ANALYZING THE COMMUNICATION GAP BETWEEN THE INSTRUCTIONAL DESIGN CONSULTANT AND THE FACULTY MEMBER IN THE DESIGN AND DEVELOPMENT PROCESS OF A WEB-BASED COURSE

A Thesis

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To the Faculty of California State University, Chico

In Partial Fulfillment of the Requirements for the Degree Master of Arts in Education: Curriculum and Instruction Option

by

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Spring 2010
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DEDICATION

I would like to dedicate this work to Edwina Buchignani, the one person who encouraged me to not give up when I thought this whole process was impossible for me to complete. Thank you for your love and support.

My sincere appreciation goes out to Rev. Eugene Huffman for being not only a spiritual patriarch, but also a father-like figure and friend. I thank the LORD for your many prayers, encouragement, and counsel while achieving this degree.

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ABSTRACT

ANALYZING THE COMMUNICATION GAP BETWEEN THE INSTRUCTIONAL DESIGN CONSULTANT AND THE FACULTY MEMBER IN THE DESIGN AND DEVELOPMENT PROCESS OF A WEB-BASED COURSE

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The purpose of this thesis was to examine potential communication barriers between an instructional designer and a faculty member while in the process of developing web-based course content using a learning management system. The analysis compares both faculty and instructional designer perspectives during this process. The intent of the author was to increase understanding related to the goals, outcomes, and needs of a faculty member and what instructional designers can do to improve potential communication barriers between these two professionals. This study’s underpinnings are based on Vygotsky’s zone of proximal development, which was used as the theoretical framework.
The review of literature outlined six areas that supported the theoretical framework of this study. The review included:

1. Zone of proximal development and scaffolding
2. Needs assessment and task analysis
3. Communication models
4. Executive coaching/technology integrated curriculum
5. Effective web-based instruction
6. Effective web-based course design and development

The design of the instrument was created with the intent of collecting data from California State University, Chico faculty members by the use of a questionnaire hosted online. Similarly, data collected from instructional designers were by way of interview questions that were sent out to various university campuses via email.

The results of this analysis are targeted for graduate-level students, faculty in higher education, and instructional technology consultants who assist faculty with their educational technology needs. Recommendations are part of the scope of this study as conclusions are drawn and suggestions are made for further research related to this area.
CHAPTER I

INTRODUCTION

Background

Some researchers have noted that the world has become a more closely-knit place due to the realm of electronics, computer, and the Internet (Marsh-Nation, 2007). Electronic technologies serve education in a similar way by providing greater access for students through online courses. Ironically, during the advent of online teaching, some schools thought that they were going to increase monetarily through large enrollments by implementing online courses (Oblinger & Hawkins, 2006).

When constructing online courses, a variety of skills are needed and these skills can be more than are readily available in one human being. According to Johnson (n.d.), instructional designer at Penn State’s World Campus:

Increasingly, many people [educators] find that they can profit from consulting with someone trained in educational theory and program design—an expert able to devise a strategy to achieve specific learning goals. Such an expert is called an “Instructional Designer” or ID. (¶ 3)

Instructional design has been used in the past by the military to facilitate instruction and recently has been widely accepted by teacher education programs (Summerville & Reid-Griffin, 2008). In view of this comes the realization that collaboration between the faculty member and the instructional designer is a good approach to creating effective
web-based instruction. An effective online course can enable learners to reach their intended educational goals faster and more economically. Connecting via the Internet has triggered the development of many new information technologies, including information retrieval and information management, personal communication and so on. One of the most interesting applications is distance learning. The appearance and development of distance learning has its own economic and social context. (Liu, Lin, & Wang, 2003, p. 110)

In light of the social and economic context and how more classes are being offered to students over distance, the need for effective online courses appears to be more evident than ever before. Online courses can be quite convenient for students who would normally be at a disadvantage trying to obtain an education due to work schedules and personal life situations. The asynchronous learning environment has increasingly become a common ground for delivering educational content to students ranging in diverse demographics.

Johnson (n.d.) claimed effective solutions to address educational interests is the special mission of instructional designers . . . [and] it’s the role of the instructional designer to listen carefully, to take in all the information, and to get an understanding of what the desired learning outcomes are before making recommendations. (¶ 7)

Also, from an instructional design perspective, many technologies can be utilized in an educational setting to support outcomes and objectives, as these can become the conduit of pedagogical content not its driving force. One technology in particular, the learning management system, was created not only to facilitate discussions, but also to deliver content such as text, video, and audio, as well as download study material, upload assignments, and deliver interactive activities that have been developed from gaming technologies (Marsh-Nation, 2007).
In the beginning of the online instruction era, many faculty members were under the assumption that learning transformation would be contingent upon information technology (Oblinger & Hawkins, 2006). The increasing number of educational facilities adopting online education prompted faculty members to develop web-based courses, and for many, this was their initial experience (Maddux, 2004). As a result, there suddenly became a greater demand for faculty to acquire the necessary skills, for example, writing HTML and graphic design. Online courses in their infancy may or may not have included good instructional design and if were single-handedly designing their own online content, this could mean having to piece together content with prevailing resources (Oblinger & Hawkins, 2006). For many faculty members, due to a lack of structure and direction from the instructional design perspective, this led to the creation of various models of online courses.

In light of the online environment, it is practically a must for faculty members to have expertise with pedagogy and technology in order to create an effective online course (Oblinger & Hawkins, 2006). Often enough, however, faculty members are more focused on their content and not the rigors of instructional design. According to Cook and Dupras (2004), “effective course design requires an understanding of both the subject and the instructional medium. The technical details of Web design and programming can be delegated to a specialist. . . .” (p. 699). Oblinger and Hawkins observe that “few faculty have had formal education or training in instructional design . . . [and] to expect them to master the instructional design needed to put a well-designed course online is probably unrealistic” (p. 14). Should faculty members only be considered consultants of content
and not consultants of technology? What works best is to pair faculty members with instructional designers; by doing so they each can offer their skills in the creation of online courses (Oblinger & Hawkins).

Statement of the Problem

In order to facilitate a productive relationship between the faculty member and the instructional designer, there has to be an understanding of how to blend course content with technology and establish strong communications between both of these professionals. Instructional designers and faculty members are faced with serious challenges when designing online courses and one of these challenges is the fragility in negotiations between them. Often, there is more to the educational procedure than just lecturing on material and having students internalize information. In order to design and develop effective online instruction, the instructional designer not only has to have a “high level [of] interpersonal skills” but also a great knowledge base of “technical and instructional design expertise” (Xu & Morris, 2007, p. 37).

Literature was researched and data were collected related to the differences involving the communication patterns between the instructional design consultant and the faculty member and how the gap in communication can affect the design and development process of an online course. In view of faculty members and instructional designers having experience using technology in professional settings, there comes the realization that using the Internet for instruction requires both users to rethink how to use the medium (Chou & Tsai, 2002). Also, research has indicated there are differences in skills between the instructional designer and the faculty member and these differences need to
be acknowledged by each professional. In their study, Xu & Morris (2007) emphasized that

faculty members and technical developers should be aware of their individual responsibilities: for the faculty members, the responsibilities include content, pedagogy, preparation of content to fit the design and tech requirements; importantly, instructional technologists often have instructional design knowledge that is not present in the faculty skill set. (p. 37)

In her journal, White (as cited in Xu & Morris, 2007) agrees and adds that, due to “different knowledge domains and discourses used by team members . . . language could too easily become a barrier to clear communication” between the faculty member and the instructional designer (p. 37).

In order to obtain maximum efficiency in the design and development process of an online course, the instructional design consultant and the faculty member must ask themselves: How much about course content does the instructional technology consultant (ITC) need to know? And also: How much does the faculty member need to know about educational technology implementation? By realizing the subtle differences in the knowledge bases between the two professions, a gap in communication appears to exist on the convergence of the two professionals in the consultation process. Therefore, this study set forth to analyze the gap in communication between the instructional design consultant and the educational content consultant or faculty member. By utilizing survey and questionnaire methodologies, the intention of this study was to find the answers to these questions:
Research Questions

1. What roles are performed by an instructional designer?

2. Are there barriers in communication between the instructional design consultant and the faculty member and would an increased knowledge of objectives, outcomes, and pedagogical content be helpful for the instructional designer?

3. Should some faculty members consider informally becoming instructional designers to obtain a broader view of the necessary vernacular needed to design and develop effective online instruction?

Purpose of the Study

Online instruction is as much a part of education as the traditional synchronous method of delivery that utilizes a classroom and instructor. The challenge with online instruction is that the faculty member must create a virtual rendition of the synchronous environment, by using technology-assisted course content. To create an effective asynchronous environment the faculty member may require the assistance of an instructional designer. The field of practice for both the instructional designer and the faculty member draws from different knowledge bases, which creates a dichotomy between their skills, due to differences in expertise, such as language, technical knowledge, and knowledge of pedagogical content.

It appears that there is minimal research available in this area of study—that is, the communication gap between the faculty member and instructional designer—and what research that is available is primarily directed towards the communications between faculty members and students. The purpose of this study was to analyze the barrier in
communication, if any, which exists between the faculty member and the instructional
design consultant. It was hoped that by performing this analysis recommendations for
further study in this content area would be found that would increase attention given to
this subject by current researchers. It was the intent of this study to open the door into a
new area of research in the field of education and the field of instructional design to
improve the design and development process of online courses. This study accomplished
looking at the potential for further investigation of how the roles of the instructional
designer and the faculty member can be better facilitated in a web-based design
partnership.

Theoretical Organization

There is extensive research available related to the design of online courses
and “understanding the pedagogical questions raised by web-based education” (Luchini,
as cited in Moore, 2005, p. 54) is what the faculty member should be aware of when
creating their online course content. There are other researchers that have done research
on information pertaining to the (a) design stage, (b), development stage, and (c) delivery
stage of online instruction (Wiens & Gunter, 1998). Most studies are central to the stu-
dent and faculty relationships in the online learning environment.

The theoretical organization of this research examined the theoretical studies
of Vygotsky’s zone of proximal development. Vygotsky (as cited in Harland, 2003)
asserts that the acquisition of knowledge and growth can be dissimilar and
that learning not only leads development, but rather learning . . . creates the
zone of proximal development [and] is the distance between the actual devel-
opment level as determined by independent problem solving and the level of
potential development as determined through problem solving under . . . guidance or in collaboration with more capable peers. (pp. 263-264)

The zone of proximal development enables the learner, in this case the faculty member, to learn by training, one-on-one consultations, or procurement through self-help resource material. Theoretically, following examples offered by these types of resources, the learner eventually becomes more independent in their own understanding. Basically, the difference between how much the learners learn on their own and how much can they learn with the help of others is the center of their growth and development.

Hypotheses

1. There is a gap in communication between the faculty member and the instructional design consultant, and this gap unique to this partnership as opposed to other consultant/developer relationships.

2. It is important for an instructional designer to understand pedagogy and understanding helps to produce more effective design and development strategies when consulting with a faculty member while designing a web-based course.

3. It would be useful for a faculty member to have knowledge of instructional design to better understand how to translate course content normally delivered in a live face-to-face class to a web-based class.

Limitations of the Study

This study’s participants were faculty members and instructional design consultants that were employed in higher education. Faculty members were sampled from California State University (CSU), Chico. Faculty members were the greater population
that was sampled in the data collection process. Instructional designers were selected from the California Polytechnic State University, Pomona; CSU, Chico; CSU, Sacramento; and Virginia Polytechnic Institute campuses. Data collection was in the form of questionnaires hosted online for faculty members and questionnaires/interviews for instructional designers delivered either face-to-face or online.

Summary

The intent of this study was to find answers related to the research questions and hypotheses posed earlier in this chapter by using questionnaires and interviews. Data were collected from faculty members and instructional designers in the Northern California area and other campuses. Data were collected, analyzed, and reported, and generalizations were made regarding recommendations for further study.

Definition of Terms

1. *Asynchronous learning*: occurs when an online learning environment lacks face-to-face communication between instructor and student. Asynchronous learning is student centered, as cognition of content is self-paced and self-directed. More often online courses and their tools are the main mode of delivery in an asynchronous learning environment ("Instructional Assessment Resources," 2007).

2. *Learning management system*: a web-based software system that manages course curriculum content that is delivered through an online course. The learning management system can be used to monitor student activity, post assignments, assessments, and set up discussion topics ("Governors State University," 2008).
3. *Synchronous learning*: when students and faculty are in an online learning environment at the same time. Synchronous learning not only transpires face-to-face in the classroom but also can occur in a learning management system by using tools such as the real-time chat or video conferencing (“Instructional Assessment Resources,” 2007).

4. *Technology and Learning Program*: a technology support facility program on the CSU, Chico campus that collaborates, empowers, and helps faculty obtain the maximum efficiency using educational technologies. The Technology and Learning Program works with faculty in the design and development process of online courses using WebCT™ (Technology and Learning Program, 2005).

5. *Zone of proximal development*: the difference between what the learner can do without help and what the learner can do with guidance and instruction. (Center for Research on Education, Diversity & Excellence, 2002).

