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A Study of the Pedagogical and Structural Elements Being Incorporated into the Design of Hybrid Courses for Higher Education

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A STUDY OF THE PEDAGOGICAL AND STRUCTURAL ELEMENTS BEING

INCORPORATED INTO THE DESIGN OF HYBRID COURSES

FOR HIGHER EDUCATION

by

Deborah Kezerian Baird

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ABSTRACT

A Study of the Pedagogical and Structural Elements Being Incorporated into

the Design of Hybrid Courses for Higher Education.

by

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Utah State University, 2016

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This descriptive study sought to understand the instructional potential of a new

course design for teaching adults in higher education. Increasingly referred to as a hybrid

course format, it entails dividing a course into both online and face-to-face sessions that

are separately calendared. A primary focus of the study was to identify teaching

principles that are recommended by established adult education models and to describe

how they have been incorporated by hybrid course designers. Also studied was how

combining the online and face-to-face instructional modes provides structural

opportunities for improving communication and teacher/learner dynamics.

The adult education models analyzed were the andragogy model, the self-directed

learning model, the transformative learning model, and the experiential learning model.

The structural opportunities investigated included content delivery choices such as the

use of lecture- and learner-centered activities and the best practices recommendations

previously published for hybrid instruction. An online survey was administered to 267

hybrid course instructors at Utah Valley University, where 20,667 students have

participated in a hybrid course. This university was actively engaged in developing the

hybrid course design into a quality instructional option. The online survey provided

descriptive data about how hybrid course instructors at the university perceive their

understanding and use of adult education theories and how they utilize the online and

face-to-face modes.

(148 pages)

PUBLIC ABSTRACT

A Study of the Pedagogical and Structural Elements Being Incorporated into

the Design of Hybrid Courses for Higher Education

Deborah K. Baird

This study examined a new course design for teaching adults in higher education. Increasingly referred to as the hybrid course format, it entails purposefully dividing a course into face-to-face class sessions and online class sessions in separately calendared periods. Hybrid courses are a specific iteration of a broader category of courses that utilize technology in many configurations. Research into the potential for the hybrid format to be a highly effective way of teaching adults was found to be new and fragmented.

Adult education theories, including the andragogy model, the self-directed learning model, the transformative learning model and the experiential learning model, were reviewed to identify recommended principles and tools for teaching adults. An extensive literature review was conducted to define these adult education theories and to gain an understanding about how they can be applied to course design in higher education programs. Also reviewed were structural design choices that influence teacher-to-student communication and overall classroom dynamics.

A descriptive survey of instructors of hybrid courses at a large university that was developing a robust hybrid course program was performed to assess their knowledge of adult education theory and their choices as designers of hybrid courses. The choices

being made at the studied university by hybrid course instructors are described and

discussed and suggestions for further research are made.

DEDICATION

I dedicate this work to my father, Nephi K. Kezerian. I could not have completed this project without his encouragement and support. His enthusiasm motivated me through the doctoral program coursework and his love and prodding to complete the research and writing for this study moved me forward during difficult times.

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I will be eternally grateful to Dr. Michael K. Freeman for his careful guidance. In spite of several changes in the direction I chose to take for this research, and more than a few delays, he patiently helped me find my way and taught me important things about academic research, perseverance, and keeping a clear perspective on my goals.

I also express thanks to my wonderful family for their willingness to help me get through these years of study and to my friend, Letty Workman, for her sweet encouragement to keep moving along. I also wish to thank my committee members for their ideas and assistance. My committee supporters were Susan Turner, Steven Laing, Sarah Clark and Pamela Dupin-Bryant.

Deborah K. Baird

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CHAPTER I

INTRODUCTION

Today's college student population participates in higher education by utilizing technology from the time they first search online for information about programs, through electronic registration, book ordering and tuition paying, to checking online for semester-end grades and overall grade point averages (Crawley & Fetzner, 2013, p. 8). Synchronous to the advance of technologically tendered student services has been an increase in the number of high-tech teaching tools available for enhancing course delivery in traditional classes that are delivered either face-to-face or online. Some college courses are entirely digitized and delivered through digitally enhanced media such as the Internet, teleconference rooms and multimedia that include TV—both closed-circuit and public access, digital storage media, or personal digital devices. These developments in course delivery have radically affected student learning processes (Eom, Wen, & Ashill, 2006, p. 216) as well as the public perception of the quality of education (Benson, 2003; Hansen, 2001).

For decades, academia has assumed that classroom teaching is superior to all other methods of delivering education. Michael Moore reflected that the cultural image of professorship revolves around assembly halls of attentive students focusing on a professorial lecture, and that this is a dogma that has been pervasive for a long time throughout academia. He applauded the growth of technology use in teaching and supports a course design that blends Internet teaching with face-to-face instruction (Moore, 2006, pp. xxiii-xxv). There are many modes of delivery currently being utilized

for adult education, but combining face-to-face instruction in a traditional classroom setting with online instruction utilizing Internet delivery, all within a clearly calendared format, is fairly new (Lin, 2008, p. 59). As economic constraints on universities continue, finding new ways to educate more students in existing brick-and-mortar structures is a major factor pushing the increase of courses that blend the face-to-face format with an online, Internet format (Graham, 2006; Snart, 2010). Moore proposed that some components of traditional face-to-face teaching should be removed from the classroom in the interest of increasing the quality of learning and posited that using a blended design will not be fully understood if one's perspective is only that of the classroom teacher and does not include knowledge of research and practice in the distance education field, which includes online delivery. "The emerging view is of a mutually respectful relationship between teaching at a distance and teaching in the classroom, and the idea that 'each can do its proper work' is now encapsulated in the concept of blended learning" (Moore, 2006, pp. xxiii-xxv). Blending these instructional modes offers the opportunity for a significant departure from strictly online or face-to-face instruction, and represents "a fundamental reconceptualization and reorganization of the teaching and learning dynamic, starting with various specific contextual needs and contingencies" (Garrison & Kanuka, 2004, p. 97).

As technology is increasingly incorporated into traditional courses, while retaining a portion of the face-to-face class time, the terminology relating to such courses is slowly evolving. In academic publications throughout the past decade the terms "blended learning" or "blended course" have been utilized for any course that was

enhanced with technology. The term "blended" is also used to describe a course that specifically combines online and face-to-face classroom instruction.

> Blended learning is a formal education program in which a student learns at least in part through online delivery of content and instruction with some element of student control over time, pace, and/or space, and at least in part at a supervised brick-and-mortar location away from home. Additionally, blended learning is called different terms such as distributed learning, open and flexible learning, and hybrid learning. (Kim, 2013, p. 474)

Kim also defined three specific kinds of blended courses.

> There are three different kinds of blended courses according to the definitions of the University System of Georgia (USG): (1) A partially-at-a-distance course uses technology to deliver more than 50 percent of class sessions, but visits to a classroom are required. If a course is offered through two-way interactive video, then it should be coded partially at a distance because students must meet at a designated location. (2) A hybrid course uses technology to deliver 50 percent or less of class sessions, but at least one class session is replaced by technology. (3) A technology-enhanced class uses technology in delivering instruction to all students in the section, but no class sessions are replaced by technology. (p. 475)

In 2002, the president of Pennsylvania State University declared that the convergence between online and residential instruction was "the single-greatest unrecognized trend in higher education today" (Young, 2002, p. A33). In 2012, McGee and Reis reported that blended course offerings were estimated to be utilized by 79% of public institutions of higher education in the U.S. and suggested that "the significant attention and support offered by post-secondary professional organizations and corporations for blended course design indicates that blended course offerings are not only an accepted and supported delivery strategy, but also a priority for higher education in the U.S." (p. 7). Garrison and Vaughan (2008) further clarified that key assumptions of a blended course design were "thoughtfully integrating face-to-face and online learning, fundamentally rethinking the course design to optimize student engagement, and

restructuring and replacing traditional class contact hours" (2008, p. 5).

The blended course design has generated discussion in three general areas: (a) improving pedagogy, (b) increasing access and flexibility, and (c) providing cost-effectiveness (Bonk & Graham, 2008, p. 8). This study sought to describe how established pedagogical models and teaching strategies could impact blended course design to improve existing methodologies for instructing higher education audiences. This entailed a detailed review of the established literature regarding the principles of adult education theories, including how adults learn differently from children and what teaching tools are recommended. This literature review included a study of Knowles groundbreaking theory about adult learners called the "Andragogy Model," and of three adult education theories that subsequently built upon his work, called the "Self-Directed Learning Model, the Transformative Learning Model, and the Experiential Learning Model." Also provided in the literature review is a discussion about the choices that blended course designers must make regarding their teacher-to-learner dynamics, as well as how best to realize the potential utilization of both the face-to-face and online formats. Finally, a descriptive survey examined one university's blended course program by enlisting the instructors' opinions about their own design choices as they built and delivered their blended courses.

Definition of Terms

This list defines the terms used for the primary concepts being analyzed throughout this paper as well as in the descriptive survey that was administered for data

collection.

  Blended course: As described above, the term "blended" is used in many ways to describe the incorporation of technology into course instruction.

  Hybrid course: After performing a meta-analysis of publications referring to either "blended" or "hybrid" courses, McGee and Reis (2012) noted that there was no consensus on the terminology and made their own suggestion.

> The popular use of the term "hybrid" to describe multiple systems that work independently to offer a service or function (such as in a hybrid car) is one distinction that may assist in clarifying the difference between the terms. Hybrid suggests that one mode is unused while the other is used. Blended suggests that there are no perceivable notifications when modes shift, if they do at all. In this manner, blended courses are then seamlessly operational where the transition between classroom meeting and online component is minimal. (p. 8)

The terminology is still evolving, with some universities purposefully resisting the term hybrid (Baird & Dupin-Bryant, 2014, p. 447). The survey used in this study to investigate design choices instructors were making for their own blended course was administered at a university that specifically used the term "hybrid" for their courses that use face-to-face instruction and online instruction in separate sessions. Therefore, this dissertation will use that term as well. When referencing the term "hybrid course," this specifically indicates a mix of face-to-face instruction and online instruction in separate sessions and in a clearly prescheduled format. Note, however, that many quotations from the research used herein to examine this specific type of course structure retain the term "blended."

  Face-to-face and online instruction. Face-to-face sessions refer to brick-and-mortar locations that take the students away from their homes and bring them together in a designated location, typically on a campus where traditional classes are held. The face-

to-face classroom provides a real-time meeting of all the students at once with the instructor. Online instruction is delivered through the Internet using text, graphics, video, and audio methods to deliver course content to individual students in various locations, including their homes. In the hybrid design, online sessions are substituted for part of what had been face-to-face class time in a traditional course. Some instructors require synchronous, or real-time, contact with their students during some or all of the online portions of the course; others allow the instructor and student to be online at different times, referred to as asynchronous delivery, which enables student flexibility for accessing content, submitting assignments, or participating in some communication activities. The technological element of these courses is facilitated through university-managed classroom software, commonly called a Learning Management System or LMS. The hybrid design itself refers to separate sessions in the two modes, and this scheduling modality can allow two hybrid courses to be scheduled in the same classroom simultaneously by offsetting the order of the face-to-face and online sessions (Snart, 2010, p. 13).

Adult education theory: There are many adult education models and theories. Those selected for discussion in this study were chosen because of their prominence and distinctiveness, and will be fully described in the literature review in chapter three and questioned by name in the survey that instructors are asked to take. All the models chosen are based on coherent concepts about how adults learn differently from children and why, which will also be identified in the literature review. The interpretation of specific adult education models and techniques by the individual instructors may suggest future

exploratory studies.

Details of the Study

Background of the Study

Principles that enhance adult learning have been well established in academic

literature and how to incorporate them into traditional face-to-face teaching has been

researched for decades. Online education has been a major player in higher education for

over 30 years, with significant research being published along the way regarding

technologies used, faculty issues and student outcomes. Online courses are offered by

many academic institutions that also have respected traditional campuses and programs

as well as by a new breed of university that is completely digital (Bryant, Kahle, &

Schafer, 2005, p. 257). Although research into many aspects of online teaching is

extensive, there has been less research into the actual incorporation of accepted adult

education principles into online curriculum and delivery. The authors of a recent study of

the research literature that examined the recommended pedagogies for online education

made this generalized conclusion regarding online pedagogy.

> It is noteworthy that connectivist models explicitly rely on the ubiquity of
> networked connections between people, digital artifacts, and content, which
> would have been inconceivable as forms of distance learning were the World
> Wide Web not available to mediate the process. Thus, as we have seen in the case
> of the earlier generations of distance learning, technology has played a major role
> in determining the potential pedagogies that may be employed. (Anderson &
> Dron, 2011, p. 87)

Research is now beginning to describe specific pedagogies for the design of the hybrid

course curriculum including ways to incorporate the use of adult education theory.

Problem Statement

There is a solid history of academic research that studies characteristics of adult-level learners, establishing a clear differentiation from child-level learners and delivering strong theoretical models regarding adult learning processes. As technology changes traditional instruction in higher education environments, research into how to incorporate established adult education theory into modern teaching methodologies is needed. Face-to-face instruction in campus classrooms often utilizes teacher-centered instruction, typically lectures. As technology develops, lecturers increasingly adopt it to enhance the quality of content-delivery to students as well as to increase student interest in a topic and the personal connection they feel to the information (Covill, 2011, p. 98). Online education, a more recent but also well-established instructional methodology in higher education, has also seen several decades of change as technology has developed.

Researchers have recently begun to focus more closely on the potential for combining traditional and online teaching into a blended delivery such as the hybrid format, and are proposing models and best practices for utilizing the best features of both teaching formats (Caufield, 2011; Graham, 2006). Access to high-bandwidth communication technologies has stimulated new ways of thinking about the use of online technologies. "Under ideal circumstances, blended/hybrid approaches allow practitioners to match technology, pedagogy, and content to the specific needs of different learners" (Roseth, Akcaoglu, & Zellner, 2013, p. 54). Although combining face-to-face sessions of a course with online sessions of the same course is a relatively new course design in higher education, it is rapidly becoming a strong third choice for many universities. What

is lacking in the research is the study of how recommended adult pedagogies are actually being evidenced in these hybrid courses and if suggestions for best practices in this format are available to and are being utilized by course developers. Lin (2008) posited that "hybrid courses have been largely treated as a subset of distance education and are seldom examined as a unique method of course delivery" (p. 54). Admitting that "there is considerable intuitive appeal" to the concept of hybrid course design, Garrison and Kanuka (2004) warned that there was also "considerable complexity in its implementation with the challenge of virtually limitless design possibilities and applicability" (p. 96).

Drysdale, Graham, and Spring (2013) performed an extensive analysis of the dissertations and thesis papers written in the decade from 2002 to 2012 ($n = 202$) that specifically studied blended and hybrid courses. They provided some initial insight into such research and its gaps regarding the pedagogies.

> Our objective in identifying theoretical frameworks was to determine how theory was being used in blended learning research and which theories were most heavily drawn upon. Few researchers used theoretical frameworks to shape their research questions.… We see a significant need for more theoretical contributions unique to the context of blended learning. (p. 90)

Purpose of the Study

For over a decade, hybrid courses have been added to many higher education offerings, albeit with different names. Exploring the inherent design possibilities such as how to facilitate teacher/student communication and ways to include established principles of adult learning theory is called for. The purpose of this study was to describe the awareness level and use of adult learning theories by instructors who have taught a

hybrid course. This began with a review of the literature that expounded on several adult education theories, including groundwork discussions about how adults learn differently from children, what characteristics adults have that enhance their ability to learn, and how several established adult education theories can be incorporated into higher education courses. Also reviewed were various logistic choices for delivering course material, such as using lectures, learner-centered activities, or the digital teaching tools that are typically provided by an institution's learning management system. The robust hybrid-course program at Utah Valley University (UVU), a large institution in the Utah State Higher Education system, provided the population for a survey that collected descriptive data regarding how aware hybrid instructors were of these various choices and how they were currently utilizing the hybrid course format.

Theoretical Framework

A significant benefit of this study was to delineate through a review of previous publications what teaching tools were recommended by the groundwork adult learning theory of Knowles, as well as those coming from later theories that have been developed. Merriam, Cafferella, and Baumgartner (2007) published a comprehensive text on adult learning, *Learning in Adulthood*. Included was a discussion about traditional learning theories that ground the more specialized adult learning theories analyzed in this study. They found the influence of constructivism to be especially useful. They taught that constructivism represented an array of perspectives positing that learners constructed their own knowledge from their experiences. The two extremes on a "scale" of

constructivism theory are (a) it is an individualized mental activity, or (b) it is a socially interactive interchange. The authors concluded that all aspects of constructivism can be found in self-directed learning theory, transformative learning theory, and experiential learning theory, all prominent adult learning theories today (p. 297).

Constructivist theory stems from the early concepts of Dewey, Piaget, and Vygotsky. Hyslop-Margison and Strobel (2008) explained that these theorists all maintained that students arrive in any learning situation with a range of prior knowledge and experience that influences how they respond to new information. Piaget called organized units of knowledge "schemata" and posited that these structures were epistemologically resistant to change; therefore, playing a key role in determining how well students assimilate or accommodate new learning. "Teachers and students do not like to change their minds—particularly if that change includes considering ideas radically different from those they presently hold" (Hyslop-Margison & Strobel, 2008, p. 78).

Constructivist learning theory describes how people construct their reality and make sense of their world. For decades, education and learning had been viewed as an external process. Students, both children and adults, were seen as "empty vessels" into which knowledge and wisdom are poured. The experience and practical knowledge that students brought with them were not woven into the curriculum (Lambert et al., 1995). Constructivism proposes that knowledge and beliefs are formed internally within the learner. Underpinning this learning theory is the recognition that learners bring experience and understanding to the classroom. Learners apply what they already know

to assimilate new information. They accommodate, or reframe what they know to meld with the new understanding they gain.

Understanding constructivist theory is particularly useful for a study of hybrid course design. To study face-to-face classroom teaching, one can appreciate Vygotsky's (1978) theory of social constructivism, which emphasizes that knowledge is a cultural or negotiated artifact generated in cooperation and understanding with others. From the social constructivist perspective, the instructor becomes a pivotal classroom figure by creating activities that direct students toward subject mastery and that promote a certain level of cultural assimilation. Learning is described as a social activity that is enhanced by shared inquiry. Learners are said to learn with more depth and understanding when they are able to share ideas with others, engage in the dynamic and synergistic process of thinking together, consider other points of view, and broaden their own perspectives (Lambert et al., 1995). Hyslop-Margison and Strobel (2008) used how teachers often explained meaning for learners as an example—what a poem means, what events in history signify, how to understand music or art. They also pointed out, however, that within a social constructivist framework, it was pedagogically acceptable in some circumstances to simply teach by lecturing, so lecture as a form of instruction should not be entirely dismissed from a constructivist teacher's repertoire. "Lecture, or direct instruction, is especially effective in classrooms where students already possess considerable subject knowledge" (p. 74).

In contrast, Dewey's (1929) constructivist approach was less focused on providing students with social knowledge and cultural tools than it is on creating

democratic learning conditions that permit students to pursue essentially independent objectives based on their own experiences, interests, and concerns. Dewey's adaptation of constructivism situates the teacher as a classroom facilitator whose role is to help students design their own learning experiences in response to personal priorities and objectives.

