INSTRUCTIONAL TECHNOLOGIES AND CULTURAL ADAPTABILITY: TWO CASE STUDIES

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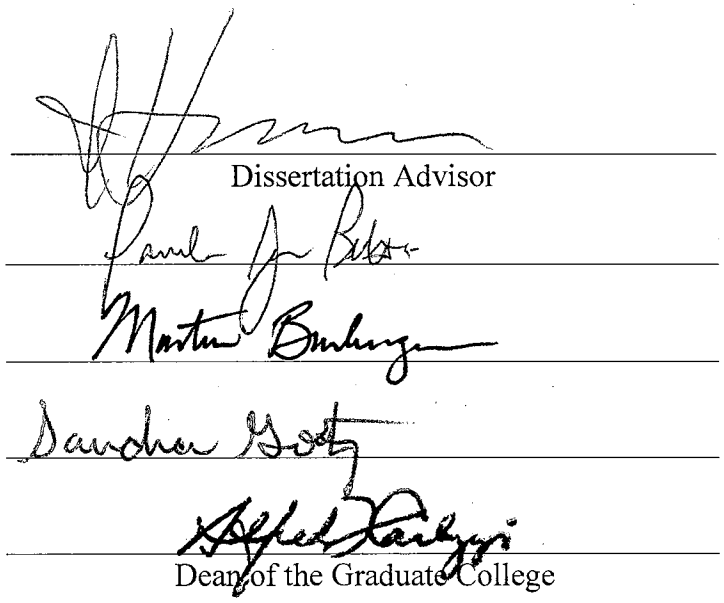

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"The Lord is my strength and my shield; my heart trusted in Him and I am helped; therefore my heart greatly rejoices, and with my song I will praise Him." Psalms 28:7

I could truly not have completed this task without the grace and strength of the Lord. He continuously puts all the right people in my path to guide, empower, and uplift me throughout my life. This whole doctoral experience has been no exception. In particular, He gave me a loving spouse who sacrificed a lot in order to help me succeed and two great kids who patiently waited for their "momma" to be done. This really is the culmination of a group effort and not a product of my own.

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CHAPTER I

DESIGN OF THE STUDY

When we were children, dominoes captivated my little sister and me. We would take them one by one and carefully align them, one right behind the other and make a "train." Sometimes we would make the train of dominoes into a pattern or a design and we always wanted the train to go as far as it possibly could. When the train was completed, we waited to see if we had accomplished our ultimate goal. With one slight push on the front domino, we would initiate a fascinating chain of movements. If we were successful, all the dominoes would fall even, neat and in succession. However, more often than not, our plans and designs would often end in a mess of dominoes, skewed this way and that, some standing, some not. We would then clear the mess and try to figure out why the train of dominoes did not fall smoothly. Was it because of poor alignment or an uneven surface or a design that was too complicated? The derailment, quite possibly, could have been caused by many variables.

I find this analogy suitable to describe what happens with most plans to implement new instructional technologies in an educational organizations. What is envisioned is a smooth chain of events, success that is far reaching and encourages further innovations. We may (or may not) align, plan, and facilitate training, however, as the plan unfolds, we are often left with skewed results and uncertainty. March and Sproull (1990) describe how some technological innovations can spread through organizations rather easily. However, most new technologies, they claim, fail to be integrated at all, the failure blamed on "irrational resistance" or faulty technology.

Is it possible that our views and ways of analyzing technology adaptation are too simplistic and do not take into consideration multiple variables? In reality, the integration and adaptation of instructional technologies is a complex process dependent upon a variety of factors in the organization and should be studied holistically with a unit of analysis that integrates multiple variables. Lynn (1990) suggests that research efforts are directed toward the development of theories that encompass "national and organizational culture, technology, organizational structure, and performance" (p. 195) and that our case studies be "oriented toward issues related to organizational adaptation to and utilization of technology" (p. 196). Therefore, this study then, will attempt to examine the integration and adaptation of instructional technologies in the higher education setting within the larger context of cultural change.

Statement of the Problem

Privateer (1999) states that institutions of higher education are "complex cultures that create, order, and manage information, and as with any organization, they are constituted as dense information networks wound together by ideological and technological strands" (p. 2). New technologies, particularly those described as instructional technologies, have been suggested as the catalyst for change in higher education: "...often it is the very characteristics of new technology that facilitate and even stimulate the changes made" (Denis, Kolodny, Liu, Stymme, 1996, p. 1456). Privateer (1999) states "in academia is the tacit assumption that instructional technologies can spearhead serious institutional reform because they create real change, especially in the area of course content and delivery. Nothing, however, could be closer and farther from the truth, given our definition of 'change'" (p. 2).

Anticipated reform in teaching and learning has not yet been realized in many institutions of higher education. Instead, there remains a discrepancy between vision and actual growth and practice (Olcott, & Wright, 1995, Houseman, 1997). Wallace (1979) would explain this phenomenon by saying that higher education's response to reform by the widespread promotion and integration of instructional technologies is "revitalistic," thereby, characterizing it as a revitalization movement. However, successful reform would consist of the institution's cultural members moving through various revitalization stages before significant change took place.

Purpose of the Study

The purpose of this qualitative case study is to describe and interpret the significant events and perceptions of faculty associated with the adaptation of instructional technologies in two colleges at a land-grant university. From these descriptions, the intent is (1) to understand the potential usefulness of Wallace's theory of revitalization movements in explaining the cultural change process within the two colleges chosen for study, (2) to identify the characteristics of the colleges selected as described in Wallace's stages of revitalization movements, and (3) to identify, in terms of these stages, the implications for future research and practice.

Special Terms

1. Adapt/Adaptation: The term is used in two slightly different ways throughout this study. According to Webster's dictionary, the term adapt means "to make suitable by changing; to adjust to new circumstances" (Agnes, 1996, p. 8). Using this term in conjunction with the chosen variable (instructional technology) suggests that a certain amount of sense-making must accompany the adaptation of

instructional technologies and is an appropriate term to use when discussing the integration of new technologies with pedagogy.

Adaptation is also used to describe one of the six sub-stages that exist in stage IV of the movement, the Period of Revitalization, and occurs when forms of resistance to the new idea, ideology, or doctrine being introduced in the revitalization movement. Leaders or members of the cultural group may at this time choose to modify the original "vision" based on "criticisms or affirmations" in order to give it a better "fit" to the cultural group's personality (Wallace, 1979, p. 426).

2. Instructional Technology/Instructional Technologies: According to the Association for Educational Communications and Technology (AECT) the following definition of Instructional Technology is applicable: "Instructional Technology is the theory and practice of design, development, utilization, management and evaluation of processes and resources for learning....It is often defined either in terms of media and other technology used (e.g., audiovisual media and equipment, computers, etc.), or in terms of a systematic process which encompasses instructional design, development, delivery, and evaluation" (Seels & Richey, 1994). Instructional technologies would, therefore, be those tools or forms which assist in accomplishing that practice.

Research Questions

The following research questions are addressed in this study:

1. At what stage of change, in relation to Wallace's theory of revitalization movements, is each college?

2. How are the changes brought by instructional technologies related to the revitalization stages?

3. How useful is Wallace's framework of cultural revitalization in explaining the process of cultural change and current integration and adaptation of instructional technologies?

Conceptual Framework

"A conceptual framework explains... the main dimensions to be studied--the key factors, or variables--and the presumed relationships among them" (Miles & Huberman, 1984, p. 28). In this study, the primary factor to be studied is cultural change. "Cultures are always in the process of change and invention" (Gilman, 1985, p. 1). From an anthropological standpoint, culture consists of three "mutually supporting," interdependent elements: learned behaviors, shared beliefs, and the surrounding environment. These elements all work to create and maintain a stable culture. Cultural change begins when there is movement away from the "old stability." Gilman (1985) describes the cultural change model provided by Anthony F. C. Wallace as a "second-step" cultural change model. The initial process or "first step" of change begins when there is a move away from the existing "cultural harmony." Often, that movement has been caused by some conflict or stress. The second step manifests itself in attempts to move the cultural group into some semblance of harmony with an entirely unprecedented, innovative way of doing things or back to the original status quo.

Labeled a revitalization movement and a "special kind of cultural change phenomenon" by Wallace (1979, p. 422), the movement signifies a desire to move or shift to a utopian ideal. While the framework has been applied to contexts such as Native

American tribes and indigenous peoples (Carroll, 1975; Schwarz, 1998; Smith, 1978; Champagne, 1983), it has rarely been applied to the education context.

Revitalization movements consist of five stages. These stages have been described as not necessarily discreet, but somewhat overlapping (Wallace, 1979, Muncey and McQuillan, 1993) with many events in one stage occurring simultaneously with events characteristic of other stages. While existence of the stages hint that an "inviolable progression" (Muncey and McQuillan, 1993, p. 416, Wallace, 1979) exists throughout the stages, researchers have disputed that progression through all stages is rare. Further, these researchers contend that the elements of stages should be used as constructs to study cultural change and generate continuous data on its progress (Muncey and McQuillan, 1993).

