled as competent. Second, it may help an online instructor to create a professional development plan. And, finally, it may serve as a guide for institutions to provide development and support services for faculty (p. 2). The document was developed based on the responses of 248 pre-program and 47 post-program surveys as well as additional summaries of course evaluations from students in the Making the Virtual Classroom a Reality (MVCR) program at Varvel's institution. The preliminary lists, representing student beliefs about necessary qualities for their instructors, were given high priority in the balance of the study. Varvel refined the student-based list, adding in competencies after conducting a literature survey of applicable research. Two more rounds of expansion and clarification of the list were conducted. Participants in the expansion included online instructor experts and senior administrators at the institution. An additional 68 participants from two conferences participated in discussion with Varvel on the evolving document and preparation of the final list (Varvel, 2007, p. 4).

Varvel (2007) provided an exceptionally detailed investigation of online teacher competencies found in the literature of online learning. His final list of 247 competencies were identified as Core (necessary) or Exemplary (beyond the required), and were organized in two categories: KI (Knowledge Indicator, not necessarily observable) and PI (Performance

Indicator, directly observable behaviour). The competencies referenced

seven roles and demonstrated multiple competencies within each role.

Varvel (2007) described the value of the document concluding, "This

document should function as a valuable resource in the development of

competency models that fit well within the given institutional context" (p.

6).

Varvel's article provided a significant contribution of 299 coded

phrases to the qualitative analysis for this thesis. Due to concern that the

number of phrases from this one work may have skewed the results of the

analysis, a test analysis was conducted removing the Varvel-coded phrases.

The revised frequency-ordered list of codes demonstrated only two minor

differences without the 299 Varvel-related phrases, and ultimately the

differences rested with codes that were not included in the final set of

codes (i.e., frequency was fewer than 5 repetitions). This test confirmed the

strong agreement between Varvel's (2007) findings and those of the

balance of the literature used in for the qualitative analysis.

Example phrases from Varvel's work used in the qualitative

analysis were, "The competent instructor has an understanding of and

belief in the administrative system under which s/he is employed," "The

competent instructor has knowledge of honesty policies and procedures

towards students and from where these policies can be accessed," and "The

exemplary instructor has knowledge of a variety of appropriate Internet

resources for the given topic beyond those used in the course itself"

(Varvel, 2007, pp. 6-8). Varvel made a distinction between competent and

exemplary practices; however, for purposes of the qualitative analysis, this

distinction was not made.

Findings of the Qualitative Analysis

A total of 1,114 phrases were identified and coded from the 18 literature

references. The codes emerged as each work from the literature was viewed and

re-viewed. An initial list of 70 codes was reduced to 57 when codes began to

demonstrate redundancy and phrases could be grouped into broader categories.

The choice of code acronym and description emerged from the phrases they

represented and, through a distillation process of qualitative coding, codes

stabilized as common descriptions, across multiple references as recommended

practices for online instruction.

A frequency analysis was conducted using the capabilities of the

HyperResearch© software, extracting a list of the codes in frequency order. The

complete set of final codes (57), the frequency with which each code appeared in

the analysis, and each code's description were included Table 2 as follows:

Table 2

Qualitative Analysis: Frequently Cited Recommended Practices

Code	Frequency	Description of the Code
PMF	66	Provide prompt and meaningful feedback
SSCB	64	Support student community building
SSE	57	Clearly state all student expectations
AL	55	Use active real-life learning techniques
AIS	53	Use appropriate instructional strategy
FC	51	Assign and facilitate collaborative activities
CECE	45	Continually evaluate course effectiveness
AALT	42	Apply adult learning theory
SLS	39	Support different learning styles

Code	Frequency	Description of the Code
MEP	38	Model effective participation
MSP	36	Monitor student progress
CP	31	Choose appropriate online content presentation
LC	30	Set up a well organized course
WPO	30	Be learner-centred
AAS	26	Assess attainment of stated objectives
MT	25	Master the technology required to design/deliver
PI	25	Use technology with pedagogic intent
ISC	22	Invite student communication with you
LL	22	Model lifelong learning (professional development)
MPEOL	22	Model passion and enthusiasm for online learning
PCS	22	Exemplify professional communication skills
LSL	19	Let students lead learning
MSE	19	Maintain student engagement
DSK	18	Maintain appropriate discipline specific knowledge
FCT	17	Facilitate critical thinking
PREP	17	Prepare students for online learning
DIV	16	Facilitate student diversity for learning
CHE	13	Communicate high expectations for achievement
EA	13	Ensure accessibility
ETT	13	Emphasize time on task
ISSC	13	Support student to student contact
PCR	13	Provide current resources
APK	11	Acknowledge and use student prior knowledge
FREF	11	Facilitate reflection
OSC	11	Provide opportunities for student choice
EIC	10	Explain your instructional choice to students
MAI	10	Model academic integrity
MDS	10	Manage disruptive students
POSA	10	Provide opportunities for student self-assessment
AATC	9	Accommodate technology challenges
TACL	9	Teach to appropriate course level
AD	6	Analyze discussion
RPOL	6	Respect and follow institutional policy
CE	5	Communicate empathy with student needs
MM	5	Maintain course momentum
MIC	4	Model interdisciplinary context
MYT	4	Manage your time effectively
RP	4	Respond promptly to student concerns
TSR	4	Treat students with respect

Code	Frequency	Description of the Code
UH	4	Use humour
POMM	3	Provide opportunities for multi-media creation
MD	2	Model discernment
RSP	2	Maintain and respect student privacy
ALC	1	Accommodate language challenges
FSI	1	Facilitate student integration with the institution

Development of the Preliminary Instrument

Transition from the frequently cited recommended practices that emerged in the qualitative analysis, to the preliminary instrument for round #1 of the Delphi Method was conducted through the following steps:

- the researcher chose to focus on codes with six or more repetitions across the 18 works analyzed. This reduced the overall number of items for the participants to review and removed items that may not have been priorities in general online instruction practice based on their lower frequency;

- the researcher expanded the coded statements from the qualitative analysis into practice statements that may be considered activities of online instruction, these statements were literature based;

- based on review and feedback from her thesis supervisor and committee member, the researcher revised, combined, refined, and expanded some of the statements to provide clarity for potential participants;

- seven categories for the emerging statements were developed to improve navigation through a lengthy web-based survey;

- each individual practice was numbered, and Likert-type responses were added (Strongly Agree, Agree, Disagree, and Strongly Disagree) to provide the agreement options for participants;

- an additional question for participants with respect to the frequency that they engaged in the practices was added. It was felt that this additional question for each practice would add information about the importance of the practice in the context of participant online teaching;

- the researcher aggregated review and feedback into a preliminary instrument for the round one survey and developed a web-based survey instrument using FluidSurveys[©] tools and templates. FluidSurveys is a Canadian-based web-survey tool chosen by the researcher for ease of use and protection of participant privacy;

- a link to the draft preliminary instrument was distributed to five online instructional designers and two institutional researchers at the participant institution for review and feedback to address any institution-specific concerns and to further increase clarity and simplicity of language;

- the researcher added an agreement checkbox to ensure participants had read and understood the consent document (Appendix E);

- the researcher added the consent question, survey identification question, and introduction statements (Appendix A);

- the researcher made final revisions and prepared the web-based survey for the online responses from participants.

Summary

The selection of literature for the qualitative analysis, the analysis and input of data, and the development of the preliminary instrument for the round #1 survey were time-consuming, but valuable, processes. This aspect of the research was necessary to provide participants with a well-designed and literature-based starting place to approach the study. While it would be difficult to replicate this analysis with 100% accuracy, the removal of the Varvel competencies and revised analysis is one indicator that key general practices of online instruction were captured effectively from the literature for the preliminary instrument. The review and feedback method used to refine the final preliminary instrument for round #1 resulted in some adjustments to the wording of the codes to provide clarity for participants.

Chapter 4 – Methodology

Introduction

This chapter will describe the research design for the study and the rationale for design choices. The phenomenon investigated in the study was a set of essential practices for online instruction. The scope of the research design focused on one participant institution, in part as a limitation of available time and access to participants for the researcher. An additional rationale for choosing one institution rested with findings from the literature. It was observed throughout the literature review, that individual institutions demonstrated unique approaches to the delivery of online learning. These diverse approaches were based on institutional expertise, a focus on specific disciplines, online learning program design and administration, student demographics, and the research areas of faculty and adjunct instructors. Very few online learning programs seemed alike.

Findings from the literature about recommended practices for online instruction represented some common findings across institutions. However, findings also presented key variations from one institution to another. The position of this study was that the set of recommended practices for online learning, arising from a literature-based qualitative analysis, were best presented to individual institutions for their expert online instructors to review on an institution-by-institution basis. Therefore, while the method of this study may be generalized to other institutions, the findings, the final set of participant-identified essential practices may not apply to online instruction at all higher education institutions.

This research focused on a small group of institution-identified expert online instructors as participants. The rationale for this design choice resided with the principle that the expert participants were most familiar with the day-to-day practice of online instruction at the institution. These participants were the most qualified to identify the essential practices that framed their profession in an institutional context. Data about the participant institution and the participants was provided in Chapter 1 as part of the context of the study. These data were collected through an interview with the director of the online learning program.

Several recommended practices and principles of the Delphi Method, as described in the Chapter 2 literature review of this study, were incorporated into the research design. The design should be considered Delphi techniques rather than a formal Delphi Method as the model represented a quantitative, survey-based research model designed to seek agreement (rather than consensus) among a group of experts.

A key component of more formal Delphi Method is the achievement of consensus. This typically involves researcher-facilitated sessions where experts have the opportunity to listen, debate, and explore alternative perspectives, based on findings of each round as reported by the researcher. The time and distance limitations of this study were considered, and the choice was made to adapt recommended practices from the Delphi Method and use many of the recommended practices to seek agreement among participants.

The literature reviewed on the Delphi Method recommended the development of an original preliminary instrument (Larcara, 2010; Egan and

Akdere, 2005; Franklin and Hart, 2007). The researcher therefore conducted a

qualitative analysis of 18 references from the literature of online learning to

develop the preliminary instrument. A full description of this analysis was

provided in Chapter 3 of this thesis.

The research design for this study consisted of a qualitative analysis to

develop the preliminary instrument for round #1 of the study. The study also

included a second round instrument, described later in this Methodology section.

In addition to these elements of the research design, a short, qualitative interview

was conducted to gather institutional data about the participant institution's online

courses, programs, and instructors.

Research Design

Creswell (2009) recommended describing several aspects of the

methodology when choosing a survey method for research. These aspects included

the overall purpose of the research, why a survey was the preferred method of data

collection, the type of survey (cross-sectional or longitudinal) that was used, how

the survey instrument was developed, the population that was surveyed, and the

sampling method that was used. In addition, he recommended that researchers

describe how they would conform to generally accepted practices of research,

ensuring that an ethical approach was used, and that the findings were valid. In

alignment with Creswell's recommendations, the descriptions below addressed

these elements of the survey method used for this research.

Purpose.

The purpose of this study was to develop a set of essential practices for online instruction at a higher education institution. An essential practice was defined as *an online instruction activity that contributes to student achievement of learning outcomes.*

Survey method.

To achieve the study's purpose, a key element of the research design was establishing agreement among the participants. The majority of the participants worked from outside the institution, i.e., non-tenured, part-time instructors, some from very distant locations. Requesting their physical presence for in-person interviews or focus groups to collect data would have been time-consuming and expensive to coordinate. An alternative method, such as a phone interview, might not have demonstrated convenience of time and place, or provided the opportunity for reflection that an online survey method offers. Web-based survey research, particularly among a participant group working in an online environment, seemed a logical and convenient approach to achieve opinion-based consensus. Web-based survey is a common approach in current Delphi Method designs.

Population and sampling method.

The population represented in this research was all online instructors at the participant institution (175 in 2012). The sample for the research was a small group of institution-identified expert online

instructors. An administrator at the institution was asked to ensure

representation from all disciplines in the online learning program, and

conducted a database scan on the full group of online instructors based on

the criteria identified for expert instructors. The criteria were that the

online instructor was a current employee, had taught at least one online

section in the past year, and had taught at least six courses for the

institution since 2005. From the population, , 122 were purposefully

identified as expert instructors.

To ensure anonymity for the participants, a research coordinator

was used and she approached the identified experts with a request for

participation (Appendix D). Thirty-nine complete responses were received

in round #1 of the web-based survey. As described in Chapter 2, 12 to 20

expert participants may be chosen to represent a larger population when

conducting a Delphi Study (Manizade & Mason, 2011). The goal of this

study was therefore to have a minimum of 12 participants providing fully

completed responses. This goal was achieved.

Data collection.

Following Skumolski, Hartman and Krahn's (2007)

recommendation that Delphi Method surveys are best conducted

anonymously, using online data collection and analysis tools, the

preliminary survey was delivered using a web-based survey service to

collect and analyze data.