Hyslop-Margison and Strobel (2008) proposed that the key to constructivist teaching is to challenge students' "taken for granted ideas" to create cognitive dissonance, which they believe must precede learning. Students then learn that their constructed beliefs do not necessarily qualify as knowledge and that knowledge emerges from sources other than their own individualized cognition. They suggested that any teaching strategy and approach to knowledge acquisition should introduce a variety of challenges including factual challenges, evidence challenges, pragmatic challenges (especially in the category of design and development learning, such as when a simulation reveals flaws to the designer), and social challenges (engaging with peers, community, society; p. 79). "Part of what qualifies as good teaching, then, is discovering what students already believe and creating the required cognitive dissonance or conflict that leads to the hard work of adjusting their conceptual understanding" (p. 87).

This study's purpose was to investigate how adult learning theory generally actedas an anchor to the choices being made by instructors as they participate in hybrid course design. "Although teachers' perceptions do not always measure what teachers actually know and do, their experiences and perceptions are important" (Sutton, 2011, p. 40). Malcolm Knowles' well-respected adult learning theory builds upon constructivist

concepts, particularly Dewey's idea that an instructor should become a facilitator. There is also a place for the socially constructed learning that is situated in classrooms, wherein lectures and group activities also construct knowledge acquisition opportunities. The basic premises of both branches of constructivist theory, therefore, provided the groundwork for determining the potential for enhancing the learning experience of adults that can be built into a hybrid course with its unique, bimodal design.

Research Questions and Hypotheses

This descriptive research study sought to open a conversation about the unique potential for hybrid course instruction to improve adult learning at the higher education level. Seeking the self-described perceptions of instructors who have taught a hybrid course, an electronic survey was utilized to collect data regarding the hybrid course program at one university specifically. Instructors who had delivered a hybrid course at that university were sampled with an online, quantitative survey. Collected data provided insight into the training instructors had received about adult education theories, how they believe adult education pedagogies were being incorporated into their hybrid courses, and what choices instructors were making regarding the teacher/student relationship dynamics for their courses. Also sought was an understanding about the training and support these instructors received from their university and an identification about how the two delivery mediums of the course were being specifically utilized.

The research questions explored with this study were as follows.

1. Have UVU instructors of hybrid courses formally studied adult education

theories and do they incorporate the ideas suggested by those theories into their courses?

2.   What training and support do instructors perceive they received from the UVU Innovation Center?

3.   How are the two modes of instruction in a hybrid course being utilized by UVU instructors?

The hypotheses regarding the UVU instructors of hybrid courses are listed below.

1.   Instructors will not have formally studied the adult education models called Andragogy, Self-directed Learning, Transformative Learning, or Experiential Learning.

2.   Instructors will not have purposefully included teaching techniques that are taught in adult education theories into their own hybrid courses.

3.   Instructors will not recognize some of the techniques that they use in their hybrid courses as having come from adult education theories.

4.   Instructors will have participated in the UVU instructional training course for hybrid course designers.

5.   The instruction and support given to instructors by the university is perceived as including basic pedagogical instruction, basic discussion about the unique structural choices available in the hybrid format and extensive instruction regarding the use of the institution's learning management system.

6.   Instructors will report that the face-to-face portion of their course consists primarily of teacher-centered delivery of content.

7.   Instructors will report that the online portion of their course consists primarily of learner-centered support activities.

Limitations of the Study

It is important to take into account the factors that may affect the results of the study and the generalizability of them.

1. A primary limitation was the nature of performing a survey in a single university, one that had clearly defined for its instructors what was meant by the "hybrid course" terminology. The population for the survey was drawn from across almost 5 years of offering hybrid courses, but the terminology was still being adapted and refined during the first year—both by the university and by the academic arena at large. Therefore, some invitations to participate in a study of hybrid course design may not have been understood by instructors who may have been more familiar with the "blended course" terminology or who only taught in the first semesters when the term was not yet well defined by the university.

2. Another limitation along this line came from the generalizability of survey results to universities that may not have had a clearly defined hybrid course program, but rather may have combined all courses that utilized technology into a blended course category or even a distance education grouping in general.

3. The terms "teacher-centered instruction" and "learner-centered instruction" may not have been universally understood by respondents. There was a clarification of the term "learner-centered" the first time it was used in the questionnaire, but not for the reference to "teacher-centered" due to a reliance on the instructor to identify it as the opposite.

4. Perhaps the most significant limitation was the possible variability in the

understanding and utilization of adult-learning theories. Although well founded and long

discussed in academic research, the specific names and technique references from the

adult education models called andragogy, self-directed learning, transformative learning,

and experiential learning may have been unfamiliar or misunderstood by the survey

respondents. Whether the instructors believed that they understood those models was one

of the things being measured.

     5. Overall, limitations were inherent in data that were collected as an online

survey with a promise of confidentiality. This type of data collection did not allow for

personal discussion and clarification. The timing of the survey was near the end of the

spring semester, which may have been difficult for some, and the survey was only

available for 2 weeks, which also may have limited responses.

CHAPTER II

LITERATURE REVIEW

Adult Learning Theories

An extensive literature review to identify the development of accepted adult learning theories across half a century was conducted to begin this study. Recent texts that discussed adult learning theories consistently listed the predominant models as andragogy, self-directed learning, transformational learning, and experiential learning (Merriam & Bierema, 2014; Merriam et al., 2007). A review of these four models will provide a solid theoretical grounding of adult learning theory for this project.

Andragogy

Malcolm Knowles (1975) challenged the curriculum standards of teaching pedagogies with his theory that focused on adult learners in a model he called "Andragogy." Never accepted as a self-sustaining model, his principles were, however, well received in academia and have maintained a consistent presence in discussions regarding best practices for teaching adults (Merriam, 2001, p. 5). Knowles' work strived to encompass all the basics of adult learning into a package that had the power to confront the major assumptions behind curriculum design itself as encompassed in standard pedagogical theory. Basic assumptions of pedagogy are geared towards prevalent childhood learning traits and include: (a) being a learner is a dependent role, (b) prior learner experiences have little value for learning, (c) children accept that they must learn what they are told to learn, (d) earning is subject-centered, and (e) the motivation to

learn is externally induced (Knowles, 1990). Knowles, Holton, and Swanson (1998)

explained that these pedagogical baseline principles are typically expanded into adult

curriculum. "Most scholars in the field of adult education itself have addressed the

problem of learning by trying to adapt theories about child learning to the 'differences in

degree' among adults" (p. 54). Andragogy, in contrast, expounds on the incorporation of

adult experiences into the learning process and also considers adults' readiness to learn,

their problem-centered orientation, and their self-directing and autonomous

characteristics (Ozuah, 2005, p. 85).

   B. Taylor and Kroth (2009) elaborated on Knowles' six key assumptions about

adult learners as follows.

1. Self-concept. As a person matures, their self-concept moves from one of being a dependent personality towards one of being a self-directed human being. Adults tend to resist situations in which they feel that others are imposing their wills on them.

2. Experience. As humans mature, they accumulate a growing reservoir of experience that becomes a resource for learning. Adults tend to come into adult education with a vast amount of prior experiences compared to that of children. If those prior experiences can be used they become the richest resources available.

3. Readiness to learn. As individuals mature, their readiness to learn becomes oriented to the developmental tasks required by social roles. Readiness to learn is dependent on an appreciation of the relevancy of the topic by the student.

4. Orientation to learn. As maturity increases, an individual's time perspective changes from one of postponed applications of knowledge to an immediacy of application, and accordingly their orientation towards learning shifts from one of subject-centeredness to one of problem-centeredness. Adults are motivated to learn to the extent that they perceive the knowledge which they are acquiring will help them perform a task or solve a problem that they may experience, or are actually facing in real life.

5. Motivation to learn. As a person matures, the motivation to learn is internalized. Although adults feel the pressure of external motivators, they are most driven by internal motivation and the desire for self-esteem and goal

attainment.

6. The need to know. Mature students need to know the reason for learning something. In adult learning the first task of the teacher is to help the learner become aware of an inherent need to know. When adults undertake learning they deem valuable, they will invest a considerable amount of resources (time, energy, etc.) to the task. (p. 46)

Some academic writers feel that the strength of andragogical principles should not be limited to adults, but that their focus on self-directed learning applies to self-directed learners of all ages. They posited that informed teachers can successfully incorporate these principles into any curriculum (Gehring, 2000; Merriam, 2001; Ozuah, 2005), especially to the extent that the student group is "diverse and has a broad variety of experiences and standpoints with which to constitute a collective learning process" (deTurk, 2011, p. 49). Others criticized andragogy as not developed enough to be considered a theory and not specific enough to be utilized in practical ways by curriculum designers (Beaman, 1998; Bolton, 2006; Ham & Davey, 2005). Although andragogy is a term used in many European countries as a specific field of study that is the differentiated branch of teaching and learning among adults, the North American understanding of andragogy is that generally it is a reference to the solid underpinnings of the entire field of adult education with all its disparate theories (Merriam, 2001, p. 7).

A list of teaching tools and techniques that directly represent the basic andragogical principles of adult learning are shown in Table 1 (Caulfield, 2011). Looking to andragogy for guiding principles for hybrid course design, Caulfield suggested these techniques should be used in course design to incorporate past adult experiences, to create a connection between the course learning goals and the adult students' personal needs, and to offer activities that encourage autonomous learning.

Table 1

Teaching Techniques Recommended by Andragogy to Increase Adult Learning

Principles	Teaching tools and interactions
1. Learners need to know why information is important to learn; educators need to make this evident.	1. The professor incorporates current material beyond the textbook.
2. Learning is the primary responsibility of the learner.	2. Some content, scheduling and accountability measures are flexible.
3. Drawing on the individual's personal experience and relating that experience to information from the discipline is the most frequently used method of teaching.	3. Students give original information to the class relating to course principles.
4. Applying scaffolding techniques, such as group interaction, simulation, and case analysis, is frequently used to enhance each individual's readiness to learn.	4. The student is given individualized, graded, reflective writing assignments.
5. Information is best learned when applied to real-life situations that are relevant to the learner.	5. The student has opportunities to express personal opinions and share personal experiences in meaningful collaborative group discussions.
6. Intrinsic motivators (self-esteem, need to achieve) are more important than extrinsic motivators.	6. Students help set course expectations, objectives, and rewards.

Self-Directed Learning

A distinctive stream of research that addressed adult learning was found in the study of self-directed learning (SDL). In an SDL classroom, the individual takes the initiative for what occurs by selecting, managing and assessing their own learning activities. The primary scaffolding of this model is credited to Knowles, not only because he included being motivated to learn from self-direction as a characteristic in his groundwork andragogical theories, but because later he developed the SDL theory into a detailed teaching model. He published a comprehensive instruction manual for instructors

and students who want to participate in a formal, self-directed learning classroom. Primarily his design provides diagnostic exercises to determine the level of self-directedness a student has and instructional samples for instructors to use as they design SDL principles into their course (Knowles, 1975).

Merriam (2001) performed an extensive literature review of the body of work discussing Knowles' self-directed learning model and other theories that were based on the principle that adults learn best when self-directed. She suggested that although there had been a decline at that time in the number of articles being published about self-directed learning, the ideas still encompassed these important adult education questions: (a) How do adults remain self-directed over long periods of time? (b) How does learning change during the move from novice to expert? (c) How do contextual factors interact with personal characteristics? (pp. 10-11). In a later text review, Merriam et al. (2007) identified three over-arching categories of SDL models that branch off from the initial Knowles' proposal, which they described as having been an early linear SDL model, one of the three categories. They described linear models as those giving an outline of specific steps that should happen during the learning process. They also identified two more SDL categories as being either a collection of interactive models or a set of instructional models (pp. 10-11). They summarized that within the field of SDL, linear models reflect more traditional ways of teaching, interactive models more closely resemble how learners go about learning on their own, and instructional models are specifically designed procedures for a variety of organized settings (p. 129).

There were strong supporters for analyzing a student's self-directedness using a

focus on SDL models as highlighting learner characteristics that can be measured to enhance a learner's self-awareness. According to Bass (2012), becoming aware of their self-directedness should lead learners to an acceptance of later opportunities they may encounter individually. In contrast, some SDL research focuses instead on how to best use its theoretical guidelines to outline specific procedures for instructors as they develop SDL courses for formal educational environments. The end result of these two philosophies should be the same, as encompassed in the idea that "if schools create learning environments that encourage self-directed learning, learners will also be transformed into lifelong learners" (p. 388).

Incorporating self-directed principles formally into higher education courses has proven difficult since the teaching designs of SDL are quite different from typical instructional methodologies for either face-to-face or online courses. Incorporating open calendaring and self-designed objectives into a course is not intuitive to teaching and there is a resistance to this type of course design. Knowles (1975) suggested this was a common attribute of instructors and admittedL

> I had been trained to perceive my role as essentially that of content-transmitter and judge of the students' absorption of the transmitted content. …I think I was a pretty good transmitter. My content was well organized, with a good logical outline; I illustrated abstract concepts or principles with interesting examples; I spoke clearly and dynamically; I brought forth frequent chuckles with my humor. (pp. 31-32)

In Knowles' (1975) self-directed learning model, classrooms help facilitate self-directedness through what he calls contract learning. He warned that students have been conditioned to having teachers tell them what to learn and how to learn it. He noted that students "become confused and worried when confronted with the responsibility of

thinking through what they want to learn and how they will go about learning it" (p. 129).

Knowles gave specific examples about how to teach students to develop their own

learning program for a course, pointing out that adults were highly self-directing when

they attempted to learn on their own in their own individualized situations. An illustrative

example of individualized self-directed learning came from Hiemstra (2009).

> After he finished a doctoral degree in sociology, Paul, age 31, began teaching in a Midwestern college. He started to pursue an interest in the history of his family by taking a course on genealogy at the local community college. He designed a questionnaire and sent it to many of his older relatives. Within two years he had created a booklet on the family history and developed a corresponding web site. (p. 1)

Knowles (1975) suggested the following semester course design.

> Weeks One and Two: Orientation, climate setting, and relationship building. (Present the learning theory behind the course and propose "units of learning" that are appropriate for the course and that students should consider in their personal planning process. Teach the students to connect with each other, in contrast to being competitive.)
>
> Weeks Three and Four: Design Learning Contracts; build peer teams (triads).
>
> Weeks Five, Six, and Seven: Team Work (work together to fulfill the Learning Contract goals).
>
> Weeks Eight through Thirteen: Student presentations about their learning processes (spend ample time letting students present their experiences).
>
> Weeks Fourteen and Fifteen: Facilitate self-evaluation of the fulfillment of their own Learning Contracts (reflection) and their evaluation of the course. (1975, pp. 45-58)

As part of the orientation session in week one, students complete a self-rating instrument

to better understand their own competency towards self-directedness. This instrument is

summarized in Table 2 (Knowles, 1975, p. 61).

Table 2

Student Self-Rating Instrument Assessing Level of Self-Directedness

Competency:	I possess this competency to this degree: (check one)			
	None	Weak	Fair	Strong
1. An understanding of the differences in the skills required for learning under teacher-directed learning and self-directed learning.				
2. A concept of myself as being a non-dependent and a self-directing person.				
3. The ability to relate to peers collaboratively, to see them as resources, to give help to them and to receive help from them.				
4. The ability to diagnose my own learning needs realistically, with help from teachers and peers.				
5. The ability to translate learning needs into learning objectives.				
6. The ability to relate to teachers as facilitators, helpers, or consultants.				
7. The ability to identify and make use of human resources.				
8. The ability to identify and make use of material resources.				
9. The ability to collect evidence of the accomplishment of learning objectives.				

Another matrix that facilitates a learner's efforts to locate themselves in terms of their readiness for and comfort with being self-directed was developed by Grow in the early 1990s. His model—Staged Self-directed Learning (SSDL)—described how teachers could help students become better self-directed learners by identifying them as currently in one of four stages: dependent learner, interested learner, involved learner, and self-directed learner (Grow, 1994). Merriam (2001) interpreted Grow's concept for using the information by suggesting:

> Instructors can match the learner's stage with appropriate instructional strategies. For example, whereas a dependent learner needs more introductory material and

appreciates lecture, drill, and immediate correction, a self-directed learner can engage in independent projects, student-directed discussions, and discovery learning. (p. 10)

SDL proposed that what adults learn through their own initiative they learn more deeply and permanently. "But it is a fact of life that when an individual enters into certain educational situations…requirements are imposed on him.…Colleges and universities spell out minimum standards of achievement as conditions for awarding their degrees" pointed out Knowles, who then explained that his concept of forming learning contracts reconciles such imposed requirements with an adult's propensity to learn best when self-directed (Knowles, 1975, p. 130).

A significant thread of self-directed learning research discussed the context and interactions that surround the learner. This focus was less on the individual learner and more on the situational context, proposing that learning occurs when certain conditions are met. Merriam et al. (2007) reported that this stream of research emphasized the interaction of two or more factors, such as the opportunities people find, the personality of the learners, their cognitive processes, or the context of the learning experience. A prominent model within this philosophy comes from Spear (1988), whose work was published in the 1980s. His model rested on three elements: the opportunities people find in their own environments, past or new knowledge, and chance experiences.

> For example, a move from an apartment to a single-family residence affords an opportunity to pursue gardening. This fortuitous action in conjunction with some prior knowledge of gardening, perhaps in combination with a chance encounter with an old friend who is an accomplished gardener, results in a self-directed learning project. (Merriam et al., 2007, p. 112)

"A successful learning project is one in which a person can engage in a sufficient number

of relevant clusters of learning activities and then assemble these clusters into a coherent

whole" (Spear, 1988, p. 217).

Transformative Learning

Introduced originally in 1978, discussions about the theory of transformative

learning (or transformational learning—the terms are used interchangeably) to describe

adult learning has grown dramatically since the turn of the century. In 2008, E. W. Taylor

proclaimed, "The growth is so significant that it seems to have replaced andragogy as the

dominant educational philosophy of adult education, offering teaching practices grounded

in empirical research and supported by sound theoretical assumptions" (p. 12). Merriam

and Bierema (2014) studied many published papers describing research on the theory and

observed:

> As a testimony to its central place in adult learning theory, there are hundreds of articles and chapters and dozens of books, the most recent being the 600-page *The Handbook of Transformative Learning (Taylor & Cranton, 2012),* a journal devoted to this type of learning *(Journal of Transformative Education),* and biannual international conferences on transformative learning. (p. 83)

Mezirow (2000) refined his initial introduction of the transformative model to this

definition: Transformative learning refers to the process by which we transform our

taken-for-granted frames of reference (meaning perspectives, habits of mind, mind-sets)

to make them more inclusive, discriminating, open, emotionally capable of change, and

reflective so that they may generate beliefs and opinions that will prove more true or

justified to guide action (p. 8). He added that constructive discourse with and using the

experience of others is part of the process (p. 12). In simpler terms, "transformational

learning shapes people; they are different afterward, in ways both they and others can

recognize" (Clark, 1993, p. 47).

In contrast to simply adding to a personal library of knowledge, transformative learning requires changing a personal frame of reference to make it more dependable for an adult to use to solve problems. It may require redefining or reframing a problem or situation through critical reflection of personal assumptions or those of others to arrive at a transformative insight. These transformations of mind may be "epochal," meaning sudden and dramatic, or they may be an incremental series of transformations in points of view or "habits of mind" (Mezirow, 2000, pp. 20-21).

Subsequent to Mezirow's primarily rational description of the transformative process, various scholars of the theory have proposed that the dominant perspectives on transformative learning should be categorized diversely as "cognitive and rational, as imaginative and intuitive, as spiritual, as related to individuation, as relational, and as relating to social change" and both constructivist and humanist perspectives are touted as fundamental (Taylor & Cranton, 2012, pp. 5-7). Tisdell (2012) suggested that transformational learning experiences are like music.