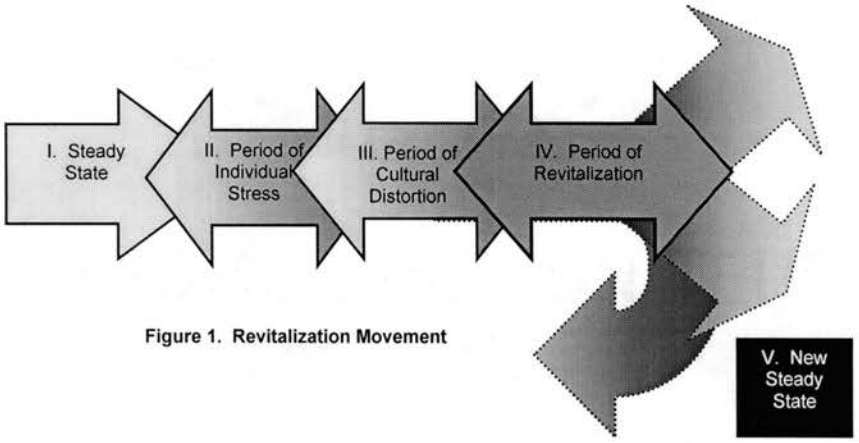

Figure 1. Revitalization Movement

The nature of revitalization movements has an associated "history of failure" (Muncey and McQuillan, 1993, p. 416), and there is no clear indication as to what the resulting cultural innovation may look like (Wallace, 1979). Furthermore, researchers of

this framework have argued that it is almost impossible to predict as far as its outcome (Muncey and McQuillan, 1993).

The purpose of this study is the presentation of the framework of revitalization movements as containing significant constructs for understanding the integration and adaptation of instructional technologies and cultural change in the setting of higher education. The stages, which are further discussed in Chapter II exist as: the Steady State, the Period of Individual Stress, the Period of Cultural Distortion, the Period of Revitalization, and finally, the New Steady State.

Based on the literature review and due to the framework's association with cultural change of a "utopian nature," it is speculated that the phenomenon under study, that is instructional technology and higher education, exhibits characteristics that would characterize it as a "revitalistic response" (Muncey and McQuillan, 1993, p. 394). It may be arguable, therefore, to focus data collection on revealing elements reflecting the particular stage, the Period of Revitalization, with its six tasks and sub-stages rather than constructs evident in all stages. However, since this framework lacks application in the educational arena, data collection was focused on revealing characteristics from all stages and not necessarily just the Period of Revitalization stage in order to explain that stage's usefulness more clearly and explore all of its inherent ambiguities.

Rationale for a Qualitative Design

The purpose of this qualitative case study is to describe and interpret the significant events and perceptions of faculty associated with the integration and adaptation of instructional technologies in two colleges at a land-grant university. From the purpose, we can derive two methodological implications. First, the study views

integration and adaptation through the lens of cultural change and revitalization movements. Since cultural change involves a break from current values, beliefs and meanings instilled within the culture's members, it is logical to use research methods that best illustrate and portray those values, meanings and beliefs in order for them to be fully understood.

Second, researchers have argued the value of utilizing qualitative methods as opposed to quantitative methods to study organizations of higher education. Higher education institutions are considered complex cultural systems that consist of many layers and levels (Dill, 1982; Kuh and Witt, 1988); therefore, choosing methods that will not trivialize findings with statistics have been cited as a more viable option (Keller, 1998). Variables, such as learning and quality, that are of prime interest to policy makers can benefit from the descriptive nature of qualitative research. "Scientific descriptions or statistical correlations cannot tell us how to organize good societies or develop good people...or tell us what is worth knowing" (Callahan, 1996, p. 17, as cited in Keller, 1998).

Qualitative research, which operates within the assumptions of post-positivism, is concerned with process and meanings. Unlike the positivist paradigm, which views reality as a singular and tangible event, the post-positivist paradigm assumes realities as multiple and constructed by the individuals who are involved in the research situation. Method of inquiry is subject to researcher biases and values within the post-positivist paradigm, whereas in the positivist paradigm, inquiry is objective and value-free (Lincoln & Guba, 1998). The researcher in the post-positivist paradigm is the primary instrument of data collection, rather than the researcher's use of surveys, questionnaires, or

inventories in the positivist paradigm. Research using the qualitative method is descriptive in nature and meanings and understandings, as well as processes, are obtained through words or pictures. Qualitative research is also inductive in nature in that concepts and patterns emerge from the details that the researcher gathers (Creswell, 1994; Merriam, 1988).

Data Needs and Sources

The aim of qualitative case study research is to describe and interpret perceptions and significant events associated with the chosen phenomenon; therefore, it is essential to carefully choose methods that will elicit data or empirical information. Qualitative data consist of "detailed descriptions of situations, events, people, interactions, and observed behaviors; direct quotations from people about their experiences, attitudes, beliefs, and thoughts; and excerpts or entire passages from documents, correspondence, records, and case histories" (Patton, 1980, p. 22, as cited in Merriam, 1988). The researcher in a qualitative case study seeks to get as close to the phenomenon as possible in order to provide rich description of the phenomenon under study.

In the instance of this study, the data needed concerned how faculty viewed the nature of instructional technologies being integrated into the academic culture, and the events surrounding their integration, hence facilitating the adaptation of instructional technologies. The lens of revitalization movements (Wallace, 1979) was used specifically to explore how faculty members perceive changes associated with utilization of instructional technologies. The study assumes some level of previous adoption and knowledge of instructional technologies in the participants in order to gain their perceptions regarding adaptation.

Site. The studies were conducted in two colleges on the campus of a large land grant university. Sites were selected upon consultation with central academic and computing services administrative members and their recommendations and upon studying each college, size, scope, and purpose. Each site was assigned a fictitious name that is used throughout the presentation of the data. Note: If the name of the college was consistent throughout other higher education institutions of the same program, attempts have been made to carefully disguise the location. These sites are the College of Human Ecology and the College of Veterinary Studies.

Participants. For the selection of faculty, purposive sampling strategies were applied. Selection of faculty was based on those who were observed to have the ability to address the basic research questions and fit the purpose (Erlandson, Harris, Skipper, & Allen, 1993). For the purpose of this study, faculty members who fit the following characteristics were chosen as the focus of interviews:

1. Faculty members who currently exhibit proficient use of instructional technology tools in their teaching,
2. Faculty members who are emergent users of instructional technologies and exhibit the intention of seeking out new technology tools and training experiences,
3. Those faculty who choose not to use any instructional technologies as part of their curriculum for whatever reasons, such as lack of resources, time, knowledge base, skill, abilities, or perceptions of their appropriateness.

In order to determine the particular faculty members in each college who met these characteristics, initial interviews were scheduled with Associate Deans in each of the colleges. These initial interviews also served as the means to gain "permission" for

conducting the study within the college and as an initial point of reference. The study was discussed in depth with each Associate Dean as well as the profiles of faculty members needed for interviews. The Associate Deans were assured of approval of the university's research board (Appendix A), that faculty would be protected by pseudonyms and that specific names and locations of colleges would not be revealed (Appendix B). The Associate Deans from each school were more than gracious and provided an adequate number of faculty names that they thought would meet the profiles established but did not specify which specific characteristic each faculty member fit.

Data Collection

The primary method of data collection for this study was the qualitative interview in a semi-structured format. Researchers who desire to find out how people describe and make sense of their world often choose qualitative interviewing as their method of inquiry (McCracken, 1988). Qualitative interviewing can give the researcher insight into critical issues by allowing the interviewee the opportunity to recall "accounts or justifications" of issues (Rubin & Rubin, 1995, p. 27). Three aspects guide the approach of qualitative interviews. First, qualitative interviewing "requires an understanding of culture" (p. 19). Secondly, interviewers are not passive participants in the interviewing relationship. Finally, qualitative interviewing is used to explore perceptions of those parties who are involved directly with the issue under study.

The nature of qualitative interviewing design is iterative, flexible, and ongoing due to the emerging nature of themes that are generated by respondents. Qualitative interviewers, at times, find that it is necessary to interview additional respondents in order to provide insight on emerging themes (Rubin et. al. 1995). "The iterative design

stops when the information you are putting together supports a small number of integrated themes, and each additional interview adds no more ideas or issues to the themes on which you are now questioning" (Rubin et. al. 1995, p. 47). Interview questions focused on the faculty members' views and perceptions of the college in which they worked and their perceptions regarding themselves (Appendix C).

Data collection also consisted of observations from various settings involving faculty in their work contexts. The documentation of observations was completed with the use of fieldnotes, and their purpose was to describe the contextual setting of participants' work and teaching atmospheres. Observation settings consisted of classroom spaces, offices, labs, examination rooms, and teaching spaces that existed as a "teaching" hospital.