Two web-based, questionnaires, round #1 and round #2, were built and disseminated to participants using FluidSurveys[©], a Canadian-based service provider. The round #1 survey was used to ask participants whether they agreed or disagreed with the practices listed in the preliminary instrument as essential for their work. A four-point Likert scale was used with no neutral option to ensure the participants either agreed or disagreed with the statement. This upheld the goal of achieving agreement more effectively. The survey was cross-sectional, referencing expert opinion at a moment in time, rather than longitudinal, across time.

An element of this research (visible in the instruments of Appendices C and F) included a frequency question for participants, asking them to identify how frequently they engaged in each of the recommended practices. How frequently the participants engaged in online teaching practices during each 13-week teaching term was an additional measure of the how important the practice may have been. Frequency of use was considered an aspect of "essential-ness" in the context of this thesis.

A round #2 instrument and web-based survey was used to achieve any additional agreement on practices that was not achieved in round #1, and to explore any additional practices named by the participants.

As a method of describing the participant institution, relevant information was gathered through a face-to-face interview with the director of online learning at the participant institution. These data were included in the *Context of the Study* section of Chapter 1.

Preliminary instrument and round #1 survey.

As discussed in Chapter 3, 18 references from the literature of online

learning were qualitatively analyzed to identify recommended practices for

online instruction. The analysis resulted in a set of 57 total recommended

practices. From this list, 46 final practice statements were developed for

the preliminary instrument in this study (Appendix A).

The preliminary instrument presented 46 recommended practices for

participants to review. They were asked to choose a level of agreement or

disagreement with the inclusion of the practice as essential for online

instruction at the institution as demonstrated in the following example:

Category 1: Student Support

1. Check in with students at course startup to

   ensure they are able to access all course

   materials (i.e., that they have the correct

   hardware, software and instructions to do so).

   This is an essential practice for online

   instruction.

   _ Strongly agree

   _ Agree

   _ Disagree

   _ Strongly Disagree

Franklin and Hart (2007) raised the issue that expert practitioners

may need an opportunity to add practices as part of a Delphi Method,

particularly in emerging disciplines, to account for the possibility that a

literature-based instrument was not all-inclusive. Therefore, a comment area was provided at the end of the round #1 survey, inviting participants to add any online instruction practices that were not included in the survey, but that were essential in their view (the preliminary instrument is provided in full in Appendix A).

Round #2 instrument and survey.

Many studies using the Delphi Method, as described in the literature, used two or more surveys to achieve consensus or to further explore comments provided by participants (Manizade & Mason, 2011; Laracara, 2010; Egan & Akdere, 2005). In this study there was a high level of agreement in round #1 of the survey, and very few additional comments regarding practices. However, there was one practice, that of inviting students to participate in real-time communication opportunities, which was included by three participants. Therefore, the round #2 survey included this practice. This survey also included all practices that had not received an agreement level of $a \geqq 95\%$ in the round #1 survey to determine if any additional agreement could be achieved.

Development of the round #2 web-based instrument, therefore, consisted of the following steps:

- FluidSurveys[©] was used to build and deliver the survey;
- the survey participant identification number question from round #1 was repeated (participants used same number that was assigned in round #1);

- a survey introduction statement was developed and posted;

- 9 items from round #1, which had not received $\geqq$ 95%

  agreement, and one additional practice for participant

  consideration were added (the full round #2 instrument is

  included as Appendix H).

Rather than requesting responses with a variety of agreement levels, the

round #2 options were simplified to Agree or Disagree only. In addition,

the use of categories was eliminated as an organization tool for round #2 as

there were only 10 questions (a significantly shorter survey than round #1).

Data analysis.

Data from Round #1 of the research was analyzed to calculate the

following for each of the 46 practices presented:

- the percentage of responses in each of the four Likert-categories for

  each item;

- the FluidSurveys web-based services included an analytic function

  that calculated percentage figures for each item captured from

  participants. The researcher confirmed these percentage

  calculations for each practice using the following formula:

$$\frac{R}{100} = \frac{P}{B}$$

Where Rate (percent) over 100 equals Part (confirmed number of

responses) over Base (number of possible responses).

Percentages were used to represent the level of agreement for each practice. An agreement measure was used in the research. For example, if an item from the survey responses indicated ≧ 95% total agree or strongly agree choices, that item was considered to represent agreement and was included in the final set of essential online instruction practices.

In addition, the frequency question for all 46 practices was analyzed and a quadrant-style chart was developed to illustrate how essential a practice was and how frequently it was used.

Two variables were used to develop the matrix as follows:

1. The level of Strong Agreement for all practices considered essential;

2. The frequency rating of the practice; 1-never; 2-once per term; 3-two or more times per term; 4-once per week; 5-two or more times per time. The higher the number, the more frequently used.

A qualitative review of expert-added essential practices, added using the final open comment question in the round #1 survey, was conducted to determine whether the practice had already been expressed in the round #1 instrument, or if the added practice warranted inclusion in a round #2 survey.

Ethical Considerations

Both Athabasca University and the participant institution for this study articulated policies with respect to ethical conduct for research involving humans.

Both institutions adhered to the overarching policies of the Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council of Canada, *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans* (2010). The Tri-Council Policy Statement was used as the adherence guideline for ethical conduct by the researcher.

The researcher ensured that relevant policies of both Athabasca University, and the participant institution, were in alignment with all statements below and that her conduct of research satisfied the Tri-Council Policy Statement.

The Tri-Council Policy Statement's minimal risk definition was stated,

For the purposes of this Policy, 'minimal risk' research is defined as research in which the probability and magnitude of possible harms implied by participation in the research is no greater than those encountered by participants in those aspects of their everyday life that relate to the research." (Tri-Council Policy Statement, 2010, p. 23).

The researcher asserted that the research qualified as minimal risk. Participants were asked to voice opinion on a variety of practices that occurred in the context of their regular work for the participant institution.

The Tri-Council Policy Statement (2010) articulated three core principles of ethics in the conduct of research on humans. Briefly stated with their primary definitions, they were,

Respect for Persons - Respect for Persons recognizes the intrinsic value of human beings and the respect and consideration that they are due.

Concern for Welfare - The welfare of a person is the quality of that person's experience of life in all its aspects.

Justice - Justice refers to the obligation to treat people fairly and equitably (pp. 8-9).

Athabasca University provided an electronic resource for the researcher called the *Ethical Conduct for Research Involving Humans Policy* (2010). Athabasca's policy articulated aspects of the Tri-Council Policy Statement's (2010) core principles in a clear manner and provided guidance for the specific procedures a researcher was required to undertake. The required procedures were upheld by the researcher as follows:

- o from Section 6.0, Free and Informed Consent - Research participants must have freely agreed to take part in the research study on the basis of well-understood information about the objectives of the research and the nature of their participation. Research participants must be fully informed of any and all known or reasonably foreseeable risks of harm associated with the research, as well as possible benefits of their participation. They must have the opportunity to evaluate the relative weight of any risks and benefits;

- o from Section 6.2 Form of Consent - Free and informed consent should normally be provided in writing. If written consent is not culturally acceptable, or where there are good reasons for not recording consent in writing, the procedures used to seek free and

informed consent must be documented for review by the Research

Ethics Board (REB); and,

- o from Section 7.0 Privacy and Confidentiality - Assurance of

    privacy and confidentiality for research participants will be a

    fundamental requirement of ethical research, except in cases in

    which the research participant explicitly waives the right to privacy

    and confidentiality. In proposals in which the potential for harm is

    significant, researchers will provide detailed protocols on how

    privacy and confidentiality will be maintained including protocols

    for storage and disposition of data. In its deliberations about the

    adequacy of provisions for maintaining privacy and confidentiality

    in proposals submitted to it, the REB will employ the principle of

    proportionate review. Researchers are advised to consult section 42

    of the *FOIP Act* (Athabasca University Research Ethics Board,

    2010, sections 6.0, 6.2 and 7.0).

According to the articulated procedures above, the researcher maintained the

privacy and confidentiality of research participants and the participant institution

as follows:

- All data gathered was stored privately and securely by the researcher

    on her personal computer (not in institutional public spaces) encrypted

    and protected in password-locked digital storage. All printed and hand-

    written physical documents were stored in the researcher's private

    home and transported out of sight from institutional staff. No aspect of

this research was discussed with institutional staff or participants outside the context of data gathering, e.g. there were no "off-the record" conversations regarding the research.

- Round #1 and round #2 of the survey was conducted electronically and anonymously with participants, their responses were not connected in any way with their identity.

- Access to an electronic, web-based survey tool was purchased, and surveys were developed through FluidSurveys[©], a Canadian-based company. FluidSurveys[©] stored all member/developer and survey participant data in Canada, reducing concerns of privacy protection that might have arisen from the use of U.S.-based survey tools.

Summary

This chapter described the research design, method, population and sampling method, data collection and analysis techniques, and ethical considerations used in this study. Creswell (2006) was used as a guide for general practices of survey-based research. Brief descriptions of the participants and participant institution were included and summaries of the development of round #1 and round #2 survey instruments were included.

Chapter 5 – Findings and Discussion

Introduction

Many research projects begin with a problem the researcher encounters in his or her field of interest, either through study or professional work experience. In the case of this study, the researcher noticed in her professional workplace that many online instructors were not provided with adequate professional development to be successful teaching online. Many instructors were struggling with workload, many student surveys described a lack of contact and communication, as if the instructors were simply not present. Online instructors were not provided with adequate levels of support and it was impacting course quality and the instructors' level of comfort with their work.

It was difficult for the participant institution to develop effective professional development programs and appropriate levels of support, as there were few literature based guidelines or standards. A review of the literature confirmed the stated problem for this study as follows:

There was strong agreement that online instructor skills were important to overall online course quality, however, there was a lack of research-based guidance that clearly identified effective practices of online instruction. There were also very few widely accepted standards for the professional development, support, evaluation or hiring of online instructors (Pagliari, Batts & McFadden, 2009; Varvel, 2007; Smith, 2005).

A focus emerged to address the problem, and the purpose of this study was to develop a set of essential practices for online instruction; a set that the

participant institution might use to build professional development and support programs. Using data gathered during a two-round process using Delphi Techniques, the final set of essential practices achieved by the research was grounded in the current literature of adult, distance, and online instruction practices, and confirmed by the experienced-based opinions of the participants. Maintaining a manageable scope for the study, the researcher selected one higher education institution to participate.

Research Questions

The research questions for this study were as follows:

1. Given a literature-based set of recommended practices for online instruction, what practices would a group of expert online instructors agree were essential in their work?

2. With respect to practices participants identified as essential, how frequently do expert online instructors engage in the practices during a 13-week term?

Participant Institution

The participant institution for this study was a large school of continuing education with a parent university. The school employed 175 online instructors in 2012 to deliver its online courses and programs. At the time of the study, the school offered little in the way of professional development for the online instructors and had experienced a variety of challenges with instructor and student satisfaction and student learning outcomes.

Individual Participants and Participation Rates

The participants for this study were expert online instructors as identified by the participant institution. Criteria for selection were as follows:

- potential participants were current instructors, had taught an online course for the institution within the past year, and,

- they were experienced, had taught six or more online courses for the institution since 2005.

A total of 122 potential expert participants were identified and invited to voluntarily participate in the study. Of these, 39 participants completed the round #1 study survey (32% participation rate) and 26 completed the round #2 survey (21% participation rate). According to Manizade and Mason (2007) between 12 and 20 expert participants represented an effective group for a Delphi Method approach. This range was successfully achieved in both rounds.

Round #1 Data Collection

Round #1 data collection, using the preliminary instrument shown in Appendix A, took place over a four-week period. Participants were provided with a survey code to enter in to the web-based survey. The real name and contact information for the participants was not shared with the researcher. The survey code was used to confirm participation in both rounds of the data collection. The survey was password protected to ensure that only participants (and not the general public) had access to the survey.

In addition to the 39 participants who completed the survey, there were five participants who opened, but did not complete or only partially completed, the

survey. These incomplete attempts were deleted from the survey responses area

and were not included in the final data. Among the 39 participants that fully

completed the survey, several either missed, or chose not to answer one or two

questions within the survey. It was determined that their surveys should remain in

the data set, missing answers were easily tracked within the analysis tools of

FluidSurveys[©]. Missing answers were accounted for on a question-by-question

basis in the "Round #1 Survey Responses" (Appendix F), e.g., if only 37 of 39 the

participants answered question 6, this would be indicated in the "Responses"

column of Appendix F. Figure 1 demonstrates the Responses column as follows:

Survey Number	Responses	Strongly Agree	Agree	Disagree	Strongly Disagree
1	39	25	12	2	0
2	39	29	10	0	0
3	39	30	9	0	0
4	39	20	18	1	0
5	39	29	9	1	0
6	37	27	10	0	0

Figure 1. Round #1 survey responses sample from Appendix F.