> In many classical music pieces, the core melody serves as the theme, and then many variations are played on that theme as the piece moves along. The theme is announced, the variations provide depth, but the whole of the piece, and its effects on the listener, are always greater than the sum of its parts. (pp. 21-22)

Tisdell (2012) posited that this is representative of the diverse discussions in the research about the transformational theory, as well as about adult education theory itself.

Importantly, a critical step in the transformative process is Reflective Discourse, or "the specialized use of dialogue devoted to searching for a common understanding and assessment of the justification of an interpretation or belief" (Mezirow, 2000, p. 78).

Mezirow taught that discourse and critical reflection are important stages of the model, but noted that discourse requires emotional maturity, and that our culture "conspires against collaborative thinking and the development of social competence by conditioning us to think adversarially, in terms of winning or losing, of proving ourselves smart, worthy, or wise." He recommended that consensus building is an ongoing process (p. 79). Not only do these observations apply to the theory, but perhaps to the ongoing discussions about the theory as well.

Cranton and Hoggan (2012) declared that the literature "is oddly silent on the issue of evaluation of transformative learning" and that evaluation of transformative learning in a formal classroom relies on interview, discussion, and reflection (p. 527). Various authors' recommendations for educators who strive for transformative learning experiences include:

1. Create conditions under which learners are pushed toward their learning edge, where they are challenged and encouraged toward critical reflection, implanting disruptions such as critical texts or lectures that challenge conventional norms and beliefs (Gravett & Peterson, 2009, p. 107).

2. Evoke powerful feelings. Generally speaking, however, strong emotions are not usually welcomed by students or teachers in the educational setting. "Helping students work through these emotional dynamics is perhaps one of the most difficult and challenging dimensions" of this kind of learning (Dirkx & Smith, 2009, p. 65).

3. As an educator, increase self-awareness, empathy, and listening skills (Taylor & Cranton, 2012, pp. 570-571).

Experiential Learning

The Experiential Learning model developed by Kolb stated that learning was fundamentally grounded in experience and that knowledge was constantly derived and tested through experience. A forerunner of the model was a proposal by Carl Rogers in the mid-twentieth century that categorized learning as either cognitive or experiential. Rogers proposed that experiential learning is what creates personal change and growth. He emphasized that teachers and students must accept the importance of learning to learn and that they must have an openness to change. He suggested that learning is best facilitated when: (a) the student participates completely in the learning process and has control over its nature and direction, (b) the learning experience is primarily based upon direct confrontation with practical, social, personal or research problems, and (c) self-evaluation is the principle method of assessing progress or success (Newsome, Wardlow, & Johnson, 2005).

In contrast to the principles touted in the experiential approach, typical cognitive learning corresponds to collecting straightforward academic knowledge such as learning vocabulary or multiplication tables. Experiential learning is more significant and refers to applied knowledge such as learning about engines in order to repair a car. Bangs (2011) referenced Confucius in illustration: "I hear and I forget. I see and I remember. I do and I understand" (p. 29). Although this sounds somewhat like Transformative Learning, it is differentiated in that there is not a paradigmatic shift of thought.

Experiential Learning theory stated that learning is an individualized process synthesized of four phases: (a) concrete experience, (b) reflective observation, (c)

abstract conceptualization, and (d) active experiment (Roessger, 2012, p. 377). An

example of Kolb's basic process is suggested by Caufield (2011).

> The supervisor of a subordinate in a new job might be treating the subordinate
> with the utmost respect (concrete experience) while showing the person how to
> perform a job task. Later that evening, the subordinate reflects on the
> supervisor's respectful behavior (reflective observation) and comes to the
> conclusion that the supervisor must behave respectfully toward all individuals in
> general (abstract conceptualization). For the remainder of the week, the
> subordinate observes the supervisor interacting with a number of individuals, and
> the subordinate decides his or her paradigm is correct (active experimentation).
> (p. 34)

The Kolb learning cycle processes are further refined by their association to four

learning types: accommodating, diverging, converging, and assimilating. Figure 1 shows

Kolb's model, as presented in Merriam and Bierema (2014, p. 109). Critics of the theory

point out that there is no context, that the learner's experience seems to occur in a

vacuum unimpeded by power dynamics that are typically present in a social context.

Others suggest that not all learners move through the process the same way, or that

teachers may lean on their own learning style, skewing the flow (Merriam & Bierema,
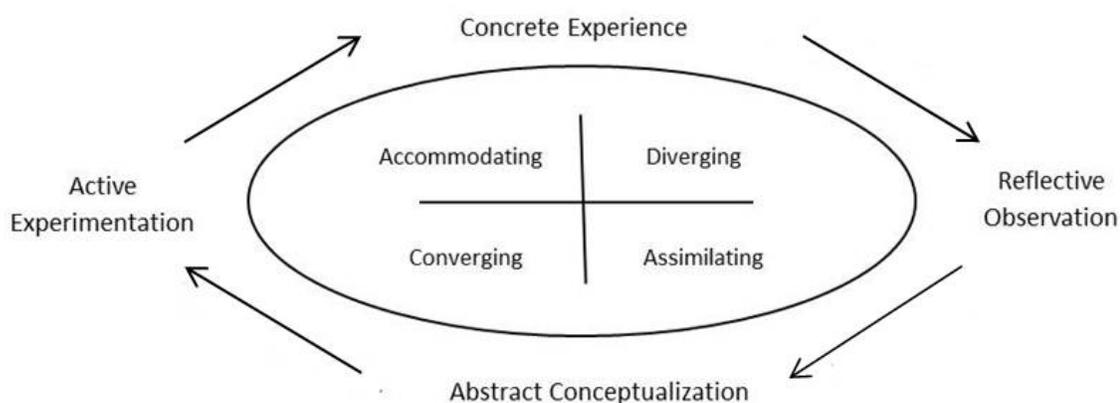
2014, p. 111).

Figure 1. The experiential learning cycle and basic learning styles.

To create an experiential learning environment, a teacher must allow the student to have some control over the learning processes and over self-evaluation, and the experience must be based on direct confrontation with practical, social, personal, or research problems, such as spending a semester performing in-field qualitative research. "The key to an experiential learning process is the active involvement of the students. They must be involved in shaping the process they will follow, guided not only by the concepts of the course, but also by their own personal knowledge and experiences they bring with them to the course" (Bangs, 2011, p. 29).

After taking a doctorate cohort on a "cruise" to Mexico to fulfill a 3-credit course in qualitative research while using the experiential model as a guide, McClellan and Hyde (2012) concluded that learning in an unfamiliar context facilitated important learning experiences for both the students and the instructors. "The incorporation of experiential learning strategies helped students step outside familiar environments and turn an eye upon something different" (p. 250).

> The propensity for college students to experience optimal engagement appears to be more prevalent during an experiential learning semester than at college or at home. Research literature indicates that such experiences can indeed lead people to become more motivated to self-regulate their learning.… There is good reason to believe that experiential learning semesters can help to foster the underlying nutriments of enjoyment and interest in learning, which are necessary to create lifelong learners. (Sibthorp et al., 2011, p. 391)

Slavich and Zimbardo (2012) condensed many papers and proposals into the following practical representation of an experiential learning classroom:

> Instructors promote learning by having students directly engage in, and reflect on, personal experiences that take place in four stages (concrete experience, reflection, abstract conceptualization, and active experimentation), leading to increased knowledge, skill development, and values clarification. (p. 573)

Examples they give of experiential learning activities are:

- Keeping a reflective journal
- Observing phenomena or behavior
- Conducting interviews or experiments
- Playing games or simulations
- Taking field trips and role playing
- Building a model.

The experiences of adults have long been viewed as a critical component of learning in adulthood. "We continue to discover more about the connections between learning and experience and how to assist adults in formal and non-formal settings to capture the richness of learning from experience" (Merriam et al., 2007, p. 185).

Course Design Considerations in Higher Education

The next section of this literature review first analyzes the literature regarding two types of teacher/student relationships: teacher-centered instruction and learner-centered instruction. Then the strengths and weaknesses of two dominant design structures inherent in courses in higher education—traditional face-to-face classroom delivery and asynchronous online delivery—are reviewed, as is emerging research regarding combining them into a hybrid course design.

Teacher-Centered Instruction

The most fundamental pedagogy behind teacher-centered teaching is that the focus of the classroom is on the teacher and students are expected to adapt to the instructor to be successful. "Teachers tend to teach as they were taught and most college teachers were taught in traditional teacher-centered classrooms" (Kahl & Venette, 2010,

p. 179). College classrooms have been dominated by the traditional teacher-centered methods such as delivering lectures possibly enhanced with overheads and digital slideshows to help visually reinforce the important concepts. The emphasis is on the instructor distributing knowledge to students (p. 180). Historically, before the invention of the printing press, the lecture method consisted of an authority figure carefully reading from a precious text, one that students could not obtain. In earliest times the students were not even able to read or write, but listened raptly. Later, students learned to take careful notes to preserve the information being delivered. This historical context has led to a notion that lectures are now an archaic method of teaching (Friesen, 2011, p. 95).

Today's teacher-centered classroom still centers around the "Sage on the Stage" but to be successful as a lecturer, to receive positive student evaluations for example, leads to the realization that a good instructor who relies on lecture methodology is rarely one who simply reads from a text. He must be an entertainer, both interesting and stimulating. Students now have easy access to the texts as well as to vast resources of information regarding the topic. The lecture is no longer about the authority of the text, but about the authority of the lecturer. Reflecting positively on a good teacher-centered course that he participated in, Friesen (2011) declared, "It was the speaker and his own words and ideas that were important" (p. 98). Some research shows that a lecture that captures students' attention, such as one that uses humor and various nonverbal tools to keep students focused, may motivate students to actively process information during the lecture, as well as at home (Covill, 2011, p. 99). "Meaning has its origin in the spirit of the speaker; it is temporarily externalized and enacted through speech, and it finally

returns to the inner speech in the minds or spirits of audience members" (Friesen, 2011, p. 98).

Schwerdt and Wuppermann (2011) conducted a study to compare middle-school student testing scores between classes that were taught differently. They compared course sections in math and science that were taught as lecture-style presentations with other sections that focused on in-class problem solving. They report: "Contrary to contemporary pedagogical thinking, we find that students score higher on standardized tests in the subject in which their teachers spent more time on lecture-style presentations than in the subject in which the teacher devoted more time to problem-solving activities" (pp. 65-66). Their reflections on these results included findings that higher-achieving and more advanced students did significantly better in lecture classes, but that under-achievers also tested better after lecture-style teaching.

Covil's (2011) study showed a preference among college students for the traditional lecture method. Students reported that they were dependent on the professor for their learning and stated that they worked hard in these classes in order to get a good grade. When questioned regarding the students' long-term growth to improve problem-solving skills, they demonstrated the belief that they had achieved such learning levels. They reported that they had been engaged in the course and they rated the lecture-style teacher and course as "excellent." Covil did, however, challenge these results as possibly evidencing some negative characteristics among students such as a lack of self-direction and independent thinking (pp. 97-98). Knowles (1975) also suggested that students preferred a dependency on teachers, not wanting to work as hard to learn. "I discovered

that my students didn't want to be self-directed learners; they wanted me to teach them"

(p. 33).

Learner-Centered Instruction

Another stream of research studying teacher/student dynamics has developed into

what are referred to as the principles of "learner-centered teaching." Initiated by

constructivist theories from pedagogical scholars such as Dewey and Vygotsky, this body

of research has gathered together and grown various concepts that posit that the "best"

learning is motivated and actuated by learners themselves. An American Psychological

Association task force carefully prepared a list of learner-centered principles. Originally

specified in 1993, then revised in 1997, it brought learner-centeredness to the forefront in

discussions about adult learning. This list has 14 principles that are drawn from the

andragogy model as well as other constructivist-based theories. These principles, or

learning factors, are grouped into four categories: (a) cognitive and metacognitive, (b)

motivational and affective, (c) developmental and social, and (d) individual differences

(Lambert & McCombs, 1998). A meticulous study regarding how these four categories

can guide the use of technology-driven courses such as those delivered online concludes

that the key issues in using educational technology to support learner-centered practices

were:

1. Building ways to meet learner needs for interpersonal relationships and connections,

2. Finding strategies that acknowledge individual differences and the diversity of learner needs, abilities, and interests,

3. Tailoring strategies to differing learner needs for personal control and choice,

4. Assessing the efficacy of technology to meet diverse and emerging individual learner and learning community needs. (McCombs & Vakili, 2005, p. 1595)

Research suggests that learner-centered methodologies can be used broadly, not just for adult learners but also as a teaching model for children and even as a philosophical base for whole school systems and institutes. In 2002, the Arizona Board of Regents funded 20 programs throughout their university system to further one of the Board's major initiatives, Learner Centered Education, or LCE, and posted this on their website, indicating a broad educational system application:

> The Board has been examining learner-centered education for two years and is excited that it can fund these initiatives to implement LCE principles at the universities. LCE places the student at the center of education, with methods of instructional delivery, student services and student assessment, all geared toward providing an individualistic, flexible and more comprehensive educational experience for students. (Arizona Board of Regents, 2012)

The Institute for Learner Centered Teaching held a national teaching conference on Constructivism in July, 2009, that focused on training teachers to use learner-centered techniques. As an introductory statement for the conference they posted online:

> Learners build on prior knowledge and experiences; learning occurs through engagement of the learner by a teacher using constructivist strategies including inquiry-based questions, group work, peer and self-evaluation, and performance-based authentic task assessment.… As schools raise standards, there will be a shift from classroom lecture and short answer tests towards projects. These projects will allow students to demonstrate what they are learning through activities that relate to the real world. These activity-based projects increase student interest and motivate them to achieve more. (The Institution for Learner Centered Teaching, 2009)

Burge (1988) posited that learner-centered ideals are actually the practical application of andragogy, suggesting that educators have "adopted and modified Knowles' principles and conditions" by extending the concept of andragogy into the

broader term of learner-centeredness (p. 5).

> Learner-centered teaching style is a construct defined as a style of instruction that is responsive, collaborative, problem-centered, and democratic in which both students and the instructor decide how, what, and when learning occurs. (Dupin-Bryant, 2004, p. 42)

In spite of the strong recommendations from research that encourages learner-centered instruction, in reality it has been difficult to implement in higher education. Some faculty and students have shown resistance to the required shift in power and responsibility (Weimer, 2002, p. 149). Teachers have to become guides, connecting students and resources, designing engaging activities, and facilitating individual learning (p. 76). Under learner-centeredness, the function of content changes, the role of the instructor and the assessment process changes, as does the responsibility of the learner. Learner-centered instruction "requires that faculty give students some control over those learning processes that directly affect them.... In most college classrooms, power, authority, and control remain firmly and almost exclusively in the hands of teachers" (p. 45).

Face-to-Face Instruction

Although some research indicates that many students do well with, and even prefer, teacher-centered classrooms that are primarily lecture/note taking (Covill, 2011; Friesen, 2011; Schwerdt & Wuppermann, 2011), other research is suggesting that face-to-face classes can be greatly improved with some learner-centered techniques incorporated. King (1993) suggested that instead of being the "sage on the stage," the professor should instead function as a "guide on the side" by helping students learn to actively participate

in thinking about and discussing ideas. "The professor is still responsible for presenting the course material, but he or she presents that material in ways that make the students do something with the information—interact with it—manipulate the ideas and relate them to what they already know" (p. 30).

Incorporating what are often called "active-learning techniques" into face-to-face classrooms requires that instructors create opportunities for students to get involved with the information presented, not just passively receive it. King (1993) gave several examples of ways professors can incorporate active-learning into their primarily teacher-centered course, and one of those is described below.

> Dr. Jones is lecturing to his Anthropology 101 class on the role of language in culture. After several minutes he poses the question, "What do you think would happen if we had no spoken language? Think about that for a minute." After a minute he continues, "Now pair up with the person beside you and share your ideas." (p. 31)

In spite of adult learning theories that recommend educators improve teaching by incorporating learning-centered methods into their face-to-face sessions, primarily the teacher-centered lecture method still dominates the face-to-face course format. Improving the quality of lectures therefore should be a serious consideration for instructors in higher education. A faculty training Idea Paper from Kansas State University outlined the following

Strengths of the Lecture Approach

1. Lectures can communicate the intrinsic interest of the subject matter. Like live theater, lectures can convey the speaker's enthusiasm.
2. Lectures can cover material not otherwise available (original research, recent developments.)
3. Lecturers can organize material in a special way (faster, simpler.)
4. Lectures can convey large amounts of information.

5. Lectures can communicate to many listeners at the same time.
6. Lecturers can model how professionals in a particular discipline approach a question or problem.
7. Lectures permit maximum teacher control.
8. Lectures present minimum threat to the student.
9. Lectures emphasize learning by listening.

Weaknesses of the Lecture Approach

1. Lectures lack feedback to the instructor about the students' learning.
2. In lectures, the students are passive.
3. During lectures, students' attention wanes quickly, in 15 to 25 minutes.
4. Information learned in lectures tends to be forgotten quickly.
5. Lectures presume that all students are learning at the same pace and level of understanding.
6. Lectures are not well suited to higher levels of learning (application, analysis, synthesis.)
7. Lectures are not well suited to complex, detailed, or abstract material.
8. Lectures require an effective speaker.
9. Lectures emphasize learning by listening (both an advantage and disadvantage, depending on the student.)

Recommendations for Using the Lecture Approach

1. Fit your lecture to your audience.
2. Focus your lecture, prepare an outline and organize your points.
3. Present more than one side of an issue (Cashin, 1985, pp. 1-2)

Lawler, Chen, and Venso. (2007) noted that the technological advances being incorporated into teaching since the turn of the century may have changed student preferences for lecture style teaching that was evidenced in their 1998 survey. They surveyed 177 university students regarding their preference for the following:

- Nontechnology based teaching techniques

- Lecture format

- Important characteristics of outstanding high school teachers

- Important characteristics of outstanding university teachers

They concluded that most students preferred a structured lecture format with a free exchange of questions. Almost half the students selected 90% or more lecture and 10% or less student group work as their ideal proportion of activities in the classroom (pp. 34-35). "Students also indicated that lectures are most interesting when instructors show enthusiasm for the subject, have good presentation skills and explain complex concepts clearly (p. 38).

Online Instruction

Online instruction began in earnest in 1996 as Internet accessibility and flexibility for universities emerged. Researching distance education in general as a first level parameter is very productive with many articles discussing singular aspects of online teaching that provide andragogically supportive methods such as the use of discussion boards or collaborative learning groups. Research is also abundant regarding both instructor and student reflections about their experiences with online education. Research that generally explores how online education is being successfully used with adult learners is included in several texts that teach instructors about utilizing distance education and is also found in a few peer-reviewed articles published in academic journals since the year 2000. Research specifically about adult education pedagogies in online courses is rare.

Delivering university coursework though distance education ranges from distributing a small segment of a traditional course to offering an entire degree program online. There are even virtual universities where the entire curriculum of every major is online such as the United States Open University and the Western Governors University

(Bryant et al., 2005). For online teaching, an instructor uses software designed for course management to deliver course content, facilitate online discussion boards and online chat sessions, and even to hold electronic office hours. Individual campuses select course management software such as Blackboard, Instructure Canvas, WebCT or Moodle to manage the courses through which instructors and students communicate.