Descriptive fieldnotes can provide a "word-picture" of the setting and participants, reconstruct discourse, and give detailed accounts of significant events and activities (Biklen & Bogdan, 1998, p. 121). Reflective fieldnotes contain a more personal account of the researcher. They may include speculations, feelings, problems, or ideas and allow the researcher to plan what might be the next course of action in the study. From reflective fieldnotes, the researcher may be able to modify interview questions to meet with emerging issues as they relate to the study, or enable him to envision possible avenues to record further data. In addition to interviews and observations, documents that were pertinent to this study were also collected. Documents can provide the researcher "factual details or rich descriptions of how the people who produced the materials think about their world" (p. 133). Examples of these documents included syllabi, proposals for courses, course Web site content, faculty council minutes, academic policy and

procedures, course catalogs, college newsletters, and publications written by interviewees. Fieldnotes and documentation were kept in journals for both colleges' settings and were reviewed against other data such as interviews and notes from documents.

Data Analysis

Data analysis for this study involved strategies that reflect a qualitative case study design (Merriam, 1988). First, an initial level of data analysis coincided with the collection of multiple sources of data and guided the research process with the constant observance of emerging themes that may or may not have fit into the lens of revitalization movements. The researcher also referred continuously to the study's original research questions as a way to focus the data collection and analysis. Early data analysis informed follow-up interviews and future data collection as emerging themes were tested and rejected. Once data collection had ended due to the emergence of no new themes, the data was assembled for each college and another layer of analysis began. Data analysis then consisted of sorting all data for each college and focused on the development of descriptive case reports. Case reports consisted of themes and categories which emerged in each college and had particular relevance to the initial research questions. The third level of analysis consisted of further interpretation and discussion of the case reports in order to make direct connections to the lens of revitalization movements.

Data collection and qualitative analysis are considered an interactive process and should involve those strategies that increase the study's trustworthiness and credibility. The triangulation of data by seeking many sources or "between-method triangulation"

(Denzin, 1989, p. 244), such as review of documents, interview transcripts, and observation fieldnotes, along with member checks, peer reviews of analytic content, purposive sampling, and rich description added to the credibility and trustworthiness of this study (Erlandson, Harris, Skipper, and Allen, 1993; Mathison, 1988). In addition, the strategy of triangulation allowed the researcher "to make sense of the social phenomenon" (Mathison, 1988, p. 15) by pointing out "inconsistencies" and "contradictions" that may exist in the data (p. 15).

A limitation to this study is that forms of instructional technologies are so broad and the nature of technology itself is so rapidly changing that it forces the set of participants to represent a heterogeneous population with a broad range of backgrounds and abilities and experiences. An additional limitation to this study concerned data collection in that the researcher was not privy to all activities in the colleges that may have informed the study and added further data collection opportunities.

Researcher Information

Since it is the nature of qualitative research to be subject to researcher bias, my proposed research topic is influenced by my experience of working closely with faculty in both public school and post-secondary levels. From my relationships with these faculty members, I have witnessed their frustrations with learning and adapting to new technology tools, as well as trying to understand the instructional paradigm associated with their use.

It has been my observation from current and past work experiences that simply planning for the integration of new tools is not enough. Many times "strategic plans" are carefully articulated but fail during implementation because there is a lack of awareness

regarding the cultural "terrain." In academe, this existing cultural terrain reflects a very uneven, complex territory that must be studied carefully in order to help us make informed decisions.

In addition, my choice of topic reflects my views that the concept of instructional technologies does not merely exist solely as discreet forms but as a way of thinking, an ideology in itself. It is part of a holistic view of designing, delivering, and assessing instruction through a variety of available tools. While I espouse the view that using these various forms can enhance pedagogical practice when they meet the appropriate learning objectives, I feel that too much emphasis is placed on adoption and integration of forms for the sake of adoption and not on the overall ideology of instruction technology.

According to Merriam (1988), these views will inform my data gathering and analysis process, as well as my interpretation of findings. Wolcott (1990) has also warned educators who are studying in the educational context against assuming they know what should or should not be occurring and being their "worst enemy by becoming their best informant" (p. 128). In addition to being aware of these influences and factors, research methods employed will allow the data to be contrasted and interpreted within the conceptual framework of the revitalization movement.

Significance of the Study

A study of the integration and adaptation of instructional technologies by faculty can be important for several reasons. First, in theory; to date Wallace's framework of cultural revitalization has not been used in a higher education setting to explain the cultural variable of technology and its relationship to cultural change. It is, therefore, necessary to test its usefulness in these settings to determine its theoretical significance

for future case studies dealing with technology. Second, in practice; Wallace (1956) states that traditional notions of change are linear, sequential, and causal, much like the systematic plans put in place for the implementation for new instructional technologies that typically meet with failure. Attempting to apply new theories of cultural change to the field of instructional technology will give those who plan and work with faculty a better understanding of the cultural factors involved in the adaptation of instructional technologies by observing the holistic aspects surrounding their integration and adaptation. Studies such as this one may afford a better understanding of pedagogy, and, perhaps, the mystery surrounding instructional technologies may be explained. Third, in research; this study adds new information to the limited knowledge base on cultural change in the higher education context. Methodological implications drawn from this study will allow researchers to focus the direction of their cultural research in an appropriate direction.

Reporting

The following chapters are reflected as follows: Chapter II contains a review of the literature associated with culture, cultural change, including revitalization movements, higher education culture, and the concept of instructional technologies. Chapter III consists of further description of the design of the study, including specific procedures and the logistics of the cases. Chapter IV presents the data in the form of descriptive case reports. Chapter V consists of interpretive commentary and further analysis. Finally, Chapter VI includes a summary, conclusions, and recommendations.

CHAPTER II

REVIEW OF THE LITERATURE

The purpose of this study is to examine issues related to the integration and adaptation of instructional technologies and their implications for cultural change in higher education. Therefore, the review of literature addresses several conceptual arenas which reflect its aims, including higher education institutions as cultures; theories of cultural change, including Wallace's revitalization movements; and the concept of instructional technologies as a change agent in higher education.

Higher Education Institutions as Cultures

Call it an evolution. The system of higher education has continued to grow and change throughout the course of its history. Although higher education's primary responsibility is to serve as an "agency of student instruction" (p. xv), it serves many ancillary purposes as well. Arguably, comparing institutions is difficult due to their varying types and purposes (Lucas, 1996); however, despite this variability in aims and purpose, scholars have described higher education institutions as having a distinct culture (Clark, 1972) that is driven by many internal as well as external forces. The internal forces are grounded in the history of the organization and are shaped by the strong beliefs, values, and routines of its constituents. Internal forces influence "decisions, actions, and communication" and overall manifest themselves in the way things are done in the organization (Tierney, 1988, p. 3). Tierney (1988) argues that to study these forces and dynamics would provide practitioners better understanding of the dynamics of the organization and, in turn, facilitate decision making and ciphering why some initiatives or decisions work in one institution and not in another. Tierney (1988) also claims that most

managers and administrators have, at best, only an "intuitive" (p. 5) knowledge of their organization's culture and only become acutely aware of it when they have transcended the organization's norms and routines. As a result, many leaders find themselves operating from a crisis mode instead of informed reflection.

To truly study and discuss culture, one must define what is meant by the term and in what context it will be applied. For that reason, the following sections will discuss how the study of organizational culture has come to fruition, define culture in a broad traditional sense, and conclude with a closer look at the particular elements of higher education culture related to this study.

History of the Study of Culture in Organizations

Having strong roots in anthropology, early studies of culture focused on entities such as groups, tribes, and other primitive civilizations. These early studies determined, albeit through varying views and outlooks, that culture is the essence of an integrated whole (Benedict, 1934; Tylor, 1929) and that its formation rests on the shared beliefs, emotions, and values that have been communicated and developed through time (Geertz, 1973).

While early studies of culture may have focused on more primitive groups, examiners of work organizations began to be curious about the benefits of a cultural approach to observe the interactions, behaviors, and belief systems of groups in their work environment (Roethlisberger & Dickson, 1938). Using methods derived from anthropological studies of culture, the Hawthorne Studies determined that depending on the work setting, workers developed a set of shared beliefs that influenced their performance. These resulting new perspectives regarding work group culture sparked

some initial interest and later works supported the earlier Hawthorne studies (Roy 1952); however, significant works over the next two decades were somewhat sparse. One of the most significant works on organizational culture that arose from this period and is related to this study was Burton Clark's (1970) work in three small colleges. His documentation of the "organizational saga," which is considered synonymous with organizational culture, became a defining work in the study of higher education culture and will be discussed later in this chapter.