Round #1 Data Analysis, Findings, and Discussion

FluidSurveys[©] provided support for researcher data analysis with a number

of user tools. A preliminary analysis of this study's data with the tools expressed

the findings as percentages, and the researcher adopted this choice for all

quantitative findings. An example of question one and its responses follows:

1. Check in with students at course startup to ensure they are able to access all

   course materials (i.e., that they have the correct hardware, software and

   instructions to do so).

This is an essential practice for online instruction.

_ Strongly agree

_ Agree

_ Disagree

_ Strongly Disagree

In response to question one, the data analysis revealed (n=39) 64% strongly

agreed, 31% agreed, 5% disagreed and 0% strongly disagreed that this was an

essential practice for online instruction. As part of the introduction to the round #1

survey, participants were reminded that it was possible to agree that a practice was

essential even if they had never engaged in it.

On a question-by-question basis these findings were demonstrated visually in

Figure 2 as follows:
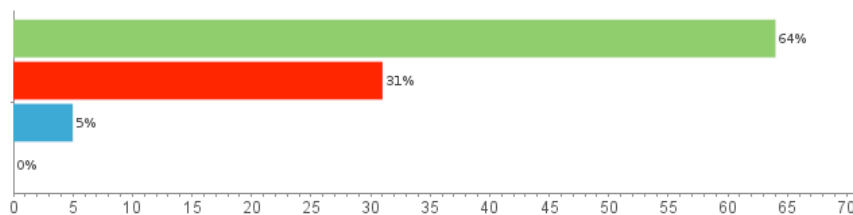
Figure 2. Agreement results from round #1 survey question one.

The analysis and findings of the data collected for this study in round #1

revealed strong collective agreement from participants that the full literature-based

set of practices (46 total practices) were essential in their work. Combining the

"strongly agree" and "agree" categories (representing overall participant

agreement), no collective response in the survey scored lower than 79%

agreement. Twenty-five of the practices scored 100% total agreement. As noted

previously, an agreement definition was set at total agreement equal to, or greater

than 95 percent, a ≧ 95%. All practices where participants responded with agree or

strongly agree ≧ 95% were included in the final set of essential practices.

Table 3 demonstrates participant total agreement as a combination of the

strongly agree and agree responses from data collected in round #1. Within these

findings, the high degree of overall agreement across all 39 participants in round

#1 is evident.

Table 3

Essential Practices Ranked by Percent of Total Agreement

Survey Number	Short Statement	Percent of Total Agreement
42	Maintain a well organized course	100
7	Encourage student independence and initiative	100
3	Respond promptly to support requests	100
8	Provide opportunities for reflection	100
11	Facilitate critical thinking	100
27	Ensure content meets academic standards	100
38	Align assessments with learning objectives	100
45	Maintain discipline expertise	100
2	Describe student support options	100
37	Provide prompt and meaningful feedback	100
6	Teach and assess at correct course level	100
13	Maintain student motivation	100
19	Communicate how and how often you will contact	100
24	Provide opportunities for interaction	100
9	Encourage students to support each other	100
21	Maintain a safe learning environment	100
32	Ensure content is copyright available	100
10	Provide opportunities for diverse perspectives	100
22	Model professional communication	100
43	Adhere to institutional policies of administration	100
44	Master the technology you need	100
18	Communicate high academic expectations	100
16	Model high quality research practices	100
17	Describe your teaching style and expectations	100

Survey Number	Short Statement	Percent of Total Agreement
36	Use a variety of assessment types	100
14	Monitor individual progress and provide support	98
34	Ensure content is accessible for disabled students	98
28	Ensure content is discipline current	97
20	State expectations for participation	97
5	Maintain a student-centred focus	97
12	Formatively evaluate and suggest improvements	97
4	Describe institutional policies	97
39	Provide self-assessment opportunities	97
31	Present activities with real-world applications	95
30	Tie strategies to learning objectives	95
1	Check in with students at start up	95
26	Present content based on adult learning theory	95
33	Align content with student level	94
41	Assess participation for quality and quantity	92
15	Model effective time management skills	92
46	Maintain learning theory expertise	89
23	Provide rationale for your choices	87
29	Present content in a variety of ways (rich media)	85
25	Provide collaborative projects	84
35	Assess student prior knowledge	80
40	Provide students with personal choice in assessment	79

Only 9 of the 46 practices reviewed by the participants failed to achieve agreement in the round #1 survey.

Round #1 agreement by category.

There were seven categories used in the survey instrument as a method of organization (listed in Table 4 below). Across the seven categories, the two practices listed in *Administration and Organization* demonstrated the highest level of agreement at 100%. Within this category, however, there were only two practice statements, "maintain a well-

organized course," and "adhere to administrative institutional policy in course management." The full categories are listed in Table 4 as follows:

Table 4	
Percent of Agreement by Round #1 Survey Category	
Category	**Percent of Agreement**
Administration/Organization (2 practices)	100
Teaching and Moderating (12 practices)	99
Student Support (4 practices)	98
Communication (7 practices)	98
Professional Development (3 practices)	96
Content Presentation and Instructional Strategies (11 practices)	95
Assessment (7 practices)	93

Three categories of practice, *Professional Development, Content Presentation and Instructional Strategies,* and *Assessment* were rated somewhat lower in agreement among participants. In the open comments section of the round #1 survey, one participant expressed frustration about the lack of power in choosing assignment types, stating, "The survey does not adequately reflect the restrictions, institutional and program requirements place on us as course designers/teachers. For example I strongly agree with students having a choice of assignments. This practice is not permitted."

In this case the participant was being constrained by institutional policy to choose assessment types more appropriate to the online environment. This may be a partial explanation for the lower level of agreement among participants with respect to assessment practices.

At the participant institution, the choice of content presentation (e.g., text, audio, video, images, diagrams) and instructional strategies used in online courses were up to the instructors' personal preferences rather than specified in policy guidelines. The same was true of assessment strategies, and this may have contributed to the diversity of opinion (lower level of agreement).

In addition, as stated in the introduction for this thesis, the participants were offered little or no professional development in online instruction. It was not surprising, therefore, to discover a finding of lower agreement within the three categories of *Professional Development*, *Content Presentation and Instructional Strategies,* and *Assessment*.

Round #1 disagreement on practices.

Table 5 lists practices where there were disagree or strongly disagree responses from participants in the round #1 survey.

Table 5

Round #1 Practices Ranked by Percent of Disagreement

Survey Number	Short Statement	Percent of Disagreement
35	Assess student prior knowledge	21
40	Provide students with personal choice in assessment	21
29	Present content in a variety of ways (rich media)	16
25	Provide collaborative projects	15
23	Provide rationale for your choices	13
34	Ensure content is accessible for disabled students	12
46	Maintain learning theory expertise	11
15	Model effective time management skills	8
41	Assess participation for quality and quantity	8
1	Check in with students at start up	5

Survey Number	Short Statement	Percent of Disagreement
26	Present content based on adult learning theory	5
30	Tie strategies to learning objectives	5
31	Present activities with real-world applications	5
33	Align content with student level	5
4	Describe institutional policies	3
5	Maintain a student-centred focus	3
12	Formatively evaluate and suggest improvements	3
14	Monitor individual progress and provide support	3
20	State expectations for participation	3
28	Ensure content is discipline current	3
39	Provide self-assessment opportunities	3

The top nine practices in this list, those that demonstrated a lower level of agreement among participants, aligned with the lower quadrant of Table 3 (practices that did not demonstrate agreement) and were not included in the final set of essential practices for this study.

As an example, the full statement for item 35 in the survey was, "Assess students' level of prior knowledge, including misconceptions and erroneous knowledge." This practice was commonly cited in the literature of adult and online learning (there were 11 statements coded in the qualitative analysis described in Chapter 3 of this study). Despite frequent literature-based recommendations for this practice, 21% of the participants in this study did not believe it was essential in their work. This may be the result of a lack of professional development for the expert participants in adult and online learning theory. It may also reference participant

experience and alignment with traditional higher education teaching models where student prior assessment may not be a regular practice.

As a second example, the full statement for item 40 in the survey was, "Provide students with personal choice for assignments and learning activities." This practice was also cited 11 times in the qualitative analysis, and described in the literature as a shift from traditional teaching methods toward a learner- or learning-centered approach (Anderson, 2008a). As indicated above, several of the expert participants in this study may have been teaching with a more traditional approach, using traditional instructional strategies. Institutional professional development and support that included a more learning-centered approach was not offered. Therefore, there may not have been instructor awareness of the literature-based recommendation.

The next five practices that demonstrated disagreement as demonstrated in Table 5, may have fallen into the realm of newer pedagogic thinking in social constructivist and digital learning environments. The practices may have generated diversity of opinion among participants because they were not yet part of the participant's course design or teaching practices. These potentially newer practices were expressed by the following statements:

- present content in a variety of ways (use rich media);

- provide collaborative projects;

- provide rationale for your choices (content and instructional strategy choices);

- ensure content is accessible for disabled students; and

- maintain learning theory expertise.

There was a five- to seven-year window for course redesign at the participant institution. Over that period of time, as online course design and delivery recommendations shifted to match current thinking in online pedagogy, newly developed courses were aligned with newer practice. It is possible that many of the participants had never consulted with an instructional designer or received any professional development in online instruction. This may have contributed to the disagreement participants expressed on these particular emerging practices.

The practice of ensuring that digital content and online instructional strategies were appropriately designed for students with disabilities was a concern arising from recent North American legislation. This legislation, applicable to most digital education materials, required accessible design of online course materials, particularly of rich media elements. There was positive, but slow, growth at the participant institution to establish policies and processes for inclusive design, and in particular to redesign older courses. The practice of ensuring accessibility would take time to grow as a common practice among online instructors, and success would likely be increased through institutional professional development programs. The

participants in this study may have had little or no exposure to accessibility

needs for online courses and digital resources.

Frequency of use for the essential practices.

In addition to describing whether or not they agreed with practices

from the literature as essential for their work, a second question was asked

of participants in round #1 of this study. Participants were asked how

frequently during a 13-week term they engaged in each individual practice.

The primary purpose for gathering data about frequency of use was

to provide additional information about *how* important the practice might

have been for the participant (relative to the other practices they had

chosen as essential). In addition, the frequency of the practice may have a

future impact on professional development and support prioritization for

the participant institution.

It was a known practice in corporate training priority analysis to

gather data about task frequency (as well as importance and difficulty) to

determine priorities for training and support. One task analysis method

used was called the Difficulty, Importance, and Frequency framework or

DIF. Buckley and Caple (2009) provided a diagram, as shown in Figure 3

below, and description that demonstrated frequency as a key indicator of

priority in a training context. The more frequently a task was performed,

the more important it be performed effectively.
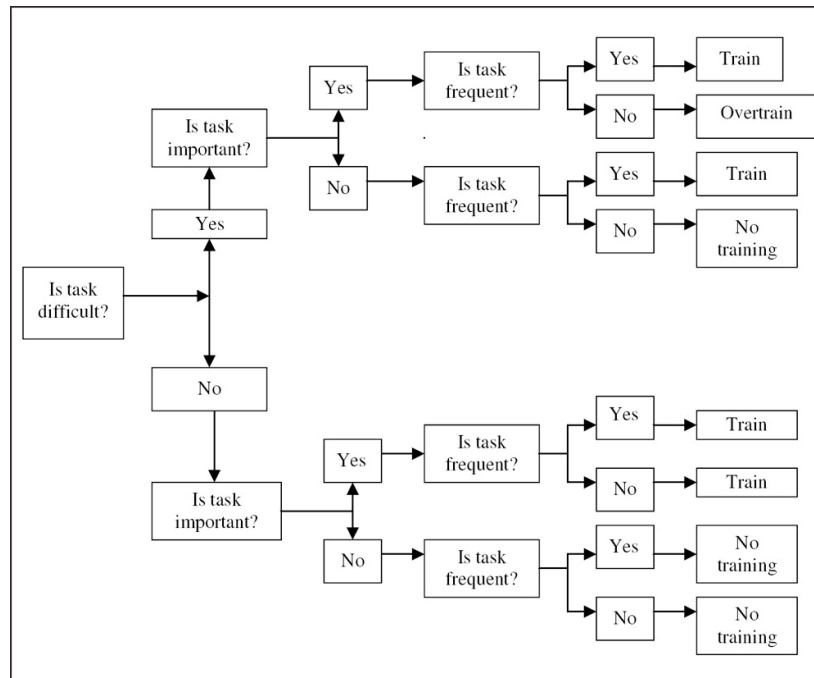
Figure 3. Difficulty, importance, frequency framework. Reprinted from *The Theory and Practice of Training, 6th Edition* (ebook, Chapter 5), by R. Buckley & J. Caple, 2009, London: UK, Kogan Page. Retrieved from http://ezproxy.athabascau.ca:2051/toc.aspx?bookid=44862

Buckley and Caple stated, "The diagram shows that when a task is difficult, important and performed frequently then training must be given. By contrast, when a task is not difficult, not important and performed infrequently then there is no need to train because it is quite likely that it can be learned while doing the job." (Buckley & Caple, 2009, Chapter 5)

To keep the scope of the study and number of questions in the survey manageable, the researcher chose not to include difficulty of practice as a line of inquiry. This may be an element of further research as described in Chapter 6 of this thesis.