In the United States, from 2000 to 2008, the percentage of undergraduates enrolled in at least one distance education class expanded from 8% to 20%, and the percentage enrolled in a distance education degree program increased from 2% to 4% (U.S. Department of Education, 2011). It is predicted that distance education courses will continue to increase in higher education institutions and that this increase can be attributed to a number of educational issues such as "the rising costs for both institutions and students, technological advances in the delivery of education, enrollment management issues, and the increasing number of adult students who are seeking flexible alternatives for education" (Hollenbeck, Zinkhan, & French, 2005, p. 47). It is also notable that older undergraduates and those with a dependent, a spouse, or full-time employment participated in both distance education classes and degree programs relatively more often than their counterparts (U.S. Department of Education, 2011).

Popovich and Neel (2005) conducted a survey of 400 deans from internationally accredited (AACSB) business schools. Of those responding, 53% offered a business program with distance education elements. One of the schools provided half of the courses for its EMBA degree through online delivery and other deans expressed an acceptance of similar approaches, but most were reluctant to offer a degree that was

entirely online. One reason mentioned by these deans for avoiding degrees that are 100%

distance delivered was a concern that a distance education degree would weaken the

quality and brand of the business school itself (p. 234).

The Sloan Consortium, an association of colleges and universities whose goal is

the promotion of quality online education, conducted a survey in 2010 that revealed that

enrollment in online courses rose by almost one million students from the year before,

and that thirty percent of all college and university students now take at least one course

online. However, the report states: "There may be some clouds on the horizon. While the

sluggish economy continues to drive enrollment growth, large public institutions are

feeling budget pressure and competition from the for-profit sector institutions" and notes

that the 21% growth rate for online enrollments far exceeds the 2% growth in the overall

higher education student population (Allen & Seaman, 2010).

The perception that traditional face-to-face teaching is the premier method for

university education is still prevalent in the public's eye, but as studies continue to

explore the effectiveness of delivering a course using 100% online delivery, that

perception is being dismantled. A meta-analysis performed by the U.S. Department of

Education (2010) put forth several pertinent key findings (note that 43 of the 50 studies in

the analysis were drawn from research examining adult learners).

1. Students in online courses performed modestly better, on average, than those
   learning the same material through traditional face-to-face instruction,

2. Instruction combining online and face-to-face elements had a larger advantage
   relative to purely face-to-face instruction than did purely online instruction,

3. Effect sizes were larger for studies in which the online instruction was
   collaborative or instructor-directed than in those studies where online learners
   worked independently (U.S. Department of Education, 2010).

Yick, Patrick, and Costin (2005) looked closely at faculty perceptions at their online university, Capella University, and delivered some valuable perceptual insights. One is that there are still negative reactions to online teaching from those who do not engage in it, those who teach in traditional settings only. Traditional professors' basic claim is that online courses are less rigorous, but online professors believe that this perception is perpetuated by those who have never taught online and who for various reasons hang onto this dated opinion, which in fact does not hold up to research (pp. 8-9).

Other faculty concerns about the online course methodology include: lack of social interaction with and among their students, extra time required in development and continuous redevelopment, labor intensive teaching, difficulty in tracking students' work and if they were the ones actually doing the work, difficulties with technology for some students, and the legal ramifications of copyrights protecting faculty work (Haber & Mills, 2008).

A perception study performed at a large university in Texas compared both student and faculty perceptions of online courses and in particular examined the element of "before and after" regarding the perceptions of faculty and students who had never previously participated in online education. Both parties' expectations changed significantly after teaching or taking an online course with regards to how much students would learn, how effective Internet communication is, the number of individual problems that might occur, and the time required to do the work (Osborne, Kriese, Tobey, & Johnson, 2009).

For students in many online classes, learning is primarily a solo activity of

processing the text, visuals, and presentation of the course material (Haber & Mills,

2008), so helping them to overcome their sense of isolation or disconnection and creating

"communities of learners" is one of the primary challenges for online instructors

(D'Agustino, 2012, p. 5).

Bryant et al. (2005) proposed that other obstacles to distance education were: (a)

labor intensity of administration of distance education courses, (b) high development

costs, (c) need for faculty training and support, and (d) high student attrition rates (p.

263). Extrapolating from many studies, the Bryant et al. report concluded that many

students in distance education programs are nontraditional and tend to be older, more

often employed, female and married, more intelligent, emotionally more stable and more

trusting, and more compulsive, passive and conforming than traditional students (p. 263).

Yet in contrast, Stone, Tudor, Grover, and Orig (2001) discovered in their research that

many successful online students are not actually "distant" or nontraditional students, but

rather are the traditional, on-campus students who utilize online courses as supplemental

to regular campus participation. The Stone study suggested that the nontraditional student

may actually be intimidated by technology, or that their socialization processes might

lead them to prefer personal interaction (pp. 7-8).

Bowman (2001) posited that lack of student commitment to online learning is a

major problem and that students assume online courses will be easier and require less

time than traditional counterparts. He concluded that "successful completion of DL

(distance learning) classes requires a student to have a high degree of self-motivation and

discipline to stay on track" (p. 88). In some literature, nonacademic factors are cited as

explanations for student failure in distance education. The following are listed by T. H. Allen (2006): Lack of informal contact with the institution; lack of time spent on campus; little interaction with faculty, staff, and peers; and absence of other social integration activities (pp. 124-125). Other failure factors for online students include a misperception among distance students about their university and a variance in their personal study habits (Richardson, 2006), inappropriate assumptions about personal learning styles and methods (Gamache, 2002), and the lack of induction and support (Forrester, Motteram, Parkinson, & Slaouti, 2005, p. 294).

Wyatt's (2005) survey of students who had completed both online and traditional classroom coursework delivered more positive results. Students were asked for their comparison observations. Significant findings were that students found online courses more academically demanding than regular courses, but viewed the heightened rigor as positive, with 77% indicating their online courses were "excellent" or "good" (p. 463). More extensive research by Hirschheim (2005) presented conclusions from a review of many studies that examined students' opinions about online education. Hirschheim pointed to both benefits and disadvantages often expressed by online students. Benefits listed are: convenience and flexibility, greater motivation to work, better understanding of the course material, better learning, better access to the professor, more participation and immediate feedback. Disadvantages listed are: high frustration levels, less interest and satisfaction, technical and logistical problems, lack of instructor interaction, difficulty developing student friendships, attendance lapses, lack of feedback, confusion about requirements, and an overwhelming volume of email and online discussion.

Essentially supporting this list of disadvantages with the results of a qualitative survey,

Hirschheim concluded:

> Loss of educational quality as a result of Internet delivery is a major concern
> identified in this survey. The Internet is leading to a fundamental change in the
> manner in which students are learning and retaining knowledge.... A total Internet
> solution will lead to the loss of certain educational experiences and the
> importance of these experiences and learning methods must be judged, trade-offs
> made, and new directions undertaken in course delivery. (pp. 97-101)

After an extensive examination of the literature proposing "best practices" for

online instruction, D'Agustino (2012) felt there was not a good model and proposed a

detailed best practices list that includes considerations that are focused on the design

process itself, as follows.

1. A design team should be formed and should include a subject matter expert,
   the faculty member, an instructional designer and a media specialist.

2. The design team should understand the context of the learning environment,
   including the characteristics of the learners such as their prior knowledge of
   the subject, their technology skills, their expectations of the course, plus the
   characteristics of the learning management systems and of the institutional
   policies.

3. Objectives and learning outcomes should be clear, measurable and realistic.

4. Content should be organized into modules that provide structure for the
   course, but should avoid multiple screens of text, long films of lectures,
   lengthy audio clips of lectures, or lengthy slideshows.

5. The focus of the course should be student-centered. The use of technology
   should satisfy the need for appealing to various student preferences.

6. Students should be given various opportunities to provide evidence of their
   understanding.

7. Instruction should include: direct instruction, indirect instruction, interactive
   instruction, experiential learning activities and independent study activities.
   (2012, pp. 10-11).

Although it was originally developed for face-to-face teaching, Burge (1988)

suggested that andragogy could be specifically useful to distance education, and posited:

> Andragogy has several uses to distance educators. The general learning processes and life conditions of adult distance learners are similar to those of adult classroom learners. The observations and experiences of such classroom based writers as Malcolm Knowles should not be discounted as irrelevant on the grounds that distance learning contexts create different types of learners or that distance learners are denied any form of classroom type activity. (p. 6)

Hybrid Instruction

Academic discussion regarding the pedagogies recommended for blended and hybrid course design is vague as to proposing how to utilize the two distinctive teaching formats. Various institutions that are engaged in blended course delivery at the higher education level may mention that their primary purpose for developing hybrid courses is improving pedagogy but specific adult learning pedagogies are rarely considered. Although research is emerging about the intrinsic potential of the hybrid course design structure itself, with a few groundwork texts becoming somewhat specific about why and how hybrids can be an effective blend of face-to-face and online deliveries, empirical research investigations into hybrid teaching are "fragmented and many important issues remain unexplored" and the overall study of blended learning "still seems to be a giant puzzle, consisting of intertwined disjointed parts, all trying to connect" (Wang, Han, & Yang 2015, pp. 380-381). "Pedagogy—the strategies used to support knowledge acquisition by the learner—is core to the blended course, and may be the most challenging to design" (McGee & Reis, 2012, p. 12).

Studies regarding blended and hybrid technology and delivery issues, student assessment results and hybrid course design proposals have emerged recently in the

institutional-level blending. This dissertation study focused on course-level blending issues, particularly looking for what Graham (2006), one of the book's two editors, called Transforming Blends, which he described as blended course designs that allow a radical transformation of the pedagogy, including a change from a model where learners are just receivers of information to a model where learners actively construct knowledge through dynamic interactions. He pointed out that these types of blended courses enabled intellectual activity that was not practically possible without the current technological developments (p. 13). Also touting the potential for hybrid teaching to transform teaching and learning, Garrison and Kanuka (2004) proposed that blended teaching did not represent just combining the two delivery modes to increase efficiency or convenience, both for the students and professors, but that it was about rethinking and redesigning the teaching and learning relationship. They declared:

> The core issue and argument is such that, when we have solid understandings of the properties of the Internet, as well as knowledge of how to effectively integrate Internet technology with the most desirable and valued characteristics of face-to-face learning experiences, a quantum shift occurs in terms of the nature and quality of the educational experience.… Blended learning has enormous versatility and potential but concomitantly creates daunting challenges on the front end of the design process. (pp. 97, 100)

A transformative process is enabled in the course in different ways, facilitated by the differentiated communication tools utilized by the learner in the two formats. Discussions that occur in the face-to-face environment have energy and enthusiasm that are spontaneous and contagious "because students have to remember what has been said and be verbally quick and assertive or opportunities to contribute are lost," while communication on the Internet provides a way for participants to confront questionable

ideas and faulty thinking in more reflective ways. "The rationale supporting this view is that there is a greater focus on the substantive issues and less distraction or noise in an asynchronous text-based Internet environment" (Garrison & Kanuka, 2004, p. 99).

One model that has been specifically proposed for hybrid instruction is the Complex Adaptive Blended Learning Systems (CABLS) model. Focusing on the interactions and synergies within complex systems, this model suggests that there are six primary subsystems within a blended learning framework: teacher, learner, technology, content, institution, and learning support, and that each subsystem is evolving and adapting to the blended learning environment. For example, teachers are becoming "facilitators, guides on the side, and advisors" and learners are transforming "from passive to active participants in learning." The CABLS model also proposes that content in blended learning is evolving into rich, engaging, interactive/collaborative and flexible content (Wang et al., 2015, pp. 386-387).

Included in the CABLS article was a reference to the techniques being purported by "Flipped Classroom" research. In tandem with academic discussions regarding the logistics of hybrid courses is a developing research thread regarding flipped classrooms, which simply assumes the use of technology in teaching and is proposing best practices for utilizing it. Flipping a course does not suggest eliminating any face-to-face class time and is typically researched within the K-12 instructional context. Flipping specifically advocates the utilization of online technologies to deliver course content and recorded lectures, thus freeing up some of the face-to-face time for support activities.

> The idea is that rather than taking up limited class time for an instructor to introduce a concept (often via lecture), the instructor can create a video lecture,

screencast, or vodcast that teaches students the concept, freeing up valuable class time for more engaging (and often collaborative) activities typically facilitated by the instructor. (Milman, 2012, p. 85).

Missildine, Fountain, Summers, and Gosselin (2013) described the flipped classroom as "a hybrid approach to learning, using technology to move the classroom lecture to 'homework' status and using face-to-face classroom time for interactive learning" (p. 598). Primarily the research on flipping a classroom focuses on describing what constitutes a successful "active-learning classroom" as gleaned from case studies and early self-reporting from instructors (Baipler, Walker, & Driessen, 2014; Gilboy, Heinerichs, & Pazzaglia, 2015; Missildine et al., 2013). "If the flipped classroom is implemented with conscious thought as to what the educational research tells us about learner-centered instruction, there is a reason to believe the flipped classroom can directly affect students' learning" (Gilboy et al., 2015, p. 110).

McCallum, Schultz, Sellke, and Spartz (2015) observed that "application of the flipped classroom technique at the college level has received little research attention" (p. 43), although a recently published textbook that discussed the use of blended teaching at the college level did refer to flipped classroom theory (Stein & Graham, 2014, p. 38). The genre of research about flipping a classroom does not reference hybrid or blended teaching, nor does it address the teaching of adults. Gilboy et al. (2015) suggested that the flipped classroom approach could be successful at a university because "When faculty members serve as both a sage on the stage as well as a guide on the side, they can transform their course to meet the demands of today's learners and the calls for accountability" (p. 109). McCallum et al., however, warned that challenges did exist for

faculty if they take on a flipped classroom approach.

> First, …the professor must be skilled at answering questions on the spot. This is particularly challenging when students are still in the process of comprehending the material. Second, flipping the classroom is labor intensive for faculty…. Third, student evaluations of faculty within the flipped classroom tend to be lower than student ratings of professors in traditional lecture classes. (2015, p. 44)

When examining the ramifications of offering blended courses upon the institution itself, research is showing that well-designed hybrid courses can provide improvement where there are many issues of concern for administrators. Snart (2010) stated that "faculty on many campuses are feeling the push from administrators to increase hybrid course offerings" and summarizes these major areas of institutional challenge: (a) managing enrollment; (b) scheduling and classroom space; (c) aligning learning objectives; (d) improving student retention, success, and completion; (e) reaching tech-savvy students; (f) understanding students, technology, and writing; (g) assessing the digital divide; and (h) choosing a direction (p. 8).

Garrison and Kanuka (2004) proposed that it was "inevitable that campus-based higher education institutions will adopt blended learning approaches in a significant way" as a necessary process for "mitigating the fiscal and pedagogical challenges and deficiencies" of current traditional education, and they posited that this adaptation will redefine higher education as being learning-centered (p. 104).

> In the face of increasing student numbers and/or decreases in state or national funding or institutional structures that favor faculty research over student learning, …advancing digital technologies within the higher education sector are challenging both the pedagogical stance of traditional didactic teaching seen for decades within universities and equally offering dynamic and innovative opportunities for student learning…. Universities need to be seen at the cutting edge of technological and educational advancement. (O'Flaherty & Phillips, 2015, p. 86)

Institutional support for hybrid courses can be challenging to achieve, particularly since administrators are not familiar with this mode of teaching and learning. Blended learning requires the same technological infrastructure elements as other network services to the university, but the requirements of the online element are "more stringent in terms of reliability and consistency of performance" and "the complexities of course management software and supporting infrastructure require continuous attention, requiring dedicated technical personnel" (Moskal, Dziuban, & Hartman, 2013, p. 17).

> The debate over where to place the support resources—centrally or within academic units—continues, but over time is tilting strongly toward centrality in order to avoid duplication and redundancy, and maintain quality and consistency.… The range of professional skills needed to design and develop blended courses, create and deliver faculty development, produce instructional media content, conduct assessment, and partner with academic units to develop blended courses or programs is greater in scope and depth than exists at most institutions. Or, if these resources do exist, they may cross departmental or divisional boundaries. (p. 17)

Designing a hybrid course itself is primarily left to the instructor. A variety of structural considerations and concerns are arising in blended design reporting. When attempting to translate a face-to-face course into a blended one, McGee and Reis (2012) discovered that many times the online components simply turn into extended homework, and warn that "starting with a classroom-based course and adding online activities typically increases workload for both instructor and student" (p. 11). Studies also showed that some instructors with experience in teaching at a distance actually employed traditional, teacher-centered styles into their online teaching (Dupin-Bryant, 2004, p. 46). In their study exploring the relationships between the online and face-to-face segments of a blended course, Ginns and Ellis (2007) determined that "teachers in blended learning

contexts need to focus not only on the technical capacities and functions" but also on how successfully the online portion of the course supports student learning across the entire course. For example, they found that students did not find online submissions from other students (such as might be required in discussion board assignments) as being helpful or motivating (pp. 58, 63).

Rausch and Crawford (2012) suggested that "knowledge cannot simply be generated by instructors and linearly transmitted to students to use" whether in a face-to-face or an online classroom environment and propose that establishing a personal relationship is a critical aspect of the face-to-face part of the hybrid experience. However, they also note that there is a benefit when the online portion of the blended experience expects each student to individually participate, which they cannot do in the classroom.

> In a face-to-face class, when a statement is made or a question is posed, the excitement and passion of the moment, which can add value to the learning, also color any purposeful and reasoned response that may be required. With the desire to be first to answer, to be noticed in the class, or to "please" the instructor, responses can rarely be thoughtful and reasoned…. Just imagine posing a question in a face-to-face class and asking the students to pick up the discussion over the next 24 hours as they reflect on their life experiences and how the theoretical constructs introduced in the class may impact their current view. (p. 177)

Features of online instruction that seem overwhelming for the online student may be perceived more positively in a blended situation. Garrison and Kanuka (2004) touted the ability of asynchronous internet communication "to facilitate a simultaneous independent and collaborative learning experience" and suggested, as another design example of the rich possibilities inherent in hybrid instruction, that a written communication emphasis online can be thoughtfully integrated with "the rich dynamic of fast-paced, spontaneous verbal communication in a face-to-face learning environment" to provide enhanced

learning experiences (p. 97).

The unique design of their hybrid courses is presented by a team from Bentley University in Massachusetts, where hybrid courses are delivered to widely disbursed classes. Specialized instructional tools are utilized such as wiki software, the SMART electronic whiteboards, blogs, and the Blackboard learning management system. Their hybrid teaching interaction takes place among the instructor, the students who are physically present in the classroom, and the students taking the course online from locations that may even be beyond U.S. borders. "It is therefore essential for the instructor to utilize pedagogical tools such as the wiki that can bring these divergent groups of students together" (Alexander, Lynch, Rabinovich, & Knutel, 2014, p. 15). To facilitate distance students who cannot attend the face-to-face sessions, the school adopted Saba, a virtual classroom web collaboration software that enables live on-campus classes to be taught simultaneously to remote students. The online student uses a headset and a microphone during the class to communicate with the instructor and peers in real time. A teaching assistant is in the classroom to facilitate. Online students' comments come through ceiling speakers built into the hybrid-equipped classrooms and instructors wear wireless microphones during class. "Bentley has 15 classrooms equipped for hybrid class delivery. More than 100 classes are offered in this format annually" (p. 11). Student response has shown a high degree of satisfaction, and the number of hybrid classes offered "has doubled in the past 5 years, almost exclusively through word-of-mouth advertising." (p. 20).