6. *Instructional designer*: one whose practice relates to the systematical, methodological application of effective design and development strategies creating content for learning environments (Wayne State University College of Engineering, 2007).
CHAPTER II

REVIEW OF LITERATURE

Introduction

Preserving the pedagogical integrity of content originally created for delivery in the classroom is a challenge that exists when creating online course material. The process of interfacing a faculty member’s course content by implementing technology requires careful attention in order to maintain the integrity of that course content. As a rule, technology’s role in education should be viewed merely as a reinforcement that is supportive of pedagogical content rather than being its driver. The convergence of knowledge between the instructional design consultant and the faculty member lends itself to the success and effectiveness of this merger. Typically, most faculty members well understand how their course content is to be delivered in the synchronous environment—that is, the live classroom. Adaptively, instructional designers must quickly learn the need of a faculty member and understand the conceptual framework related to their course content while becoming a translator in helping make sense of how to deliver course content in a web-based environment.

The outline of this review of the literature examines six areas:

1. Zone of proximal development and scaffolding
2. Needs assessment and task analysis
3. Communication models
The theoretical underpinnings of the zone of proximal development (ZPD) and scaffolding provide an excellent basis to examine how one becomes a “vicarious form of consciousness until such a time as the learner is able to master [their] own action through [their] own consciousness and control” (Bruner, as cited in Bliss & Askew, 1996, p. 123). ZPD is useful both in examining students as learners under the aegis of a more experienced mentor—the teacher—and also in looking at teachers as learners of technology guided by instructional design consultants. When designing course content, instructional designers must go through particular phases to reach desired goals. Task analysis helps the instructional designer to understand the maximum performance efficiency of a duty, and the needs assessment is commonly performed to establish the learning objectives related to the instructional design intervention (Miller & Osinski, 1996). This literature review explored how communication models can be an oversimplification of the communication process by the way they “visualize” that process (Gozzi, 2005). This review also explored how executive coaching can be a useful method to get a failing executive back on track and be more productive (Thach & Heinselman, 1999).

The author found it appropriate to examine the trends involved in effective web-based instruction to compare the various styles of web-based instruction that are being used in education. Integrative technologies can add to the development of cognitive awareness no matter if the course content is totally facilitated online or if just a portion of
the content is augmented by technical assistance (Comeaux & McKenna-Byington, 2003). So the effectiveness of web-based instruction was examined to better understand how this type of instruction facilitates learning and cognition.

Online instruction has increasingly become more accepted as a means to deliver course content. In fact, as online instruction has rapidly propagated, many faculty members are too often not prepared enough to deliver their content through this medium, which means educational facilities seek the assistance of instructional designers to help faculty members develop web-based courses that emulate the synchronous course content they deliver normally in the classroom (Su, 2005). To be more proficient in the understanding of the need of the faculty member, a broader knowledge of effective online course design and development was examined.

The Zone of Proximal Development and Scaffolding

The roles of the instructional designer and faculty member can be understood to some degree by comparing them to the roles of tutor and tutee. This comparison does not suffice, however, as there are different roles an instructional designer can assume. John Roussell, Ph.D. (personal communication, June 23, 2009), an educator in the field of instructional design technology, expressed how instructional designers may indeed have “multiple experiences” with faculty members in educational settings and that some of these roles may include being a mentor, client problem solver (e.g., troubleshooting), or simply a resource of information. The roles of instructional designers ensure “an instructional experience that makes certain the learner will accomplish the goals of
instruction” (Franquet, 2007, p. 12). Rothwell & Kazanas (as cited in Franquet) attested that

the role of an instructional designer is to work within such a model to analyze performance problems systematically, identify possible causes of the performance problem, think about different solutions to correct the performance problem, and implement a solution. (p.12)

Similar to the growth in the roles instructional consultants play in the merging of their expertise with faculty needs, the increased use of technology has also resulted in the faculty member’s role changing from being less of a professor to being more of a counselor or guide for students (Howell, 2007). According to Baldwin (1998), the role of the educator in higher education is to “play a supportive role” with students. They will be considered “subject matter experts [that employ] instructional technology skills, counseling skills, and a keen knowledge of group dynamics” (p.10). These skills are needed to help integrate technology into their curriculum. Congruently, Howell (1999) claimed:

Faculty are the key to successful integration of education technology. Faculty must have the desire, initiative, and incentive to learn education technology, to review the wide array of options and find the most appropriate technology specific to their course, to spend time revising curriculum [and] to incorporate the education technology. (p. 7)

Therefore, the roles of the instructional designer and the educator are delineated respectively in this study as being a client problem solver and a client that is a manager of course content. In some ways, these roles can be similar but are definably different.

Eun, Knotek, and Heining-Boynton (2008) pointed out that tutors and their participation in the mentoring process of the tutee are critical and “the most important quality has been identified as the tutor’s ability to adjust [the] level of guidance to the current level of the [tutee’s] psychological functioning” (p. 135). Another way to describe
this relationship is by taking into consideration that the tutor can also act as a arbitrator who participates in all parts of the relationship between the content material and the learner’s theoretical understanding (Subramaniam, 2007). Eun et al. (2008) stated there are three “key elements” related to the ZPD that “conceptualize” the positions of the tutor and tutee:

1. The goal (i.e., cognitive or cultural development)
2. The individual who is going through the cognitive development (e.g., child, tutee, novice)
3. The guide or mediator who is more competent (e.g., adult, tutor, more capable peers)

Subsequently, the delivery of dialogue in an effective manner is vital in the process of one’s cognitive development. Research indicates that effective transfer of dialogue is the most useful method of transmitting knowledge from the instructor to the learner (Randal, 1978). Vygotsky’s (as cited in Eun et al., 2008) writings endorse this claim, relaying that the conversation that exists between the tutor and the tutee becomes the deciding factor in the cognitive growth process of the learner. There exists a connection between dialogue and cognition related to the ZPD and this establishes the reality that cognition is communicated by the use of speech (Subramaniam, 2007). Thus the ability to learn and understand new material is most effective when proper guidance through communication is established in a productive tutor/tutee relationship.

The principal understanding of scaffolding is to manipulate and make accessible the materials of learning that normally would be out of reach of the learner’s ability to
achieve themselves (Holton & Clarke, 2006). Scaffolding takes what is complicated and reduces it down to more manageable portions, which affords the learner a greater opportunity to simplify and solve problems (Turner & Berkowitz, 2005).

To effectively apply the theory of scaffolding to the learning process, the tutor should not depend too much on the natural impulse of the learner’s questioning and should be ready to assist the learner if they are not advancing by their own devices (Lakkala, Muukkonen, & Hakkarainen, 2005). The tutee should follow the lead of their instructor when learning new content, making progress towards becoming more aware about the way they assimilate content becoming more proficient in that process (Pata, Sarapuu, & Lehtinen, 2005). The tutee’s overall goal is to eventually be able to overcome barriers in learning new content through scaffolding and soon be able to structure their own learning processes and patterns.

Needs Assessment and Task Analysis

Before any instructional design intervention can evolve, there are specific phases or steps taken. One of the beginning phases is the front-end analysis. According to George Mason University Graduate School of Education the front-end analysis phase of instructional design consists of four elements that include:

1. Performance analysis
2. Environmental analysis
3. Learner analysis
4. Needs assessment (Dabbagh, N., 2006 ¶ 1)
The needs assessment or *gap analysis* as defined by Miller and Osinski (1996) is analysis of “a gap between what is currently in place and what is needed, now and in the future” (p. 1). In their discussion, Miller and Osinski (1996) correlate with George Mason University by illustrating how five phases are involved in the instructional design process, which include needs assessment, instructional objectives, design, implementation, and evaluation. They demonstrated that in order for the design process to be more efficient, the needs assessment must be performed first (p. 1). The National Oceanic and Atmospheric Administration (n.d.) reported that needs assessment “is the gathering of complete and accurate data and information regarding your target audience” (¶ 1). The NOAA pointed out a list of methodologies related to the needs assessment that include:

1. Observations
2. Interviews
3. Focus groups
4. Surveys
5. Questionnaires
6. Existing data
7. Tests

Jack Phillips (1997), founder of Performance Resources Organization (PRO), asserted that surveys are useful where attitudes, beliefs, and opinions are concerned and that questionnaires can be more “flexible [as it] captures information data ranging from attitude data to specific improvement statistics” (p. 45). Out of the various phases in the instructional design (ID) process—which are all vital to the ID process—this study was
more concerned with the front-end analysis phase and placed emphasis on the needs assessment.

According to Jonassen, Tessmer, and Hannum (1999), “task analysis for instructional design is a process of analyzing and articulating the kind of learning that you expect the learners to know how to perform” (p. 3). The National Resource Conservation Service (n.d.) asserted that task analysis involves “breaking a task down into functional behavioral units. [Which means] tasks are broken down into subtasks. Subtasks are broken down into elements. Elements are broken down into steps” (Task Analysis sect. ¶ 1). The Reigeluth (1988) study exemplified how task analysis goes well with instructional design even describing specific occurrences as substantive and temporal integrations. Jonassen, Tessmer, and Hannum (1999) asserted the importance of knowing the essence of the process the trainee will undergo regardless of what kind of situation the instructional designer will be training in. It is also significant how Jonassen et al. raised the question: “If you are unable to articulate the ways that you want learners to think and the act, how can you believe that you can design instruction that will help them?” (p. 3).

Communication Models

Communication, the very concept that centralizes this study, can be visually depicted to the learner of communication through models. According to Gozzi (2005), a communication model “is a simplification based on a metaphor” (p. 91). Gozzi explained how communication models are a way to make these complicated situations more understandable. The Human Communication Laboratory at Columbia University (n.d.) declared, “Communication is a complicated process involving a number of systems that
work in concert. Although people typically communicate with relative ease, it’s not entirely clear how they do it.” Gozzi agreed saying that communication models “create certain mythic figures: the sender and the receiver, which are really just metaphors for certain functions” (p. 90).

Dick Lee (1993), a spokesperson for the University of Missouri Extension noted that the word “communication” originates from the Latin word *communis*, which translates into the word common. Based on this insight, there must be then a “common ground” founded in most human interpersonal communication. Gozzi (2005) pointed out how interpersonal communication is a cooperative experience that involves awareness and reasoning. Lee (1993) agreed stating, “communications is the mechanism through which human relations exist and develop” (¶ 5).

The Schramm’s communication model illustrated how three components must be present in a communication and these include: the source, the message, and the destination (Lee, 1993). This model seems to invoke the concept that interpersonal communication can be visualized in linear terms. On the other hand, Gozzi contended that the process of interpersonal communication is not a linear event but rather it is an exchange of “mutual and simultaneous sending and receiving” (p. 89). From another point of reasoning, Shannon and Weaver (Lee, 1993) were not concerned about how the logistics of psychology and sociology affect communication but were instead more interested in how closely they could come to 100% efficiency in the communication process (¶ 28).

In spite of all the scientific and philosophical ramifications related to these and other communication models, “noise” is another factor that can detrimental to the
communication process. Lee (1993) pointed out how the Shannon and Weaver model defines noise as a component that creates barriers with communication: “Semantic noise is the problem connected with differences in meaning that people assign to words, to voice inflections in speech, to gestures and expressions and to other similar ‘noise’ in writing” (¶ 28). The Schramm model depicted how noise can become the “all-purpose placeholder for miscommunication” and how we “interrogate and interpret determines the accuracy of future communication” (Horne, 2009, ¶ 9, 12). Lee (1993) emphasized how Berlo’s communication model is representative of four elements such as source, message, channel, and receiver (¶ 43). In relation to noise being a barrier in communication, Lee stated:

Messages sometimes fail to accomplish their purpose for many reasons. Frequently the source is unaware of receivers and how they view things. Certain channels may not be as effective under certain circumstances. Treatment of a message may not fit a certain channel. Or some receivers simply may not be aware of, interested in, or capable of using certain available messages. (¶ 51)

Gozzi (2005) declared that communication models do not capture the “complexities of communication” and that much of what happens in the communication process (between sender and receiver) cannot be depicted in a visual model (p. 91). Information from this literature supports that interpersonal communication is an intricate, specific process.

Executive Coaching/Technology
Integrated Curriculum

In the past, the corporate world adopted the use of executive coaches only when there were performance concerns with an administrative staff member. The
usefulness of executive coaching has become increasingly the norm as administrative leaders have closed sessions with coaches to share dialogue about professional development and personal cognitive growth (Thach & Heinselman, 1999). Coaching expert Donna Karaba (personal communication, July, 17, 2009) described how:

Creating wholeness at the top of an organization is crucial for its success. If you want authenticity in others, and optimal effectiveness, you must find it first within yourself as an individual and as a leader. In order for an organization to operate at full potential the leaders must be operating from a place of wholeness, aware of their true nature, or higher self, inspired by a clear vision, living a well-balanced life, and continuing to learn and grow. Organizational performance can be improved through leadership effectiveness.

Research indicates that there are a various types of coaching that assist in the development of specific skills. For example, in the sports profession, experts revealed that there are coaches for “pitching, hitting, catching, base running, outfield play, infield play, sliding, and taking signals” to improve skill and expertise (H. Wong & R. Wong, 2008, p. 59). In the corporate sector, there are “major categories of executive coaching” that include

1. Feedback coaching
2. In-depth development coaching
3. Content coaching (Thach & Heinselman, 1999, p. 35)

Since athletes and the corporate sector benefit from coaching, there are agreements in research that is indicative of positive increases in professional vocation, management, and professional development, and that the positive attributes related to coaching can been identified in the field of education (Onchwari & Keengwe, 2008). The
professional world realizes the need for coaching in academics, as Pedroni (2004), Vice President of My eCoach, stated,

Teachers repeatedly say that they need help finding effective ways to build technology into their existing programs. Online coaching and mentoring programs allow teachers to connect, share, and learn on an ongoing basis. Teachers want and enjoy being part of an online professional learning community. They say that collaborating with their peers to create standards-based technology integration activities promotes inquiry, problem solving and critical thinking. Providing such types of professional development allow teachers the flexibility to take advantage of opportunities anytime, anywhere. (p. 1)

Stability within learning institutions is improved because of coaching. Experts agree that schools that employ coaches and have constant communication with upper administration concerning faculty and student progress usually are noted for greater efficacy (H. Wong & R. Wong, 2008, p. 59).