Not until the later 1970s and early 1980s did the study of organizational culture become somewhat of a phenomenon. Spurred on by instability in the business world and competition with Japanese markets, current management practices were blamed for stifling organizational growth and productivity. Leaders were lured by suggestions that a deeper understanding of the organization's culture could serve as basis for significant change. (Ouchi & Wilkins, 1985; Trice & Beyer, 1993). Influential works of that period emphasized the importance of an organizational culture's relationship to productivity, stability, and adaptability, and an organization's profound resistance to change based on its history or evolution (Peters & Waterman, 1982; Ouichi, 1981, Deal & Kennedy, 1982). For a complete review of the literature, one can read Ouichi and Wilkins' work (1985), which offers a substantial look at the field of organizational culture and discusses some of its most debated issues and perspectives, as well as gives credence to its roots in anthropology and sociology.

Parallel to the development of interest in the culture of organizations was the interest in how to study organizations. Researchers using quantitative methods to study organizations had an increasing level of dissatisfaction. Critics of quantitative methods

argued that researchers were producing data that in addition to being trivial, were so complicated that leaders of organizations could not determine what changes would actually help their organizations (Ouchi & Wilkins, 1985; Trice & Beyer, 1993). Consequently, this renewed interest in qualitative methods fueled a reciprocal relationship with the study of organizational culture, perhaps, because past cultural research (that is, anthropological studies) relied so heavily on qualitative methods. However, even with general acceptance of qualitative methods, scholars with varying perspectives and points of view continue to debate the best methods for studying organizational culture.

Characteristics of Organizational Culture

Throughout the substantial body of literature that has attempted to describe and define culture, researchers employ varying perspectives to observe culture (Kroeber and Kluckhohn, 1952; Sackmann, 1992). The most pervasive argument among researchers is whether to view culture from a functionalist or interpretive perspective, or both. When the interpretive perspective is taken, culture is an independent variable, meaning culture is something the organization "is" and resists manipulation and change by any one person or group. In contrast, the functionalist perspective views culture as a dependent variable, meaning that culture is something the organization "has" and that by altering certain behaviors and cultural forms, change can occur (Kuh and Witt, 1988; Ouchi & Wilkins, 1985, p. 478; Sackmann, 1992).

In spite of the all of the conceptual perplexities and disparity in views, there are some characteristics generally agreed upon by researchers. Trice and Beyer (1993) list six characteristics that typically define culture. These are that cultures are: (a) collective,

(b) emotionally charged, (c) historically based, (d) inherently symbolic, (e) dynamic, and (f) fuzzy. This section will serve to briefly discuss these characteristics.

Cultures are "collective" (Trice and Beyer, 1993, p. 5). Cultures can only be formed when individuals interact with other individuals. These individuals must share or collectively accept a set of beliefs, values or norms that have been formed as a result of the group's ways of managing life's day to day difficulties or unpleasant circumstances (Benedict, 1934; Kilmann, 1982; Sackmann, 1992; Schein, 1985; Trice, et. al. 1993). If an individual does not at least partially accept a group's practicing ideologies or beliefs, then he or she may be expelled from that group.

Since cultures are formed partly to manage life's difficulties, they are somewhat "emotionally charged" (Trice and Beyer, 1993, p. 6). Deeply held ideologies allow some a way to make life less surprising or more predictable by making it resemble the past. When these ideologies are challenged, members of a culture react strongly based on their emotions instead of acting in a manner that is based on rationality (Schein, 1985; Trice, et. al. 1993).

Cultures are also formed in ways that are based on its members interacting with each other and developing mutually shared beliefs and practices. It can be assumed that this process of agreement does not happen automatically and must progress through a substantial period of time. Therefore, cultures can be described as being "historically based" (Trice and Beyer, 1993, p. 6). When a particular group comes together and attempts to cope with a unique set of circumstances, a culture with a unique history is formed (Schein, 1985). The beliefs and practices that are developed collectively persevere long after the circumstances have changed or uncertainties have ceased to exist.

These persevering ideas and/or "cultural residues" are so strong that they persist through the culture's history even if the original difficulties in which the culture was formed have ceased to exist (Trice and Beyer, 1993, p. 6). The most pervasive forms of cultural residues are its symbols. Considered the lowest common denominator, symbolism represents the way a culture expresses itself and communicates (Geertz, 1983; Sackmann, 1992; Schein, 1985).

While symbols remain the most pervasive aspect of cultures, it must be noted that cultures are in constant state of gradual change, and are inherently ambiguous (Keesing, 1987; Geertz, 1983; Trice and Beyer, 1993; Young 1990). Trice and Beyer (1993) give reasons for this ambiguity. Cultures rely on the interaction and communication among its members in order to perpetuate its beliefs; however, communication of these norms is not always precise and correct nor is it interpreted correctly by all members. Thus, there is some degree of variance and individualism in the ways members respond to new difficulties and circumstances. The result of misinterpretations can be that some members form new groups and routines in order to cope with their evolving environment.

Thus far, cultures can be viewed as a dubious yet significant aspect of organizations. Yet, despite the difference and conflict in perspectives and methodology and their uses, it is undoubtedly the "social energy" (Ott & Shafritz, 1996) that can define an organization and lend it its personality. To ignore culture's existence or downplay its importance in organizations can contribute to leaders' inabilities to face challenges, crises, or even opportunities from an informed perspective.

Higher Education Culture

Examining the history of the study of higher education culture reveals that its development somewhat parallels that of the study of organizational culture. However, researchers have noted that compared to the management and business field those in higher education are far behind in their understanding of organizational culture's nature (Dill, 1982). Studies based on higher education culture are marked with as much complexity and confusion, if not more, than the field of organizational culture. The disparity no doubt reflects all of the inherent confusion in the study of culture itself and compounds when the complexities of higher education structures are added to the mix. The purpose of this section of literature review is to define culture in the higher education setting, to describe the major ways researchers have conceptualized and studied culture, to discuss cultural change in this setting, and to elaborate on my chosen cultural change framework, revitalization movement and its associated literature.

The literature regarding the area of higher education culture is divided into two general areas. The first area consists of descriptions of cultural frameworks used to conceptualize culture in higher education, and the second includes studies, anecdotal references, and vignettes with reference to specific cultural elements or influences at institutions varying in purpose and size. The second area is often criticized for its lack of the necessary detail to truly be considered cultural studies (Kuh and Witt, 1988).

Examples of major cultural elements have been discussed in many different layers (Kuh and Witt, 1988) and have emphasized the following: historical roots and external influences, (e.g., religion, societal influence, alumni support) (Chaffee, 1983; Clark and Trow, 1966; Cohen, 1998; Jencks and Riesman, 1969; Riesman and Jencks, 1962); the

academic program, (e.g., curriculum as a distinctive feature) (Clark, 1970, 1972; Grant and Riesman, 1978); the "personnel core," (e.g., faculty work and life) (Clark, 1970; Kennedy, 1997; Kenworthy, 1996; Tierney and Bensimon, 1996; Ward, 1998); symbolic manifestations of culture, (e.g.,. size, rites, traditions) (Meister, 1982; Horowitz, 1986; Kuh, Shuh, and Witt, 1991); distinctive themes or "ethos" that reflect the institutions values purpose, and beliefs (Clark, 1971; Freed, Klugman and Fife, 1997; Kuh, Shuh, and Witt, 1991)and individual actors, leaders or founders who have participated in the formation of institutional cultures (March and Cohen, 1986; Neumann, 1995).

The literature reveals that higher education institutions are not uniform entities. Therefore, traditional anthropologic methods, which view cultures as formed by "homogenous societies," may have to be suspended. Instead, higher education institutions should be described as "social communities as well as educational institutions" (Kuh and Witt, 1988, p. 11) that are comprised of multi-layered, multifaceted, and "multicultural contexts that are host to numerous subgroups with different priorities, traditions, and values" (Kuh and Witt, 1988, p. 11). Having argued the previous is an accepted view of higher education institutions, Kuh and Witt (1988) state that a definition of higher education culture should be considered as a

> collective, mutually shaping patterns of norms, values, practices, beliefs, and assumptions that guide the behavior of individuals and groups in an institute of higher education and provide a frame of reference within which to interpret the meaning of events and actions on and off campus. (p. 13)

It is proposed that culture in higher education institutions is context reliant and holistic, meaning that events and actions should be interpreted bound by the conditions in which

they took place whether it be in one layer of culture or in other, overlapping layers. Moreover, the meaning of events and actions is subjective and lies within the perceptions of individuals and groups. It is also suggested that culture can be considered an equalizing effect and can instill a feeling of continuity in the sense that it tends to perpetuate existing values and beliefs and can tie its members to the past (Masland, 1985). Paradoxically, these factors can be the very aspect of culture that inhibits change and growth and serves as provocation for dissension among its members (Kuh and Witt, 1988). Due to culture's holistic and complex nature, the literature often regards culture from a combination of both functionalist and interpretive views. For example, culture has been described as something that an institution, university, or college "has" *and* "is", depending on which layer is being observed or the purpose for observation.