Another perspective of the potential of hybrid teaching comes from Monash

University in Australia as they utilized blended courses to address some of the difficulties experienced when delivering courses to large and diverse student cohorts. They reflected on the weaknesses of relying on lectures as a way to reach large groups, with problems including poor attendance rates, low levels of engagement by unprepared students, and little opportunity for professors to give feedback and encourage active learning. Developing blended courses, they created online "pre-class activities" that prepare students to come to lectures with a basic level of understanding of the topic which not only include content viewing but also accountability measures such as quizzes. This allows the lecturer to spend more time engaging students in discussions and exploration activities. Although students showed improvement in satisfaction and achievement, one significant problem was identified which was the variability in how faculty adapted their lecture materials and styles to accommodate students who had already self-studied much of the content.

> One approach was to reduce coverage of definitions and basic concepts in favor of spending more time discussing research studies and applications; whereas, another approach was to re-structure the content into an 'overview' lecture plus an 'advanced issues' lecture, encouraging interaction with activities in the lecture and online discussion of case examples. Some lecturers, however, tended to follow the more traditional, information delivery lecture approach. (McKenzie et al., 2013, p. 125)

Providing training to instructors who were engaged in designing and delivering hybrid courses is important to gain faculty cooperation. "Lack of technical training and support, inadequate compensation and incentive structures, and lack of release time for planning have been cited as reasons why faculty resist participating in hybrid and online courses" (Mansour & Mupinga, 2007, p. 246). Although the research suggested that

"when technology is chosen thoughtfully, it has the potential to enhance the hybrid teaching and learning environment significantly while making the experience more interactive and time efficient for teachers and students alike" (Ross & Gage, 2006, p. 60), this developing mode of instruction is complex and is leading to a new generation of learners and teachers, and requires new approaches to content design. "The good news is that its flexibility permits individual institutions and collaborative groups to tailor the concept to maximize its potential while being responsive to a new generation of student" (Moskal et al., 2013, p. 16). Garrison and Vaughan (2008) focused on the potential communication processes inherent in hybrid courses and recommend that instructors consider three phases of the students' experience: (1) Online, before a face-to-face session—plant the seeds; (2) Face-to-face session—diagnose student misconceptions, foster critical dialogue, support peer instruction; and (3) Online, after a face-to-face session—explore and reflect on course-related activities (pp. 113-120).

Studies showed that many students say they like having multiple modes of delivery and feel the hybrid format is more centered on the needs of the current generation of learners, although there are some students who have difficulty adjusting because they initially equate "fewer class meetings with less work" or are unaware of the online component when they register (Lin, 2008, p. 56). Having the course well organized with clear indicators of how the online and face-to-face expectations relate, and having multiple opportunities to make social connections between other students as well as with the instructor—be it in class or online—were two predominate findings of positive student reflections (Dukes, Waring, & Koorland, 2006; Lin, 2008). The Dukes et

al. study additionally recommended, "Course instructors should utilize class meetings to the fullest extent possible by eliminating the use of class time for purposes other than hands-on instruction" (p. 156). A statistics professor used his hybrid courses this way.

> Face-to-Face time includes a mini lecture (no more than 15 minutes) which poses a critical question or two, followed by interactive small group work applying the material presented. Groups then report on their work, differences are discussed, and misconceptions are clarified. Some time is also spent reviewing the online work that was assigned to be completed prior to class. Online expectations that follow are to complete readings for the next F2F class, complete online simulations or quizzes, solve problems similar to those worked on in class, and work on a critical literature review for presenting a topic of interest to the class in lieu of a final. (Caulfield, 2011, p. 70)

Although best practices literature is still formative regarding hybrid course design (Adams, 2013; D'Agustino, 2012; Ginns & Ellis, 2007), several universities have formulated best practices instructions for their internal use which can be found online. The most thorough of these was posted at James Madison University at the end of the year in 2013. Most of that "policy manual" is actually geared toward online course developers, with hybrid course instructors included primarily to guide them to the best use of digital teaching tools. The extensive best practices instructions however only refer to online instruction, and it appears that the inclusion of hybrid courses is secondary. Relevant instruction for their hybrid instructors does include these concepts for online teaching, many of which come from adult learning theories.

1. Faculty should set clear expectations for their courses.
2. All courses should be centered on student learning.
3. A personal connection with students is more important than the technology used.
4. Courses should engage students in active learning.
5. Interactivity and prompt feedback are key to student engagement.

6. The diverse ways students learn should be incorporated into the curriculum and individual courses.

The James Madison University website stated "the quality of online courses and student success in these courses is dependent upon well-trained, supported faculty" and suggests that faculty interested in developing online and hybrid courses should conduct a self-assessment evaluation regarding the following:

1. Competence in using the tools required to teach online,

2. An understanding of the difference between online and face-to-face instruction,

3. An understanding of the amount of work involved in preparing and teaching an online course,

4. An understanding of the need for regular communication with student, prompt feedback, the need for student collaboration in online classes, and so on,

5. The identification of areas where there is a need for additional theoretical or practical training in online instruction.

Another interesting "best practices" policy from the James Madison University website states that students must take a 10-question online questionnaire to evaluate their technological competencies, which includes the question "I learn best by: (a) reading the material, (b) listening to a lecture on the material, or (c) sharing my knowledge with others." The online survey is immediately scored and students are told "you are well prepared," or "you may find an online course more challenging than an in-class course" or "an online course is not recommended at this time" (James Madison University, 2013).

Brandeis University also posted a detailed policy manual for their hybrid course instructors, which opens with "There are no standard definitions for what constitutes a 'hybrid course'…. In online learning literature the terms 'hybrid' and 'blended' are used

synonymously." Although Brandeis does not stipulate what percentage of a hybrid course

must be online, they do provide three possible course structures:

> Option 1) The instructor lectures and facilitates class discussion in the face-to-face classes. Students complete online assignments based on these classroom activities. The online assignments are posted to asynchronous discussion forums for online discussion.

> Option 2) Students prepare small group projects online and they post them to discussion forums for debate and revision. Students then present the projects in the face-to-face class for final discussion and assessment.

> Option 3) The instructor places online course content (text-based lectures, articles, recordings) for students to review. Students use these preliminary online materials to prepare for face-to-face small group activities. Subsequent asynchronous discussions take place in small group and class-wide settings.

The Brandeis University (2015) site also warned:

> In a hybrid course, expectations shift, and research indicates that students can lose track of the course when they are not in the face-to-face mode ("out of sight, out of mind").… Research also indicates that there is a tendency for hybrid instructors to keep the online component of the class relatively superficial. If not given equal attention by faculty, then there is a tendency for students to do the minimum work required for the online component as opposed to the face-to-face interactions. Faculty who are used to being an active ("sage on the stage") presence in the face-to-face classroom can face challenges adapting to online discussions where they must maintain an engaged but more collaborative ("guide on the side") presence.

A highly detailed instruction manual for blended course designers was recently

written by Stein and Graham (2014). Their text presented a series of illustrated outlines

and examples of blended courses for course designers to reference. The authors called

these "Blended Course Standards." These standards are summarized in Table 3.

Although a review of both instructional design textbooks and peer-reviewed

research articles provides many insights regarding the structural potential for designing

and delivering hybrid courses, there is limited analysis available regarding the

experiences instructors within higher education environments have had incumbent to

Table 3

Blended Course Standards

Design goals	Standards
Course goals and learning outcomes	- Concise course description - Clear description of the successful learner - Learning outcomes same as for onsite versions of course - Learning outcomes specific and measurable - Learner focus - Appropriate time allotments - Supportive resources and activities - Carefully chosen mode for activities: online or on-site - Assessments
Ease of communication	- Clear writing style - Clear instructions and requirements - Contact information provided - Clearly written assignments - Submission of assignments clear - Criteria for peer review well defined - Consistent indication of onsite vs. Online assessments - Sequential tasks numbered
Pedagogical and organizational design	- Comprehensive syllabus - Unit introductions and summaries - Information divided into blocks of information - Pedagogical steps build progressively - New information followed by application activities - Activities reference and connect between modes - Course workload same as online/f2f versions
Engaged learning	- Frequent and varied activities - Interactive activities - Lessons include engaging methods and real-world relevance - Attention sustaining presentations - Reflection activities - Authentic applications - Clear and simple content
Collaboration and community	- Active interactions - Learner self-direction - Online space for student meeting - Optional blogs used as learner-owned spaces - Resources are shared among students - Discussions designed for online/face-to-face - Allow privacy

(*table continues*)

Design goals	Standards
Assessments and feedback	• Frequent assessment • Differentiation clear between graded and ungraded • Graded assignments are varied • Achievements measured • Onsite strengths utilized (i.e. Human interaction) • Clear rubrics • Timely, prescheduled feedback
Grading	• Reasonable size of and due dates for assignments • Ethical use of materials • Graded activities and criteria pre-listed in syllabus • Final grading clear • Student self-tracking
Ease of access	• Organized website, direct links provided • Brief audio or video clips • Accessible resource materials • Avoid nonessential materials
Preparation and revisions	• Continuous course improvements • Course evaluations • Website pretested

*Note. A*dapted from Stein and Graham (2014, pp. 195-200).

incorporating established best practices specifically for adults into their hybrid courses.

Overall, research did project a positive voice as to the possibilities of the hybrid course

design.

> Considering its potential congruence with the traditional values and goals of
> higher education, it should be clear that blended learning is not a technological
> fad. It is an approach and strategy that can be built upon in a progressive,
> systematic, and thoughtful manner, and over time will transform the institution in
> a manner congruent with our highest ideals. (Garrison & Kanuka, 2004, p. 103)

CHAPTER III

RESEARCH DESIGN

After completing a review of the academic literature regarding adult education

theories and the various design possibilities that should be considered in the design of

hybrid courses for higher education environments, a descriptive study of a robust hybrid

course program at a large university was developed and administered. The overall

mission of the hybrid program at the university under study was examined and a census

survey to collect descriptive data from hybrid course instructors who had delivered a

hybrid course there was conducted. Many of those instructors had developed and

designed their own course. All the instructors who had taught a hybrid course for the

university during the previous nine semesters were sent an email invitation to participate

in the survey. The email provided a link to an online survey platform that facilitated the

survey administration, data collection, and summary reporting.

Setting of the Study

Location

UVU is a teaching institution in central Utah. At UVU, the term "engaged

learning" is used to describe the fusion of academic instruction with hands-on learning.

Building upon the institution's long-rooted commitment to serving the needs of the

community, UVU's emphasis on engaged learning led to the prestigious certification as a

"community engaged university" by the Carnegie Foundation in 2009. Students are given

many opportunities to participate in local internships and community service. With over

32,000 students, UVU is now the second-largest 4-year institution in the Utah System of

Higher Education (behind University of Utah) and is providing higher education to more

Utahans than any other university. In addition to 58 baccalaureate programs and many

certificates and 2-year degrees, UVU offers master degrees in education, nursing, and

business administration. UVU has been actively engaged in various forms of distance

delivery for over 25 years and provides faculty with a list of definitions of course

configurations currently used as shown in Table 4.

Benjamin Wood (2012) quoted Dan Clark, senior director of Distance Education

at UVU, in his Deseret News article about online and hybrid courses at Utah universities

with the following statement:

> At Utah Valley University, Clark said there has been a push for faculty to enhance
> their courses with technology. He said his staff holds a Hybrid Course Boot Camp
> where they help faculty identify the best delivery methods—such as online or
> face-to-face instruction—for key concepts and offer incentives for moving toward
> 50 percent of their course delivery being done online. UVU is expecting more
> than 9,000 online enrollments in the fall, Clark said. Enrollment for both online
> and hybrid courses has grown by more than 20 percent each year.

Wood also pointed out in his article that in fall of 2011, 38% of students participated in

some form of distance learning and that in fall of 2012 this was expected to top 40%

(Wood, 2012).

UVU's university president, Matthew S. Holland, has particularly encouraged

funding and training for hybrid courses to become a major factor in the university's

offerings. In his 2012 State of the University address he explained:

> The development of hybrid courses...at my urging, is the primary focus of online
> development right now. While hybrid courses still require the use of a bricks and
> mortar classroom, they do not require the full use of the classroom. What this
> allows for is two separate courses, even those in entirely different fields, to share–

Table 4

Utah Valley University Course Delivery Dictionary

Course	Definition
Face-to-Face	Course is taught primarily in person – classroom based. This includes workbook courses with instruction and courses with some technology-delivered components such as online syllabi and online lecture notes; however, teaching and learning activities are classroom-based.
Technology-Enhanced	Course is taught both in person in a classroom and via technology. The technology-delivered components include teaching and learning activities. Use of technology does not reduce the time traditionally spent in the face-to-face class.
Broadcast	Course is taught via live or taped broadcast over open air, closed circuit, or cable television systems (i.e. KUED, KULC). The technology component delivers lectures and assignments one-way from the instructor to students. Broadcast classes may have internet-based or face-to-face components such as exam review sessions and proctored exams.
Interactive Audio/Video	Course is taught via remote interactive video and audio (i.e. IVC, EdNet, Satellite) from an origination site to one or more receiver sites or via streaming media technologies. Lectures and assignments are delivered in real time, one-way from the instructor to students (Satellite), with two-way exchange capabilities between instructor and student (IVC or EdNet), or accessed online on demand via streaming audio/video.
Online/Internet	: Course content is delivered online. While online courses may require proctored exams, there are no other place-bound requirements and minimal synchronous (real time) requirements. Regular online interactions between students and instructor are a part of the teaching and learning process.
Blended	Course is taught both face-to-face in a classroom and via technology. The technology-delivered components include some teaching and learning activities which reduces the time traditionally spent in the face-to-face class.
Hybrid/Hot Bunk Hybrid	UVU defines hybrid courses as those in which 50% or more of face-to-face class time is replaced by content and activities delivered online in a pre-scheduled format. Hot Bunk Hybrid courses are a subset of Hybrid courses and represent courses that share classroom space by delivering the face-to-face content on opposite days so that two sections can operate from the same room.
Correspondence	Course is delivered in print form either as hard or electronic copy. Students work at their own pace without significant interaction with the instructor or other students in the class. Students may use mail, phone, fax, or email to contact the instructor, submit work or take assessments. Courses are generally enrolled open entry/open exit throughout the year and students are given one year to complete the course.
Electronic Media	Similar to correspondence, but content is delivered digitally .

or "hot bunk"…the same room during the same time block of the same semester. This last year, of the 65 developed hybrid courses, 48 were hot-bunked which effectively opened up 24 additional classroom spaces. (Holland, 2012, p. 5).

The term "hot bunk" was adapted from the military use of the term for two soldiers sharing the same bunk on opposite 12-hour shifts (Wikipedia, 2013). Holland emphasized that gaining classroom space was not the only benefit being sought, and referenced a Department of Education study by the saying "The differences in student learning between pure online and pure face-to-face were negligible. The one delivery format with a demonstrable uptick in student learning was the hybrid course" (Holland, 2012, p. 5).

One major element of UVU's hybrid effort is called the Hybrid Teaching Initiative, or HTI. It is offered through the school's Innovation Center, which is housed in the Distance Education department. They offer a workshop for professors who will be developing a hybrid course, called The Hybrid Boot Camp, which faculty is strongly encouraged to attend. The invitation faculty receive to participate in this boot camp is quite enticing.

Hybrid courses couple technology with innovative teaching practices to increase flexibility and engagement. Hybrids transform one or more face-to-face sessions into online experiences, reducing physical seat time without diminishing educational outcomes. Faculty who join the Hybrid Boot Camp will explore new ways of teaching and learn to use relevant technology to foster engagement. You'll walk away with your own hybrid design strategy and a prototype lesson that can serve as a template for the rest of the course. Because hybrid courses require significant re-thinking of teaching practices and understanding of new technologies, we're offering the Hybrid Boot Camp over the course of a month. Stipends of up to $1800 may be available to faculty who complete the Hybrid Boot Camp. (The Innovation Center, 2014).

A boot camp is offered during fall, spring, and summer semesters. UVU faculty are given rudimentary background regarding pedagogy and best practices for teaching, then are

given significant training in the technology required and how to set up materials in the online course delivery system called Canvas, a highly rated learning management system. Instructors are not closely monitored as to the design and development of the course materials and teaching tools used, although some standardized templates are used for page design. They are fully monitored and supported, however, in the use of Canvas as they deliver hybrid courses. Support technicians at the Innovation Center are assigned to specific courses and are enrolled directly into the course, observing and inserting communications to the students on administrative issues periodically during the semester, such as a notification of an approaching deadline for withdrawal without detrimental effect on a student's GPA. The technician assigned to each class connects with individual faculty at the beginning of each semester. Figure 2 shows a sample of the initial support contact.

The Innovation Center at UVU

The UVU Innovation Center is assigned to manage the hybrid course program and their website publishes a mission statement, goals, and services. These are listed below.

Innovation Center mission statement. Innovation in Instruction and Technology leverages exciting educational approaches and new technologies to promote effective teaching and learning across the curriculum. We are a part of the UVU Distance Education department.

Innovation Center goals. Improve teaching and learning across the curriculum through innovative application of instructional technology and educational theory.

Professor _____ ,

My name is xxx and I work as a Course Specialist in the Distance Education Department here at UVU. Recently, with the dramatic increase in the development of hybrid courses, the university administration has decided that faculty of "HOT-BUNK" Hybrid courses need some technical support, much like faculty who teach "Online" and "Live Interactive" courses.

I can provide you with several support services I hope you will find valuable. All of our services are free to hybrid faculty and your students and will not create an additional cost for you, your students, or your department. A few of the services I provide:

- Help to resolve any technical issues that you or your students may have in the course.
- Review your online materials periodically to ensure links, pictures, and videos are still functioning properly and repair any broken files that crop up.
- Import your Canvas course over to a new semester with all the files intact.
- Help to manage assignments and assessments for accommodative students.

If you have any questions or would like to set up a meeting where we can further discuss how I can be of assistance to you and your hybrid course experience please give me a call or send a quick email. I sincerely look forward to meeting with you and providing you and your students with the support that is now available to Hybrid Courses.

XXX, Hybrid/LI Course Specialist
Distance Education
Utah Valley University

Figure 2. Sample support letter for faculty teaching hybrid courses.

1. Provide a staffed faculty lab for learning and teaching design.

2. Encourage conservation of campus resources by promoting alternative teaching approaches that leverage technology, e.g. by supporting hybrid course development.

3. Instill faculty confidence and remove barriers to innovative uses of technology by providing personal, relevant consultation, training, and support.

4. Help meet regional education needs by encouraging sharing of UVU scholarly and creative work and consulting with statewide institutions and organizations.

Innovation Center services. Services provided include**:**

1. An open lab for faculty with state-of-the-art technology

2. Small group faculty workshops & webinars

3. Online training materials

4. Hybrid course development support

5. One-on-one technology training and instructional design consultations

6. Curriculum design advisement and consultations (by appointment)

7. New technology research and development

8. Pilot implementations of educational technology

9. Production of technology enhanced teaching-related documents (both digital and physical), e.g. tutorials, handouts, manuals, etc.

Innovation Center faculty lab. The Innovation Center runs a faculty lab that is located in the library. This is a full-time center where faculty can go to receive tutoring and personal support, as well as attend workshops that are offered every week. Services provided are:

1. Skilled technology staff to help you

2. Faculty computer workstations with general office and productivity applications

3. DVD/VHS recording and digitization equipment (includes transferring services)

4. High-end scanning equipment (slide and film, large document feed, high-res image)

5. PDF conversion

6. CD/DVD authoring

7. Graphic design applications

8. Web development applications and resources (The Innovation Center, 2014)

Subjects for the Study

All instructors who had taught a hybrid course at UVU were invited to take an online survey prepared for this research study. The university defined a hybrid course as one that purposefully schedules some of the sessions during the semester into a traditional classroom and other sessions are delivered 100% online, with a clearly defined calendaring of each session's location. The e-mail list for distributing the invitation included courses that were identified in registration records as those that were offered over the past nine fall and spring semesters as having been delivered in the hybrid format, typically with a 50% face-to-face/50% online design. Hybrid courses at UVU are promoted through regular online class schedules with traditional face-to-face classes, but with an indicator that the course is to be delivered in the hybrid format. Many of these courses are listed as a "Hot Bunk Hybrid" and a brief explanation about what that means is provided on the online registration page as a pop-up that explains that two courses are scheduled for the same classroom at the same time, with each section using the room for their face-to-face session on different days.