In order for technology to be integrated into the delivery of course content, “faculty members must have the skills, knowledge, and attitudes necessary to infuse it into [their] curriculum” (Baylor & Ritchie, 2002, p. 398). Glazer, Hannafin, and Song (2005) revealed how faculty members obtain technology integration skills via training and workshops and how these are usually not effective due to a lack of practical application in professional practice. There also is a decline of technical support in some institutions and educators’ integration efforts are often less than optimal. There is a demand for professional development among educators as they realize the need for technical training (Clapp, 2004). Technology integration is being facilitated in some educational institutions that is based on a model that Glazer et al. call “cognitive apprenticeship.” This model was originally created to supplement and improve teaching. Technology integration based on
this model is consistent with professional development and the upside of the process is that it is focused on the educational institutional setting. Glazer et al. have noted that

Novices learned to solve problems and handle complex tasks through modeling, coaching, and fading. Initially, novices observed experts modeling the target process. Novices then executed the task themselves, with experts (e.g., teachers, [instructional designers]) coaching and scaffolding on the side. As novices became more proficient, the intensive coaching of experts was faded to occasional feedback. (p. 58)

Before any technology is integrated into curricular content, there is a need for those who will assist in the training process to “survey [educators] and evaluate their experience” with technology (Clapp, 2004, p. 28). To expound on this, researchers Chen and Price (2008) noted that if faculty member are to increase their skill with technology integration there is a greater need for professional development and classroom support. There are limitations of effective technical training and one contributor to these confines is the brevity of the trainings. Also, Chen and Price stated that educators never seem to have the proper amount of time to master computer proficiencies much less be able to support classroom activities with the technology. Another limitation is how qualified the trainer is in education and child development. Because of this, trainers train without trying to emulate the classroom context leaving the faculty members to figure out how to apply the technology in the classroom. It is an assertion that the technical need of the faculty member is more than just learning how to use tools or push buttons within a software program. As the literature reveals, they require training and coaching from professionals that fully understand their technical and pedagogical needs.

The Beginning Teacher Support and Assessment Induction Program (BTSA) in the Butte County Office of Education (BCOE) in California offers recently
credentialed K-12 educators coaching assistance in their first and/or second year of professional practice. Most often, as noted in a personal communication with Nikol Baker, the administrator of the BTSA program, these mentors are experienced educators matched with the same credentials as their subordinates. According to Baker (personal communication, September 17, 2009), what matters most in coaching educators is “building relationships that include [building] rapport, trust, [being] non-condescending, and [deciphering] body language.” William Baker’s (2008) coaching handbook agreed as it lists behaviors of rapport should include posture, gesture, tonality, language, and breathing (p. 61).

A great deal of understanding is created in human encounters as Dean C. Barnlund (1968), author of Interpersonal Communication: Survey and Studies, admitted:

> From the moment of recognition until the moment of separation, people observe each other with all their senses, hearing pause and intonation, attending to dress and carriage, observing glance and facial tension, as well as noting word choice and syntax. (p. 536)

Lipton, Wellman, and Humbard (2003) attested that the essential factor involved in the mentoring process is the recognition of the role of each participant and the desired outcomes of mentors are to increase professionalism in their colleagues while augmenting efficiency in the problem-solving and decision-making process. In order for these processes to be accomplished, literature makes assertions that communication is complex in relation to the coaching process. Greater awareness in regards to the desired outcomes of the mentoring process and human interaction are open to examination, and through
examination, greater understanding will be gained relative to effectiveness in the consultation process between the faculty member and the instructional designer.

Effective Web-based Instruction

Many times technology is used in course design before being carefully decided upon as to its necessity. Before faculty members can create sound curriculum they may want to ask themselves “what learning outcomes do I want for my course?” and before seeking the assistance of instructional design consultants they may want to ask themselves “can technology help me reach these goals?” (Poindexter & Choton, 2000, p. 4). Palloff and Pratt (2001) extended this idea by stating, “although developing an online course requires the integration of technology, it is pedagogy—not technology—that is critical to the success of and online course” (as cited in Xu & Morris, 2007, p. 36). Therefore, it can be assumed that regardless of how much technology can be a powerful tool for teaching and learning, it is course content that takes precedence over technology. Albeit, course content is the main driver of how the technology can be utilized effectively in a web-based course. Technology is not its own entity in web-based instruction nor does it stand apart from the presence of pedagogy and course curriculum. Technology should not be considered unrelated to the process of content delivery to the point of it being in itself the instrument of teaching, but rather it should be utilized as a tool that can perform processes for instructors and their course content (Koehler, Mishra, & Yahya, 2007).

It would appear then that the instructional design consultant has the responsibility of knowing the protocol of the technology as well as understanding the style and
delivery of instruction. To illustrate, research has described how instructional methods from the behaviorist approach seek for the instructional design consultant to place “an emphasis on producing observable and measurable outcomes for students . . . [that] include creating objectives, performing task analysis and competency-based assessment” (Williams, 2002, p. 135). The same researcher also explained the need to understand the constructivist perspective, which places “emphasis on learner control and the capability of the learner to manipulate information.” A major premise in the instructional design process is for the learner to actively use what is being learned” (p. 135). It can be inferred that faculty members already have the knowledge they need to take these instructional methods and integrate them well with technology. Instead, research challenged this idea by supporting that while working with instructional designers; faculty members can develop greater understanding pertaining to the coexistence between the theory of learning and the design of course content (Freeman, Ryan, & Boys, 2001).

The major objective in attaining effective online course content is to maximize the utilization of technology that allows “multimodal, non-linear, self-paced, asynchronous and synchronous instruction” (Ellsworth & Flake, as cited in Wiens & Gunter, 1998, p. 95). Web-based instruction takes on its own uniqueness as it is designed to focus more on the acquisition of knowledge instead of being an instrument of direct instruction (Liu et al., 2003). This does not necessarily mean that every course created needs to have a variety of technical bells and whistles in order to be effective. Studies have revealed that faculty members who used web-based environments to deliver music appreciation
course content found that the courses did not need “glitz” but rather that simplicity was a more of an effective approach to successful content delivery (Waters, 1999).

The role of student and faculty member tends to be similar in the online environment when compared to the face-to-face classroom environment (Young, 2006). The pedagogical approach to a web-based course is remarkably similar to that of the traditional class. According to researchers Reeves and Reeves (as cited in Robertson, Grant, & Jackson, 2005, p. 74), there is an understandable list of guidelines that evaluate the underpinnings of web-based instruction for effectiveness. Their list includes

1. Pedagogical philosophy (instructivist to constructivist)
2. Learning theory (behaviorist to cognitivist),
3. Goal orientation (sharply focused to general),
4. Task orientation (academic to authentic),
5. Source of motivation (extrinsic to intrinsic),
6. Teacher role (didactic to facilitator),
7. Metacognitive support (unsupported to integrated),
8. Collaborative learning strategies (unsupported to integral),
9. Structural flexibility (fixed to open)

The Williams study (2002) concurred with the recommendations of Reeves and Reeves that effective web-based course content should contain:

Defined goals and objectives; specific, relevant content; focus on job relevance [for trainers in the corporate sector]; varied of methods of learning; regular participation of learners; learner’s experience and knowledge; reinforcement; realistic and problem centered examples; and application and follow up. (p. 133)
There is a translation process existing between course content that is delivered in the classroom and how that content will be delivered in a web-based course. In her commentary, Sherion H. Jackson, Ed.D (2005) extended this idea by offering insight about how producing web-based instruction from regular classroom-delivered content is a challenging process. There is more to the process than just posting information online with the full expectation that it will be effective. Learners in the web-based environment can be deprived of certain protocols of the learning process due to an ineffective use of resources when translating course content from the face-to-face class to the web-based class. The social implications related to effective web-based courses are not the same as with traditional classroom learning environments.

Research by Williams (2002) indicated that there are limitations that exist relative to web-based courses from the learner perspective that can interfere with process of learning, even making it slower. The research Williams conducted produced the following list:

1. Accessibility and responsiveness of the instructor.
2. Instructor’s expectation of the students.
3. Fostering a participatory online learning environment (p. 140).

Therefore, the instructional designer must be willing to implement “new and revised methods of instruction in order to take full advantage of the World Wide Web in education” (Su, 2005, p. 63).

Research indicated there is consistency between effective web-based courses and instructional design. The Williams (2002) study found that instructional design lays
the groundwork that facilitates successful instruction and optimal cognitive retention for students while experiencing a web-based course. The improper use of instructional design as it relates to web-based instruction will foster a course that is ineffective to learners. Furthermore, Williams maintains that instructional designers need to include the constructivist and behaviorist learning methods in their design protocol, thus developing more efficient course content. Web-based courses in their design and delivery protocol should to some extent replicate courses that are taught face-to-face in the classroom. Studies have shown that the virtual classroom appearance should not be confused with traditional classes but rather it should be understood “that online education is a specific medium in its own right and thus, it will have its own design considerations for effective instruction” (Carr-Chellman & Duchastel, 2000, p. 232)

Professional development is another consideration that assists in the undertaking of designing effective web-based courses. Without professional development activities guiding the growth of skills and knowledge with technology, instructional designers and faculty members will not be able to effectively facilitate any web-based instruction. The Williams (2002) study explained that professional development has great importance if any learning institution is going to implement effective web-based course materials for online learners. Institutions of education should not take for granted that instructional designers will innately have the skills needed to successfully create effective web-based courses without the presence of professional development (p. 143).

The effectiveness of online instruction is not solely based on pedagogical and design considerations; financial budgeting and satisfaction should be considered as
equally important factors. According to Sengchanh (2007), “a high level of technological expertise on the part of students and teachers, a sufficient budget, and a high level of satisfaction with learning with outcomes all contribute to making online instruction effective” (pp. 12-13). In light of the studies that have been conducted in relation to effective web-based instruction, its success is centered on efficient use of technology, the solid understanding of pedagogy, professional development, and budget.

Effective Web-based Course Design and Development

In its beginning, web-based instruction faced challenges directly related to unknown variables existing in the design and development process of course content and to how students respond to this type of learning (Meyen & Lian, 1997). Experts substantiate that “technology is not inherently good or bad, but rather depends on the way it is used. Teachers and administrators therefore need a good understanding of the strengths and weaknesses of different media and technologies” (Lee & Owens, 2004, p. 7). Oftentimes, by “trail and error,” course content is placed in web-based environments and, ironically, these experiences can provide the means by which sound and effective models of online instruction can be effectively developed (Meyen & Lian, 1997).

When designing effective web-based instruction, the faculty member should be willing to increase their knowledge about technology integration. Faculty members must be able to assess their experience with technology, being ready to improve their skills, and also be able to create course content they can manage and maintain (Cuellar, 2002, as cited in Yang, 2005; Volery, 2000). An important goal for an instructional
designer when assisting in the development of web-based course content is to create a “relationship of trust” when interacting with a faculty member (Barnstrom, 2006). While building a professional relationship between the instructional design consultant and the faculty member, the instructional designer needs to know the difference between the technological need of a faculty member and their pedagogical understanding in order to be better prepared when assisting them. Research demonstrated that the instructional support personnel must be “adequately prepared in order to assist faculty, so that faculty can effectively teach . . . distant courses” (Telg et al. 2005, p. 332).

The essence of designing and developing effective web-based course content begins with understanding “what the [faculty member’s] psychological insights are that serve to mediate student learning when [faculty members] integrate computer technology into their teaching” (Subramaniam, 2007, p. 1059). Research also has also established that the faculty member that delivers web-based instruction takes on the role of “facilitator” instead of “content provider” (Fein & Logan, 2003). By using technology-assisted content within the web-based environment, the ZPD serves the learning process as an intermediary that closes the gap between the faculty member’s mental processes, the course content, and the computer software (Subramaniam, 2007).

Before course content is uploaded into a learning management system (LMS), a faculty member must realize that web-based course preparation is time-intensive and requires much attention (Fein & Logan, 2003). In spite of the time-consuming process of preparing web-based courses, the interfaces of new educational technologies have provided a look and feel in the delivery of web-based courses that very much resembles
course content from the traditional face-to-face learning environment (Robertson et al., 2005). In preparing course content for online suitability, oftentimes there are modifications that are necessary for proper display in the LMS (Fein & Logan, 2003). Research by Collins (as cited in Koszalka & Ganesan, 2004) supported this claim, stating that:

Well-designed online instruction must provide opportunities to appropriately (a) engage with multiple types of resources based on individual preferences, (b) improve the flexibility of instruction by integrating multiple types of interactions, and (c) integrate multiple forms of communication among instructors, learners, and others beyond what might occur in a classroom. (p. 244)

There are specific materials and electronic tools that work well in the online learning environment, and if used properly, they can produce effective results. The research provided by Carr-Chellman and Duchastel (2000) specified that the certain technologies and study materials that work well with more effective web-bases include: study guides, course syllabi, discussion forums, email, photo images, video, and voice communication via audio-streaming or telephony. The study also made it clear that it is appropriate for the faculty member to assign a textbook to the class (p. 232).