For this study, a matrix was developed to demonstrate the level of importance (collective Strong Agreement) for each practice considered essential (37 total), as well as how frequently during a term the practice was used. Figure 4 shows the four quadrants of importance (essentialness) by frequency.
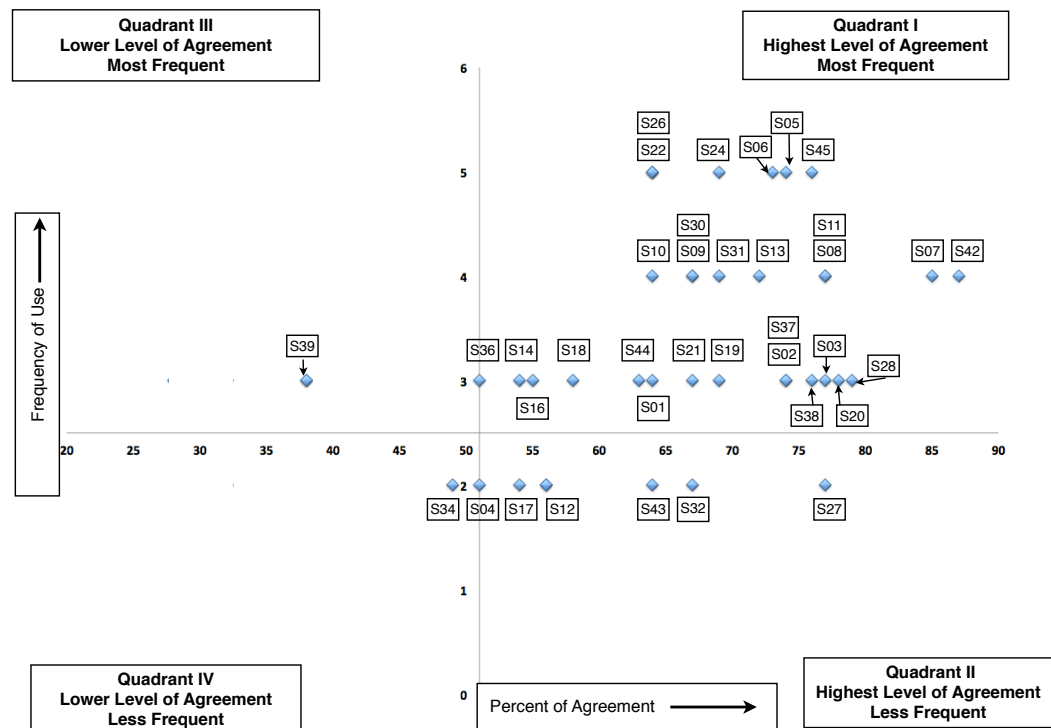
Figure 4. Matrix of essential practices and frequency of use.

Quadrant I, those practices rated most essential (important) and most frequently used, represented the highest value of importance for the participants and the participant institution. Quadrant II, practices rated essential and less frequently used, were of next in importance, followed by quadrants III and IV. Only practices deemed essential by the participants ($\geqq$ 95% total agreement) were included in the matrix. This matrix may be

interpreted as a matrix of priority, where limited professional development programs and support resources exist to help online instructors deliver essential practices.

Round #1 participant comments.

Referencing a recommended practice in Delphi Method surveys (Franklin & Hart, 2007), the survey for this study included an open comments area where participants could add practices that were not included in the survey. This option ensured that if there were gaps between the work of experienced online instructors and the literature of online learning, that new and essential practices would not be missed.

Twelve participants chose to add comments to their surveys. Three of the comments were unrelated to the survey questions, and represented participant feedback on the challenges of teaching online. Six of the comments included rephrased practices that the researcher concluded were already present in the survey, and three of the comments described a potential new practice for participant review.

The following summative excerpts demonstrated the additional practice suggested by participants, and the rationale for conducting a round #2 survey:

1. "I have found real-time student contact via a weekly chat (for participation marks) to be a useful strategy."

2. "Real-time discussions between instructor and students (4 to 5 times/course/session). Provide students with access to software to

run their own real-time discussion sessions around a group task

(This is a new development and students asked for it and have done

it four times on one course).”

3. “Weekly office time - set time is offered for students to contact

us once per week in chat room.”

The researcher chose to phrase the practice suggested above as follows:

Provide occasional real-time opportunities for class discussion

using chat, teleconference, or web-conference tools.

Development of the round #2 survey.

Real-time communication in the case of the comments above was

conducted using the Blackboard© Chat tool, a text-based messaging option

(in the case of comments 1 and 3) and Adobe Connect©, web-conferencing

software (in the case of comment 2). Real-time communication by phone,

chat, or web-conference represented potential value to instructors and

learners in online courses. These types of synchronous communication

elements were an experimental and emerging practice at the participant

institution; however, identification by three participants indicated that these

practices represented important opportunities for connection to learners.

Comment 2 included a reference to opportunities for learners to

interact with each other synchronously with no support (or interference)

from the instructor. This opportunity represented peer-to-peer

communication for teaching and learning, and was cited in several works

from the qualitative literature analysis as recommended in a learner-

centered context (Cobbett, 2010; Tallent-Runnels, et al., 2006; Swan, 2010;

Yan, & Cornelious, 2005).

Comment 3 suggested a regular communication opportunity that

may have been a benefit to improve instructor-learner relationship. Office

hours represented unpaid hours for online instructors at the participant

institution. The instructor's willingness to conduct unpaid weekly

synchronous sessions for the benefit of the learners was a further indication

of the value the practice represented.

Round #2 Data Collection

The round #2 survey was developed and included an added practice

statement for the synchronous communication item, stated as follows:

"Provide occasional real-time opportunities for class discussion using chat,

teleconference, or web-conference tools."

This practice is essential for online instruction.

Agree

Disagree

In addition to seeking agreement from participants about whether this practice was

essential, the researcher included nine practice statements from the round #1

survey that had not achieved agreement. The round #2 survey instrument was

included as Appendix H in this thesis.

The round #2 survey was disseminated to participants exactly as the round

#1 survey, using FluidSurveys[©] with the support of the participant institution's

research coordinator. The round #2 survey was open for a period of three weeks,

and a reminder was sent to participants at the beginning of week 3. Only 26 of the

39 participants from round #1 completed the round #2 survey. Several works from

the literature of Delphi Method described attrition between rounds as difficult to

control based on available interest and time from volunteer participants (Franklin

& Hart, 2007; Larcara, 2010; Manizade & Mason, 2011). The attrition experienced

between rounds #1 and #2 was therefore anticipated. The overall number of

recommended respondents, between 12 and 20, was still achieved.

Round #2 Data Analysis, Findings and Discussion

Aligning with the method of round #1 analysis, the findings from the round

#2 survey were analyzed and expressed as percentage totals of agree and disagree

responses. To simplify participant responses for agreement, the researcher chose to

use only agree or disagree response options, rather than the Likert-type scale (four

responses) used in the round #1 survey. The participants had reviewed all but the

added practice (Question 10 in the round #2 survey) in round #1, and therefore

would have the ability to reach agreement more easily in round #2 if desired.

Table 6 demonstrates the percent of agreement for each of the practices in

the round #2 survey.

Table 6

Round #2 Percent of Agreement on Remaining Practices

Survey Number	Short Statement	Percent of Agreement
8	Assess participation for quality and quantity	88
9	Maintain learning theory expertise	85
5	Align content with student level	81
1	Emphasize time on task	81
4	Present content in a variety of ways (rich media)	81
10 Added	Use occasional synchronous communication	69

2	Provide rationale for your choices	68
7	Provide students with personal choice in assessment	56
3	Provide collaborative projects	52
6	Assess student prior knowledge	50

Aligning with this study's definition of agreement, a $\geqq$ 95%, none of the practices in the round #2 survey, including the added practice, were promoted to the final set of essential practices. No participants added comments into the round #2 survey.

Further Discussion

Comparison of findings with the literature.

The preliminary instrument, Appendix A, was literature based, and it may be stated that participants validated a large number of the initial 46 practices. They agreed that the practices that were essential in their work. The 25 practices that demonstrated 100% agreement (a combination of Agree and Strongly Agree responses) aligned well with the most frequently cited practices from the literature-based qualitative analysis (described in Chapter 3). For example, 15 of the 25 statements that represented 100% agreement among participants, aligned with the 15 most frequently cited statements from the qualitative analysis. No participant-rated practice received agreement lower than 79% (combination of strongly agree and agree responses). Therefore, it may be stated that the majority of all participants agreed with literature-based recommended practices. The final set of essential practices, 37 in total are listed in Appendix J.

An interesting comparison may be made with what students expected from online instructors by referencing findings from Young

(2006). Her study focused on effective online teaching from the student

perspective, and included 199 undergraduate and graduate online

participants. The participants completed a 25-item questionnaire containing

correlates of effective teaching, combined with characteristics of online

teaching, and identified a list of items that described effective online

teaching. Figure 5, below is Young's ranked 25-item scale (Table 1 from

her study) that was an outcome of her research.

Table 1. Item Means, Standard Deviations, Correlations With Overall Item

Item	M	SD	r_p
Subject matter knowledge	4.58	0.65	.60
Effective communication	3.99	1.19	.79
Enthusiasm for teaching	4.13	1.08	.78
Effective facilitation	3.86	1.18	.83
Create comfortable learning atmosphere	4.08	1.04	.80
Adapt to student needs	3.85	1.15	.82
Tolerant	4.25	0.84	.60
Respect for students	4.31	0.87	.66
Warm and friendly	4.19	1.01	.71
Personalize interactions	3.90	1.27	.75
Motivate students to do their best	3.68	1.23	.81
Facilitate thoughtful discussions	3.93	1.14	.71
Design little technology interference	4.07	1.05	.64
Concern about student learning	4.07	0.97	.80
Design understandable course materials	4.10	0.96	.67
Identify important ideas	4.18	0.93	.66
Use of meaningful examples	3.98	1.06	.76
Accessible outside of course	3.71	1.21	.59
Appropriate assignments	3.99	1.06	.58
Course organization	4.14	1.02	.73
Increase student interest	3.93	1.12	.72
Appropriate course difficulty	4.02	1.03	.58
Motivate students to take responsibility	4.14	0.94	.70
Improve student understanding	4.19	0.91	.68
Value of course for students	4.10	1.04	.75

Figure 5. Item means, standard deviations, and correlations with overall

item. Reprinted from "Student Views of Effective Online Teaching in

Higher Education" by S. Young, 2006, *The American Journal of Distance

Education, 20*(2), 70. Copyright 2006, Lawrence Erlbaum Associates, Inc.

Table 7, below is the top 25 (agreement = 100%) practices from this study.

Table 7

Top 25 Essential Practices for Online Instruction

Survey Number	Short Statement	Percent of Agreement
42	Maintain a well organized course	100
7	Encourage student independence and initiative	100
3	Respond promptly to support requests	100
8	Provide opportunities for reflection	100
11	Facilitate critical thinking	100
27	Ensure content meets academic standards	100
38	Align assessments with learning objectives	100
45	Maintain discipline expertise	100
2	Describe student support options	100
37	Provide prompt and meaningful feedback	100
6	Teach and assess at correct course level	100
13	Maintain student motivation	100
19	Communicate how and how often you will contact	100
24	Provide opportunities for interaction	100
9	Encourage students to support each other	100
21	Maintain a safe learning environment	100
32	Ensure content is copyright available	100
10	Provide opportunities for diverse perspectives	100
22	Model professional communication	100
43	Adhere to institutional policies of administration	100
44	Master the technology you need	100
18	Communicate high academic expectations	100
16	Model high quality research practices	100
17	Describe your teaching style and expectations	100
36	Use a variety of assessment types	100

The student perspective from Young's (2006) research included

several references to empathetic and emotion-based expectations, e.g.,

enthusiasm for teaching, creating a comfortable learning environment,

being tolerant, respectful, warm and friendly. In both the literature and the

opinion of the expert instructors for this study, these emotional items were not included or considered important. However, Young's students did identify the importance of subject matter expertise, communication skills, effective facilitation, course organization and other elements similar to those in the final set of essential practices for this study.

It was an oversight that Young's article was not included in the qualitative analysis of literature for the preliminary instrument in this study, and could not be rectified once the round #1 survey was distributed. However, an assignment of one citation per teaching element from Young's findings would not have affected the overall frequency of citations that formed the preliminary instrument.