Hybrid courses are also listed in distance education catalogues that are available both online and as a widely distributed printed class schedule. They are accompanied by an indication that the course is a hybrid or hot bunk hybrid course. In either case, Banner, the university's digital registration and student data management system, requires a second entry of TBA to serve as a placeholder for the online portion of the course, so students are sometimes confused about the course structure. Using the results of a search

for the term "hybrid course" on the home page of the UVU website leads searchers to the

Innovation Center page which discusses hybrid courses in detail, or to the Distance

Education page which gives summary descriptions of the three categories of distance

education course designs currently being offered: online, hybrid and live interactive. The

way a course is listed in the online class schedule that most students use for registration is

shown in Figure 3.

A list of the hybrid courses offered during just the Fall 2012 semester at UVU

provided the following statistics:

1. Departments offering at least one hybrid course = 20

2. Number of course topics with at least one hybrid section = 36

3. Total number of hybrid sections offered = 73

4. Average number of students per section = 33

5. Number of instructors = 5

Instructors invited to participate in the study were not prescreened regarding having

participated in the Hybrid Boot Camp or other training programs and all were invited to

participate. The survey—shown in Appendix C—primarily sought to learn about

Principles of Marketing - 12156 - MKTG 3600 - 002						
Technology enhanced: course is taught both in person and via computer, online, or other technologies. Associated Term: 2014 FALL Levels: Undergraduate Attributes: HY - Hybrid, Course fee of $1 applies, Lab access fee of $32 applies 3.000 Credits Scheduled Meeting Times:						
Type	Time	Days	Where	Begin - End Dates	Schedule Type	Instructors
Class	10:00 am - 11:15 am	T	WB 123	Aug 25, 2014 - Dec 18, 2014	Hot Bunk Hybrid	xxx
Class	TBA	TBA	TBA	Aug 25, 2014 - Dec 18, 2014	Hot Bunk Hybrid	xxx

Figure 3. Sample of the UVU class schedule entry for a hybrid course.

instructors' knowledge of adult learning pedagogies and where that knowledge came from, how it was considered and used in their course design and delivery, and how UVU educates and supports hybrid course instructors.

Methodology

Survey Instrument

A descriptive survey was formatted for online delivery using Qualtrics, and a Letter of Intent (Appendix A) was presented to the Institutional Review Board (IRB) as part of an application for permission to administer the survey. The IRB determined that a survey of instructors met federal guidelines for exemption (Appendix B). An email invitation to participate in the survey was then sent to every instructor at UVU who had taught a hybrid course from Spring Semester of 2010 through Spring Semester of 2015. The Qualtrics survey platform is generally familiar to UVU instructors and is heavily supported by UVU with several full-time employees whose job it is to assist faculty researchers in formatting and utilizing Qualtrics surveys. Questions were formatted with pre-selected responses using binary, multiple choice and checklist formats. The survey asked several questions about the instructor's experience with hybrid teaching, then solicited details about the research questions. Those research questions were:

1. Have UVU instructors of hybrid courses formally studied adult education theories and do they incorporate the ideas suggested by those theories into their courses?

2. What training and support do instructors perceive they received from the UVU Innovation Center?

3. How are the two modes of instruction in a hybrid course being utilized by UVU instructors?

Supporting those questions were a series of hypotheses that were built upon the information discussed in the literature review, as well as what was learned about the hybrid course mission as described by the UVU Hybrid Course Initiative. Those hypotheses were:

1. Instructors will not have formally studied the adult education models called Andragogy, Self-directed Learning, Transformative Learning, or Experiential Learning.

2. Instructors will not have purposefully included teaching techniques that are taught in adult education theories into their own hybrid courses.

3. Instructors will not recognize some of the techniques that they use in their hybrid courses as having come from adult education theories.

4. Instructors will have participated in the UVU instructional training course for hybrid course designers.

5. The instruction and support given to instructors by the university is perceived as including basic pedagogical instruction, basic discussion about the unique structural choices available in the hybrid format and extensive instruction regarding the use of the institution's learning management system.

6. Instructors will report that the face-to-face portion of their course consists primarily of teacher-centered delivery of content.

7. Instructors will report that the online portion of their course consists primarily of learner-centered support activities.

Although the survey instrument is original, guidance for creating the questions was taken from Alonzo and Tindal (2011) and from Creswell's textbook on education research (2005).

Validity and Reliability of the Survey

Formal measures of validity and reliability were not conducted for the instrument. Because the data was being collected from a single institution as part of an exploratory study on the topic of hybrid course design, the survey was designed by the researcher to gather information about issues that were specifically related to the university's hybrid course program. Since the guiding principles for the survey were drawn from the literature, face validity was deemed sufficient to provide valuable information. The collected data provided enough information for a descriptive analysis of instructors' perceived understanding of adult education theories. The data also provided information about the use of several specific adult learning tools within their hybrid course and reflected how the online and face-to-face formats are being utilized. Examples of tools that evidenced awareness of adult learning theories were drawn from the literature review, particularly from the best practices literature supporting individual models.

Because the well-defined and clearly stated mission of the UVU university is to provide hybrid courses, and the published mission of the Innovation Center is to train and support hybrid instructors, the use of the term "hybrid course" had a high level of recognition among the respondents. The survey questions were reviewed by the director of the UVU Innovation Center, an expert in the hybrid field, as well as his assistant, an expert in Qualtrics. After the expert review and a pilot test, some questions were

rewritten to more clearly extract what instructors perceived about adult education theories and to give a clearer picture about what they recalled about the training and support they had received as they designed and delivered their hybrid course. UVU's Innovation Center has been actively involved in the design and support of hybrid courses since Spring 2010, so most instructors were familiar with the terminology. However, although the current comprehension of the university's use of the term "hybrid" was determined to be high, there was a limitation for its use among early hybrid instructors who had only taught during the earliest of the nine semesters studied. Some may not have had a clear understanding of the term "hybrid" since the term was still being identified and defined at UVU. It is supposed that those earliest instructors may not have taken the survey due to the invitation stating that instructors of hybrid courses were being solicited.

The interpretation of the terms "adult learning" and "adult education" were not clearly defined for the population surveyed, so there may have been some reduction in the validity of how those references were interpreted. However, a Cronbach's Alpha analysis of the questionnaire resulted in a .824 statistic, which suggests that the internal consistency of the interpretations and answers was well within the reliability bounds for accepting the results as indicative of the phenomena being studied.

Motivation for the Study

Motivation for performing this study came from Kenney and Newcombe's (2011) action research study of a teacher's reported experiences associated with adopting a blended learning approach into an established face-to-face course. The Kenney and Newcombe report concluded from their research that faculty training is "critical" and that

"not every faculty member has the knowledge, skills, and attitudes to teach a technology-

based learning course and in many cases do not receive the necessary pedagogical and

technical training" (p. 49). One of the conclusions of their study is given as advice to

instructors who are developing a hybrid course.

> Get training. Re-designing a course to work in a blended format is not easy.
> Learning how to effectively integrate online with face-to-face instruction so
> students see the connection and your course does not become a 'course and a half'
> is essential for effective blended learning. Online learning is best understood
> when instructors have a chance to engage in the experience themselves through
> online workshops conducted by qualified trainers. A valuable part of the online
> training is interacting with and learning from other workshop participants using
> the approach. (p. 54)

Specific tools for study were selected from the best practices literature described

in Chapter II and are described in Table 5 under constructs 4 and 5. The adult education

theories from which they were selected were the Andragogy model, the Self-directed

Learning model, the Transformative model, and the Experiential model as listed in

construct two. Questions in construct three were informed by the mission statement and

goals statements of the UVU Innovation Center described above. The survey was

formatted for use in Qualtrics, an online survey instrument that is familiar to UVU

instructors.

Table 5

Research Constructs and Survey Questions

Construct	Questions
1. General description of hybrid teaching experiences.	1. How many hybrid courses have you taught? 2. For how many hybrid courses were you the primary designer? 3. How many different subjects do you teach in the hybrid format? 4. What is your usual teaching schedule in a semester? 5. In a typical semester, how many of your courses are delivered in the hybrid format? 6. How many of your courses are "Hot Bunk Hybrids" sharing a classroom with another section? 7. For how many years have you taught hybrid courses? 8. What is the course level of your most recent course? 9. Is your most recent course required for most of your students? 10. What is usually the scheduled beginning time of the face-to-face sessions of your hybrid course?
2. Knowledge about and use of adult learning pedagogies	1. Have you ever studied any of the following adult learning pedagogies: andragogy, self-directed learning, transformative learning, experiential learning? 2. Did you study adult learning theory as part of any coursework leading to a degree (bachelor, masters, or doctorate)? 3. Have you purposefully incorporated adult learning pedagogies into your courses?

3. Instructor training from UVU Innovation Center	1. Did you participate in the Innovation Center's training course?
	2. As part of the Innovation Center's training course:
	  • did you receive instruction about adult learning theory?
	  • did you receive instruction regarding incorporating learner-centered activities into your course?
	  • were you given examples of innovative ways to use the online portion of the course?
	  • were you given examples of innovative ways to use the face-to-face portion of the course?
	3. Did the Innovation Center provide personal assistance to you as you designed your course?

4. Teaching techniques included in the overall course	1. Are students allowed some flexibility in content, scheduling, and rewards? 2. Do students set their own goals for learning? 3. Do you provide learner-centered activities? 4. Do you introduce controversial ideas to the class? 5. Are students assigned individualized, reflective writing assignments? 6. Are students given opportunities to share personal opinions and experiences? 7. Are students required to give prepared presentations?

5. Use of face-to-face and online sessions	1. Check those of the following that are true about the face-to-face portion of your course:
	  • Instructor primarily delivers course content using lecture.
	  • Instructor primarily utilizes the sessions for support activities such as open discussions, quizzes, videos or games.
	  • About half the sessions are lecture, then support activities are provided.
	2. Check those of the following that are true about the online portion of your course:
	  • Instructor primarily delivers course content (recorded lectures, etc.)
	  • Online activities are primarily supportive, such as writing assignments, quizzes, or games.
	  • Instructor includes links to external websites.

CHAPTER IV

RESEARCH FINDINGS

The descriptive survey administered to instructors of hybrid courses at UVU sought to identify the pedagogical and structural choices being made in the design of their courses. Anchoring the study are the two basic theoretical frameworks about learning that stem from constructivism theory. One branch of constructivism posits that learners are strongly influenced by their social connections during the learning experience, while the other branch proposes that students learn best from within. The hybrid course design model provides the unique opportunity of encouraging both types of learning events because of the combination of face-to-face sessions where the students meet together with their instructor and online sessions where students are typically alone. The grounding pedagogical choices influencing the design of hybrid courses for delivery to adults at colleges and universities are informed by the adult education theories that have developed from decades of study.

Data were collected from UVU instructors of hybrid courses about the experiences they have had while teaching in the hybrid format. A preliminary review was conducted of both historical and current literature regarding adult education theories as well as the possible structural approaches available to adult educators. An online survey was then designed and administered to investigate the use of some of those pedagogical choices by instructors of hybrid courses at a large university that is developing a strong hybrid teaching program. Also sought was an understanding about the training and support instructors receive from their university.

The research questions explored with this study were:

1. Have UVU instructors of hybrid courses formally studied adult education theories and do they incorporate the ideas suggested by those theories into their courses?

2. What training and support do instructors perceive they received from the UVU Innovation Center?

3. How are the two modes of instruction in a hybrid course being utilized by UVU instructors?

The hypotheses regarding the UVU instructors of hybrid courses were:

1. Instructors will not have formally studied the adult education models called Andragogy, Self-directed Learning, Transformative Learning, or Experiential Learning.

2. Instructors will not have purposefully included teaching techniques that are taught in adult education theories into their own hybrid courses.

3. Instructors will not recognize some of the techniques that they use in their hybrid courses as having come from adult education theories.

4. Instructors will have participated in the UVU instructional training course for hybrid course designers.

5. The instruction and support given to instructors by the university is perceived as including basic pedagogical instruction, basic discussion about the unique structural choices available in the hybrid format and extensive instruction regarding the use of the institution's learning management system.

6. Instructors will report that the face-to-face portion of their course consists primarily of teacher-centered delivery of content.

7.   Instructors will report that the online portion of their course consists primarily of learner-centered support activities.

The descriptive data for this study was collected for two weeks from an online survey that was administered at UVU during May 2015. It provided insights into the dynamics of hybrid course design and delivery at that school. The survey can be found in Appendix C. A master list of hybrid courses that have been offered at the school was created using registration information for fall and spring semesters from Spring 2010 through Spring 2015. Although some hybrid courses were taught during summer terms, these were not included. The master list included the sections taught, the instructors of them, the academic subjects, and the enrollment numbers of all the courses that were delivered in the hybrid format during those nine semesters. The data are displayed in Table 6.

Sorting the master list of hybrid course registration data by instructor, an email list of 267 instructors was created and each was sent an email invitation to take the survey. They were asked to click onto an embedded link that would take them to a Qualtrics survey that asked 23 multiple choice questions. Assistance in preparing the survey was received from the UVU Innovation Center, which provided a tutor in the use of Qualtrics. The tutor stated that most UVU instructors were unlikely to respond, due to the many requests for survey respondents they receive. However, 99 instructors took the survey, representing a response rate of 37%.

Table 6 shows the total number of hybrid courses offered during the nine semesters by subject along with the number of sections offered. Also indicated are the

Table 6

UVU Hybrid Courses by Category, Total Sections Offered, Respondents, Respondents'
Sections, and Enrollment

Category	Total hybrid sections	Instructor-respondents	Respondents' sections	Respondents' total enrollment
Accounting	66	6	57	1,899
Anthropology	13	-	-	-
Art, emergency services	2 hybrid sections offered in each subject, no respondents			
American Sign	17	2	16	302
Autism	2	1	3	9
Aviation	9	1	7	126
Behavioral science	22	3	6	117
Chemistry	23	1	11	768
Communications	9	1	3	75
Computer	96	7	58	1,245
Digital media	92	13	35	751
Drafting, health	1 hybrid section offered in each subject, no respondents			
Economics	47	1	35	966
English prep	651	9	212	4,470
English	70	5	61	1,298
Finance	28	1	3	130
Hotel management	11	-	-	-
Humanities	25	1	25	592
Languages	26	1	8	123
Leadership	23	-	-	-
Management	131	5	55	1,826
Marriage & family	14	1	10	254
Math prep	215	10	71	1,210
Math	194	7	83	2,160
Nursing	99	8	67	1,343
Philosophy	8	1	4	215
Psychology	37	1	2	67
Sociology	37	2	18	464
Student studies	23	4	14	209
Technology management	9	1	2	78

number of instructors from that subject area who responded to the survey, the number of sections they represent and the total number of students who were enrolled in the hybrid sections specifically taught by those respondents.

Of those sections listed in Table 6 as the total number of hybrid sections offered, 130 sections enrolled fewer than eight students. Although the university policy is to cancel sections with under eight enrolled, many of those low enrollment hybrid sections were allowed to run, even with as few as two students, to hopefully begin the process of building awareness and positive word-of-mouth regarding the hybrid design. At the opposite end of the scale, there were 14 sections of math that enrolled more than 150 students each, with four sections serving over 335 students per section. Six sections of college algebra had between 258 and 350 students enrolled. There is a large contingent of prep classes taught on campus due to the open enrollment policy that the university honors. Many students coming out of high school cannot pass the necessary requirements to enter university level courses so are required to take these preparatory courses. There is also a substantial enrollment of international students who require special preparation before they can enroll in credit courses. It is notable that two of these prep courses—the English and math prep courses—delivered 43% of the total hybrid courses taught. Removing the extremes of these very large and very small sections from a calculation to determine the average enrollment per hybrid section, it was determined that the average enrollment per hybrid section delivered was 24 students.

The total number of categorical subjects that had been developed into hybrid courses at UVU was 32, with the total number of course sections offered over the studied

semesters being 2,003 and students taught in this format totaling 20,667. Within some of

the categories are several related topics, which were blended to present this data (i.e.

information systems, information technology, and computer science courses were

combined under the subject heading "computer"). The array of instructor-respondents

who took the survey covered most of the primary categories.

Overview of Scheduling Details

As data was analyzed, it was observed that some respondents did not answer all of

the questions, with a few skipping questions that asked about andragogy and the adult

learning pedagogies that come from adult education theories, some skipping questions

regarding hybrid design structural choices, and quite a few skipping questions asking

about the UVU Innovation Center's training and support of hybrid course design.

Because of this variability in responses, the tables that follow, designed to describe the

results, indicate varying "n" values.

Tables 7-11 illustrate basic information about the hybrid courses being taught at

UVU, as indicated by individual instructor responses to the online survey. Most hybrid

instructors (66%) taught three or more sections each semester in any format, with 84% of

them teaching only one or two hybrid sections per semester as part of their teaching load.

A surprising 10% however were teaching three or more sections per semester as hybrids.

Also identified was that 56% of these instructors' hybrid courses had been

scheduled as "hot bunk" sections, meaning they were double-booked into a single

classroom at the same time by offsetting the face-to-face instruction sessions. An

Table 7

Hybrid Course Teaching Statistics (*n* = 96)

	Number of courses taught (%)			
Survey questions	0	1-2	3-4	5 or more
How many hybrid courses have you taught?	0	49	26	25
What is your usual teaching schedule per semester (in sections)?	1	33	61	5
In a typical semester, how many of your courses are delivered in the hybrid format?	6	84	9	1
How many of your hybrid courses have been offered at least once as a "Hot Bunk Hybrid" sharing a classroom with another section/course?	44	50	5	1
For how many years have you taught hybrid courses?	0	51	31	18
For how many hybrid courses were you the primary designer?	14	72	7	7

Table 8

Topics Taught (*n* = 96)

	Number of courses taught (%)			
Survey question	0	2	3	4 or more
How many different subjects have you taught in the hybrid format?	55	22	7	16

Table 9

Academic Level of Most Recent Course (*n* = 96)

	Course level (%)			
Survey question	Freshman-Sophomore	Junior-Senior	Graduate	Noncredit or Other
What is the class level of your most recent hybrid course	52	41	2	5

Table 10

Course Requirement in Degrees (*n* = 95)

Survey question	Yes (%)
Was the most recent course you taught as a hybrid a required course (in any format) in most of your students' degrees?	7

Table 11

Scheduling for Hybrid Courses (*n* = 95)

Survey question	Weekday morning 7 a.m. - noon	Weekday afternoon Noon - 5 p.m.	Weekday evening 5 p.m. - 10 p.m.	Saturday morning	Other
What was the scheduled beginning time of the face-to-face sessions of your most recent hybrid course?	45%	34%	18%	2%	1%

additional set of scheduling data regarding the ratio of hot-bunk hybrids to overall hybrid

scheduling was extracted from one of the semester lists obtained from the registration

office. It showed all hybrid sections delivered during the Fall 2013 semester. During that

semester, there were 74 hybrid sections taught with 28 of them scheduled as "hot-bunk

hybrids." These 28 sections were taught by 16 different instructors.