When designing web-based instruction it is highly possible for faculty members to seek the assistance of an instructional designer. Instructional designers and web experts assist faculty in a most beneficial way when creating web-based course content using a LMS (ASHE Higher Education Report, 2006). During the consultation process, the faculty member must be certain that the instructional designer they are working with has enough knowledge of pedagogical content to be able to assist in the implementation of their course content using technology. According to T. H. Spotts (as cited in Telg et al., 2005) “instructional designers and technology specialists need to be knowledgeable
about not only the latest technology, but also the education methods to use that technology” (p. 332). There is a great necessity for instructional designers to be well-trained at using technology as well as knowing how to apply the technology in a pedagogical context. Knowing how much technical knowledge a faculty member possesses is significant to the instructional designer; therefore, it is usually a best practice for the instructional designer to perform the learner and task analysis in the beginning of the consultation process (Summerville & Reid-Griffin, 2008).

The development of effective web-based instruction in higher education should take into consideration what is best for the teacher and their relationship with the student. According to Chickering and Gamson’s (1987, ¶ 4) Seven Principles for Good Practices in Undergraduate Education, good practice in undergraduate education:

1. encourages contact between students and faculty,
2. develops reciprocity and cooperation among students,
3. encourages active learning,
4. gives prompt feedback,
5. emphasizes time on task,
6. communicates high expectations, and
7. respects diverse talents and ways of learning.

The challenge that researchers have addressed is how to maintain the integrity of the seven principles in a web-based course. Chickering and Ehrmann (as cited in Robertson et al., 2005) are inclusive with the presence of the seven principles being integrated with the dynamic ways educational technologies are being used in web-based
instruction. They explained, “if the power of the new technologies is to be fully realized, they should be employed in ways consistent with the Seven Principles” (p. 75).

Instructional design helps to upgrade how students cognitively assimilate course content thereby promoting more functional uses of course content in web-based activities (ASHE Higher Education Report, 2006). The study by Zhang (2004) supported the idea that educational psychologists are adamant about using various learning styles to increase cognitive assimilation and are dedicated to the preservation of information in the learner’s long-term memory. The study also extended this idea by stating, “there are four important learning styles that include (1) concrete experience, (2) abstract conceptualization, (3) reflective observation, and (4) active experimentation” (p. 33) These learning styles have been recommended to be integrated in the design of web-based instruction.

Research also indicated the need to design web-based courses with these goals in mind: (a) simplifying design, (b) directing learning, and (c) facilitating multiple access to the course (Miller-Cochran & Rodrigo, 2006. p. 103).

Instructors of web-based courses need to consider their role in the online environment and reflect on their practice to make the appropriate adjustments to their content. The web-based instructor must rethink how they are participating as the facilitator/developer in their course to be more supportive to students, helping them to realize the importance of the instructor and fellow-students’ roles as resources of information rather than just the instructor being a lecturer that provides material that is to be memorized (Coppola, 2001). Studies pointed out:

Another important difference is that online teaching does not involve presentation or performance like traditional classroom instruction; instead it involves
much more organized classroom activities, well defined assignments, and a higher level of instructor-student communication on issues from content to technical problems. (Knolle, 2002, p. 13)

Web-based instruction allows for faculty participation to be more of a “counselor, guide and mentor” as more time can be spent designing and developing course content that is inclusive of higher order thinking skills while less time is spent in the delivery of the content (Gillespie, 1998).

Summary

The greater challenge for the instructional design consultant is to be able to support the use of technology while having an understanding of the pedagogical context of course content design. Utilizing terminologies from each professional perspective—that being the instructional design consultant and the faculty member—places even more of a challenge on the design and development process of web-based instruction.

For the instructional designer, knowing how much skill a faculty member possesses is of key importance when beginning the consultation process. The level of technical skill of the faculty member is useful in determining of how complex or simple their course will be in its online existence. The instructional designer must know how the center of their client’s understanding about educational technology while being able to provide them with proper stimuli to keep them focused, engaged, and growing in their knowledge. Being able to demystify the complexities of educational technology while translating course content into the online environment is another important role of the instructional designer when consulting with a faculty member.
The effectiveness of web-based instruction is reliant on specific factors that relate to the traditional methods of content delivery. There must to be solid objectives, goals that are conceivable, and consistency in the design and development so that students are not confused or frustrated when participating in an online course. There are social implications related to the effectiveness of web-based instruction and the limitations of the student being able to access the faculty member. There are protocols that faculty members must follow adamantly relating to the consistency of their communication with students. To stay current with the trends in technology and teaching online, faculty members should aggressively seek resources that will increase their skill and knowledge pertaining to the integration of electronic technology with their course content through professional development.

Faculty members that utilize an LMS, for example WebCT™, often enough seek necessary collaboration with instructional design consultants to achieve maximum efficiency with the design and development of their web-based courses. The real key to achieving success with web-based courses depends on the prioritization of pedagogy over technology. The course content is what needs to be supported by the technology, and if the technology is not perceived as being a conduit for the course content then the course content is at the mercy of the technology, meaning that it is limited by the technology and thus lacks effectiveness. The main concern when creating course content in the online environment is to replicate its appearance as much as possible how it would be delivered in a traditional face-to-face classroom.
CHAPTER III

METHODOLOGY

Overview

The purpose of this study was to examine how communication patterns exist between the instructional design consultant and the faculty member and how these can potentially affect the process of course design intervention, mentoring, client problem solving, information troubleshooting, and developing web-based courses. The controlling factor that is central to this examination concerns the communication variables related to existing terminologies due to the different professional fields. It was the intent that the exploration of these variables and their results through this study may well be significant, as this may support the notion that further investigation is needed in relation to these occurrences. The data for this study were collected using two methods, interview/questionnaire, and survey.

Design of Study

Interviews/questionnaires are a unique method of data collection due to their adaptability and the potential for the seasoned interviewer to be able to control the interview environment to acquire the highest level of information from the interviewee (Gall, Gall, & Borg, 2005). The interview process can be efficient in gathering information that is meaningful and insightful. Careful selection of respondents is important to the success
of the study, as these participants should add support to the project because of their dedication to assisting in reaching the study’s final outcomes (Terry, 2003).

Surveys, as indicated by researchers, are powerful tools due to their effectiveness in making survey data more easily accessible to larger numbers of respondents (Couper, 2000). Salahub (2008) from Colorado State University attests that web surveys are a commonly used method to deliver data to participants and they can be used in conjunction with the interview process. The survey format is convenient for data collection from large or small samples and has been used by a variety of college disciplines (¶ 1-2). Thus the survey/questionnaire for this study, titled *Analyzing Communication Patterns Between A Faculty Member And Instructional Designer*, was developed.

The first step in the development process of this instrument was to consider the two populations that were being studied, that being, the faculty member, and the instructional designer. What are their commonalities in communication? What are their differences in communication? Do any characteristics of communication overlap between the two? What are the objectives being met in their curriculum? What are the goals and outcomes? What attitudes do faculty members have towards an instructional designer? The first part of the instrument was designed to be a survey intended to collect data from faculty members (Appendix A). In the faculty portion of the instrument, respondents were asked to provide demographic information. The majority of the faculty section contained prompts that were in a Likert Scale format. At the end of the survey were some multiple choice and short-answer questions. The second part of the instrument was designed to accommodate instructional designers and this was set up using interview
questions (Appendix B). Once a rough draft of the entire instrument was completed, a Delta test was performed to determine its reliability. After receiving feedback from committee members and Delta test respondents, all necessary adjustments were made, and the instrument became ready to be used to collect data. The instrument was subject for approval and clearance before data collection processes could proceed.

The second step was to complete an application through the Human Subjects in Research Committee (HSRC) at CSU, Chico. A copy of the instrument was submitted, along with informed consent forms for both the faculty member and the instructional designer (Appendix C). Once the HSRC board reviewed the application, it was determined that there was no risk involved with faculty respondents and a potential risk with instructional designers. A letter of approval was sent clearing this study, which also stated that a Full Board Review from the HSRC was exempted (Appendix D).

The third step was to make arrangements to host the survey on a server specifically set up for data collection and send the survey out to CSU, Chico faculty members via email. The first part of this process consisted of contacting a CSU, Chico campus representative from the Recreation Department to obtain permission to draft and enter the survey into their data collection software, test the survey for technical errors, and then have it added to the department’s server ready to be sent out to respondents. Sawtooth Software™, which is designed for online interviewing, was the software that was used to host the survey. The next part of this step was to contact another campus representative from Public Affairs and Publications to seek permission for sending out a link to the survey through CSU, Chico’s Campus Announcements.
Initially, face-to-face interviews with instructional designers from CSU, Chico were the intended respondents for data collection purposes. After examining a list of potential instructional design respondents that was offered by another campus representative, it was determined that the greater majority of instructional designers were located at institutions outside the realm of CSU, Chico. This meant that there was a necessary modification request needed through the HSRC board to allow the instructional designer questionnaire to be delivered via email to respondents out of state. This modification was approved.

Participants

The faculty population that was interviewed for this study was sampled from the CSU, Chico campus. Discipline area was not a factor in determining the sample to be used but rather whether the faculty member(s) were using electronic technology to support the delivery of their course content. At the same time, instructional designers were selected not only from the CSU, Chico campus but also from other campuses that include California Polytechnic State University, Pomona; CSU, Sacramento; and Virginia Polytechnic Institute campuses. The main reason instructional designers were selected for data collection from these campuses had to do first, with the availability of participants and second, with their willingness to participate in the study.

Data Analysis Procedure

According to Hoepfl (1997), “qualitative research reports are descriptive, incorporating expressive language” (¶ 12). QSR International (2007), a leading
 qualitative analysis software developer, describes the process of qualitative analysis as being more concerned with the “why” and not the “how” of a particular topic in analyzing “unstructured information—things like interview transcripts, emails, notes, feedback forms, photos and videos . . . Qualitative research is used to gain insight into people's attitudes, behaviours, value systems, concerns, motivations, aspirations, culture or lifestyles” (¶ 3). Miles and Huberman (1984) view qualitative analysis in a three-fold approach that includes, first, data reduction, which means the process of summarizing data from written notes; second, data display, or presenting the data in a methodical manner so that assumptions can be made and third, conclusion drawing/verification, is the process that extrapolates meaning from the various “regularities, patterns, explanations, configurations, causal flows, and propositions” (p. 22).

Triangulation, as discussed by Miles and Huberman, means that the modus operandi in qualitative data analysis is performed “by seeing or hearing multiple instances of [a finding] from different sources, and by squaring the findings with others it needs to be squared with” (p. 234). In this study, both sets of interview question responses that were collected from instructional designers and faculty members were looked over for validity by the use of triangulation. The responses to each question that were drafted specifically for instructional designers were examined by using comparison strategies among each of the respondents. Faculty members responded to a survey questionnaire tailored for them, which included a section of short-answer questions (SAQ). The responses to these SAQs were compared and contrasted within the faculty pool for reoccurring themes and then compared to instructional designer responses. The transcripts of
interview questions from both instructional designers and faculty members were reported in narrative form after being examined for any similarities, inconsistencies, patterns, or recurring themes.

Strauss and Corbin (as cited in Hoepfl, 1997), reports that “some researchers believe that qualitative and quantitative research can be effectively combined in the same research project” (¶ 9). Quantitative research was also used in this study to analyze collected data. This method was used primarily to generalize findings that were collected by a survey that was sent out to CSU, Chico faculty via email.

Descriptive statistics are also a component of quantitative analysis. University of the West of England’s webpage, titled Descriptive or Summary Statistics (2007) states, “all quantitative studies will have some descriptive statistics, as well as frequency tables. [These include] sample size, maximum and minimum values, averages, and measures of variation of the data about the average” (¶ 4-5). Hoepfl (1997) asserts how “logical positivism, or quantitative research, uses experimental methods and quantitative measures to test hypothetical generalizations [by seeking] causal determination, prediction, and generalization of findings” (¶ 4-5). By the use of statistical information gathered through an instrument such as a questionnaire or interview, more respondents can be reached faster using quantitative research methodologies (Sanchez, 2006). In this study, the faculty member questionnaire included questions related to demography, Likert scale survey concerning communication with instructional designers, technology use, and finally a section asking to describe attitudes when learning technology. PASW™ (Predictive Analytics SoftWare), formally SPSS™ (Statistical Package for the Social
Sciences) was the software used to analyze the frequencies and cross tabulations of the collected data that are reported in Chapter 4.
CHAPTER IV

RESULTS AND DISCUSSION

Overview

The findings reported in this section of the study are based on data collected from instructional designers and faculty members in professional practice within the realm of higher education. The instrument that was used in the data collection process consisted of two components. The first component contained a list of interview questions that were sent out via email to a pool of potential instructional designers. The second component contained a survey that included short-answer questions that was delivered to faculty members, also via email. The results of this study are reported through qualitative and quantitative research methods.