Teaching excellence.

A set of practices, essential for online instruction was the primary outcome of this research. The choice of a research design using techniques from the Delphi Method indicated that the final set of practices would be expert opinion-based. Reading through the final set of 37 essential practices for online instruction, Appendix J, it was interesting to observe that only nine of the final 37 practices were directly, or even marginally, related to online learning or the technology used to deliver it. Twenty-eight of the practices in the final set described essential practices that may be perceived as important in any instructor-led context, whether online, face-to-face, or blended.

This observation aligned with Anderson's (2008b) assertion that "First and primarily, an excellent e-teacher is an excellent teacher" (p. 360). The participants, through their agreement, confirmed this statement.

Summary

Through two rounds of data collection over a period of two months, success was achieved with respect to the number of participants, the maintenance of ethics and privacy between the researcher and participants, and the rapid turnaround between surveys to maintain participant interest. The findings and outcome of the data collection and analysis was an expert-identified set of essential practices for online instruction. This set of practices fulfilled the purpose of the study.

Chapter 6 – Conclusions and Recommendations for Further Research

Findings in this study indicated participants collectively agreed that 37 of 46 recommended practices from the literature of online learning were essential in their work. Across a range of Strongly Agree responses and frequency of use, a matrix was developed that helped to visualize potential professional development and support priorities for the participants and the participant institution.

Returning to the problem statement for this study, the following describes the issues this study attempted to address:

In the literature of online learning, a primary focus of online course quality was the practice of online instructors. The literature also presented strong agreement that the skills required for online teaching differed from those of traditional classroom-based teaching. The literature indicated that online instructor training and evaluation were vital aspects of a successful online education program. Despite general consensus in the literature on these issues, there was little agreement on a set of recommended practices for online instruction. This lack of research-based guidance limited the instructor's understanding of recommended online teaching practices, and the institution's ability to develop training, evaluation, and support for online instructors.

This study addressed the problem in several ways. A qualitative analysis of 18 references from the literature of online learning was conducted to develop a preliminary set of recommended practices. A total of 1,114 phrases were identified and coded during this analysis. The recommended set represented the most

frequently cited practices of distance education and online learning among the

references chosen, and served as a preliminary instrument for the Delphi

Techniques research design.

The core element of the research design for this study consisted of a

survey-based investigation with a group of expert participants (determined by

several criteria). In this study, participants were asked whether they agreed or

disagreed that each of the practices in the preliminary instrument were essential in

their work. There was clear agreement among participants that 37 of the 46

literature-recommended practices were essential.

Delphi Method Considerations

The researcher examined literature-based recommendations regarding the

Delphi Method benefits and challenges of the Delphi Method, which informed the

research design, to ensure the following:

- the instruments used and examples of data were included in the final

  report (Skumolski, Hartman & Krahn, 2007);

- the issue being reviewed by experts was narrowly defined (Egan &

  Akdere, 2007);

- there were between 12 and 20 expert participants (Manizade & Mason,

  2011);

- using an online format to reduce researcher and participant timelines

  (Manizade & Mason, 2011);

- there was an open-ended comment area provided to ensure that any

    missing information from the preliminary literature-based instrument

    could be corrected with participant input (Franklin & Hart, 2007).

Although some challenges were encountered, for example, Franklin and Hart's

(2007) indication that the development of a literature-based instrument was time

consuming was confirmed; however, the investment of time and overall design

contributed to the clear agreement achieved among participants. Through a variety

of approaches, rigour was applied to the design used in this study.

Recommendations for Practice

The preliminary used in this study may represent a starting place for online

course development support professionals, online instructors, and institutions to

engage in dialogue about success in online teaching and learning. Items in the final

set of essential practices may have implications for course design, policy

decisions, and professional development and support programs. The final set of

practices may help develop a better image of what is needed in the transition from

traditional teaching to online teaching.

In higher education, the quality of teaching, and the satisfaction of

instructors and students are not simply issues of accountability; they may also

represent a competitive edge in a rapidly expanding global market. Appropriate

levels of professional development and support for online instructors can

positively affect the quality of the teaching and learning in online programs

(Pagliari, Batts & McFadden, 2009; Chua & Lam, 2007). Online instructors

seeking to increase expertise, and advance their skills in online instruction, may

use the final set of essential practices from this study as a means of self-assessment toward continuous improvement.

As with all practice recommendations, the status quo for an organization or individual will not change if the recommendations are not translated into actions. Simply handing a set of essential practices to an online instructor will not improve his or her skill in online instruction. The set of practices may increase an instructor's awareness of what is recommended for online teaching, but awareness does not equal skill.

Programs that provide practice opportunities in online environments may be built based on the recommendations to ensure that essential practices are taught and supported. Professional development in a variety of delivery formats (e.g., peer mentoring, self-directed and instructor-led online courses, and face-to-face workshops) may be made available to ensure that instructors can find guidance that suits their learning preferences and available time. Support and professional development programs might be evaluated regularly and updated to ensure they continue to deliver what online instructors need for success. Ideally, professional development programs should be required of all new and existing online instructors, and instructors would be paid appropriately for their time.

Support and professional development programs require a significant investment of resources by institutions with online learning programs. However, the reward for that investment is a higher level of program quality and increased satisfaction among instructors and students.

Revisiting the Limitations

The limitations described in Chapter 1 of this study were as follows:

- the availability of participants identified as expert online instructors to complete the data collection;

- acceptance that the participants were experts in online learning practices;

- acceptance that the literature-based recommended practices used in the preliminary instrument represented a complete and accurate set; and,

- acceptance that the discipline-specific instruction requirements in online courses may have challenged the participants to reach agreement on a generalized set of recommended practices.

The acceptance-based limitations above relied on a decision from the reader, and were outside the influence of the researcher. The first limitation, the availability of the participants was offset by the success of the participation rate. According to Delphi Method recommendations, between 12 and 20 participants is a valid group of experts . In both round #1 and round #2 of this study, more than 20 participants responded fully to the surveys.

Revisiting the Delimitations

The delimitations of this study, those elements that were under the control of the researcher, included two categories as follows:

Elements intentionally included in the study:

- Online instructors identified as experts from one participant institution;

- a preliminary survey instrument derived from a qualitative analysis of 18 literature sources; and

- a two-round design based on Delphi techniques design that invited participants to reach agreement about online instruction practices.

The following elements were intentionally left out of this study:

- Additional participant institutions with similar programs;

- Other stakeholders at the participant institution with responsibility for online programs;

- Multiple research methods to triangulate data.

The limitations were intentionally included to ensure that the scope of the study was manageable for the researcher. At the same time, the limitations were sufficiently broad to ensure an appropriate level of work for academic research at the masters level. It was in the elements intentionally left out of the study where recommendations for further research arose.

Recommendations for Further Research

The scope of this study did not allow for a triangulated research method, including a combination of face-to-face interviews, gathering of student perspectives from the participant institution, and institutional data gathering in order to confirm alignment with the expert opinion of the participant instructors. Institutions and researchers considering similar studies may revise the design to include these additional assurances of reliability and validity. In addition, the element of "difficulty" assigned to performing the tasks (practices) of online instruction (Buckley & Caple, 2009) was deliberately left out of the round #1 and

round #2 surveys as it would have compounded an already lengthy instrument. The element of difficulty in assessing tasks of online instruction (an addition to importance and frequency) may be considered in future research.

The final set of essential practices confirmed by participants in this study may be used for a variety of applied research studies, or as a starting place for an institution to develop professional development and support programs. However, the primary perspective included in the scope of this research was that of the online instructor. There were additional stakeholder perspectives at the participant institution, such as those of students and senior administrators, that could not be covered. Other institutions may consider these additional stakeholder perspectives in further research about essential practices in online instruction. Of particular importance may be the student perspective as exemplified in Young (2006).

There was a clearly stated need in the literature for a standard of recommended practices for online instruction. Such a standard may be developed and promoted by a leading online learning organization, such as the Sloan Consortium, the Instructional Technology Council (ITC), or the International Board of Standards for Training, Performance and Instruction (IBSTPI). All three organizations have developed and promoted standards for online programs for many years. These organizations have demonstrated exceptional rigour in the development of standards for other aspects of online learning. A focus on essential practices of online instruction would be a welcome addition to their work.

Summary

While research-based standards and practices of online instruction continually emerge, there are some excellent foundations for individual practitioners and institutions with online programs. Individual practitioners have multiple opportunities in the established research and literature of online learning to self-assess their capabilities, and to engage in learning that is meaningful to them in their practice. This may empower them to act as leaders within their organizations and to continuously improve student outcomes in online learning. If there is a perceived gap in defining a standard, individuals and institutions have opportunities to define and test standards for themselves. The method and preliminary instrument from this study, or the final set of essential practices identified by the participants, may represent a starting place for such an opportunity.

Chapter 7 – Researcher's Reflection on Credibility

Neuman (2006) described a variety of reliability and validity elements in the context of both quantitative and qualitative research methods. He stated, "Perfect reliability and validity are virtually impossible to achieve. Rather they are ideals researchers strive for." (p. 188). Within the scope of this study, reliability was sought but proved challenging to confirm. The study focused on one participant institution, and used a researcher-generated preliminary instrument. The instrument was literature-based, adding one element of reliability. There were very few comparisons to make with existing research, and no additional time to include other participants to test the reliability of the instrument or research design. Opportunities for others to test reliability were explored in the Recommendations for Further Research section of Chapter 6.

Neuman's concept of "face validity" aligned with elements of this research. He described the concept as follows, "It is a judgment by the scientific community that the indicator really measures the construct." (p. 192). In this research, the indicator may be considered the practices of online instruction, and the construct may be the successful work of online instructors.

In the opinion of the scientific community, are the literature-based recommended practices distilled in the qualitative analysis accurate indicators of the construct? Only the community can answer. Are the expert opinions of the participants, which so clearly confirmed recommended practices as essential, valid? Again, it remains to be seen if the scientific community, in the case of this

study, the readers, can answer Neuman's (2006) question, do the definitions and the methods of measurement fit? (p. 192)

Credibility in a research project was an additional element worth exploring for the researcher. Oxford English Dictionary defines credibility as, "the quality of being trusted and believed in" (OED Online, 2013). The credibility of any research project may rest with the agreement of discipline experts in the subject area, supervisors and committee members (if the research is part of an academic thesis), and all readers of the thesis or publication. The basic articulation of credibility may reside in a series of questions. Do the findings ring true in the expert or novice reader's experience? Are the outcomes plausible and clearly summarized? Was something new presented to the reader, a different perspective, an article they had never read, or was there a conclusion that differed from one they would have made? Did something about the research resonate positively with them? Affirmative answers to one or more of these questions may indicate that the research was credible at an individual level for the reader.

In addition to the reader's satisfaction with the study, a question might arise for a researcher at the end of a formal thesis process. Was the work an engaging and meaningful learning experience? If the experience of conducting the research was both engaging and meaningful, and the researcher cooperated with expert-guided supervision to improve her skills, how could the research be anything but credible in from her perspective? What more would be needed for the researcher to confirm success?

In the case of this study, the researcher did not claim that the results would be generalizable to all online instructors or all higher education institutions with online programs. The scope was too narrow and the research design was focused and specific to one participant institution and its online instructors. The results may not even be generalizable to all online instructors at the participant institution. It's possible that the findings are simply relevant to the group of participants for the study. It's also possible that the findings might appeal to a larger audience if presented, and represent value to them in their practice.

There are several ways to improve credibility and demonstrate value in new research. One is the rigour of the design; the researcher is satisfied that the design and implementation were rigourous to the best of her capabilities. Another is the confirmation of supervisors and committee members that the work aligns with accepted academic practice and explores new territory. A third possibility might be favourable comparison with similar, accepted research. Finally, presenting, publishing, and accepting feedback from peers and mentors may help to build and further establish the credibility of the study as well as to demonstrate the value of the research.