Conceptualizing Culture in Higher Education

The literature describes and analyzes culture at various levels or layers and within its unique context. One of the most significant works produced that allows researchers to conceptualize culture in higher education is Burton Clark's works on the organizational saga (Clark, 1970, 1971, 1972). Based on empirical research done in three small U. S. colleges--Antioch, Reed, and Swarthmore--Clark conceptualizes culture on the institutional level. Clark defines the organizational saga as a "collective understanding of unique accomplishment in a formally established group. Based on past exploits, the formal group develops a unitary sense of highly valuable performance and place. The group's definition of the situation, intrinsically historical, links stages of organizational development" (Clark, 1971, p. 500).

Organizational sagas have two major stages of development: initiation and fulfillment. Initiation can occur in one of three settings: an organization that is new and autonomous, an already established organization in crisis, or an organization that is viable, and ready for change. In regard to fulfillment, Clark (1971, 1972) states that in each case certain features exist that serve to determine the course of development of the saga. These are the personnel core or faculty; the program core, which consists of the academic side of the institution; the social base, which manifests itself typically in alumni and or community support; the student subculture; and the overall institutional ideology and self belief which can manifest itself to those in the organization with a feeling that "there are really two worlds – the small blessed one of the lucky few and the large routine one of the rest" (1971, p. 511). In a strong, fully developed saga the "organization becomes the model in a sense of what the individual wants to be: a social being with clear identity, a proven ability to cope, and a social definition of success" (1971, p. 511). Clark suggests that larger multidisciplinary institutions cannot develop strong sagas due to their multifaceted nature. Strong subcultures that are formed within other disciplines and decentralization threaten the saga of the institution as a whole. He also leads us to believe that organizations that develop strong sagas over a period of time are more durable than those whose initiation is brought on quickly in "unstructured social settings" (1971, p. 501).

Although the framework of the organizational or institutional saga is best applied to smaller colleges, Clark's work enables those who study culture in larger multidisciplinary universities to conceptualize basic elements of higher education culture and organization and, therefore, focus their cultural studies in an appropriate direction,

for example, a specific single disciplinary college, school, or department. Clark (1983) later expanded on his work to further describe four institutional contexts that influence culture. According to Clark, these are the discipline, the higher education institution, the national system, and the academic profession as a whole. In a similar vein, Austin (1992, p. 1615) has described these contexts, and other researchers have discussed particular contexts such as the academic culture and disciplinary cultures (Becher 1984; Dill, 1982; Kennedy, 1997; Knight & Trowler, P., 2000). Each author argues that these contexts affect the belief system and values of the academic profession as a whole.

In addition to Clark's work, Tierney's (1988) work in building a 'framework" to study higher education culture is frequently discussed and referenced throughout the recent literature. Based on a case study of one university, Tierney observes culture on the institutional level and from a functionalist perspective in that he presents culture as something that can be successfully managed. Data were gathered from participant observation and interviews with a "random sample of the entire college community" (p. 9). The size of the college is not stated, nor is its overall structure described. Tierney's work is in conflict with Clark's framework in which the structure is broken down into layers, and culture's role is discussed in reference to those layers.

Tierney (1988) suggests that cultural concepts must be defined and determined before embarking on cultural studies in a higher education setting. Tierney considers these "operative cultural concepts" essential for studying culture: environment, mission, socialization, information, strategy, and leadership. Moreover, he argues that each of these terms "occurs in organizational settings, yet the way they occur, the forms they take, and the importance they have differs dramatically" (Tierney, 1988, p. 9). This

framework appears incomplete at best, and Tierney (1988) states as much at the end of the article. The operative cultural concepts might serve as a starting point for future researchers studying culture at the institutional level; however, much is left open as to how to handle subcultures. Tierney has continued his work on the subject of higher education culture with many subsequent publications (Tierney, 1991; Tierney and Bensimon, 1996; Tierney, 2000), but to date, he has not further developed his framework.

Dill (1982) describes three levels of culture which exist in higher education: the institutional level based on the work by Clark (1971, 1972); the collected academic profession, whose ideologies serve as the life behind the institution; and the academic discipline itselfself that is "a culture with its own symbols of status and authority in the forms of professional awards, research grants, and publications, its ritualistic behavior at professional meetings, and its distinguished articles of faith" (1982, p. 310).

Dill's (1982) main premise is that too much focus has been placed on the academic discipline because of current bureaucratic, market-based management techniques and not the academic culture as a whole; consequently, there is deterioration of the academic culture as we know it. For example, he notes a shift in faculty language. Faculty members identified themselves as a member of a discipline rather than an institution. As faculty members narrowed their focus on their individual careers and specializations, they decreased their efforts and ties with instruction and relationships with colleagues. Dill states (1982) the strength of academic culture is particularly important when there is institutional decline, for it is academic cultures whose ideologies give life to the institution. To remedy this decline, Dill (1982) calls for the "management of meaning" or those certain symbolic aspects of institutions that deal with academics (p.

313). By placing more emphasis on teaching exemplars and developing "critical academic values" and the support mechanisms to sustain them such as teaching guilds (p. 315), a strong culture that values "loyalty, commitment, and identity can be maintained" (p. 316). Dill states that "teaching is a distinctive characteristic of the academic craft in which all members engage" and that placing more emphasis on its development and those mechanisms necessary to "maintain the faith in the importance in teaching" and "act to define the necessary values in teaching" (p. 315), can result in shared values and purpose among faculty members.

Dill's (1982) emphasis on managing academic culture is a sharp contrast in focus to that of Becher (1984) who argues that disciplines in themselves are cultural entities and, therefore, can assist higher education policy and decision makers. He based his study partly on the position of Gaff and Wilson who reveal "there are significant differences between faculty members in different fields of study on such aspects of culture as educational values, teaching orientation, and lifestyle" (Cited in Becher, 1984, p. 173).

In his study, Becher (1984) interviewed 120 academics from every discipline and later produced an "ethnographic account for each discipline (p. 176). According to his analysis, there are external and internal influences to disciplinary culture, but more importantly, and of significance to this study, is the disciplinary culture's impact on the academic culture.

Becher (1987) argues that the disciplinary culture essentially helps shape the academic culture in four ways: the initiation process of new members of the profession, the nature of social interaction in the field, the type and degree of specialization, and

mobility and change in the profession. Becher argues that it is not as useful to use the academic profession as the "unit of analysis" (1984, p. 186), but better insight can be gleaned from observing the makeup of the disciplines. His reasoning is of an anthropological nature in that the academic discipline as a whole is not homogenous enough: "There is no single method of inquiry, no single verification procedure, no single set of values or purposes..." (1984, p. 186). Nevertheless, he does state that some disciplines do share some common characteristics. As stated, this notion could have particular bearing on this study, as it is postulated that the rate the academic culture changes is due partly to disciplinary influence. For example, changes in teaching practices or adoption of new innovations on the level of academics would be influenced heavily by whether or how certain disciplines were being motivated by outside needs, social contexts, or advancements in their field.

In summation, when conceptualizing culture in higher education, researchers have argued three general units of analysis: institutional culture, academic culture, and disciplinary culture. Each unit has characteristics that somewhat overlap and influence each other. While risking oversimplification, depending on the specific needs of a study, one might turn to any of the three. For example, in a study focusing on teaching and learning, one might observe the influences and structure of the academic culture in a particular university or college, which, according to Clark's (1971, 1984) and Dill's (1982) works, influence such things as instruction and faculty roles. Of course, immediately one might begin to argue the overlapping influences of the discipline *and* the institution. Conceptualizing culture is by no means an easy task in higher education, and the literature is disagrees as to which unit of cultural analysis is the most influential

and what constructs or cultural concepts are within each layer. In fact, among the three "frameworks" mentioned (and there are others; see Masland, 1985 and Bergquist, 1992) only Tierney's (1988) and Clark's (1971, 1972, 1984) works offer any hint at specific cultural concepts to be observed.

A Cultural Approach in Studying Change

Defining Cultural Change

A previous point discussed in the characteristics of culture is that cultures are not static but dynamic; meaning that some aspects of cultures do change as the result of various historical influences. In addition, the maintenance of cultures may mean many incremental changes in some of their forms or symbols. However, when researchers refer to cultural change, they most likely refer to a change that is much deeper and profound. Trice and Beyer (1993) define the term cultural change to mean

> planned, more encompassing, and more substantial kinds of changes than those which arise spontaneously within cultures or as a part of a conscious efforts to keep an existing culture vital. Culture change involves a break with the past; cultural continuity is noticeably disrupted. (p. 395)

In addition to their definition of cultural change, the authors (Trice and Beyer, 1993) categorize cultural change into three basic types: (1) radical and sweeping efforts to change the cultures of entire societal groups, (2) efforts in which change is concentrated on particular subcultures within groups, and (3) efforts that are gradual and incremental, yet culminate in an extensive and complete reshaping of an entire organization's culture (p. 396).