Presentation of the Findings

In the first part, the author reports the findings that are written responses to interview questions gathered from four instructional designers. Limitations in the data collection process was the main reason why these questions were delivered to instructional designer respondents via email, as most of them have their practice on university campuses out of state. California Polytechnic State University, Pomona; CSU, Chico, CSU; Sacramento; and Virginia Polytechnic Institute are the campuses that host the instructional designers that responded to the interview questions.
Instructional Designer Question 1

The first query asked: “Describe the types of technical terminology that is typically used in the consultation process with a faculty member. You may use hypothetical or real life examples to support your discussion.” Instructional designer (ID) responses to this query were conveyed in primarily technical and pedagogical terms that are used when consulting with faculty members. The overarching technical terminologies that were collected included discussion, instant messaging, chat, streaming media, and Flash™. Likewise, the overarching pedagogical terminologies among all respondents that were collected included goals, outcomes, learning theory, and learning framework.

ID1 indicated that in most conversations with faculty during the consultation process, terms such as synchronous, asynchronous, online only, and face-to-face are typically used. ID2 claimed that when they are in a normal consultation with faculty, outcomes and activities are discussed first and discussions about technology come second. They emphasized that they do not discard any technology ideas or options right away. ID3 specified that most faculty that wish to use technology in their course content usually have basic understanding about computers, and, for the most part, this includes operating systems and software, for example, Microsoft Office™. ID3 explained how faculty “seeking to use” a Learning Management Systems (LMS) such as Blackboard™ are given technical terms in simpler format and these are kept to a minimum, while, on the other hand, faculty members that seek to “spice up” their courses are taught the related technical terminology incrementally due to the learning curve. ID3 asserted, “It is important to proceed in small doses first.”
ID4 stated they employ “tool specific technical terminology” when discussing various technology interventions with faculty members about their course design. Normally, technical terminology is limited in their discussions with faculty members. Instead, ID4 noted, they draw their discussion from learning frameworks because most faculty members are not trained in technology but rather pedagogy. Also, it is to be noted that ID4 claimed they are not well-trained in a pedagogical understanding and they feel this can bring about barriers in communication due to the disconnect in terminologies.

**Instructional Designer Question 2**

The second query asked: “What are the usual reactions about technology from faculty members during the consultation process? Are there any communication gaps”? The instructional designer respondents to this query gave responses related to the reactions they encounter during the consultation process. There were also comments that describe communication gaps during this process. All of the data that were collected from each of the four respondents were unique and none of the responses reflected any similarities.

ID1 reported that the faculty reactions are usually reliant upon “self-efficacy, self-regulation, and the level of concern they embody regarding technology.” They noted that first-time users are reticent towards technology integration. One major concern is the time investment. At the same time, ID1 noted that when a faculty member is familiar with educational technology, they are able to focus more on task management and how the technology can support the objectives and learning outcomes of their content. They reported that when the faculty member masters technology, their focus becomes more on
improving upon or obtaining a higher level of use of the technology to reach their desired outcome.

ID1 discussed how communication gaps could exist when a faculty member assumes that technology will improve something related to their course content. ID1 stated, “Faculty may perceive technology as the solution or cause of the problem.” ID1 noted that it is important for an instructional designer to recognize and make clear that technology “is a tool to reach a solution.” ID1 added, “This minute difference in thought results in huge differences in outcomes.” ID1 made it very clear that technology is not the focus of the consultation and it is equally important for the instructional designer to communicate that technology is the means to the end or simply a way to find a better solution to meet the end. The focus should be finding what tools are best in supporting the instructional strategy.

ID2 explained that there is some feeling of relief for the faculty member that has found a way to do what they are asking because there is someone to help. Excitement is another reaction, ID2 noted, when faculty realize the possibilities of technology, but ID2 also stated that if the instructional designer is not careful, they can overwhelm the faculty member. ID2 pointed out how there can be disbelief and hesitation when a faculty member knows very little about any given technology and how that technology can specifically work for them. ID2 did not have any commentary concerning any perceptible communication gaps in their experiences with consulting with faculty.

ID3 made commentary suggesting that a greater portion of faculty from the institution are uncomfortable using technology. Not all of them willingly integrate their
course content into a web-based environment. Most that do conform to technology integration do so under peer pressure from colleagues or their department chair. ID3 described how certain older faculty members feel threatened that they could possibly be replaced in the classroom by technology and this trepidation causes resistance. ID3 described how frustrations arise as these senior faculty members see how far ahead their students are in their understanding of how technology works. ID3 perceived that these faculty members would progress more slowly when it comes to technology integration. ID3 felt that when faculty members with this type of attitude were students, their learning environment might have been lacking technology use. Conversely, ID3 observed that faculty members who recently obtained their degrees were more confident with their technology integration skill in an online environment. ID3 noted that the faculty members that showed resistance to technology integration couldn’t see how web-based course content can uphold their university’s mission statement, when, in fact, technology has been successful in meeting this end.

ID3 indicated that communication gaps with faculty members are almost non-existent because of the strong pedagogical background they (ID3) possess. ID3 sensed that most faculty members on their campus have a high regard for ID3 because ID3 has such a strong pedagogical foundation. ID3 observed how faculty members view them as being a peer or colleague. Another interesting observation that was made by ID3 indicates that if an instructional designer possesses less of a pedagogical background, IDs can be “looked down on” as not being “as educated” and this can be delimiting because they “are not worthy of respect” by some faculty members. In most cases, the instructional
designer in these circumstances has to prove themselves to faculty members that have this “superior attitude.” ID3 observed that this attitude could be exceedingly detrimental to the communication process between the faculty member and the instructional design consultant.

ID4 noted that the faculty members they consult with can have knowledge of the many tools but not know where to start applying them to their courses. ID4 emphasized that the potential possibilities of technologies that are covered with the faculty member by IDs in the consultation are so vast that it is almost certain the faculty member has not seen good models for how to apply these tools to their courses. ID4 explained how communication gaps can exist when a faculty member does not realize that they have not articulated a broader sense of their teaching style, overall objectives, and outcomes to ID4 so they can relate to the faculty member the “overarching technology implementations strategy” that can be integrated throughout their course, rather than thinking how a single tool can solve a single problem occurring once in a course.

**Instructional Designer Question 3**

The third query asked: “When meeting with a faculty member for the first time, what determines the type of language or technical terminology to use”? Here is where responses related to the first meeting in the consultation process were reported by the instructional designer respondents and how they evaluate their clients. It is interesting to hear how the needs assessment and task analysis are evident in these discussions.
ID1 stated that they utilize the Concerns Based Adoption Model (CBAM) Stages of Concern and/or the CBAM Levels of Use questionnaire prior to the first meeting. They also specified that this is not always possible. ID1 reported that often an on-the-spot assessment is performed and this is based on the faculty member providing a description of what it is they would like to accomplish, why they would like to do it, what is the desired learning, and how they think it should be done with what technology. An interesting key point that ID1 shared is that the language used by the faculty member to describe this process provides insight into the level of use and comfort with the given technology. ID1 asks the faculty member to describe in their own words what was just explained and periodically stops to ask, “Does this make sense?” ID1 stated that, based on faculty response to this periodic recap of their understanding about technology, descriptions/analogies related to technology could be “tuned up or down” as needed.

ID2 discussed how they spend a reasonable amount of time getting to know the faculty member first by asking questions focusing on their experiences. ID2 clearly stated that there are a great number of factors that influence their approach in the consultation process, but the focus is primarily centered on teaching and learning and less centered on technologies. ID2 reported a list of factors that they implement in their practice and these include

1. Discipline
2. Experience in teaching, both face-to-face and online
3. Interests that relate to teaching
4. Goals for the course
5. Terminology they use as they try to relate it to what they already know

ID3 stated that the first meeting with a faculty member revolves around what type of technical experience the faculty member already possesses. ID3 informed the author how they seek understanding related to the faculty member’s teaching experience and how well they understand technology. ID3 stated that they look at how well the faculty member writes objectives, whether they are able to organize activities effectively, and how well they write rubrics. ID3 also noted how they try to gain insight into how much technological understanding and experience the client possesses. ID3 is also interested in knowing how much time they spend on the computer and if they like using the computer.

ID4 reported that when they begin the consultation process with a faculty member, they start at a very global level, wanting to know what the faculty member teaches and why they teach their courses. By understanding the faculty member’s passion for the subject matter, ID4 gains insight about how the faculty member views themselves as a facilitator of learning, their awareness of the role of technology in their field, and how the technology functions in the learning process. ID4 discussed how they talk to the client about the “culture” of the faculty member’s department toward technology-enhanced learning. By doing so, ID4 can gain insight as to the kind of support their client may have from their colleagues. ID4 declared that this global discussion helps to builds rapport as it helps them to understand their client’s teaching style so they can tailor their instructional support approach and the level of terminology to what their client feels comfortable with.
Instructional Designer Question 4

The fourth query asked: “From an Instructional Technology Consultant perspective, what process do you go through in order to determine a faculty members need when assisting them in the design process of a web-based course? Are there any barriers in communication that makes the process difficult? If needed, describe an example of a consulting experience.” The instructional designer responses to this query varied, as they are based on the different consultation strategies each instructional designer employs. There were similarities among the responses related to outcomes, need, and teaching style, as the focus is more on pedagogy during the first meeting with each consultant.

ID1 reported for the second time how in an ideal fashion they would have the faculty member complete the CBAM 35 item States Of Concerns and/or Levels of Use Questionnaire. They again pointed out how most often, the on-the-spot needs assessment is performed in a face-to-face environment. ID1 explained how the face-to-face scenario helps to determine what the faculty member would like to do, why they would like to do it, the desired learning outcome, and what technology they feel should be used to achieve the desired outcome.

ID1 claimed that the needs of the faculty are preliminarily determined via email or by phone before they begin. If the faculty member can clearly identify the learning objectives and overall learning goals and describe what they think they should do next, ID1 encourages them to move forward on their own. ID1 mentioned that they have the faculty member check in with them after the first two weeks to report progress,
identify problems, and/or seek help with tasks using technology they do not know how to do.

ID1 added that if a faculty member has trouble explaining their outcomes, then they are advised to participate in a one-on-one discussion in a face-to-face consultation session. According to ID1, during the consultation, they discuss with faculty (a) what they would like for the student to learn; (b) what instructional strategies will accomplish the desired learning outcomes; (c) what technologies will support those strategies; and (d) how to use one of the technologies to begin building the course. ID1 added that their response time to faculty through phone and email is slow, due to the fact that they are a single instructional designer servicing numerous faculty members.

ID1 noted that there is a “level one support team” available for faculty on their campus. This service can be viewed by ID1’s faculty members as being useful or frustrating. According to ID1, the service provides handouts, video, and quick start guides, along with short trainings to help faculty in the “Task Management (How do I . . .) stage.” ID1 revealed that the largest barriers in communication come to pass as a result of issues in timeliness, the inability of faculty to articulate precisely their problem or issue, and faculty failure to include in their discussion all the pertinent factors involved (i.e., browser type, version, OS, or describing what they were doing when the issue occurred). ID1 stated that this could slow the troubleshooting process, making it difficult to determine whether an error is a “user error” or a “technologies error.”

ID2 indicated that faculty members asked a great deal of questions. ID2 claimed they try to listen more than they speak, as they want to hear the faculty member’s
story, their experiences, as well as their successes and frustrations. ID2 reported that while they are listening, they take notes and brainstorm ideas as to how they can assist the faculty member in having success with the design process. ID2 claimed the following questions are important to ask in the consultation process.

1. “Why do you want to teach this course online?”
2. “Describe your teaching style.”
3. “Tell me about your class.”

ID2 stated that potential barriers in communication exist when instructional designers focus more on the technology and fail to translate the discussion into teaching activities or outcomes. ID2 mentioned that barriers in communication can also arise when faculty sense that instructional designers only focus on technology and do not have any teaching experience or any understanding of how to connect technology to education.

ID3 asserted that before meeting with a faculty member for the first consultation, ID3 spends time “perusing” campus resources to acquire contextual background information regarding the course description. ID3 stated that they ask their client questions regarding the course prerequisites, curriculum, and inquire whether it is a general education course. ID3 allows faculty members to describe their course when they meet for the first time in their own words and to name the “top three things” they want their students to walk away with from the course and remember forever. ID3 emphasized that by utilizing this strategy, the faculty member sees the “big picture” of their course content. ID3 stated that the first consultation has very little to do with technology but rather is focused on effective pedagogical concepts. What ID3 tries to accomplish with
this approach is to get faculty members away from “using technology for technology’s sake” or using it because they “think it is cool.”

ID3 revealed that on their second consultation with the faculty member, they discuss the course’s learning objectives more in-depth and what technologies they think will help to achieve their learning objectives. ID3 shared how they discuss with their client the learning styles of students. ID3 also noted that they try to find out if the faculty member knows their own learning style. ID3 made clear that if the faculty member does not know their own learning style, they encourage them to use the VARK guide to learning styles to find out. ID3 related that they have their faculty clients think about learning styles when creating assessments encouraging them from not using strictly multiple choice/true false/fill-in-the-blank questions. By doing so, ID3 articulated that students could be assessed in different ways that spotlight their strongest learning style.

In further consultations, ID3 mentioned that they have their clients devise a scheduled plan that includes weekly deadlines, outlining what modules they will work on within the time frame, and then they meet with the client to review their progress to see if it is realistic. Using mind-mapping techniques, ID3 discussed how they help their clients visualize the “bigger picture” in regard to learning objectives and the types of tools they are using. ID3 mentioned that they contribute creative ideas concerning technology that the faculty member may or may not have thought of to address student-learning styles. ID3 revealed how they discuss the types of training a faculty member will need and go over the level of commitment it will take on the faculty member’s part to fulfill their objectives in an online environment. ID3 stated that they schedule trainings with their
client and work together to get them “up to speed” technologically. ID3 related how they not only work one-on-one with faculty, but also send them away with “homework” in the form of online video tutorials. ID3 observed:

Like students on any level, faculty members will achieve success with web-based course development when there is clear communication, structure, creativity, high expectations, and a sense of collegiality and unity of purpose established from the very first consultation.