References

Allen, I., & Seaman, J. (2003). *Sizing the opportunity: The quality and extent of online education in the United States, 2002 and 2003*. Needham, MA: Sloan Consortium. Retrieved from http://sloanconsortium.org/publications/survey/index.asp

Allen, I., & Seaman, J. (2004). *Entering the mainstream: The quality and extent of online education in the United States, 2003 and 2004*. Needham, MA: Sloan Consortium. Retrieved from http://sloanconsortium.org/publications/survey/index.asp

Allen, I., & Seaman, J. (2005). *Growing by degrees: Online education in the United States, 2005*. Needham, MA: Sloan Consortium. Retrieved from http://sloanconsortium.org/publications/survey/index.asp

Allen, I., & Seaman, J. (2006). *Making the grade: Online education in the United States, 2006*. Needham, MA: Sloan Consortium. Retrieved from http://sloanconsortium.org/publications/survey/index.asp

Allen, I., & Seaman, J. (2007). *Online nation: Five years of growth in online learning*. Needham, MA: Sloan Consortium. Retrieved from http://sloanconsortium.org/publications/survey/index.asp

Allen, I., & Seaman, J. (2008). *Staying the course: Online education in the United States, 2008*. Needham, MA: Sloan Consortium. Retrieved from http://sloanconsortium.org/publications/survey/index.asp

Allen, I., & Seaman, J. (2009). *Learning on demand: Online education in the United States, 2009*. Needham, MA: Sloan Consortium. Retrieved from http://sloanconsortium.org/publications/survey/index.asp

Allen, I., & Seaman, J. (2010). *Class differences: Online education in the United States, 2010*. Needham, MA: Sloan Consortium. Retrieved from http://sloanconsortium.org/publications/survey/index.asp

Allen, I., & Seaman, J. (2011). *Going the distance: Online Education in the United States, 2011*. Needham, MA: Sloan Consortium.

http://sloanconsortium.org/publications/survey/going_distance_2011

Allen, I., & Seaman, J. (2012). *Changing course: Ten years of tracking online education in the United States*. Needham, MA: Sloan Consortium. Retrieved from

http://sloanconsortium.org/publications/survey/changing_course_2012

American Psychological Association. (2010). *Publication manual of the american psychological association* (6th Ed.). Washington, DC: American Psychological Association.

Anderson, T. (2008a). Towards a theory of online learning. In T. Anderson (Ed.), *The theory and practice of online learning* (pp. 45-74). Athabasca, AB: AU Press.

Anderson, T. (2008b). Teaching in an online learning context. In T. Anderson (Ed.), *The theory and practice of online learning* (pp. 343-365). Athabasca, AB: AU Press.

Anderson, T. (2010). Theories for learning with emerging technologies. In G.

Veletsianos (Ed.), *Emerging technologies in distance education* (pp. 23-

40)*.* Athabasca, AB: AU Press.

Anderson, T., & Dron, J. (2011). Three generations of distance education

pedagogy. *The International Review of Research in Open and Distance

Learning, 12*(3), 80-97. Retrieved from

http://www.irrodl.org/index.php/irrodl/article/view/890

Archer, W., & Garrison, D. (2010). Distance education in the age of the Internet.

In C. Kasworm, A. Rose, & J. Ross-Gordon (Eds.), *Handbook of adult and

continuing education* (pp. 317-326)*.* Thousand Oaks, CA: Sage

Publications.

Athabasca University Research Ethics Board. (2010). Ethical conduct for research

involving humans policy. Retrieved from

http://www2.athabascau.ca/secretariat/policy/research/ethicpolicy.htm

Aubteen Darabi, A., Sikorski, E., & Harvey, R. (2006). Validated competencies

for distance teaching. *Distance Education, 27*(1), 105-122.

Bangert, A. (2008). The development and validation of the student evaluation of

online teaching effectiveness. *Computers in the School, 25*(1-2), 24-47.

Baruch, Y. & Holtom, B. (2008). Survey response rate levels and trends in

organizational research. *Human Relations,* 61(8), 1139-1160.

Bates, C., & Watson, M. (2008). Re-learning teaching techniques to be effective in

hybrid and online courses. *Journal of American Academy of Business,

Cambridge, 13*(1), 38-44.

Bates, T., & Sangrà, A. (2011). *Managing technology in higher education: strategies for transforming teaching and learning.* New Jersey: John Wiley & Sons.

Bawane, J., & Spector, J.M. (2009). Prioritization of online instructor roles: Implications for competency-based teacher education programs. *Distance Education, 30*(3), 383-397.

Bolliger, D., & Wasilik, O. (2009). Factors influencing faculty satisfaction with online teaching and learning in higher education. *Distance Education, 30*(1), 103-116.

Boon, S. & Sinclair, C. (2010). Life behind the screen: Taking the academic online. In L. Dirckinck-Holmfield, V. Hodgson, C. Jones, M. de Laat, D. McConnell, & T. Ryberg, (Eds.), *Proceedings from 7th international conference on networked learning 2010.* Retrieved from http://www.lancs.ac.uk/fss/organisations/netlc/past/nlc2010/info/confpapers.htm

Boon, S. & Sinclair, C. (2009). A world I don't inhabit: Disquiet and identity in Second Life and Facebook. *Educational Media International, 46*(2), 99-110.

Briggs, S. (2005). Changing roles and competencies of academics. *Active Learning in Higher Education, 6*(3), 256-268.

Buckley, R. & Caple, J. (2009). *The theory & practice of training* (6th Ed.). London: UK, Kogan Page.

Canadian Institutes of Health Research, Natural Sciences and Engineering

>   Research Council of Canada, and Social Sciences and Humanities

>   Research Council of Canada. (2010). *Tri-Council Policy Statement: Ethical*

>   *Conduct for Research Involving Humans*. Retrieved from

>   http://www.pre.ethics.gc.ca/pdf/eng/tcps2/TCPS_2_FINAL_Web.pdf

Chickering, A. & Gamson, Z. (1991). *Applying the seven principles of good*

>   *practice for undergraduate education*. San Francisco: Jossey-Bass.

Chua, A. & Lam, W. (2007). Quality assurance in online education: The

>   Universitas 21 Global approach. *British Journal of Educational*

>   *Technology, 38*(1), 133-152.

Clevelend-Innes, M. (2010). Teaching and learning in distance education. In M.

>   Cleveland-Innes & D. Garrison (Eds.), *An introduction to distance*

>   *education: Understanding teaching and learning in a new era* (pp.1-10).

>   New York: Routledge.

Cobbett, S. (2006). Nursing Education Online: Pedagogical practice and

>   professional socialization. (Unpublished doctoral dissertation). Charles

>   Sturt University, Australia.

Cobbett, S. (2010). Pedagogical evaluation of online courses. In *Proceedings of*

>   *world conference on educational multimedia, hypermedia and*

>   *telecommunications 2010*, (pp.2324-2329). Chesapeake, VA: AACE.

Conceição, S. (2006). Faculty lived experiences in the online environment. *Adult*

>   *Education Quarterly, 57*(1), 26-45.

Cook, K. (2007). Immersion in a digital pool: Training prospective online
     instructors in online environments. *Technical Communication Quarterly,*
     16(1), 55-82.

Creswell, J. (2009). *Research design: Qualitative, quantitative, and mixed methods*
     approaches (3rd Ed.). Thousand Oaks, CA: Sage.

Crow, R., McGuinty, D. & LeBaron, J. (2008). The online small group analysis
     (OSGA): Adapting a tested formative assessment technique for online
     teaching. *MountainRise: The International Journal for the Scholarship of*
     Teaching and Learning, 4(3), 1-18.

Dykman C. & Davis, C. (2008). Online education forum part two - teaching online
     versus teaching conventionally. *Journal of Information Systems Education,*
     19(2), 157-165.

Endean, M., Bai, B., & Du, R. (2010). Quality standards in online distance
     education. *International Journal of Continuing Education and Lifelong*
     Learning, 3(1), 53-71.

Egan, T. & Akdere, M. (2005). Clarifying distance education roles and
     competencies: Exploring similarities and differences between professional
     and student-practitioner perspectives. *The American Journal of Distance*
     Education, 19(2), 87-103.

Fish, W. & Wickersham, L. (2009). Best practices for online instructors:
     Reminders. *The Quarterly Review of Distance Education, 19*(3), 279-284.

Franklin, K. & Hart, J. (2006). Understanding the influence of Web-based distance

education on the role of the academic department chair: A Delphi study.

Educational Technology and Society, 9(1), 213–228.

Franklin, K. & Hart, J. (2007). Idea generation and exploration: Benefits and

limitations of the Policy Delphi research method. *Innovative Higher

Education, 31*(4), 237-246.

Garrison, D. & Akyol, Z. (2009). Role of instructional technology in the

transformation of higher education. *Journal of Computing in Higher

Education, 21*(1), 19-30.

Garrison, D., Anderson, T. & Archer, W. (2000). Critical inquiry in a text-based

environment: Computer conferencing in higher education. *The Internet and

Higher Education, 2*(2-3), 87-105.

Gaytan, J. & McEwen, B. (2007). Effective online instructional assessment

strategies. *The American Journal of Distance Education, 21*(3), 117-132.

Goolnik, G. (2006). Effective change management strategies for embedding online

learning within higher education and enabling the effective continuing

professional development of its academic staff. *Turkish Online Journal of

Distance Education, 7*(1).

Hartman, J., Dziuban, C., & Brophy-Ellison, J. (2007). Faculty 2.0. *Educause

Review, 42*(5), 62-77.

Henry, J. & Meadows, J. (2008). An absolutely *riveting* online course: Nine

principles for excellence in web-based teaching. *Canadian Journal of

Learning and Technology, 34*(1), 75-90.

Hong, W. (2008). Benchmarks and quality assurance for online course

     development in higher education. *US-China Education Review, 5*(3) 31-34.

Instructional Technology Council (ITC). (2011). 2010 distance education survey

     results. Trends in elearning: Tracking the impact of eLearning at

     community colleges. From

     http://www.itcnetwork.org/component/content/article/48-library-articles-

     abstracts-research/87-distance-education-survey-results-march-2010.html

Larcara, M. (2010). Forecasting online adjunct needs: A Delphi study. Retrieved

     from ProQuest. Dissertations (UMI Number: 3426718)

Li, C.-S., & Irby, B. (2008). An overview of online education: Attractiveness,

     benefits, challenges, concerns, and recommendations. *College Student*

     Journal, 42(2), 449-459.

Likert, R., Roslow, S. & Murphy, G. (1934). A simple and reliable method of

     scoring the Thurstone Attitude scales. *Journal of Social Psychology, 5*(2),

     228-238.

Manizade, A. & Mason, M. (2011). Using Delphi methodology to design

     assessments of teachers' pedagogical content knowledge. *Education*

     Studies in Mathematics, 76(2), 183-207.

Mauch, G. & Park, N. (2003). *Guide to the successful thesis and dissertation: A*

     handbook for students and faculty (5th Ed.). New York, NY: CRC Press.

Menchaca, M. & Hoffman, E. (2009). Planning for evaluation in online learning:

     University of Hawaii case study. *Journal of College Teaching and*

     Learning, 6(8), 45-51.

Meyer, J. & Barefield, A. (2010). Infrastructure and administrative support for

online programs. *Online Journal of Distance Learning Administration,*

13(3). Retrieved from

http://www.westga.edu/~distance/ojdla/Fall133/meyer_barfield133.html

Moore, M. & Kearsley, G. (2005). *Distance education: A systems view*. Belmont,

CA: Wadworth, Cengage Learning.

Moore, M. (2007). The theory of transactional distance. In M.G. Moore (Ed.)

Handbook of distance education (2nd Ed., pp. 89-105). Mahwah, NJ:

Lawrence Erlbaum.

Neely, P. & Tucker, J. (2010). Unbundling faculty roles in online distance

education programs. *Contemporary Issues in Education Research, 3*(6),

17-23.

Neuman, W. L. (2006). *Social research methods: Qualitative and quantitative*

approaches (6th Ed.). Boston, MA: Pearson.

OED Online. (2013). Agreement, n. Oxford University Press. Retrieved from

http://0-

www.oed.com.aupac.lib.athabascau.ca/view/Entry/4159?redirectedFrom=a

greement#eid

OED Online. (2013). Credibility.n. Oxford University Press. Retrieved from

http://oxforddictionaries.com/definition/english/credibility?q=credibility

Pagliari, L., Batts, D. & McFadden, C. (2009). Desired versus actual training for

online instructors in community colleges. *Online Journal of Distance*

Learning Administration, 12(4). Retrieved from

http://www.westga.edu/~distance/ojdla/winter124/pagliari124.html

Perkin, H. (2006). History of universities. *International Handbook of Higher*

Education, 18(1), 159-205.

Perry, B. & Edwards, M. (2010). Creating a culture of community in the online

classroom using artistic pedagogical technologies. In G. Veletsianos (Ed.)

Emerging technologies in distance education (pp. 129-151)*.* Athabasca,

AB: AU Press.

Peters, O. (2007). The most industrialized form of education. In M.G. Moore

(Ed.), *Handbook of eistance education* (2nd ed., pp. 57-68). Mahwah, NJ:

Lawrence Erlbaum.

Phipps, R. & Merisotis, J. (2000). Quality on the line: Benchmarks for success in

internet-based distance education. *The Institute for Higher Education*

Policy. Retrieved from http://www.ihep.org/assets/files/publications/m-

r/QualityOnTheLine.pdf

Puzziferro-Schnitzer, M. (2005). Managing virtual adjunct faculty: Applying the

seven principles of good practice. *Online Journal of Distance Learning*

Administration 8(2). Retrieved from

http://www.westga.edu/%7Edistance/ojdla/summer82/schnitzer82.htm

Puzziferro, M. & Shelton, K. (2009). Supporting online faculty - Revisiting the

Seven Principles (A few years later). *Online Journal of Distance Learning*

Administration, 12(3). Retrieved from

http://www.westga.edu/~distance/OJDLA/fall123/puzziferro123.html

Rochefort, B. & Richmond, N. (2011). Connecting instruction to connected

    technologies - why bother? An instructional designer's perspective. *Revista*

    de Universidad del Conocimiento (RUSC), 8(1), 217-232.