These types of cultural changes differ and have been described in terms of the total amount of change to occur (Trice et. al. 1993). The authors suggest that by observing dimensions that expand on the amount of cultural change that one can determine the effort it will consume. The first of these dimensions is the "pervasiveness" (p. 396) of the conceived cultural change effort. This pervasiveness simply means the degree to which those people and activities in the organization will be affected by the change or the degree to which it will change their existing "cultural understandings" and cause them to do their work differently. The second of these dimensions is "magnitude" (p. 396). Magnitude has implications for the range between the old ways and the new ways and understandings. Members of an organization may have to adapt to a new status quo or a new routine that is far different than the ones to which they are accustomed. Members may even perceive these new routines as totally conflicting with previous ideologies. The third dimension is the aspect of "innovation." Innovation refers to the nature of the ideas being discussed. If the ideas are relatively novel or revolutionary, then members will have to resort to inventing new cultural forms and being the forerunner, so to speak. If the ideas being presented are not as new, then members can, perhaps, adapt cultural forms that are being used in other cultures or subcultures that have been deemed successful or predicated. The final dimension, "duration" (p. 398), alludes to the amount of time that the change is likely to take and how durable it is likely to be. Typically, cultural change lasts years; but in organizations that are in crisis, this change may occur more quickly. Also if the organization itself is considered a temporary structure, then change may occur more quickly as well.

Cultural Change in Higher Education

Empirical studies on cultural change have been scarce. Becher (1984) notes that this scarcity is probably due to the nature of culture research in general. Studies of cultural change usually demand much fieldwork over long periods of time, and results can be ambiguous. Several published "accounts" exist in higher education literature regarding cultural change in the areas of leadership, campus, faculty, and student cultures. Moreover, there are numerous publications which call for cultural change or discuss strategies to facilitate it (Fincher, 1998; Freed, Klugman and Fife, 1997; November, 1998; Tierney, 2000). However, they lack the empirical evidence, statements of theoretical disposition, and thick descriptions that should accompany cultural change studies, or they address cultural change in a trivial manner by lumping it into studies with traditional notions of change. A few studies discovered, however, were noted to be of significance to this author's research not only because of their findings about cultural change in the higher education setting but also because of their implications regarding how to study change in this setting. Neumann (1995) completed a study on the subject of collegiate leadership and Hackett (1990) on the changing culture of academic science.

Neumann's (1995) study is an interpretive case study which focuses its main research questions on how an established college culture experiences a new leader and how members of the culture change as a result of the entry. Data were collected through interviews and observations, and the researcher interpreted findings through a constructivist lens, meaning that it was vital to determine how participants viewed their reality and worlds. Findings suggest several key points. First, leaders who have come into new situations should value and be aware of actions, values, and existing beliefs of

those around them and should ground their own actions in these. In addition, the author suggests "that cultural change may be slow and hard to come by because it requires that people learn one from another about what is of value to each and that they create relationships that will foster such learning" (p. 271). Findings also suggest that leaders are not able to directly change others but can direct change by altering the setting or circumstances that, thereby, cause members to think differently about their actions. While the author (Neumann, 1995) does confirm some interesting notions about cultural change, it is not clear at which level this change is supposedly occurring. The author refers to "collegiate culture" but does not specify what that entails. For example, is the author expecting to observe a change occurring in teaching practices or ideology, research practices or a change in the overall commitment to the institution? Collegiate culture can mean a variety of things and in this case it is not clearly delineated.

The study has implications for this research endeavor in that the author observes that change is "anything but linear and simple" (p. 273), and that cultural change is viewed from the perspective of the those who are experiencing change or being changed. Neuman (1995) states that with certain exceptions of studies which focus on organizational learning, we have no real knowledge of what it entails to personally experience certain changes. The design of the study particularly allows the members of the culture who were directly affected by the new leader to voice their perceptions. Neuman (1995) did state, however, that there was not clear evidence in the data as to whether members were actually changed "in how they viewed their realities" (p. 272). There were only hints that changes were taking place.

An additional study of cultural change, albeit of a different nature, was by Hackett (1990), who regards cultural change in academic science. Hackett's study observes culture through the lens of cultural transformation and through institutional and competitive isomorphism. Isomorphism can be defined as a strong energy or "force" among group or society members to conform or become more homogenous. The author hypothesizes that isomorphic forces create and change culture within the university. In the case of this study those forces are competition with other universities, federal regulations which mandate policy regarding research involving human and animal subjects, and pressures from professional groups to provide programs and curricula reflective of current needs.

Using this framework, Hackett (1990) set out to determine how the current ideologies of science are changing, why they are changing, and the consequences of that change. To answer these questions, he gathered interview data from 26 academic scientists, including full professors, department chairs, assistant professors, and agency officials.

Hackett's (1990) findings reveal several cultural "axes" or variables that are specifically influencing change in the area of academic science. He provides justification for his findings through interview data (p. 266). These cultural axes are as follows: creative freedom in research versus liability and responsibility; the need for justifiable research results versus mentoring and supervising graduate students for the sake of educational value; conflict in allegiances between students, departments or to professional agencies, and scientific community; quality of research versus quantity; specialization versus generalization; competition versus cooperation; and efficiency

versus effectiveness. Hackett insists that it is vital to examine these cultural variants as they influence each other since they do not exist solely as separate entities. He concludes by suggesting the consequences for ignoring these variables lead to ambivalence, a breakdown in social stability because of unclear, unstable standards, and what he calls "academic capitalism" (p. 273).

This study, which clearly falls within the realm of cultural change in a disciplinary culture, conflicts with notions that Dill (1982) presented in the management of an academic culture. However, the study does show the influences, which exist within a disciplinary culture that can have profound effects on how the discipline is shaped or changed (Becher, 1987).

From the studies on cultural change, one continues to see varying perspectives being used and no consensus regarding frameworks in which to study cultural change. Therefore, new approaches of studying cultural change should be examined to determine their usefulness. For the purpose of this study, the framework of revitalization movements has been chosen as a lens through which to view cultural change in two colleges. It will be elaborated in the upcoming section.

Revitalization Movement

Wallace (1979) presents a framework to explain cultural change based on the notion of a "cultural-system innovation." According to Wallace (1979), "Revitalization is, ...from a cultural standpoint, a special kind of change phenomenon" (p. 422). Wallace defines culture as a "regularity of patterned behavior" (p. 423). Individuals in a society or culture perceive those behavioral regularities or the "status quo" which exist in their culture and act in ways that are in accordance to those. This perception of what

behavioral regularities exist is important because it, along with an individual's experiences, shapes the individual's perception of how to manipulate the regularities or status quo in times of stress in order to reduce those stress levels. Wallace coins the term "*mazeway*" to describe this perception.

When individuals receive information that their perceived mazeway does not lead to the reduction of stress, they have the option of choosing between the status quo and tolerating the stress or changing their perception of current behavioral regularities and of their "ways of action" (p. 423). Although an individual may change his perceptions and actions to deal with the stress,

> it may also be necessary to make changes in the 'real' system and bring the individuals perceptions in congruence with reality in order to bring true change. This 'effort' to bring the change in an individual's perceptions in congruence with the 'real' system so as to permit more effective stress reduction is the effort at revitalization; and the collaboration of a number of persons in such an effort is called a revitalization movement. (p. 423)

Thus, revitalization movements can be described as uniform processes that consist of the following factors:

1. Persons involved in the revitalization movement must perceive their culture as a system.
2. They must feel that certain aspects of the cultural system are unsatisfactory.
3. They must "innovate" or change to a new cultural system that consists of new relationships, beliefs, and structure; however, it is not just changing single aspects of the system (Wallace, 1979).

Wallace's framework differs from traditional notions of change such as diffusion, acculturation, or evolution in that these typically rely on a chain reaction of events and do not manifest themselves in the "deliberate" intentions of particular members in the system. Wallace (1979) describes notions of cultural change: "[The] process continues for years, generations, centuries, millennia, and its pervasiveness has led many cultural theorists to regard culture [sic] change as essentially a slow, chain-like, self-contained procession" (p. 422). Revitalization movements differ in that they can be a *rapid* change, often occurring abruptly with significant events occurring simultaneously.

Therefore, based on Wallace's comparison of other notions of change to revitalization movements, it would seem appropriate to determine whether this framework of cultural revitalization would be useful in explaining the adaptation of instructional technologies.