ID4 stated that they conduct the “global conversation” which sets the tone and context of the consultation. ID4 informed that they then move into greater detail about a particular course, asking the faculty member to explain what the course would look like in the classroom. ID4 stated that ID4’s focus is on the ways students are engaged the material, the reading load, and how students interact with one another in the course. ID4 informed the author that the best tools that are supported at the campus where they practice are centered on collaborative learning in an online environment. As a result, ID4 is less interested in what the faculty member thinks a web-based course should look like. Instead, ID4 stated that they are more interested in how they can help the faculty member translate the way they like to teach and inspire their students using the tools that are available. ID4 asserted that there are faculty members that have a “preconceived notion” of what web-based learning should look like. ID4 noted that they are inclined to tell faculty members about the parts they think easy to put online, for example, a quiz, or a PowerPoint file. ID4 stated that in their perception, these recommendations do not create a barrier in communication, but instead what does generate communication barriers is the way a faculty member is thinking about ways to be successful online. ID4 articulated that it is their responsibility to help the faculty member transcend these barriers by talking
about and/or showing the faculty member examples of innovative ways to develop a high-quality online course. ID4 explained that in the institution where they practice, there are reliable resources that enable faculty members to find specific aspects of online implementation on which to concentrate.

Faculty Survey/Questionnaire Analysis

The survey instrument that was used to collect data from CSU, Chico faculty members produced results that were analyzed by quantitative procedures. In theory, the original intent was to gather data from 100 respondents, using this instrument. In reality, there were only 35 actual respondents who participated. Demographic variables were reported by frequency distribution. These data were collected by means of a Likert scale with a five-point rating where “1” stands for “Strongly Agree” and “5” stands for “Strongly Disagree.” Certain data that were collected have been cross-tabulated for determining statistical significance using the chi-square distribution.

Demographic Frequency

Table 1 exhibits the total number of valid faculty responses to the survey/questionnaire. Of the 35 valid respondents, 62.9% completed the entire survey, meaning they answered not only the survey, but also the short-answer questions (SAQ). The valid responses equaling the remaining 37.1% of the population included those who answered the survey portion of the instrument but not the SAQs.
Table 1

Qualified Status of Respondents

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid percent</th>
<th>Cumulative percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid 1*</td>
<td>22</td>
<td>62.9</td>
<td>62.9</td>
<td>62.9</td>
</tr>
<tr>
<td>Valid 2**</td>
<td>13</td>
<td>37.1</td>
<td>37.1</td>
<td>100.0</td>
</tr>
<tr>
<td>Totals</td>
<td>35</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
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</tbody>
</table>

*Completed the survey including the short answer questions.
**Completed the survey without responding to the short answer questions.

Table 2 illustrates the proportions of gender that responded to the survey/questionnaire. The total percentages were 25.7% male and 74.3% female.

Table 2

Gender of Qualified Respondents

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid percent</th>
<th>Cumulative percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>9</td>
<td>25.7</td>
<td>25.7</td>
<td>25.7</td>
</tr>
<tr>
<td>Female</td>
<td>26</td>
<td>74.3</td>
<td>74.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Totals</td>
<td>35</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Table 3 embodies the age distribution of the respondents. Out of all the respondents, 8.6% were between the ages of 20-30, 20.0% were between the ages of 31-40, and 71.4% were between the ages of 41-50+ years.

Table 3

*Age Distribution of Qualified Respondents*

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid percent</th>
<th>Cumulative percent</th>
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<tbody>
<tr>
<td>20-30</td>
<td>3</td>
<td>8.6</td>
<td>8.6</td>
<td>8.6</td>
</tr>
<tr>
<td>31-40</td>
<td>7</td>
<td>20.0</td>
<td>20.0</td>
<td>28.6</td>
</tr>
<tr>
<td>41-50+</td>
<td>25</td>
<td>71.4</td>
<td>71.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Totals</td>
<td>35</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 4 represents tenured faculty as 45.7% of the sampled population and the remaining non-tenured faculty total 54.3%.

Table 5 reports on Tech Use among faculty. Tech use variables are represented as “minimal” being 14.3%, “moderate” being 42.9%, and “extensive” being 42.9%.

Cross-tabulated Analysis

The following data represent cross-tabulations that were performed using the demographic prompt Tech Use with valid responses being “moderate” and “extensive”
Table 4

Tenured Faculty

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid percent</th>
<th>Cumulative percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>16</td>
<td>45.6</td>
<td>45.6</td>
<td>45.7</td>
</tr>
<tr>
<td>No</td>
<td>19</td>
<td>54.3</td>
<td>54.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>35</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

compared to responses to question 2, question 3, question 5, question 8, and question 11, which are listed in the Likert scale portion of the survey. Further analysis consisted of performing cross-tabulations with question 2 against question 13 and question 9, as well as question 4 alongside question 11.

Table 5

Tech Use

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid percent</th>
<th>Cumulative percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimal</td>
<td>5</td>
<td>14.3</td>
<td>14.3</td>
<td>14.3</td>
</tr>
<tr>
<td>Moderate</td>
<td>15</td>
<td>42.9</td>
<td>42.9</td>
<td>57.1</td>
</tr>
<tr>
<td>Extensive</td>
<td>15</td>
<td>42.9</td>
<td>42.9</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>35</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
No significant difference occurred where $\chi^2(3) = 2.730, p = .435$. N. S. when the query: “When learning about a new technology, I am proactive and ready to jump in and learn” (Q2) was cross-tabulated with Tech Use (Figure 1). Extensive users of technology appear to be largely in agreement with Q2 when compared with moderate users of technology, who seem to disagree more with this prompt. There is an indication of reluctance among moderate users towards learning about new technologies as this aligns with instructional designer questionnaire responses. It seems logical that extensive users would have less reluctance towards learning new educational technologies.

Figure 2 illustrates a significant difference where $\chi^2(3) = 7.912, p = .048$ occurred when the Tech Use was cross-tabulated with the prompt: “I feel that I do not understand the technical terms that are frequently spoken by an Instructional Designer when they assist as I am designing or troubleshooting online course content” (Q3). Again, it seems that extensive users of technology disagree with this prompt, as would be appropriate, because they are more familiar with the technical terminology associated with educational technologies. As the instructional designer questionnaire data indicated, when faculty members master the use of technology, they are prone to a higher level of use. On the other hand, moderate users showed a surprising agreement with this prompt, indicating a lack in technical terminology understanding. Data collected from the Instructional Designer questionnaire indicated “that potential barriers in communication exist when instructional designers focus more on the technology and fail to translate the discussion into teaching activities or outcomes.” In the faculty short-answer responses,
there was mentioning that instructional designers should have greater knowledge of the faculty member’s particular academic discipline when consulting with them. This supports Research Question 2 that in fact a need for more pedagogical understanding among instructional designers is needed instead of a discussion of how course content should be technology-driven.

Figure 3 shows the results of the cross-tabulation between Tech Use and the prompt “I feel that the language associated with computer technology causes a phobic reaction when I’m trying to learn how to integrate technology into my course content” (Q5). A statistically significant result, as $X^2_{(3)}=8.553$, $p=.036$, was observed. Phobic reaction in understanding technical terminology for the moderate user is substantiated by
Figure 2. Cross-tab comparison between Tech Use and question 3.

This comparison. Although a majority of responses collected from moderate users were indicative of being in disagreement with the prompt, there was a strong portion of moderate users who feel a phobic reaction about technology in relation to technical terms. Experience is not necessarily a key factor in understanding and communicating technical need, according to the significant difference in this cross-tabulation.

A statistically significance results is displayed in Figure 4 when $\chi^2 (3) = 11.244, p = .010$ as Tech Use was cross tabulated with the prompt, “When working with an Instructional design consultant I like having them communicate to me who, what, when, and, why about how the educational technology might work best for my course content” (Q8). Both moderate and extensive users expressed agreement with this
prompt. There is a concern with how two of the extensive users of technology remain neutral to this prompt indicating some lack of understanding or they are not persuaded either way. Some of the data collected in the short-answer questions from faculty indicated how “faculty need to have access to a better variety of examples best practice.” Others mentioned how they “would like to see the technology in action through an example so [they would] have some understanding of what it does and does not do before [they] start looking for advisement in using it.” The instructional designer questionnaire revealed how faculty members find relief when they have help solving technical issues.

A statistically significant difference occurred when the prompt Tech Use was cross-tabulated with “I feel there are communication barriers when seeking assistance
from an instructional designer or technology specialist’ (Q11, $\chi^2(3)=9.744, p=.021$) (Figure 5). The extensive users for the most part disagreed with the prompt, while the moderate users agreed that there is a potential barrier in communication when seeking technical assistance. A faculty member reported “not understanding terms used by the consultants” in their short-answer response, and instructional designers indicated that they “take it upon themselves to be the ones to bridge the gaps in communication.” Moderate users are seemingly the majority of those who experience communication barriers during a consultation. The data indicates that these particular users could be more dependent on the instructional designer to make the communication clearer for them.
in regard to technology implementation, or, perhaps, that the instructional designer has little or no pedagogical background.

The prompt “Choose the best response that describes the way you accept changes with educational technology” (Q13) asked respondents to select one of the options from choices: “Innovator,” “Early Adopter,” “Early Majority,” “Late Majority.” When cross-tabulated with the prompt “When learning about a new technology, I am proactive and ready to jump in and learn” (Q2), statistical significance was determined where $\chi^2(9)=19.664, p=.020$ (Figure 6). When compared to the innovator, the late majority users are reluctant to proactively “jump in and learn” new technologies.

**Figure 5.** Cross-tab comparison between Tech Use and question 11.
Figure 6. Cross-tab comparison between question 13 and question 2.

The data raised concern and questions such as “why are the innovators proactive using educational technologies? Why does the late majority take so long to use educational technologies?”

Figure 7 demonstrates the cross-tabulation results of prompts “When learning about a new technology, I am proactive and ready to jump in and learn” (Q2) and “I am not sure I understand technical terminology” (Q9), which produced a statistical significance of $\chi^2(9)=19.326, p=.023$. Interestingly, there are faculty members who indicate a strong desire to implement educational technology and at the same time are not sure they understand the technical terminology that exists in relation to this integration. Some faculty members pointed out in their short-answer responses that they would like
consultants to assess their need before offering them assistance. They stated that articulating their need is easier some of the time and more difficult at other times. It has been mentioned also that, at times, they may need some prompting from the instructional designer to “pull their need out of them.”

The cross-tabulation between the prompts “I feel there are communication barriers when seeking assistance from an instructional designer or technology specialist” (Q11) and “I feel like I need to explain my course content in detail when consulting with an Instructional Designer to make them understand my need” (Q4) provided was not statistically significant and is shown with \( \chi^2_{(12)} = 16.757, p = .16, N. S. \) (Figure 8). This testing strongly shows that a greater part of the sample agrees with having to explain
Q4: I feel like I need to explain my course content in detail when consulting with an Instructional Designer to make them understand my need. * Q11: I feel there are communication barriers when seeking assistance from an instructional designer or technology specialist.

Figure 8. Cross-tab comparison between question 4 and question 11.

their course content in detail and at the same time feel there is a barrier in communication when in the consultation process. The data shows that there is a gap in communication, and because of this gap, faculty members find it necessary to explain their need in greater detail to be understood by their instructional design consultant. In the short-answer responses, it was mentioned by a faculty member that there should be a “meeting of the minds” in regard to consultation process. This also shows how an instructional designer should perform the needs assessment during their consultation with a faculty member.
This finding may indeed be substantial for future recommendations related to research concerning the needs assessment.

Faculty Short-answer Questions (SAQs)

As part of the survey/questionnaire hosted online for faculty respondents, three short-answer questions were delivered. The following is synthesis of their responses to those queries.

Faculty Member Short-answer Question 1

The first short-answer question that faculty members responded to stated:

Think of an experience you had communicating your technology needs and/or issues with an instructional design consultant. What do you think would have made that communication more effective? Are there any gaps in communication? The responses to this query included everything from instructional designers having “preconceived notions about what to do in my course” to having “a greater understanding and knowledge of computer and software terminology.” Most faculty members agreed that instructional designers should have greater knowledge of the faculty member’s particular academic discipline. Other faculty members contended that “Instructional designers/consultants should be former or current faculty members [and] if need be, we should train interested faculty members to be design consultants.” One faculty member did assert “communication would be more effective if tech designers did not attempt to foist a view of cognition on an instructor.” Other findings included that there should be “more shared terminology.” One faculty respondent reported “not understanding terms used by the consultants” and also that instructional designers should “take it upon themselves to be the ones to bridge
the gaps in communication.” The faculty member also noted, “I think more discussion of pedagogical goals might enhance any interactions.”

One respondent related their experience while consulting over the phone with an instructional designer. While in the middle of a phone consultation, this faculty member stated, “we can be looking at the same screen, but there is still a barrier to communication clearly.” They discussed how once the instructional designer and they both clarify what they “mean” and are “looking at,” they then make progress. The faculty member stated “that [the consultation process] would go better in a face-to-face environment.” Another faculty respondent conceded, “instead of trying to resolve the problem over the telephone, I should have met with the consultant face to face.”