Over half of the instructors responding to the survey had taught only one topic in

the hybrid format (55%) and 52% of all hybrid courses were delivered to freshmen and

sophomores.

Analysis of Research Questions

Research Question 1

Have UVU instructors of hybrid courses formally studied adult education theories

and do they incorporate the ideas suggested by those theories into their courses?

Tables 12-13 show the data collected from the survey about the knowledge instructors perceived they had of adult learning pedagogies. Also asked was if they had studied specific adult education theories in their higher education degrees. As noted previously in Table 7, 86% of the respondents were the primary designer of their course. In the data displayed in Table 12 it is evident that hypothesis 1 which posited that instructors will not have formally studied the adult education models that teach about andragogy, self-directed learning, transformative learning and experiential learning, was not supported. Fifty-two percent of the respondents reported that they had formally studied one or more of these adult education theories in their own higher education degrees. Table 12 also shows that 75% of the respondents believe they have incorporated adult education pedagogies into their courses (note that the question was broadened to

Table 12

General Knowledge About and Use of Adult Learning Pedagogies ($n = 99$)

Survey questions	Yes (%)
Have you studied any of the following adult learning theories? (check all that apply)	
Andragogy	17
Self-directed learning	48
Transformative learning	21
Experiential learning	54
None of these	35
Did you study any adult learning theories as part of coursework leading to any of the following degrees? (53 respondents, some indicated more than one degree)	
Bachelor degree = 16 of 53	52
Masters' degree = 36 of 53	
Doctorate degree = 24 of 53	
Have you purposefully incorporated techniques into any of your courses in the past (traditional, online, blended, other) that you believe came from adult learning theories?	75

Table 13

Reported Use of Teaching Techniques That Come from Adult Education Theories

Survey questions	I am aware this is from adult ed. theory: $n = 81$ (%)	I included this in my hybrid course: $n = 86$ (%)
Allowing flexible content, scheduling and accountability measures	64	63
Letting students in the course set their own goals for learning	48	17
Providing learner-centered activities where the teacher provides support, the student leads the activity	78	57
Introducing controversial ideas	53	50
Giving students individualized, reflective writing assignments	69	63
Giving students opportunities to share personal opinions and experiences	77	76
Requiring students to give prepared presentations	NA	51

include all formats of instruction). This does not support hypothesis 2, which posited that instructors were not using adult education principles in their teaching.

Hypothesis 3 further investigates the concept of utilization of adult education theory by positing that instructors may have incorporated some of the specific tools being examined in this study, but will not have recognized them as having come from adult education theories. Each of the tools or techniques specifically identified in Table 13 below were determined during the literature review from the best practices literature. These tools or techniques were reported by the survey respondents as being utilized by over half of them and were reportedly recognized by over half as having come from adult education theory, with the one exception being "letting students in the course set their own goals for learning." Even that tool was "recognized" as an adult learning theory by

48% of the instructors, but only 17% of them reported using it.

In order to analyze the statistical probability that studying adult education theories increases the use of them in course design, a cross-tabulation was performed as shown in Figure 4, with a null hypothesis for this calculation stating that receiving this education leads to the use of these tools over 95% of the time ($p = .05$). Based on results of Chi square = 1.93, degrees of freedom (yes/no) = 2, and probability value = 0.38, it was shown that there is indeed a greater than 95% probability that instructors who formally study adult education theories in their higher education degrees use them in their design choices as they develop hybrid courses.

Table 14 shows the data from a cross-tabulation of specific adult education theories with selected learning tools that best practices literature recommended be included in a course designed for adult learners. It is interesting to note the strong relationship between having studied the theories of self-directed learning and of experiential learning with the higher incidence of using tools that come from adult
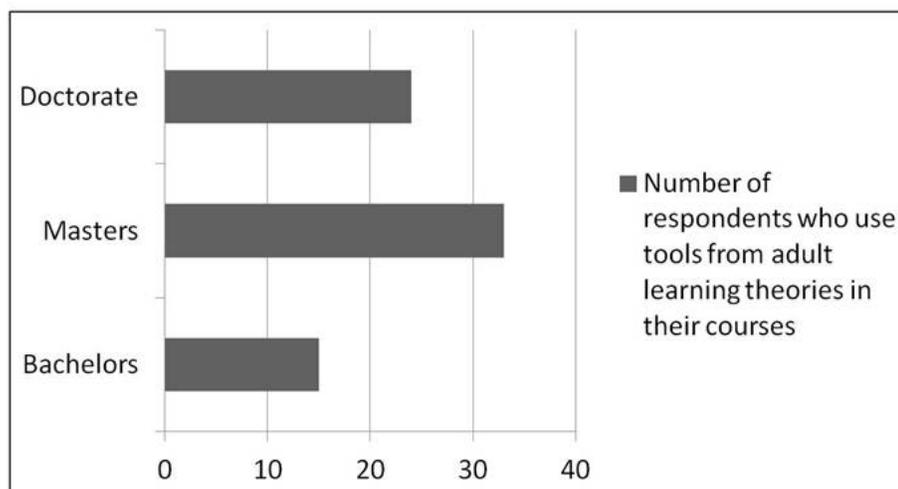

Figure 4. Cross tabulation of instructors who studied adult learning theories in their higher education degrees and subsequently used them in their hybrid courses.

Table 14

Cross-Tabulation of Instructors Who Have Formally Studied a Specific Adult Learning Theory with Their Use of Recommended Adult Education Techniques in Their Hybrid Courses

Which of these are included in your hybrid course?	Which of these adult learning theories have you studied?					
	Andragogy	Self-directed learning	Transformative learning	Experiential learning	None of these	Total respondents
Some content, scheduling and rewards are flexible	10	29	13	32	15	54
Students set their own goals for learning	4	10	8	10	3	15
Learner-centered activities are provided	13	28	14	34	10	49
Instructor introduces controversial ideas to the class	10	24	14	26	13	43
Students are given individualizes, reflective writing assignments	15	30	16	38	12	54
Students have opportunities to share personal opinions and experiences	14	31	16	40	20	64
Students are required to give prepared presentations	10	21	14	29	11	43
Total respondents	17	42	20	48	27	85

Note. (Chi Square = 26.32, Degrees of freedom = 24, p-value = 0.34).

education theories, such as flexibility in course design, giving the students opportunities for expressing personal opinions and experiences, giving students individual writing assignments, and the inclusion of learner-centered activities.

Research Question 2

What training and support do instructors perceive they received from the UVU Innovation Center?

Table 15 displays instructor responses to questions specifically about their UVU

Table 15

Innovation Center Training Course (*n* = 27)

Survey questions	Yes (%)
As part of the Innovation Center's training course, did you receive instruction about teaching adult learners?	41
As part of the Innovation Center's training course, did you receive instructions about how to incorporate learner-centered activities into your course?	59
As part of the Innovation Center's training course, were you given examples of innovative ways to use the face-to-face portion of the course?	67
As part of the Innovation Center's training course, were you given examples of innovative ways to use the online portion of the course?	93
Did the Innovation Center provide individual consultation to help you design your course?	70

Innovation Center training course. Instruction from the center continues to evolve, and the population list surveyed for this paper was gathered from nine semesters. Over that period of time, instructors received support in various ways, such as the Hybrid Boot Camp, the month-long training courses, or through individual tutoring. A screening question on the survey asked who had participated in the "Innovation Center training course," which weakened the responses hoped for in addressing hypothesis four which proposed that instructors will have received training and support through the Innovation Center. This error in design then led to the unexpected result that only 27 respondents said they had done so (28% of the responding hybrid course instructors). Nevertheless, Table 15 is informative even though it reflects percentage scales of those 27 instructors only. Since hypothesis four proposed that hybrid course instructors would have received training and support from the Innovation Center rather than seeking to learn about those who had specifically taken a training course, we must state that there is not enough evidence to support hypothesis 4.

As shown in Table 15, the instruction and support given to instructors as part of the hybrid training course provided by UVU is perceived as including basic pedagogical instruction, basic discussion about the unique structural choices available in the hybrid format and extensive instruction regarding the use of the institution's learning management system. While only 41% of the instructors who took the course recalled learning about adult education theory, almost 60% of them recalled discussing learner-centered activities. A previous question in the survey had defined learner-centered activities as student directed, but had not listed it as an adult learning theory; however, these results are not conflicting.

Much of the Innovation Center's training involves learning to use Canvas, the learning management system used to support hybrid courses at UVU, and this is reflected in the 93% who reported that they had received training in how to use online sessions innovatively.

Research Question 3

How is the design potential of a hybrid course being utilized by UVU instructors?

Hypothesis 6 posited that the face-to-face (F2F) portion of the instructor's course would consist primarily of teacher-centered delivery of content, and hypothesis seven proposed that the online portion of their course consisted primarily of learner-centered support activities. This was not indicated by the collected data. Regarding face-to-face instruction, only 23% (Table 16) claimed that their course content was primarily delivered by lecture during face-to-face sessions, and another 24% said they delivered most of their course content online. A majority of 53% of these instructors indicated that

Table 16

Hybrid Course Structural Design: Face-To-Face (F2F) Portion (*n* = 92)

Survey questions	True (%)
In F2F sessions instructor delivers course content using lecture (with or without supporting technologies such as PowerPoint, YouTube, etc.)	23
Basic course content is delivered online, so F2F sessions are used for supporting activities such as open discussions, quizzes, experiments, games, etc.	24
About half the face-to-face sessions are lecture then support activities are provided such as open discussions, quizzes, experiments, interview, games, etc.	53

they use both their face-to-face and online sessions (Tables 16 and 17) to deliver teacher-centered content and to provide support activities.

Instructors were also asked how they utilize the online portion of their course, and although all the answers do not match up with Table 16 statistically, Table 17 shows these responses to give added insight into instructors' structural choices. The inconsistency in responses may stem from the second question asking for a "check all that apply" response. As further research is performed in the future this needs to be clarified. Hypothesis seven proposed that instructors used their online sessions primarily for support activities, which is supported by the 71% agreement and is coherent with the 23% in Table 16 who said they use their face-to-face sessions primarily for lecture delivery of course content. The 55% who said they do deliver course content online were not asked if this was their primary use of the medium, so referencing Table 16 provides further clarification. The question regarding the use of external websites hearkens back to the use of adult education theory, and is a recommendation from the best practices literature.

The registration data and the online survey data provided an improved

Table 17

Hybrid Course Structural Design: Online Portion (*n* = 89)

Survey questions	True (%)
The instructor delivers course content online using text, recorded lectures (video or audio) and supporting technologies	55
Online sessions are primarily supportive activities such as writing assignments, quizzes, etc.	71
Instructor provides links to external websites	53

understanding regarding the hybrid courses being offered at UVU as well as descriptions about how hybrid courses are being designed and how their structure is being utilized for teaching adult learners in a higher educational setting. The total response rate was 37%, but some instructors were responsive to only one or two of the three major areas being investigated, which were: knowledge of and use of adult education theories, training received from the university, and how hybrid course instructors are using their face-to-face and online sessions.

CHAPTER V

DISCUSSION

A continuing thread in educational research is a search for how best to teach adults and how utilizing this research could improve higher education teaching. An extensive literature review was conducted to define what the current research expounds as best practices for teaching adults. It was found that the groundwork laid by Knowles' Andragogy model still informs newer models that have been developed to suggest specific methodologies for enhancing adult learning, including the Self-Directed Learning model, the Transformative Learning model and the Experiential Learning model.

With higher education teaching modalities ranging from a teacher-centered focus of lecture halls to a learner-centered focus using online flexibility there are many structural possibilities for delivering education in colleges and universities. This descriptive study focused on a new course design that carefully divides a course into both online delivery and reduced-schedule face-to-face delivery. The terminology used in this study for such a structure is "hybrid course" within the larger context of blended courses. Research suggests that this format can provide an improved structure for teaching adults.

> Hybrid learning is designed to integrate the best features of regular face-to-face learning with technology-based online learning by dichotomizing the total class time into a distance or a web-based learning portion and an in-class or face-to-face meeting portion. (Olapiriyakul & Scher, 2006, p. 287)

UVU has been aggressively developing their hybrid course program for 5 years and provided the population that was studied to collect descriptive data regarding the

ways adult education theories are informing designers of hybrid courses. The primary

goals of this study were to identify the level of instructor knowledge about adult

education pedagogies and to learn how they utilize the unique features of the hybrid

course design.

The research questions explored with this study were:

1. Have UVU instructors of hybrid courses formally studied adult education

theories and do they incorporate the ideas suggested by those theories into their courses?

2. What training and support do instructors perceive they received from the

UVU Innovation Center?

3. How are the two modes of instruction in a hybrid course being utilized by

UVU instructors?

The hypotheses regarding the UVU instructors of hybrid courses were:

1. Instructors will not have formally studied the adult education models called

Andragogy, Self-directed Learning, Transformative Learning, or Experiential Learning.

2. Instructors will not have purposefully included teaching techniques that are

taught in adult education theories into their own hybrid courses.

3. Instructors will not recognize some of the techniques that they use in their

hybrid courses as having come from adult education theories.

4. Instructors will have participated in the UVU instructional training course for

hybrid course designers.

5. The instruction and support given to instructors by the university is perceived

as including basic pedagogical instruction, basic discussion about the unique structural

choices available in the hybrid format and extensive instruction regarding the use of the institution's learning management system.

6.   Instructors will report that the face-to-face portion of their course consists primarily of teacher-centered delivery of content.

7.   Instructors will report that the online portion of their course consists primarily of learner-centered support activities.

Summary of Collected Data

Descriptive Data

Thirty-two general academic subjects have been developed into the hybrid format and were subsequently taught at UVU, as was shown in Table 6. With 267 instructors identified for the survey, there were more instructors involved in hybrid teaching at UVU than was expected. Receiving a 37% response rate for the survey was better than had been anticipated. From the data reported by the registration office it was ascertained that a broad variety of subjects had been developed into at least one hybrid course, and some hybrid courses had been developed to instruct hundreds of students using this design. Of the 32 subjects identified, only seven did not have a representative instructor respond. There were 2,003 hybrid course sections offered during the nine semester period studied (Spring 2010 - Spring 2015), most of which were delivered, even if the enrollments were small. Excluding the very small and very large enrollment sections, the average enrollment for hybrid sections was 24.

Hybrid courses are self-designed by instructor. The results of the study showed

that UVU instructors tend to be the designer of their own hybrid courses, with 86 of the 99 respondents having developed at least one hybrid course. Fourteen of the respondents had developed three or more hybrid courses and seventeen instructors answered "4 or more" to the question "How many different subjects have you taught in the hybrid format"?

Hybrid courses as part of teaching load. Most instructors who responded to the survey (87 of 99) are only teaching one or two hybrid courses per semester as part of their teaching load. Of the 99 respondents, 52 have taught in the hybrid format for three or more years.

Use of hybrid courses for high enrollment courses. Over half of all the sections of hybrid courses that were taught by the respondents were being used for lower level classes that are required by degree programs and which are typically high enrollment courses. Also, hybrid courses are usually scheduled during the standard school daytime hours, suggesting that the institution's need for space may be a driving factor in scheduling.

Unexpected were the very large enrollments in some sections—14 hybrid sections of math had between 150 and 350 students enrolled. This study did not gather data regarding how those large sections were being managed at UVU, but the literature review described two examples of large enrollment hybrid teaching. Bentley University in Massachusetts used wikis, electronic whiteboards, blogs, and the Blackboard learning management system to manage their large classes. They also have classrooms that enable live on-campus classes to be taught simultaneously to remote students (Alexander et al.,

2014). Monash University in Australia has created online preclass activities such as readings and quizzes to help students arrive at large-enrollment lectures with an understanding of the topic (McKenzie et al., 2013). These ideas from the literature review along with the findings from the study could inform future research into how hybrid courses can be utilized for large enrollment sections.

The hybrid course design seems to be getting a foothold in higher education. Academic research discussing this design has been published now for over 10 years. The survey respondents at the single university studied had delivered 866 sections of hybrid courses, teaching a total of 20,667 students. The data collected from the study, albeit descriptive in nature, can be looked to as being a helpful indication of the dynamics of hybrid teaching. This presents an opportunity in higher education to train instructors who are venturing into this new teaching configuration to change the way they may have taught in the past, and to improve the connections they make with their adult students.

Research Question 1

Research question 1 asked: Have UVU instructors of hybrid courses formally studied adult education theories and do they incorporate the ideas suggested by those theories into their courses?

Three hypotheses refining this research question were proposed.

1. Instructors will not have formally studied the adult education models called Andragogy, Self-directed Learning, Transformative Learning, or Experiential Learning.

2. Instructors will not have purposefully included teaching techniques that are taught in adult education theories into their own hybrid courses.

3. Instructors will not recognize some of the techniques that they use in their hybrid courses as having come from adult education theories.

Researcher's personal perspective. Some of the personal experiences that suggested these hypotheses came from the researcher's business management education and teaching experiences. Instructors in management are expected to understand finance and economics, be experts in their business specialty and in the dynamics of managing profitable businesses. Few business instructors have studied specific teaching pedagogies or the recommended techniques from adult education theories for teaching adults. There tends to be a strong "sage on the stage" experience in their own educational background which is carried forward to their teaching. One hybrid instructor volunteered to the researcher, "It is a great irony that most college professors teach adults but have little understanding of adult learning theories and applications." Another experience that led to this study was the recent assignment to the researcher to design and deliver a hybrid course at UVU. That experience included participation in the UVU Innovation Center's hybrid training course and the teaching of over 300 students in that format.

Hybrid instructors' education in adult learning theories. To discover that of those who responded to the survey only a third said they had not studied adult education theories was surprising. Fifty-two of the 99 respondents had specifically studied adult education theory in their own higher education coursework. However, this high percentage result may be skewed from a weakness inherent in the voluntary, online nature of the survey. Respondents could scroll through and preview parts of the survey and may have been put off by its clear investigation into instructors' knowledge of adult

pedagogies, so some instructors may have chosen not to participate if they did not have any knowledge of those models.

Yet, with the high response rate to the survey and its across the board representation of topics, we should accept that many college instructors are receiving formal education regarding the adult education models that inform various assumptions about teaching in higher education environments. The most often studied were the self-directed learning theory and the experiential learning theory. The most studied adult pedagogy was experiential learning theory with 53 instructors having formally studied those principles. These 53 also represented the highest number of users of all the tools examined.

Incorporation of adult education pedagogies into hybrid course design. The UVU survey data also disclosed that not only did a high number of the responding instructors report that they understand adult education theories, most of them said they were purposefully using tools that are suggested by those theories. We ascertained that over half of the 99 respondents were aware of these tools and used them:

- Allowing flexible content, scheduling and accountability measures.
- Introducing controversial ideas.
- Giving students individualized, reflective writing assignments.
- Giving students opportunities to share personal opinions and experiences.

This included 27 instructors who reported that they had never formally studied adult education theories, yet they were using many of the tools recommended by them, especially these two: providing some flexibility to the students and giving them opportunities to share personal opinions and experiences. The only recommended technique surveyed that instructors generally did not use was "letting students in the

course set their own goals for learning." Only 17% of the instructors reported that they used this technique, even though almost half of the respondents reported that they were aware this was suggested by adult education theory. The literature review did document that it is often difficult for instructors to let go of this much control of a course.

Although learner-centered teaching is not actually an adult education theory, it is often taught along with adult pedagogies as a structural way to enable adult learners to thrive, and many instructors said they were familiar with those principles. There were 63 instructors who said they had studied learner-centered teaching and 49 instructors who said they were actually using those principles.