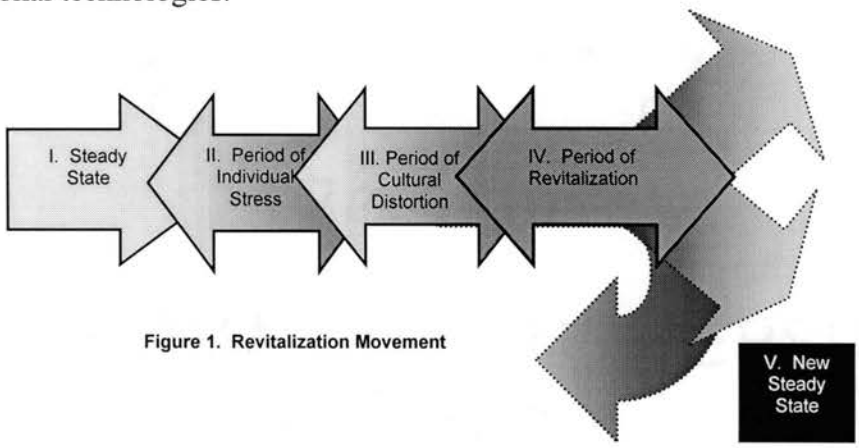

Figure 1. Revitalization Movement

Five stages can occur during the whole process of a *successful* revitalization movement. It must be noted that these stages can be described as overlapping, simultaneously occurring, and "processual" Wallace, 1979, p. 422):

(I.) Steady State: There exists no demand for change. Working life or conditions may not be at their best but are tolerable. Overall, there is an established routine and although possible shifting may occur, cultural norms are established.

(II.) Period of Individual Stress: Members of a group or subculture begin to experience increasing dissatisfaction with the current standards of practice or status quo. Member dissatisfaction also lies in the fact that current needs are not being met; therefore, role distinction becomes less clear. A new pressure towards acculturation begins to build resulting in some internal conflicts.

(III.) Period of Cultural Distortion: The building stress and conflicts are prolonged, and as a result, members feel ambivalence, apathy, and a sense of disillusionment.

(IV.) Period of Revitalization: This period is a *pivotal* state where several things must happen in order for cultural change to occur and, in some instances, for the cultural group to survive. These have been described as the following. *Mazeway Reformulation* occurs with the introduction of a new leader or code that is a vision of something better and builds on moments of either revelation or inspiration. Wallace describes this period as when an individual or visionary "constructs a new, utopian image of sociocultural organization" (Wallace, 1966, p. 160, as cited in Muncey and McQuillan, 1993). *Communication* occurs when vision is communicated and converts are initially gathered. *Organization* occurs when converts or "disciples" initialize the beginnings of an organization. Leadership rests on one who is considered a "charismatic leader" because of his/her perceived power (Wallace, 1979, p. 426). The goal in this period is to "convince others that the code offers a plausible solution to an existing state of social disarray"

(Muncey, et. al., 1993, p. 405). *Adaptation* occurs when the organization may begin to experience resistance to the new cultural forms or ideas being communicated. Many times the code which is being presented as the new gospel may have to be adjusted in order to address ambiguities, "criticisms and affirmations" (Muncey, et. al., p. 408). *Cultural transformation* occurs when members of the cultural group begin to accept more and more the new cultural ideas or "doctrine," therefore, leading to "widespread acceptance of its ideologies and the concomitant effects of this acceptance, that is, extensive cultural change" (Muncey, et. al., p. 411). *Routinization* occurs as the cultural group must complete a move to a position of "preservation," meaning that the group is no longer focused on innovation now, but the development of maintenance and support of the group (Wallace, 1979, p. 427).

(V.) New Steady State: The "new cultural system has proven itself viable, and once the organization has solved its problems of routinization" (Wallace, 1979, p. 427). The new state exists and will most likely be extremely different than the previous steady state with new forms, symbols, and traits. Wallace does not give any indication as to what a New Steady state will look like. This inability to predict where change is leading could have important implications in the area of education as it is already riddled with criticisms that unclear goals exist (March and Cohen, 1986).

Wallace (1979) describes three variations of the revitalization movement. There are movements that attempt to revive a past traditional culture, movements that attempt to adopt an alien cultural scheme, and movements that are attempting to achieve a Utopian-

like existence and consider themselves innovative and unique. Also provided are implications regarding the success or failure of a particular revitalization movement. Wallace notes (1979) that many revitalization movements are terminated; their advancement halted; however, he does not give explicit reasoning as to why this is so. He hints that whatever new doctrine is introduced must be perceived as realistic by the cultural members. Once a cultural group moves to a state of *adaptation* that produces a new *mazeway* with low stress ramifications, then cultural change is more likely to be achieved and the culture more "viable" (p. 429). However, Wallace further suggests that the stage of adaptation becomes like a crossroads to the success of a revitalization movement since resistance is most likely to "crystallize" (1979, p. 427). This resistance manifests itself in tensions and sometimes hostility which may emerge from "political and philosophical disagreements" (Muncey and McQuillan, 1993, p. 410). Adaptation, intertwined with the "realism" of the new ideologies, and the amount of force exerted on the cultural group to accept the new ideas all have significant bearing on the success of the movement.

Revitalization movements have been observed in Native American tribes (Smith, 1978) or North American societies (Carroll, 1975) such as the use of the framework to examine the transformative social movements surrounding a 1996 "Holy" event involving the Navajo people (Schwarz, 1998). Conclusions suggest that the movement was in the revitalization state and that the ultimate outcome of the movement at the time of writing remains undetermined. The model is not predictive; therefore, it is unknown whether the movement will be sustained.

In addition, Champagne (1983), characterized revitalization movements as periods of social deprivation and compares the movements to that of "state building." Differences of the models lie primarily in the outcomes. The empirically-based study seeks to combine the frameworks of state building to revitalization movements in order to account for differential societal responses "while controlling for historical period and expanding state system, and allowing social structure and market relations to vary" (p. 755). Champagne draws an important implication from this study. When there is a low level of structural differentiation, there is a higher resistance to change and that forces revitalization movements to begin. However, societal structures that are looser in structure and organization do not have the propensity for revitalization movements to occur due to their openness towards innovation.

A significant use of the revitalization movement in the educational arena is Burlingame and Harris's (1998) application observing changes in the field of educational administration. They used the revitalization movement framework to conceptualize that changes that occurred during the history of educational administration were reactions or changes in the societal and cultural norms that existed in the field of educational administration, thereby qualifying it as a study of cultural change instead of proposed historical research methods and paradigm shifts. They reveal that the revitalization movement illuminates controversial issues such as power struggles within the discipline of educational administration: "They are not about scientific paradigm shifts or historical eras; they are about the cultural configurations of relations of professors and practitioners, knowledge communities, and societal values. These are cultural struggles in which steady states emerge, persist, are revitalized, and are replaced by new steady

states" (p. 33). Their observations also serve as reinforcement for the role and influence of the disciplinary culture in cultural change and the fact that revitalization movements' framework can be a reasonable means for observing cultural change in an academic discipline.

Muncey and McQuillan (1993) also apply the revitalization movement framework to examine the Coalition of Essential Schools. They reason that the Coalition's actions can be deemed a revitalization movement because of its early recruitment efforts, its utopian ideals, its faithfulness to a common belief system, and the charismatic nature of its leader. The authors use the framework to "reveal and clarify impediments to the reform" and state that the framework does not necessarily reveal "discreet stages" but much overlap, mainly in the main state of Revitalization, which is the focus of the article (p. 395). The authors maintain an important assumption in their study with regard to the stages of the revitalization movement. Due to the nature of the educational reform effort itself, they assume that the prior stages have occurred or occur simultaneously, and that the primary stage to be concerned with is the Period of Revitalization and its six major tasks.

Important implications toward educational reform are illuminated. The author describes these as "tension points" and lists them as the following. First, tensions will most likely occur as there is a shift from charismatic leadership to more bureaucratic structures, which is inevitable due to the number of members which must be attracted in order for the change to take place. How members are attracted and how they are maintained are separate issues but may cause later problems. The second tension deals with the communication and adaptation of the new code. There is risk in members not

coming to consensus over shared values and meanings or in misinterpretation of the so-called shared beliefs. Finally, envisioning new steady states is hard due to unclear goals or non-communication of goals. "People become very suspicious if there isn't a clear-cut definition of what it is that you are really trying to do..." (Olsen, 1990, p. 8, as cited in Muncey and McQuillan, 1993).

Applying the framework highlights areas of concern while the change is underway. One example is during the formulation of a code when "subsequent adaptation, communication of the code and recruitment of like-minded persons into a multilevel pool of resources and expertise from which labor can be drawn to deepen ideas and continue the expansion of the code and program" (p. 421). Through longitudinal data collection, events of cultural change can be observed as they occur, "warts and all" and not in a retrospective manner (p. 421).

To sum, cultural change is considered profound and encompassing and can be described as a break from the past or a move away from previous stability. Cultural change is assessed typically in terms of its pervasiveness, magnitude, duration, and innovativen. Empirical evidence regarding cultural change in higher education is infrequent and varying in the frameworks used to observe it. It is hoped that a study in the higher education setting using Wallace's framework of revitalization movements will help fill the void of research about cultural change in this context.