It has been discovered through the data that there is a need for instructional designers to listen carefully to faculty members. One faculty member noted that “An instructional design consultant should be a good listener first and foremost.” This faculty member also stated that instructional designers should “not assume an educator doesn’t know what to do with the technology once the concept of how [that technology] works is understood.” Some faculty members feel they are well-supported at their institution of higher learning. One in particular noted that “Instructional design consultants at CSU, Chico... listen carefully to instructor’s needs and ideas, [and] there are few problems communicating.” Another faculty member stated, “If it is not an issue about ‘what’ technology to use to achieve a goal, I’d like to discuss that pedagogically. I guess I want the consultant [to] assess my need before jumping in to help me.”
**Faculty Member Short-answer Question 2**

The second short-answer question that faculty members responded to stated: Because faculty members and instructional designers work in slightly different arenas, in your opinion, what specific steps should be taken to bridge communication gaps when they occur? Interestingly, this query elicited a mixture of responses that relate to the needs assessment, academic discipline, and pedagogy, as well as the communication model.

One of the chief concerns that were noted in the data is that “Faculty need to have access to a better variety of examples best practice.” This faculty member also mentioned how they “would like to see what other faculty are doing to support their courses with technology.” Another response indicated that “short tutorials that introduce types of technology and their capabilities before scheduling an actual appointment for setting up technology would be helpful.” The same faculty member stated that they “would like to see the technology in action through an example so [they] have some understanding of what it does and does not do before [they] start looking for advisement in using it.”

When concerning the needs assessment, one faculty member indicated: The "designer" should be the professional and determine if the problem is a "tech" issue that can be "fixed" which is beyond the faculty member’s reach or if they determine this is a problem the faculty member can "fix" then explain that but also explain they will "teach" them how to fix it . . . as opposed to never clarifying the difference, walking the faculty member through a series of steps that the faculty member may never need to remember, or if they do, then they didn't learn the steps well enough for future use. The Designer has to be professional enough to diagnose what approach is best for the situation presented by the faculty.
Another faculty member furthered this idea by stating, “There should be a meeting—an actual meeting of the minds. The collaboration is not one-sided. Educators and instructional designers have skills and information that each can use and that provide benefits to those with whom they work.” One faculty member emphasized, “I want the consultant to assess my need before jumping in to help me. In some cases I can clearly articulate the need, in others I may need some prompting to pull it out of me.”

On the other hand, one faculty member mentioned, “Designers need to know some details of the academic discipline.” There was another faculty respondent that agreed, as they stated, “I think it helps if the faculty can get to know the designer and talk in general terms about the class before launching into specific projects.” Another faculty perspective indicated, “Both parties need to be active listeners as well as knowing how to ask appropriate questions to obtain the information that is helpful to accomplishing the task.”

**Faculty Member Short-answer Question 3**

The third short-answer question that faculty members responded to stated: Given the situation, list three things an instructional design consultant should know about curriculum, instruction, educators, and technology when assisting an educator with designing web-based course content. The main concern that was revealed in this query related to how technology does not necessarily facilitate learning. Much of the faculty perspective targeted how instructional designers should be knowledgeable towards faculty members, teaching a technique that is centered on learning objectives and out-
comes. There was also concern about how instructional designers should be aware of how specific disciplines can have specific technological needs.

Interestingly, the data revealed one faculty member’s reference as to how they and instructional designers should “work in a partnership.” The faculty member stated, “We present content, SLO (Student Learning Objectives), assessment paradigms, and instructional design consultants represent suitable technology.” Another faculty member noted that instructional designers should know “how to ask good questions to clearly diagnose what the faculty member needs, sometimes they might not already know.” They also stated how the instructional designer should “ask what the faculty wants to achieve with their use of technology and then provide the faculty with a clear picture of what their goals involve.” This same respondent made it clear that the instructional designer must “realize that many faculty do not have ‘pedagogical’ goals or knowledge, they just know they want to use tech for something, and possibly assist them in building a pedagogical goal into their courses.” This compares to another response that stated, “We typically want to do things as quickly as possible. We want the technology to work. I want to know methods to make the distant learners feel as valued as if they were in class.”

One faculty member noted, “We don’t all lecture!” They related that instructional designers can be “excited” about providing “electronic ways to dump material on students.” The faculty member stated how “this is a problem for those of us who use a constructivist approach to teaching.” Another faculty member’s answer stated that instructional designers should “know that different faculty—or the same faculty at different times for different purposes—may have different instructional techniques/styles of
getting to a point.” They emphasized that “the IDC will need to understand the faculty intent related to instructional strategies.” This response dovetailed with another faculty member who mentioned that “the consultant should already be familiar with how technology has been implemented in a particular discipline to deliver or enhance curriculum.” The same faculty member also stated that “the consultant should have some knowledge of how people learn, some background in education or communication.” They also emphasized, “the consultant should know all about how the technological side works and be able to work with faculty to put it to the best use for student learning.”

In terms of content being related to technology integration, some faculty member’s responses were concerned with how much an instructional designer should know about teaching and learning. One faculty member stated that an instructional designer should “know the limitations of the instructor/students technology capabilities. Learn a bit about the goals and performance objectives I am trying to get at with the students online” and, “keep it as simple as possible, or interesting and optional as possible.” These statements related to another faculty response that stated, “Teaching is process orientated, not just based on end results.” This faculty also mentioned, “Assessment is inherent in quality instruction. It begins with a good objective, incorporates strategies and experiences, and then allows for collection of data or results that is either formative or summative.” Lastly, the same faculty member declared, “Students in the course may range in age from their—20s to their 60s—technology and its use are not evenly accepted by all students in a course.” Another faculty member mentioned, “I think the objectives of the course should be known, so those can be used to filter the use of technology.
Knowing the comfort level of the educator with technology in general and continuing use of that technology is also helpful.”

Discussion of the Findings

The collection of data through the instrument designed for this study provided the author useful information in regard to answering and/or proving the research questions and hypotheses. This study examined the following hypotheses:

1. There is a gap in communication between the faculty member and the instructional design consultant and this gap unique to this partnership as opposed to other consultant/developer relationships. This study indicated that there could well be a gap in communication between the instructional design consultant and the faculty member. Through the findings, there is evidence to conclude that this gap in communication is unique to this partnership due a difference in pedagogical and technical understanding. Overall, extensive users of technology, when compared to moderate users of technology, have less trouble communicating their need to the instructional designer, although a greater portion of faculty members feels it is necessary that they explain their course in greater detail to an instructional designer.

2. It is important for an instructional designer to understanding pedagogy and understanding helps to produce more effective design and development strategies when consulting with a faculty member while designing a web-based course. The findings of this study ascertained that the instructional designer must be diligent in performing the needs assessment, while being proactive when listening to the need of the faculty member to better understand what they are trying accomplish through their goals and outcomes of
the course. For the instructional designer to have knowledge of technology, pedagogy, and how curriculum can be effectively deployed in an online environment is seemingly the norm and this study helped to substantiate this presumption. The more an instructional designer can know about the how and what of a faculty member’s need, the more effectively they can assist them in managing their content online. As the literature revealed, effectiveness in communication by sharing the communis or “common ground” in the form of common knowledge would be the impetus for a productive consultation between faculty members and instructional designers (Gozzi, 2005).

3. It would be useful for a faculty member to have knowledge of instructional design to better understand how to translate course content normally delivered in a live face-to-face class to a web-based class. There was not any strong evidence to prove that faculty members should have knowledge of instructional design. The findings from faculty did indicate that instructional designers should be former educators. Although the findings do not exactly prove this hypothesis, there seems to be enough information given to call for further examination in this area. The more skill and knowledge a faculty member can possess about their profession can only help them to be more proficient in that vocation.

Further findings assisted the author in answering the following research questions.

RQ1: What roles are performed by an instructional designer? Personal communication with professionals in the field has revealed that the roles of instructional designers can include being a mentor, client problem solver, or simply a resource of information
Literature has described the role of instructional designers as being creators of “an instructional experience that makes certain the learner will accomplish the goals of instruction” (Franquet, 2007, p. 12). Data collected from the instructional designer questionnaire validates this research as the respondents mentioned frequently how they gather information pertaining to goals and outcomes of course content during the consultation process. Inferentially, it can be noted that instructional designers can take on the role of being a tutor, mentor, technical coach, and someone who is acquainted with teaching and learning.

RQ2: Are there barriers in communication between the instructional design consultant and the faculty member and would an increased knowledge of objectives, outcomes, and pedagogical content be helpful for the instructional designer and if so how? Most instructional designers who responded agreed that there are certain communication barriers that exist during the consultation process. The findings revealed that the incapacity to articulate precisely a problem or issue can cause a delay in how long it takes to troubleshoot that issue. Likewise, failing to include all the “pertinent factors” related to an issue can cause communication barriers that can also reduce the timeliness in resolving the issue. This can add frustration that could be responsible for creating barriers that cause some faculty to be discouraged from using technology or that cause some faculty to see technology as being the problem instead of the solution. The findings have clearly revealed that the instructional designer should promote technology as a solution while demonstrating how technology supports course content. It seems logical that in order for
the consultation process to be more proficient, there must be an increased understanding
of the needs of the client.

RQ3: Should some faculty members consider informally becoming instructional
designers to obtain a broader view of the necessary vernacular needed to design and
develop effective online instruction? Some data indicated a need for faculty members to
informally become instructional designers. Commentary made by a faculty member in
their response to a short-answer question pointed out that “instructional designers/
consultants should be former or current faculty members [and] if need be, we should train
interested faculty members to be design consultants.” This supports the view of one
instructional designer in their commentary who indicated that communication gaps with
faculty members are almost non-existent because of the instructional designer’s strong
pedagogical background. It has been noted that there are some faculty members who tend
to “look down” on instructional designers if they sense that their academic qualifications
are limited. Arguably, it has been declared that this faculty “attitude could be greatly
detrimental to the communication process between the faculty member and the instruc-
tional design consultant.” There appears to be a need for an “overlapping” of skill
between the faculty member and the instructional designer in regard to their professional
expertise.

The findings related to these hypotheses and research questions have aided in
increasing understanding about the faculty member’s need for seeing more examples of
how pedagogy and technology are integrated. What seems to be lacking for some faculty
members are solid examples of technology integration. Can this lack of understanding
create a barrier in communications during the consultation process? The study has helped
the author to understand that there can be communication barriers between the faculty
member and the instructional designer when designing web-based course content. What
has been demonstrated is the need for more clear-cut examples of how technology can be
implemented with course content for the sake of the faculty members’ understanding.
Lack of these models can be well thought of as potential barriers in communication as
this can make it difficult for one to describe their need without sharing any “common
ground knowledge” of a particular practice. Being able to provide specific examples of
technology integration is a responsibility for instructional designers to consider when
consulting with faculty. What these data demonstrate is that instructional designers
should have a greater understanding of curriculum and instruction in academia and,
likewise, the faculty member should have a sound understanding of instructional design,
especially when designing web-based content.
CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

This study contains the results of research that was conducted through the use of qualitative and quantitative methodologies to determine the validity of potential communication barriers between an instructional designer and a faculty member during the consultation process in relation to online course content development. In analyzing this occurrence for validity, the intent was to improve the quality of online education through the infusion of technology as it is manifested by the partnership between the faculty member and the instructional designer. This chapter provides a summary of this study and draws conclusions related to it, while offering recommendations for further research.

Summary

In the recent past, the world of academia has increasingly adopted the use of educational technologies, and this is especially common in the realm of higher education. As the demand for online instruction increases, there is a greater need for faculty members to collaborate with instructional designers to create effective course content, both synchronously and asynchronously. In its advent, online education was entirely in the hands of the faculty member and the quality of course content was in the hands of
instructors who lacked skill, not only with electronic technology, but also with instructional design. Research has concluded that it is unrealistic for a faculty member to effectively manage their course content while fully executing the rudiments of instructional design in an online environment (Oblinger & Hawkins, 2006). Designing effective web-based content is better accomplished when faculty members are assisted by competent mentors that not only have expertise with instructional design technology but also understand goals, outcomes, and learning objectives related to pedagogy.

To facilitate stronger relationships in the consultation process, analyzing how communication barriers can possibly thwart the progress of effective online course design became the interest of the author. Therefore, the principles of Vygotsky’s zone of proximal development became this study’s theoretical framework, and so simultaneously dovetailed with the learning concept, scaffolding. The relationship between the instructional designer and the faculty member can be modeled as tutor and tutee, but this is not always the trend. Research related in this study has revealed there are many “roles” an instructional designer can perform in their capacity. When performing these roles with a faculty member, the communis, or “common ground” between the faculty member and the instructional designer, must be well understood by the instructional designer in order facilitate an effective design protocol or instructional design intervention.