Implications. Adult learners have been carefully studied as to how they learn and how they learn differently from children, and generally accepted is the assumption that adults have a strong preference to self-direct their learning processes rather than to simply absorb what is delivered to them. Researchers have pointed out that the grip of traditional, teacher-centered instruction is very much embedded (Knowles et al., 1998). Caufield (2011) asked, "When is it appropriate to apply andragogical principles to an adult learning environment?" He then posited this answer, "If the learner is willing to accept primary responsibility for learning and has adequate life experiences to draw upon" (p. 11).

For most of the specific teaching tools that were identified in adult education research and selected for examination in this study it was shown that awareness of and use of those tools was highly connected. This suggests that instructors would benefit from studying adult education theories to learn about the methods suggested for teaching in

higher education arenas. The study revealed that many instructors may come to a university professorship having already studied adult learning, and a simple review of those principles would suffice as a background to hybrid course design training. Some educational fields, such as business, may have not have prepared higher education teachers to understand the long tradition in adult education research. Those instructors would be well served to study the basic principles of adult teaching along with the recommended models and to identify various techniques that fit well into the hybrid course teaching environment. The purpose of teaching hybrid-course instructors to directly address the needs of adult learners was to improve the quality of teaching that was occurring at colleges and universities.

Research Question 2

Research question 2 asked: What training and support do instructors perceive they received from the UVU Innovation Center?

This research question was defined with a hypothesis that stated: The instruction and support given to instructors by the university is perceived as including basic pedagogical instruction, basic discussion about the unique structural choices available in the hybrid format and extensive instruction regarding the use of the institution's learning management system.

Perceived content of UVU Innovation Center training. The hybrid training course offered at UVU was perceived by 31% of the instructors who had participated in it as having included instruction about adult learners, and by 59% as having included instruction about learner-centered activities. Most (67%) of the instructors who

participated in the training course said they were given examples of innovative ways to use the face-to-face portion of their course. Almost all (93%) reported they were given examples of innovative ways to use the online portion of the course.

Low participation in the UVU Innovation Center's training course. Because of the dedicated administrative support for the studied university's hybrid initiative, with strong financial backing and a high level of staffing support, it seemed fortuitous to look at the instructors' opinions about the training they were receiving as they designed and/or delivered their hybrid course. It was disappointing that only a quarter of the survey respondents had availed themselves of the training course that was available, and unfortunate that the survey did not probe a more general utilization of the Innovation Center itself such as the individual tutoring that they provide. It may have been somewhat counterproductive to combine the survey about UVU support with research about adult pedagogies, since most instructors who responded were well versed in adult learning theory but only a quarter of them had been involved in the Innovation Center's training course. The scroll-through aspect of the survey may have precluded a true effect size of all hybrid instructors who have actually received training from UVU whether in a formal course, through personal tutoring or in other training configurations.

Implications. The literature review studies that discussed teacher-training proposed that in order for the hybrid design potential to be fully utilized, instructors needed to be willing to make significant changes to how they may be currently teaching. University training seems imperative, otherwise it was noted in the literature research that some teachers simply move homework and readings to the online environment without

making changes to their teaching modalities or providing techniques that would help students make needful connections about how the two environments support each other. Both the James Madison University's and the Brandeis University's online manuals for their hybrid instructors included instructions to faculty about the need for self-analysis regarding their readiness to teach in the hybrid format. Both also gave information regarding how they could seek training individually, but neither required pre-design courses.

Given the low percentage of survey respondents who said that they had participated in the UVU's training course, it seems appropriate to pose the question, "If faculty is not required to take training courses in adult education theory or in hybrid course design, will they assume they are experienced enough or knowledgeable enough to simply make personal adaptations as needed?" Research suggests that without sufficient financial support and time allotments to encourage instructors to seek training in hybrid design, this could often be the case. The studied university provides a stipend to instructors to participate in their training course, but having less than a third of the instructors do so suggests it may be a challenge to any university. Universities that are developing hybrid courses should reflect on whether the goals of the university's use of the design is to improve teaching or just to find ways to squeeze more classes into current space. If hybrid course instructors are well trained, then a positive reputation should follow student reflections about their hybrid course experience.

Research Question 3

Research question 3 asked: How is the design potential of a hybrid course being

utilized by UVU instructors?

Hypothesis 6 posited that the face-to-face portion of the instructor's course would consist primarily of teacher-centered delivery of content, and hypothesis seven proposed that the online portion of their course consisted primarily of learner-centered support activities.

Structural choices in the face-to-face portion of the course. Only cursory information was collected regarding the customization of course design to the hybrid course's unique opportunities. The data showed that just over half of the respondents said they divided the face-to-face portion or their course into half lecture and half support activities. The other 50% of the instructors were evenly divided about their use of the face-to-face sessions, with 25 of the instructors using them traditionally for teacher-centered delivery, and another 26 instructors delivering their basic course content online so that the face-to-face sessions were used primarily for learner-centered support activities.

Structural choices in the online portion of the course. Sixty-two instructors reported delivering some course content online using text, recorded lectures in either a video or audio format, or using other technologies. Sixty instructors reported that providing links to external websites was part of their online structure, something that was recommended in the adult education literature. However, 80 instructors reported using their online sessions "primarily" for supportive activities such as writing assignments and quizzes, which results in some overlapping of the data reported by 26 instructors that said they were using their online sessions "primarily" for delivering basic course content.

Implications. The literature regarding best practices specifically designed for hybrid courses and the best way to use the two modes of delivery is slowly developing, but most of that research is just beginning and is primarily being built upon prior research regarding online instruction. How the UVU instructors are utilizing the two modes of their courses indicates that there is not a standard being implemented, but that instructors are varied in how their courses are being delivered.

University training programs for hybrid course instructors should look to the best practices and standards described in the academic literature review. Besides a study of adult education theories, instructional training should include analysis of the structural possibilities for the two modes of a hybrid course. Changing an instructor's paradigm for utilizing face-to-face time and online delivery should be a strong focus of a hybrid design training course. Giving examples of learner-centered activities in both formats would provide a good practical application of potential strategies. The study provided evidence that there was a strong connection to learner-centered teaching among instructors with 57% responding that they were utilizing it in their designs.

Recommendations for Further Study

Although the descriptive survey administered for this study reflects a single university's experience with hybrid teaching, much of the information gleaned was notable for any higher education population that is considering a hybrid program. The potential of the hybrid course design is becoming generally accepted, but specific best practices research about how to achieve that potential is just now unfolding. Based on

this, it was hoped that the descriptive survey administered would suggest topics for continued investigation

Recommended Use of Adult Education Models

With over half of the university's hybrid course instructors who responded to the survey having received formal education regarding adult education theories, and with the high correlation between those instructors and their use of those principles in their courses, there is a strong indication of the value of learning about those principles. It is, therefore, recommended that universities that are developing hybrid course programs also develop formal training about the use of adult education theory for the instructors and others who assist in the hybrid course design or delivery processes. This should increase the potential for the hybrid course design to be an educational vehicle that improves how we teach adults in higher education.

Lack of evidence in academic research. There was a weakness evidenced in the literature review regarding studies investigating the incorporation of adult education pedagogies into higher education courses of any design. Reviewing a decade of research regarding the hybrid format itself showed only a philosophical generalization about adult pedagogies for hybrid course design and delivery. Often the pedagogical goal of hybrid teaching was a highly simplified concept, with the goal statement being that hybrid course design should be expected to "improve" the pedagogy of teaching adults.

Two specific models prove most influential. The two most influential of the adult pedagogies on the instructors surveyed were the self-directed learning model, which focuses on allowing adults the autonomy they are said to desire, and the experiential

learning model, which expounds on engaging the adult learner in action-based learner-centered exercises. Learning the basics of those two models should provide a solid theoretical base as well as highlight specific techniques that instructors could incorporate into their hybrid courses.

Recommendation to Provide Training to Instructors

Hybrid course instructors should benefit from training about how they can provide self-directed environments within both online and face-to-face sessions. Instructors should also be taught how to guide experiential opportunities in both environments. This would involve a paradigm shift for many instructors who are experienced in being primarily a "deliverer" of information.

Teaching designers of hybrid courses about the principles of established adult pedagogies and then assisting instructors as they incorporate teaching tools designed to enhance adult learning will take time, funding and focus. Institutions that are simply hoping to gain classroom space need to balance that need with the requirements of providing quality instructor support.

Recommendations for Further Research

Because of the diverse interpretation of the term "hybrid" among institutions and academic researchers, and with the population for this study limited to a single university and its unique development of a hybrid course program, the results should not simply be generalized onto the larger body of universities and hybrid course designers. The findings of this descriptive study are being presented as formative in nature, showing trends for

course development in a new instructional configuration. This analysis also initiates research into how the study of adult education theory can be a valuable guideline for developing a high quality hybrid course design model.

Further research should include a study into how students themselves perceive their experiences in hybrid courses and students could also provide specific reporting regarding their engagement with the techniques being used in both the face-to-face and online portions. Qualitative interviews of those professors who are managing large-enrollment sections is recommended. A qualitative study is also recommended for interviewing those who train and support hybrid course instructors to investigate these questions: What are your recommendations for teaching adult pedagogies to hybrid course instructors and how might those teaching methodologies be better utilized in course design? What kind of support do they (training staff) receive from the institution? How are instructors and students responding?

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APPENDICES

Appendix A

Letter of Intent

Title of Study: A Study of the Pedagogical and Structural Elements Being Incorporated Into the Design of Hybrid Courses for Higher Education

Principal Investigator:
Name: Deborah K. Baird, Associate Professor, Marketing
Department: Marketing, Woodbury School of Business
Address: Utah Valley University
800 W. University Parkway, Orem, UT, 84058
Phone: 801-863-8235
E-mail: deborah.baird@uvu.edu

Background:
You are being invited to take part in a research study. Before you decide to participate in this study, it is important that you understand why the research is being done and what it will involve. Please take the time to read the following information carefully. Please ask the researcher if there is anything that is not clear of if you need more information.

The purpose of this study is to analyze the levels of understanding of adult pedagogies among hybrid course instructors as well as give us insight into how they are currently being used in hybrid courses. We are also seeking data on how hybrid courses are being structured and how specific features of hybrid courses lend themselves to adult education.

Study Procedure:
Your expected time commitment for this study is: 8 minutes

Procedure: The survey will be available for two weeks and will close on May 30, 2015. Please respond quickly, this is a small sample and we highly value your input.

To complete the survey online, go to the URL link provided and follow the online survey instructions. Your survey responses will be completely confidential. The results of the survey will be reported in a summary format, so no one will link you to your responses.

Risks:
The risks of this study are minimal. These risks are similar to those you experience when disclosing work-related information to others. You may decline to answer any or all questions and you may terminate your involvement at any time if you choose.

Benefits:
There will be no direct benefit to you for your participation in this study. However, we hope that the information obtained from this study may inform future instructional design for the training of hybrid course instructors and designers. This information will also be used as part of a broader study on the inclusion of adult education principles into other course formats in higher education.

Confidentiality: Please do not write any identifying information on your questionnaire. Your responses will be anonymous. Every effort will be made by the researcher to preserve your confidentiality including the following:

Assigning code names/numbers for participants that will be used on all researcher notes and documents. Notes, interview transcriptions, and transcribed notes and any other identifying participant information will be kept in a locked file cabinet in the personal possession of the researcher. When no longer necessary for research, all materials will be destroyed. The researchers will review the collected data. Information from this research will be used solely for the purpose of this study and any publications that may result from this study. All survey participants involved in this study will not be identified and their anonymity will be maintained

Persons To Contact:
Should you have any questions about the research or any related matters, please contact the researchers at deborah.baird@uvu.edu .

Institutional Review Board:
If you have questions regarding your rights as a research subject, or if problems arise which you do not feel you can discuss with the Investigators, please contact the Institutional Review Board Office at (801) 863-8156.

Voluntary Participation:
Your participation in this study is voluntary. It is up to you to decide whether or not to take part in this study. If you do decide to take part in this study, you will be asked to sign a consent form. If you decide to take part in this study, you are still free to withdraw at any time and without giving a reason. You are free to not answer any question or questions if you choose. This will not affect the relationship you have with the researcher.

Unforeseeable Risks:
There may be risks that are not anticipated. However every effort will be made to minimize any risks.

Costs To Subject:
There are no costs to you for your participation in this study

Compensation:
There is no monetary compensation to you for your participation in this study.

Appendix B

Approval From IRB

Institutional Review Board
USU Assurance: FWA#00003308
Exemption #2
Certificate of Exemption

FROM: Melanie Domenech Rodriguez, IRB Chair
           True M. Rubal, IRB Administrator

To: Michael Freeman, Deborah Baird

Date: February 10, 2015

Protocol #:   6264

Title: A Study Of The Pedagogical And Structural Elements Being Incorporated Into The Design Of Hybrid Courses For Higher Education

The Institutional Review Board has determined that the above-referenced study is exempt from review under federal guidelines 45 CFR Part 46.101(b) category #2: Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (a) information obtained is recorded in such a manner that human subjects can be identified, directly or through the identifiers linked to the subjects: and (b) any disclosure of human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

This exemption is valid for three years from the date of this correspondence, after which the study will be closed. If the research will extend beyond three years, it is your responsibility as the Principal Investigator to notify the IRB before the study's expiration date and submit a new application to continue the research. Research activities that continue beyond the expiration date without new certification of exempt status will be in violation of those federal guidelines which permit the exempt status.

As part of the IRB's quality assurance procedures, this research may be randomly selected for continuing review during the three year period of exemption. If so, you will receive a request for completion of a Protocol Status Report during the month of the anniversary date of this certification.

In all cases, it is your responsibility to notify the IRB prior to making any changes to the study by submitting an Amendment/Modification request. This will document whether or not the study still meets the requirements for exempt status under federal regulations.

Upon receipt of this memo, you may begin your research. If you have questions, please call the IRB office at (435) 797-1821 or email to irb@usu.edu.

The IRB wishes you success with your research.

Appendix C

Survey

Survey

The Qualtrics software protects your identity as a participant and the questions will not identify which course(s) you teach. The collected data will be delivered to the researcher in a timely manner for statistical analysis. Participation in this research is voluntary and you may decline to participate or withdraw at any time without consequence. Research records will be kept confidential, consistent with federal and state regulations.

1) Have you ever studied any of the following adult learning theories? *(Check all that apply)*

☐ Andragogy

☐ Self-directed learning

☐ Transformative learning

☐ Experiential learning

☐ None of the above

2) Have you purposefully incorporated techniques into any of your courses in the past (traditional, online, blended, other) that you believed came from adult learning theories?

☐ Yes

☐ No

3) Check all of the teaching techniques below that you knew (before this survey) were

from adult learning theories:

☐   allowing flexible content, scheduling and accountability measures

☐   letting students in the course set their own goals for learning

☐   providing learner-centered activities where the teacher provides support, the student

 leads the activity

☐   introducing controversial ideas

☐   testing students for their self-determination levels

☐   giving students individualized, reflective writing assignments

☐   giving students opportunities to share personal opinions and experiences

4) Did you study any adult learning theories as part of coursework leading to any of the

following degrees? *(check all that apply)*

☐   Bachelor

☐   Masters

☐   Doctorate

5) For how many academic years have you taught hybrid courses?

☐ 1-2

☐ 3-4

☐ 5 or more

6) How many hybrid courses have you taught?

▢ 1-2

▢ 3-4

▢ 5 or more

7) How many different subjects (topics) have you taught in the hybrid format?

▢ 1

▢ 2

▢ 3

▢ 4 or more

8) What is your usual teaching schedule in a semester?

▢ no teaching

▢ 1-2 sections

▢ 3-4 sections

▢ 5 or more sections

9) In a typical semester, how many of your sections are delivered in the hybrid format?

0	1	2	3	4	5 or more
☐	☐	☐	☐	☐	☐

10) For how many hybrid courses have you been the primary designer?

0	1	2	3	4	5 or more
☐	☐	☐	☐	☐	☐

11) How many of your hybrid courses have been offered at least once as a "Hot Bunk Hybrid" sharing a classroom with another section/course?

0	1	2	3	4	5 or more
☐	☐	☐	☐	☐	☐

12) What is the course level of your most recent hybrid course?

☐ freshman-sophomore

☐ junior-senior

☐ graduate

☐ non-credit or other

13) Was the most recent course you taught as a hybrid a required course in most of your students' degrees (in any format)?

☐ Yes

☐ No

14) What was the scheduled beginning time of the face-to-face sessions of your most recent

hybrid course?

☐ Weekday morning between 7am and noon

☐ Weekday afternoon from noon to 5pm

☐ Weekday evening from 5pm to 10pm

☐ Saturday morning

☐ Other

15) Have you participated in the development course for designing hybrid courses at the UVU Innovation Center?

☐ Yes

☐ No

16) As part of your hybrid development course did you receive any instruction about teaching adult learners?

☐ Yes

☐ No

17) As part of your hybrid development course did you receive instructions about how to incorporate learner- centered activities into your course? *(student is in charge of the activity, teacher provides support)*

☐ Yes

☐ No

18) As part of your hybrid development course, were you given examples of innovative ways to use the face-to-face portion of the course?

☐ Yes

☐ No

19) As part of your hybrid development course, were you given examples of innovative ways to use the online portion of the course?

☐ Yes

☐ No

20) Did the Innovation Center provide individual consultation to help you design your course?

☐ Yes

☐ No

21) Which of the following is true about the face-to-face portion of your course?

☐ Instructor primarily delivers course content using lecture (with or without supporting technologies such as PowerPoint, YouTube, videos, etc.)

☐ Basic course content is delivered online, so instructor utilizes face-to-face sessions for supporting activities such as open discussions, quizzes, experiments, interviews, games, etc.

☐ About half the sessions are lecture, then support activities are provided such as open discussions, quizzes, experiments, interviews, games, etc

22) Which of the following are included in the online portion of your course? *(check all that apply)*

☐ Instructor primarily delivers content using text, recorded lectures (video or audio) and supporting technologies

☐ Online sessions are primarily supportive activities such as writing assignments, quizzes, etc.

☐ Instructor provides links to eternal websites (either optional or required)

23) Which of the following are included in either the online or face-to-face portion of

your most recent hybrid course? *(check all that apply)*

☐ Some content, scheduling and reward measures are flexible

☐ Students set their own goals for learning

☐ Learner-centered activities are provided (i.e. students perform experiments)

☐ Instructor introduces controversial ideas to the class

☐ Students are given individualized, reflective writing assignments

☐ Students have opportunities to share personal opinions and experiences

☐ Students are required to give prepared presentations (either face-to-face or online)

CURRICULUM VITAE

DEBORAH K. BAIRD

CAREER OBJECTIVE

To enhance the quality of my teaching and my value to my university through academic research and publication.

EDUCATION

Bachelor of Science in Marketing, Brigham Young University, Provo, Utah.

Master of Business Administration with a composite minor in accounting and economics, Brigham Young University, Provo, Utah.

Doctor of Philosophy in Education with an emphasis in curriculum and instruction in higher education, Utah State University, Logan, Utah.

EXPERIENCE

Associate Professor of Marketing: Utah Valley University, Orem, Utah. Served as a department chair; developed and taught a hybrid course in marketing; developed and taught courses in computer information systems, business computing, business presentations and promotion management; have also taught accounting, macroeconomics, microeconomics and business writing.

Retail ownership and management: Owner of maternity shop in University Mall, Orem, Utah; part owner/manager of laundromat, Orem, Utah.

Graphic designer and front office manager: Printing Services, Utah Valley University, Orem, Utah.