Scheibe, M., Skutsch, M., & Schofer, J. (2002). Experiments in Delphi

    methodology. In H. A. Linstone & M. Turoff (Eds.) The Delphi method:

    Techniques and applications. Retrieved from

    http://is.njit.edu/pubs/delphibook/delphibook.pdf

Schulte, M. (2009). Efficient evaluation of online course facilitation: The 'Quick

    Check' policy measure. *The Journal of Continuing Higher Education,*

    57(2), 110-116.

Siemens, G. (2008). Learning and knowing in networks: Changing roles for

    educators and designers. ITForum. Retrieved from

    http://it.coe.uga.edu/itforum/Paper105/Siemens.pdf

Skulmoski, G., Hartman, F. & Krahn, J. (2007). The Delphi Method for graduate

    research. *Journal of Information Technology Education, 6*(1), 1-21.

Smith, R. (2010). Facilitation and design of learning. In C. Kasworm, A. Rose, and

    J. Ross-Gordon (Eds.) *Handbook of adult and continuing education* (pp.

    147-155)*.* Thousand Oaks, CA: Sage Publications.

Smith, T. (2005). Fifty-one competencies for online instruction. *The Journal of*

    Educators Online, 2(2), 1-18. Retrieved from

    http://www.thejeo.com/Ted%20Smith%20Final.pdf

Spector, J., Klein, J. Reiser, R., Sims, R., Grabowski, B. & de la Teja, L. (2006).

    Competencies and standards for instructional design and educational

technology. ITForum. Retrieved from

http://it.coe.uga.edu/itforum/paper89/ITForumpaper89.pdf

Swan, K. (2010). Teaching and learning in post-industrial distance education. In

M. Cleveland-Innes and D. Garrison (Eds.), *An introduction to distance education: Understanding teaching and learning in a new era* (pp. 108-134*).* New York, NY: Routledge.

Staley, D. & Trinkle, D. (2011). The changing landscape of higher education. *Educause Review, 46*(1). Retrieved from http://www.educause.edu

Tallent-Runnels, M., Thomas, J., Lan, W., Cooper, S., Ahern, T., Shaw, S. & Liu, X. (2006). Teaching courses online: A review of the research. *Review of Educational Research, 76*(1), 93-135.

Thach, E. (1994). Perceptions of distance education experts regarding the roles, outputs, and competencies needed in the field of distance education. Retrieved from ProQuest Digital Dissertations. (AAT 9506728)

Tipple, R. (2010). Effective leadership of online adjunct faculty. *Online Journal of Distance Learning Administration, 13*(1). Retrieved from http://www.westga.edu/%7Edistance/ojdla/spring131/tipple131.pdf

Trentin, G. (2010). *Networked collaborative learning: Social interaction and active learning*. Oxford, UK: Chandos Publishing.

Varvel, V. (2007). Master online teacher competencies. *Online Journal of Distance Learning Administration, 10*(1). Retrieved from http://www.westga.edu/~distance/ojdla/spring101/varvel101.htm

Williams, P. (2003). Roles and competencies for distance education programs in

higher education institutions. *The American Journal of Distance

Education, 17*(1), 45–57.

Yang, Y. & Cornelious, L. (2005). Preparing instructors for quality online

instruction. *Online Journal of Distance Learning Administration, 8*(1),

Retrieved from

http://www.westga.edu/%7Edistance/ojdla/spring81/yang81.pdf

Young, S. (2006). Student views of effective online teaching in higher education.

American Journal of Distance Education, 20(2), 65-77.

Zsohar, H. & Smith, J. (2008). Transition from the classroom to the Web:

Successful strategies for teaching online. *Nursing Education Perspectives,

29*(1), 23-28.

Appendix A - Final Preliminary Survey Instrument

Note: The set of agreement responses demonstrated in Question 1 was provided for each numbered question in the survey.

Consent and ID Number

This survey consists of 46 questions about online instruction practice. By checking the box below you confirm that you have read the consent form and agree to share your opinion anonymously with the researcher.

(check box here)

Survey ID

Please type in the survey ID assigned to you by the Research Coordinator. This ID will be included in your survey invitation email and consists of two letters and a number, e.g., ZT773. The purpose of this ID is to maintain confidentiality yet confirm participation.

(ID field here)

Introduction

A set of practices used in online instruction is described below. You will be asked the degree to which you agree or disagree that the practice is essential for online instruction. You will also be asked how frequently you engage in a particular practice.

It is possible to agree that a practice is essential, yet state that you have never engaged in it. It may be new to you or to your institution.

Some practices are engaged only once per term by their nature. Frequency is not an indicator of overall importance.

For this research an essential practice is *an online instruction activity that contributes to student achievement of learning outcomes.*

Category 1 Student Support

1. Check in with students at course startup to ensure they are able to access all course

   materials (i.e., that they have the correct hardware, software and instructions to do so).

   This is an essential practice for online instruction.

   _ Strongly agree

   _ Agree

   _ Disagree

   _ Strongly Disagree

   I engage in this practice…

   _ two or more times per week

   _ once per week

   _ two or more times per term

   _ once per term

   _never

2. Describe the options for students to seek institutional support with course technology or

   for any other learning needs.

3. Respond promptly to student requests for accessibility and accommodation.

4. Describe academic department and institutional policies that affect students.

Category 2 Teaching and Moderating

5. Maintain a student-centered approach in the course.

6. Teach and assess at the appropriate course level (i.e., introductory, intermediate or

   advanced).

7. Encourage students to take personal responsibility for their own learning.

8. Provide opportunities and guidance for student reflection.

9. Encourage students to support each other throughout the learning process.

10. Provide opportunities and encouragement for students to share their understanding, experience, culture, and other unique aspects of themselves in the course.

11. Facilitate the development of critical thinking among students.

12. Formatively evaluate course effectiveness (combination of examining student outcomes while the course is underway and seeking student and institutional feedback).

13. Promote and maintain student motivation.

14. Monitor individual student progress and offer specific opportunities for support and improvement.

15. Encourage and model effective student time management skills.

16. Model and describe high quality academic and discipline-specific research practices.

Category 3 Communication

17. Describe your teaching philosophy and what students can expect from you as the instructor.

18. Communicate high academic expectations.

19. Communicate how, and how often, you will be in contact with students.

20. Provide students with explicitly stated expectations for assessments and course participation.

21. Maintain a safe learning environment (e.g., describe the ways that students should interact respectfully in discussion forums and during group work).

22. Model professional standards in communications.

23. Provide rationale for your choice of course materials, presentation format and assessments.

Category 4 Content Presentation and Instructional Strategies

24. Provide opportunities for students to interact with each other, and with you, in discussion forums and other course communication spaces.

25. Provide opportunities for students to collaborate on projects.

26. Present content using strategies based on adult and online learning theories.

27. Ensure content and learning resources meet institutional academic standards.

28. Ensure that content reflects current research in your discipline, and represents multiple perspectives.

29. Present content in a variety of ways (e.g., text, images, diagrams, audio, video).

30. Use instructional strategies appropriate to the available technology and learning objectives.

31. Provide learning activities where students present, challenge, analyze and reflect on real life situations.

32. Ensure content and resources adhere to copyright regulations specific to digital materials.

33. Align content with the comprehension level of the students and course (i.e., introductory, intermediate, advanced).

34. Ensure content (including media and learning activities) conforms to institutional accessibility requirements (e.g., videos are captioned).

Category 5 Assessment

35. Assess students' level of prior knowledge, including misconceptions and erroneous knowledge.

36. Utilize a variety of assessment types (e.g., quizzes, essays, projects, observations).

37. Provide prompt, supportive feedback on assessments with concrete suggestions for improvement.

38. Ensure that assessments confirm the attainment of stated learning objectives.

39. Provide a variety of opportunities and activities for students to self-assess their learning progress.

40. Provide students with personal choice for assignments and learning activities.

41. Use an assessment strategy for discussion forums that evaluates both quality and quantity of participation.

Category 6 Administration/Organization

42. Maintain a well-organized course environment (e.g., all materials, readings and assignment details are easy to locate).

43. Adhere to academic department and institutional policies for the delivery of courses.

Category 7 Professional Development

44. Ensure your personal technology expertise for learning and content management systems to effectively administer the course.

45. Maintain discipline-specific professional development and expertise.

46. Maintain awareness of current research in adult and online learning theory and practice.

Appendix B - Sample Survey Instrument Question

The following web-based question format was used for all 46 of the literature-based,

recommended practices as the FluidSurveys Instrument for participants:

Student Support   ✖

1. Check in with students at course startup to ensure they are able to access all course materials (i.e., that they have the correct hardware, software and instructions to do so).

This is an essential practice for online instruction.

strongly agree	agree	disagree	strongly disagree
○	○	○	○

✖

I engage in this practice...

two or more times per week	once per week	two or more times per term	once per term	never
○	○	○	○	○

Appendix C – Athabasca Univeristy Research Ethics Board Approval

Athabasca University

Canada's Open University™

MEMORANDUM

DATE:	November 20, 2012
TO:	Jenni Hayman
COPY:	Dr. Susan Moisey (Research Supervisor) Janice Green, Secretary, Athabasca University Research Ethics Board Dr. Simon Nuttgens, Chair, Athabasca University Research Ethics Board
FROM:	Dr. Rick Kenny, Chair, CDE Research Ethics Review Committee
SUBJECT:	Ethics Proposal #<u>CDE-12-08A</u>: Major Amendment to #CDE-12-08 *"Essential Practices for Online Instruction"*

On behalf of the Centre for Distance Education (CDE) Research Ethics Review Committee, acting under authority of the Athabasca University Research Ethics Board to provide a process of review for minimal risk student researcher projects, I reviewed the above-noted **major AMENDMENT** to the previously approved proposal and supporting documentation.

I am pleased to advise that the above-noted research as described in the revised application received November 5, has been **APPROVED TO PROCEED.** Please provide, **for final FILE PURPOSES ONLY,** evidence of the additional information and minor change requested below:

1.   **Appendix A - Revised Supervisor Support E-mail** for file purposes only – a new e-mail from the supervisor is required to be inserted in this appendix, confirming her knowledge and support of the revised application as stated in the applicant's November 5 conveyance e-mail.

2.   Optional: **Appendix D – Participant Consent Form – Addition of AU REB Contact Information:** *Questions about the Study* section – since both Ryerson and Athabasca University's Research Ethics Boards approved this study, it would be preferable to have Athabasca's REB contact information included, in addition to that shown for the Ryerson board.

> AU REB Contact: Janice Green, Research Ethics Administrator
> Athabasca University Research Ethics Board
> University Research Services
> 1 University Drive, Athabasca, AB T9S 3A3
> Canada
> Telephone: 1-780-675-6718
> E-mail: rebsec@athabascau.ca

However, if inclusion of that additional contact information would cause further delay in getting the study going (due to additional review by Ryerson), or if it is felt locally that this additional contact would create confusion, the AU board is satisfied to leave the consent form 'as is' on the assumption that the Ryerson REB would contact us immediately if there are any problems or concerns expressed to them. (Confirmation of that understanding from the Ryerson REB would be appreciated, for our file.)

The **approval for the study** "as presented" **is valid for a period of one year from the date of this memo**. 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 research progresses, if you need to make any significant changes or modifications, **after consultation and accompanied by verification** of the support of your research supervisor for such changes or modifications, please forward the new 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)
1 Athabasca Drive, Athabasca, AB, Canada T9S 3A3
e-mail: janiceg@athabascau.ca
Telephone: (780) 675-6718
Fax: (780) 675-6722

CDE 1_Apprvl   Page 1 of 1

Appendix D - Invitation to Participants

November 19, 2012

Dear Instructor,

This email is being sent to you seeking your voluntary participation in online, survey-based research. The purpose of this research is to identify a set of practices that are essential in online instruction. The researcher is a masters-level graduate student at Athabasca University named Jenni Hayman. I have been appointed by [participant institution] to serve as a liaison between you and the researcher in order to assure your anonymity. Your participation will contribute to the emerging body of research about online learning, and may help inform other online instructors and institutions. In particular, your contribution may help institutions provide more informed, effective training and support programs for online instructors.

You have been sent this email because you meet the criteria for participation. Those criteria are:

- You are a current online instructor at [participant institution] (you have taught an online course section within the past year)

- You have taught six or more online sections at [participant institution] since 2005

The preliminary online survey will take no longer than 30 minutes to complete and should be completed in one session if possible. A brief second survey may be needed, and would take no more than 10 minutes to complete.