Conclusions

By investigating literature, a great deal of understanding was obtained in regard to mentoring, communication models, needs assessment, and how to design effective web-based course content. As a result, the research became the foundation of a study
that produced key findings that pointed to potential communication barriers between faculty members and instructional designers during a consultation. The analysis, conducted through the use of the survey/questionnaire, provided results that demonstrate the need for instructional designers to carefully articulate technical terminology to their clients. In regard to the instruction designer, the research indicates that careful consideration of their client is expected, especially in trying to understand their client’s skill level, and skill level must be recognized early in the consultation, so when technology implementation is discussed, it can be done without overwhelming the faculty member. These implications are in alignment with the literature, as it were, pertaining to the needs assessment and task analysis. Respondents to the questionnaire who claimed they did not understand technical terms spoken to them during a consultation confirmed their lack of understanding as they responded with phrases such as “not understanding terms used by the consultants.” Some expressed that instructional designers should be more involved with closing the gaps in communication while providing “more shared terminology.”

When providing common terminology, instructional designers revealed through their questionnaire responses that they have faculty members communicate goals and outcomes during the consultation process. Faculty members agreed by suggesting that instructional designers should be well-informed about how “learning is centered on learning objectives and outcomes.” Faculty members believe that they are the representatives of student learning, whereas instructional designers “represent suitable technology.” Although these responses appear to widen the gap in communication, faculty members
still believe that instructional designers should know how people learn, while having knowledge and experience with communication and education.

General faculty member responses did imply the need for instructional designers to be aware of various disciplines, learning styles, and techniques. The concern was raised that instructional designers should be aware of the limitations of technical knowledge among faculty members. Since some academic disciplines are less “technically driven,” per se, it would also be helpful if instructional designers were somewhat more simplistic in their technical assistance.

Interestingly, the greater percentage (f =71.4%) of faculty member respondents to the survey/questionnaire ranked in the higher age category, indicating that most of the respondents are potentially “digital immigrants.” This could possibly explain why they feel it is necessary to explain their course content in greater detail with instructional designers. Based upon the author’s professional experience, faculty members that over-articulate their need to an instructional designer often create a communication barrier by this undertaking. This is so because oftentimes the intervention is simple to detect and over-communicating the need can make that process longer, due to the unnecessary communication on the faculty member’s part. The assumption is that this may be a result of the faculty member being a “technophobic.” The results of the study did illustrate a statistical significance towards phobic reactions to technical terminology when cross-tabulated with level of tech use. A statistical significance ($x^2 (3)=8.553, p=.036$) was observed, and this was mainly among moderate users.
This study raised concern over faculty members having understanding related to instructional design. Although the data were inconclusive that faculty members should have knowledge of instructional design, it does seem realistic that students of education are provided with some practical experience related to instructional design technology in their academic programs as they become educators. Careful consideration should be made when going through such programs, especially if one’s desire is to teach in online environments.

Recommendations

When closing the gap in communication between the instructional designer and the faculty member, there are a few points to consider beyond the actual consultation. The recommendations that are listed in this section are based upon the related processes and findings from this study:

1. Institutions of higher learning that offer academic programs related to instructional design technology should include in their educational plans areas related to performance improvement, return on investment, and rethinking the roles of instructional designers and these areas should not only apply to corporate training, but also to curriculum and instruction in K-12 and/or higher educational environments.

2. When training educators, in either formal education or professional development programs, focus should be placed on activities related to instructional design technology so future educators can become familiar with how educational technologies can support teaching and learning and learn related terminologies in regard to instructional design.
3. Institutions of higher learning should take into consideration the allocation of more resources for technical support services such as the Technology and Learning Program at CSU, Chico for faculty who seek professional consultation in regard to technology infusion into synchronous and asynchronous learning environments.

4. More focus should be put on creating a partnership between instructional designers and faculty members that entails an overlapping of knowledge bases so that each professional field may understand the other for the purpose of higher quality consultations.

5. Faculty members should have more access to solid examples of technology integration that demonstrate how to achieve pedagogical goals related to course content and that are discipline-specific.

6. By facilitating greater understanding pertaining to “common ground” knowledge between both instructional designers and faculty members, effective communications should be established between these professionals, in regard to the need of the faculty member, during the consultation process.

Finally, if this study were to be replicated, there would indeed be some necessary modifications to consider for implementation. Although there were limitations to the study, these changes should be considered in order to expand its scope.

First of all, the faculty member response rate was low and this is primarily due to the sample being limited to one institution of higher education. The original intent was to survey 100 faculty respondents. If a more meticulous study is to be performed, then it is recommended that a larger population of faculty members be selected, and this will only be possible if the researcher gathers data from more than one institution. Ideally,
selecting respondents from institutions of higher learning throughout the nation would be optimal, as this would ensure that the sample size would be increased, thus producing a greater number of responses for data collection.

Next, when creating the Likert scale survey, it would be interesting to see how the response rate changes simply by omitting the “neutral” selection. Research indicates the significance of having five choices, but it would be interesting to see how much difference there would be in the results if four or six choices were used in the scale.

Finally, if at all possible, face-to-face interviews with instructional designers should be conducted instead of using online questionnaires. This is also strongly suggested for interviewing faculty members. There is a great deal to be gained by conducting a face-to-face interview because of the complexities of human communication. This stands to reason as research has demonstrated how oversimplified communication models can limit the description of the communication process.

Suggestions for Further Research

The results of this study provided key findings for further research to be performed in this area. Research revealed much information in regard to how oversimplified communication models are in relation to how complex the communication process actually is among human beings. Noise variables exist during this process. Therefore, further research would be valuable to analyze communication barriers created by the “noise” when communicating via email or over-the-phone support calls.
A study in regard to the roles of an instructional designer and their relationship to faculty members may also be conducted to analyze how a “meeting of the minds” can be better facilitated during a consultation.

As the move towards electronic technology in education continues, there comes with it innovations in technology. As new technologies emerge and old ones are improved, their use may increase in K-12 education, especially in middle school and high school. It would be necessary to understand how communication barriers may exist among these educators and their affiliated technical personnel. Therefore, this study could be replicated in these areas.

It would be interesting to see how this study could be revised to accommodate teacher professional development and how communication barriers related to technology may exist. One example of how this can be accomplished can be seen in the Beginning Teacher Support and Assessment program, a professional development organization in Butte County, California, that supports professional development for K-12 educators.
REFERENCES
REFERENCES


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APPENDIX A
FACULTY MEMBER QUESTIONNAIRE ANALYZING COMMUNICATION PATTERNS

Please complete the demographic information listed below by placing an “X” space provided or fill in the blank that correlates with the description.

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<th>My use of Technology with course content:</th>
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<td>___Use technology somewhat with course content.</td>
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<td>___Use technology moderately to support course content.</td>
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<td>___Use technology in a variety of ways to support course content.</td>
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Using a scale of 1 to 5, where “1” means “Strongly Agree” and “5” means “Strongly Disagree”, please indicate with an “X” in the box provided, how much agree or disagree with each of following statements.

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<th>(1) Strongly Agree</th>
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<th>(3) Neutral</th>
<th>(4) Disagree</th>
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<td>I have no problem explaining my technological need to an Instructional Designer.</td>
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<td>When learning about a new technology, I am proactive and ready to jump in and learn.</td>
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<td>I feel that I do not understand the technical terms that are frequently spoken by an Instructional Designer when they assist as I am designing or troubleshooting online course content.</td>
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<td>I feel like I need to explain my course content in detail when consulting with an Instructional Designer to make them understand my need.</td>
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<td>(3) Neutral</td>
<td>(4) Disagree</td>
<td>(5) Strongly Disagree</td>
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<td>I feel that the language associated with computer technology causes a phobic reaction when I’m trying to learn how to integrate technology into my course content.</td>
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<td>I feel that an Instructional Designer should use more pedagogical terminology when consulting with educators.</td>
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<td>I value the opinions of others as it helps me determining whether or not I reject or accept the possibility of implementing technology into my course curriculum.</td>
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<td></td>
<td>(1) Strongly Agree</td>
<td>(2) Agree</td>
<td>(3) Neutral</td>
<td>(4) Disagree</td>
<td>(5) Strongly Disagree</td>
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<td>When working with an Instructional design consultant I like having them communicate to me who, what, when, and, why about how the educational technology might work best for my course content.</td>
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<td>I am not sure I understand technical terminology.</td>
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<td>I am fearful that I do not know how to use educational technology.</td>
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<td>I feel there are communication barriers when seeking assistance from an instructional designer or technology specialist.</td>
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</table>
Select your response by placing an "X" in the space proceeding the item(s) listed below.

1. Choose what best describes your feelings, attitudes, and reactions when learning how to implement educational technology into course content.

   ____Action: I like to start uploading materials immediately to get the course started concerning myself with major and minor details later.

   ____Holistic: Before designing content, I like to plan out the course design to know what technological possibilities exist because I want to see “the bigger picture” in relation to technology and course content.

   ____Caring or Valuing: I like to think through the value of the online course for students before starting.

   ____Detail Oriented: I like to be familiar with the "inner working" of the technology before I use it to create any course content.

2. Choose the best response that describes the way you accept changes with educational technology

   ____Innovator
   ____Early Adopter
   ____Early Majority
   ____Late Majority
   ____Laggard

Short answer questions: Complete the following questions in the space allowed. These questions are related to the communications between the faculty member and the instructional design consultant.

1. Think of an experience you had communicating your technology needs and/or issues with an instructional design consultant, what do you think would have made that communication more effective? Are there any gaps in communication?

2. Because faculty members and instructional designers work in slightly different arenas in your opinion, what specific steps should be taken to bridge communication gaps when they occur?

3. Given the situation, list 3 things an instructional design consultant should know about curriculum, instruction, educators, and technology when assisting an educator with designing web-based course content.
APPENDIX B
INSTRUCTIONAL DESIGNER INTERVIEW QUESTIONS

ANALYZING COMMUNICATION PATTERNS

1. Describe the types of technical terminology that is typically used in the consultation process with a faculty member. You may use hypothetical or real life examples to support your discussion.

2. What are the usual reactions about technology from faculty members during the consultation process? Are there any communication gaps?

3. When meeting with a faculty member for the first time, what determines the type of language or technical terminology to use?

4. From an Instructional Technology Consultant perspective, what process do you go through in order to determine a faculty member’s need when assisting them in the design process of a web-based course? Are there any barriers in communication that makes the process difficult? If needed, describe an example of a consulting experience.
INFORMED CONSENT FORMS

INFORMED CONSENT
Instructional Designer Communication Interview

Please participate in an interview titled Analyzing Communication Patterns Between A Faculty Member And Instructional Designer.

Tim Rogers, a graduate student pursuing a Master of Arts in Education, is conducting research centered on analyzing communication patterns between faculty members and instructional designers in higher education when designing and/or creating web-based courses. This study purposes itself by looking at potential differences in technical and pedagogical communications that may or may not cause barriers within the consultation process between both professionals.

This interview is purely voluntary and participants will by no means incur any penalty for not participating. Respondents will remain anonymous. If for any reason you wish to not continue, you may stop at any time. It must be noted that the only potential risk existing is that the respondent’s dialogue may be identifiable to readers as parts of it may be reported in the facilitator’s thesis. The length of the interview should be no longer than 20-30 minutes.

Your participation in this interview will be a proactive step in the process of making web-based instruction more efficient and reliable. This not only helps faculty and instructional designers who design web-based courses, but more importantly the students that will be enrolling in these types of classes.

Please contact Tim Rogers at 530.592.8199 or trogers@mail.csuchico.edu with questions.

Thank you for your assistance.

____________________________________  ______________________________________
Name of Participant                  Date
INFORMED CONSENT
Faculty Communication Questionnaire

Please participate in this questionnaire/survey titled Analyzing Communication Patterns Between A Faculty Member And Instructional Designer.

Tim Rogers, a graduate student pursuing a Master of Arts in Education, is conducting research centered on analyzing communication patterns between faculty members and instructional designers in higher education when designing and/or creating web-based courses. This study purposes itself by looking at potential differences in technical and pedagogical communications that may or may not cause barriers within the consultation process between both professionals.

This questionnaire/survey is purely voluntary and participants will by no means incur any penalty for not participating. Respondents will remain anonymous. If for any reason you wish to not continue, you may stop at any time. The questionnaire/survey will take about 5-10 minutes to complete. Assuredly, this project has been cleared by the Human Subjects in Research Committee.

I also want to assure you that there is no anticipated risk. Your participation in this questionnaire will be a proactive step in the process of making web-based instruction more efficient and reliable. This not only helps faculty and instructional designers who design web-based courses, but more importantly the students that will be enrolling in these types of classes.

Please contact Tim Rogers at 530.592.8199 or trogers@mail.csuchico.edu with questions.

Thank you for your assistance.
APPENDIX D
May 1, 2009

Tim Rogers
1100 N. Cedar St. #7
Chico, CA 95926

Dear Tim Rogers,

As the Chair of the Campus Institutional Review Board, I have determined that your research proposal entitled "ANALYZING THE COMMUNICATION GAP BETWEEN THE INSTRUCTIONAL DESIGN CONSULTANT AND THE FACULTY MEMBER IN THE DESIGN AND DEVELOPMENT OF A WEB BASED COURSE" is exempt from full committee review.

This clearance allows you to proceed with your study.

I do ask that you notify our office should there be any further modifications to, or complications arising from or within, the study. In addition, should this project continue longer than the authorized date, you will need to apply for an extension from our office. When your data collection is complete, you will need to turn in the attached Post Data Collection Report for final approval. Students should be aware that failure to comply with any HSRC requirements will delay graduation. If you should have any questions regarding this clearance, please do not hesitate to contact me.

Sincerely,

John Mahoney, Ph.D., Chair
Human Subjects in Research Committee

Attachment: Post Data Collection Report

cc: Cris E. Guenter (222)

The California State University