If you agree to participate, please use the link, password and ID number below to access the survey. The ID number allows the researcher to confirm you have completed the survey, but does not reveal your identity to her. There is an informed consent description attached to this email that provides you with additional details about the research.

I will ensure your identity remains unknown to the researcher. The researcher will only be provided with your anonymous survey responses.

If you have any questions, please do not hesitate to contact me. I will contact the researcher to provide clarification of any issues. This research proposal has been approved by [participant institution's] and Athabasca University's Research Ethics Boards.

The researcher wishes to thank you very much for your consideration of participation in this study. If you are interested in participating, please complete the Round #1 survey as soon as possible. It will be open for a period of three weeks. If needed, a brief Round #2 survey will be sent in January 2013.

Link to the survey:

Survey Link Here

The survey is password protected, the password is: **au2012**

Your unique survey ID**: XXXXX**

Sincerely,

Participant Institution Research Coordinator

Appendix E - Participant Consent Details

Dear Instructor,

You are being asked to participate in a research study. Before you begin the web-based survey that comprises data collection, it is important that you read the following information and ask as many questions as you would like to satisfy your comfort-level and understanding of the study. Recruitment and consent are two different research processes. You have already responded with agreement to participate. Each item in this document is described to ensure you are fully informed prior to participation.

Researcher: The principal researcher for this study is a Masters of Education student at Athabasca University named Jenni Hayman. Jenni is also a staff member at [the participant institution] and may be known to you. This study will contribute to a thesis toward completion of her master's degree.

Researcher Coordinator: [Designated Coordinator] is acting as the research coordinator for this study. His or her responsibilities are to coordinate a list of potential participants based on the criteria listed below, assign them a survey ID to ensure they are anonymous to the researcher, and conduct confidential email communication with participants with respect to invitations and reminders. He or she will not share the real names of participants with the researcher. No ID-specific data will be shared with him or her.

Purpose of the Study: The purpose of this research is to identify a set of practices essential for online instruction.

Description of the Study: The study requires as many participants as possible, selected from the full population of online instructors at [the participant institution] for their expertise in online instruction. **Criteria for participation are:**

- The participant is a current online instructor at [participant institution] (they have taught an online course section within the past year)

- The participant has taught six or more online sections at [participant institution] since 2005.

The following steps describe the core elements of the research process:

1. The researcher has developed a preliminary web-based instrument that provides a set of 46 recommended practices for online instruction and seeks participant opinion about the practices. This set was extracted from the literature of online learning.

2. Potential participants will be sent an invitation by a research coordinator from [participant institution] and asked to respond by November 23, 2012.

3. Participants who agree will receive an email from a research coordinator with a survey identification number, this document, and a link and instructions to complete the web-based round-one survey. The preliminary survey should take no longer than 30 minutes to complete. It will be available for a three-week period.

4. Once all round-one surveys are completed, the researcher will analyse and, if needed, build a round-two survey.

5. If needed, the round-two survey will be sent to participants for completion. The round-two survey will take no longer than 10 minutes to complete.

6. The total time for the researcher to collect and analyse data, from receipt of the round-one survey participation details, to finalization of the round-two survey, should be approximately eight-ten weeks.

7. Once analysis is complete and findings and conclusions confirmed, the researcher will share the findings with any interested participants.

Risks or Discomforts: There are no anticipated risks in this study. Participants may discontinue participation at any time.

Benefits of the Study: This study will contribute to the emerging body of research about online learning and may help inform other online instructors and institutions with online learning programs. In particular, the opinions of participants may help institutions provide more informed, effective training and support programs for online instructors.

Confidentiality: The researcher is conducting this study as part of a master's thesis with Athabasca University. The research coordinator will not share the real names of participants with the researcher. The researcher will only know them by their survey ID. The researcher is the only person who will be reading or analysing data. Collective anonymous findings will be shared with [participant institution]. The purpose of the research does not specifically apply to [participant institution] and is neither sponsored nor paid for by any internal or external stakeholder. All communication with participants, and all responses will be held confidentially.

Once the surveys are completed and fully analyzed, all survey data will be deleted from Fluidsurveys' website and stored by the researcher. All correspondence with the participants will be deleted from [participant institution] research coordinator's email account. Findings and a final report on the study will be shared by request with participants upon completion of the Study.

Incentives to Participate: Participants will not be paid for their participation in this study.

Costs for Participation: There are no anticipated costs for participation in this study.

Voluntary Nature of Participation: Participation in this study is voluntary. Participant choice of whether or not to take part will not influence their employment relationship with [participant institution] in any way. Participants may withdraw at any point during the survey by stopping and closing their browser.

Questions about the Study: If participants have any questions about the research now, or during the course of the surveys, they may contact the research coordinator who sent the participation invitation. He or she will contact the researcher for support or clarification of any issues or needs.

If you have questions regarding your rights as a participant in this study, you may contact the [participant institution] Research Ethics Board for additional information.

[Participant Contact Data Here]

<u>Agreement:</u>

By checking the first question box in the web-based survey, you confirm that you have read the

details of this document and consent to provide your opinion for anonymous data collection.

Appendix F – Round #1 Survey Responses

Survey Number	Responses	Strongly Agree	Agree	Disagree	Strongly Disagree
1	39	25	12	2	0
2	39	29	10	0	0
3	39	30	9	0	0
4	39	20	18	1	0
5	39	29	9	1	0
6	37	27	10	0	0
7	39	33	6	0	0
8	39	30	9	0	0
9	39	26	13	0	0
10	39	25	14	0	0
11	39	30	9	0	0
12	39	22	16	1	0
13	39	28	11	0	0
14	39	21	17	1	0
15	39	15	21	3	0
16	38	21	17	0	0
17	39	21	18	0	0
18	38	22	16	0	0
19	39	27	12	0	0
20	37	29	7	1	0
21	39	26	13	0	0
22	39	25	14	0	0
23	39	13	21	4	1
24	39	27	12	0	0

Survey Number	Responses	Strongly Agree	Agree	Disagree	Strongly Disagree
25	39	13	20	4	2
26	39	25	12	2	0
27	39	30	9	0	0
28	39	31	7	1	0
29	39	25	8	5	1
30	39	26	11	2	0
31	39	27	10	2	0
32	39	26	13	0	0
33	39	22	15	2	0
34	39	19	19	1	0
35	39	12	19	7	1
36	38	20	19	0	0
37	39	29	10	0	0
38	39	29	9	0	0
39	39	15	23	1	0
40	39	11	20	7	1
41	39	22	14	3	0
42	38	33	5	0	0
43	39	25	14	0	0
44	38	24	14	0	0
45	38	29	9	0	0
46	38	15	19	4	0

Appendix G – Round #2 Invitation to Participants

March 5, 2013

Dear xxxx,

This email is being sent to you as follow up to December 2012 survey-based research in which you participated. Thank you for your valuable responses.

The researcher, Jenni Hayman, requests a short Round #2 survey that will clarify the data gathered. A second survey is often needed in Delphi Method research to confirm elements and add items identified by participants in the first round. Participation by Round #1 respondents is critical to the success of the full research. Your time and contribution is greatly appreciated. The follow up online survey takes an average of 15 minutes to complete and should be completed in one session if possible.

If you agree to participate in this follow-up, please use the link, password and ID number below to access the survey. The ID number allows the researcher to confirm you have completed the survey, but does not reveal your identity to her.

I will ensure your identity remains unknown to the researcher. The researcher will only be provided with your anonymous survey responses.

If you have any questions, please do not hesitate to contact me. I will contact the researcher to provide clarification of any issues.

Please complete the Round #2 survey **by Friday March 22, 2013, 10pm**.

Link to the survey:
FluidSurveys Link

The survey is password protected, the password is: **au2013**

Your unique survey ID**: ZT503**

Sincerely,
Research Coordinator

Appendix H - Round #2 Survey Instrument

Note: The set of agreement responses demonstrated in Question 1 was provided for each

numbered question in the survey.

Survey ID

Please type in the survey ID assigned to you by the Research Coordinator. This ID will be included in your survey invitation email and consists of two letters and a number, e.g., ZT773. The purpose of this ID is to maintain confidentiality yet confirm participation.

(ID field here)

Introduction

The set of online instruction practices listed below includes 9 items from the Round #1 survey where full agreement (consensus) was not achieved. In Round #2, you are asked to determine whether you agree or disagree that the practice is essential for online instruction.

For this research, an essential practice is defined as "an online instruction activity that contributes to student achievement of learning outcomes." It is possible to agree that a practice is essential, even if you have not have engaged in the practice or if it is not used in your institution.

There is one added practice that did not appear in Round #1, but was included in several "What practices would you add?" responses from participants. Question 10 describes an additional practice for your consideration. Please indicate whether you agree or disagree that practice is essential.

This is the final round of the study. Thank you for your participation.

1. Encourage and model effective student time management skills.

   This practice is essential for online instruction.

   Agree

   Disagree

2. Provide rationale for your choice of course materials, presentation format and

   assessments.

3. Provide opportunities for students to collaborate on projects.

4. Present content in diverse formats (e.g., text, images, diagrams, audio, video).

5. Align content with the comprehension level of the students and course (i.e., introductory, intermediate, advanced).

6. Assess students' level of prior knowledge, including misconceptions and erroneous knowledge.

7. Provide students with personal choice for assignments and learning activities.

8. Use an assessment strategy for discussion forums that evaluates both quality and quantity of participation.

9. Maintain awareness of current research in adult and online learning theory and practice.

10. Provide occasional real-time opportunities for class discussion using chat, teleconference or web-conference tools.

    (In addition to agreement or disagreement on question 10, participants were asked to rate how frequently they engaged in the new practice, i.e., two or more times per week; once per week; two or more times per term; once per term; never.)

Appendix I – Round #2 Survey Responses

Survey Number	Responses	Agree	Disagree
1	26	21	5
2	25	17	8
3	25	13	12
4	26	21	5
5	26	21	5
6	24	12	12
7	25	14	11
8	25	22	3
9	26	22	4
10	26	18	8

Appendix J – Final Set of Essential Practices for Online Instruction

Category 1 Student Support

1. Check in with students at course startup to ensure they are able to access all course materials (i.e., that they have the correct hardware, software and instructions to do so).

2. Describe the options for students to seek institutional support for course technology or for any other learning needs.

3. Respond promptly to student requests for accessibility and accommodation.

4. Describe academic department and institutional policies that affect students.

Category 2 Teaching and Moderating

5. Maintain a student-centered approach in the course.

6. Teach and assess at the appropriate course level (i.e., introductory, intermediate or advanced).

7. Encourage students to take personal responsibility for their own learning.

8. Provide opportunities and guidance for student reflection.

9. Encourage students to support each other throughout the learning process.

10. Provide opportunities and encouragement for students to share their understanding, experience, culture, and other unique aspects of themselves in the course.

11. Facilitate the development of critical thinking among students.

12. Formatively evaluate course effectiveness (combination of examining student outcomes while the course is underway and seeking student and institutional feedback).

13. Promote and maintain student motivation.

14. Monitor individual student progress and offer specific opportunities for support and improvement.

15. Model and describe high quality academic and discipline-specific research practices.

Category 3 Communication

16. Describe your teaching philosophy and what students can expect from you as the instructor.

17. Communicate high academic expectations.

18. Communicate how, and how often, you will be in contact with students.

19. Provide students with explicitly stated expectations for assessments and course participation.

20. Maintain a safe learning environment (e.g., describe the ways that students should interact respectfully in discussion forums and during group work).

21. Model professional standards in communications.

Category 4 Content Presentation and Instructional Strategies

22. Provide opportunities for students to interact with each other, and with you, in discussion forums and other course communication spaces.

23. Present content using strategies based on adult and online learning theories.

24. Ensure content and learning resources meet institutional academic standards.

25. Ensure that content reflects current research in your discipline, and represents multiple perspectives.

26. Use instructional strategies appropriate to the available technology and learning objectives.

27. Provide learning activities where students present, challenge, analyze and reflect on real life situations.

28. Ensure content and resources adhere to copyright regulations specific to digital materials.

29. Ensure content (including media and learning activities) conforms to institutional accessibility requirements (e.g., videos are captioned).

Category 5 Assessment

30. Utilize a variety of assessment types (e.g., quizzes, essays, projects, observations).

31. Provide prompt, supportive feedback on assessments with concrete suggestions for improvement.

32. Ensure that assessments confirm the attainment of stated learning objectives.

33. Provide a variety of opportunities and activities for students to self-assess their learning progress.

Category 6 Administration/Organization

34. Maintain a well-organized course environment (e.g., all materials, readings and assignment details are easy to locate).

35. Adhere to academic department and institutional policies for the delivery of courses.

Category 7 Professional Development

36. Ensure your personal technology expertise for learning and content management systems to effectively administer the course.

37. Maintain discipline-specific professional development and expertise.