Studying Cultural Change

Kanter (1996) made several observations when reconstructing accounts of cultural change in organizations that bear noting in this review and pertain to the design of the study. One observation was that "multiple events disappear into single thematic events"

(p. 492). Here Kanter suggests that when observing change in the organization, many times the story that is presented will only "reflect what the organization needs to symbolize". This reflection may eliminate the major conflicts in the organization and highlight only the successes. Kanter (1996) further adds that it may

> reflect the human reality that too much complexity and detail cannot be grasped and remembered easily and thus interferes with a clear conception of what the situation now is. So a large number of things that might have occurred are reduced to just a few critical ones which tell a story that gives people a common image of what is now the right thing to do. (p. 492)

This notion presents a limitation to this study in that perceptions of participants may not truly reflect the whole picture of what is truly happening in each of the college. It also suggests and further supports the triangulation in the form of multiple data sources in order to portray a clear account of what is occurring in each colleges.

Higher Education and Instructional Technologies

The amount of anecdotal evidence regarding the instructional uses of technology has become staggering. For the purpose of this study, instructional technologies literature will be reviewed in light of its description as a change force within higher education, particularly its use as a vehicle in changing the culture of teaching and learning. Some brief background information will be provided regarding prevalent and documented uses represented in the literature, as well as how the term instructional technologies is used in the literature.

Instructional Technologies as a Change Force

The notion of reforming higher education with instructional technologies is not necessarily a novel idea. Even before the advent of powerful Internet-based technologies, academics proposed the transformation of higher education by integrating "new instructional media" such as television, videotape and "teaching machines" (McIntyre, 1963, Fraley & Vargus, 1975). Now, the idea of utilizing this media to revolutionize higher learning appears somewhat amusing; nevertheless, the vision has remained a pervasive theme. Recently Van Dusen (1997) suggests that two clear philosophies have emerged regarding the use of technology. One is that instructional technologies will provide a support role in the "evolving" structure of higher education and the other that they will be the change force itself in the current revolution occurring in higher education.

Another general set of themes drawn from the literature relates to the central proposition that instructional technologies have the capability to be a significant change force in higher education in two general capacities: 1) *as a strategic tool*, meaning that the use and implementation of instructional technologies can create significant change in the function and structure of higher education by reducing overall costs of education while increasing access to learning opportunities (Duderstadt, 1999; Hannah, 1998; Graves, 1999; Katz, 1999 Privateer, 1999; Van Dusen, 1997) and 2) *instructional technologies as a cognitive tool*, meaning that utilizing instructional technologies will result in an increase in quality learning and change the culture of teaching and learning (Courtney, 2001; Gandolfo, 1998; Privateer 1999; Van Dusen, 1997).

Now at stake is the larger question represented in the literature of *how* to capitalize on instructional technology's potential and achieve this change; however, there is little agreement on the best path or on what the resulting *modus operandi* of a changed system of higher education should look like. Some scholars claim that transformation can be achieved through strategic planning and structural changes (Blustain, Goldstein, and Lozier, 1999; Graves, 1999). Nevertheless, other critics suggest that more meaningful changes must be made in the culture and ideologies that run deep through higher education institutions in order to truly benefit from the vast capabilities of instructional technologies (Gandolfo, 1998; Privateer, 1999; Van Dusen, 1997).

Duderstadt (1999) claims that the major forces of change in higher education are the following: finances, societal needs, and of course, technology. He argues that at this time technology can meet the changing financial and societal needs by changing the very nature of what universities do, which is creating and transmitting knowledge. Through the uses of technology-based teaching, faculty can become "designers of learning experiences" rather than their more mundane roles of mere teachers (Duderstadt, 1999). Distributed learner-centered environments that exist in new types of higher education market, a commodity-based structure where courses are offered across multiple campuses, can increase access and revenues therefore ensuring the institution's survival.

Hannah (1998) states that faculty use of instructional technologies has been impeded by traditional notions of course, student, and curriculum and suggests that the academic community rethink those notions as part of a new "academic strategy" (p. 12). He argues that the traditional academic or intellectual infrastructure in higher education is

"out of sync with the new technical infrastructure" (p. 9). This disproportion has inhibited what he describes as the revitalizing role of universities in our society and economy.

Frayer (1999) presents similar notions of renewal and the rethinking of pedagogy through the use of instructional technologies with the development of a new campus culture. Frayer agrees with the notion of increased collaboration with university leadership and describes key factors to creating a new campus culture as the integration of both a "top-down" and "bottom–up" structure.

Gilbert (1995) theorizes that researchers are asking the wrong questions in our research on instructional technologies. He questions the value of looking at such variables as the cost of technology versus the cost of traditional education, and whether a faculty adopts a certain tool. He posits that researchers should be analyzing the educational strategies behind them. Supporting Gilbert's (1995) notion is Privateer (1999), who claims that using technology in itself is not innovative when traditional teaching methods, which are teacher-centered, are used. It is merely automating the classroom experience. However, he contends that when significant changes that are grounded in ideologies of student-centered learning are made then higher education may realize the revolution that it has been vehemently chasing.

This study's interest centers on changing culture and faculty's perceptions of instructional technologies being that change force, and therefore compliments some of Gilbert's (1995) concerns. Many authors profess the importance of strategic planning (Kotler and Murphy, 1981) and theorize on barriers to instructional technologies' integration or adoption (Groves and Zemel, 2000), which would serve to explain technology as a "support function" (Van Dusen, 1997, p. 9) and emphasize that

instructors and teachers have plenty of choice in their teaching methods within their own cultural context (Anderson & Becker, 1999). Nevertheless, this author contends that further study and recognition of these cultural contexts and their forces is needed to describe and explain this phenomenon and possibly serve as a precursor to studying theories of adoption and strategic planning (Swenk, 1999). While the notions of choice in adoption and integration may serve common education teachers (Anderson and Becker, 1999), it may not serve to adequately describe the context of teaching in higher education as faculty have very conflicting roles that are influenced by many variables as discussed previously (Boyer, 1990, Lucas, 1996, Clark, 1987).

Instructional Technologies Defined

While the terms instructional technology and instructional technologies are used as synonymous terms by many authors, there have been some discrepancies noted in the literature regarding their meaning. Hannah (1998) describes them as "instructional technology formats" (p. 8) and states that universities have embraced instructional technologies in four varying degrees:

1. Master classrooms (richly equipped desk units with online connections, usually including projection, multimedia, and faculty control panels;
2. Distance learning rooms and high capacity point-to-point electronic connections;
3. Multimedia (e.g., CDs as stand alone, self-directed instructional devices);
4. Internet-based instruction (Hannah, 1998, p. 9).

Van Dusen (1997) uses the terms synonymously and presents descriptions of current instructional technologies available that enable students to pursue a multitude of

"learning options" (p. 36): one-way audio/visual classrooms, two-way audio/visual classrooms, two-way audio classrooms, two-way audio graphic classrooms, desktop groupware conferencing, desktop video conferencing, asynchronous desktop conferencing, asynchronous/CD-rom hybrids, tutorial software, and exploratory software.

The literature documents various examples of faculty using the above-mentioned technologies. Groves and Zemel (2000) discuss the faculty uses of "tool technologies" such as word processing and spreadsheets and "new technologies" such as multimedia, distance-learning, and computer-aided instruction (p. 62). They observe in an action research case study that faculty uses of instructional technology are largely influenced by availability, ease of use, and compatibility with the discipline. Nantz and Lungren (1998) describe their experiences with presentation software and give tips for its use. On the same note, Brown (2001) warns faculty of creating "PowerPoint induced sleep" in their own students (p. 17). Bent (1998) describes the trials and tribulations of designing a Web site used for instructional purposes.

A common misconception surrounding the concept of instructional technology is the common practice of narrowing the focus to its *forms*. Albright and Graf (1992) contend that the notion of instructional technology is misunderstood and is indeed a much larger encompassing concept. The President's Commission on Instructional Technology describes instructional technology as a concept, a

> systematic way of designing, carrying out, and evaluating the total process of learning and teaching in terms of specific objectives, based on research in human learning and communication, and employing a combination of human and

nonhuman resources to bring about more effective instruction. (as cited in Albright and Graf, 1998, p. 8)

In light of this definition, the authors (Albright and Graf, 1992) make powerful observations that all college and university faculty are considered instructional technologists. They argue simply that instructional development occurs at the level of the faculty member and that even without the specific *forms* of technology tools that instructional design and development still take place, although at a less effective level.

This argument adds another question to the already complex issue surrounding instructional technologies as a change agent. If one espouses the view that instructional technology and their forms are more encompassing concepts which hold all of the ideologies involved with traditional notions of pedagogy, then where does the argument for reforming teaching and instruction fit? Clearly, no form of instructional technology will be meaningful and effective if not grounded in sound pedagogical principles (Albright and Graf, 1992). Therefore, it may lead us to question whether our traditional notions of pedagogy are sound (Baldwin, 1998). These issues allude to a certain degree of confusion about what innovation is specifically referred to when speaking of change or reform.

Many would argue that there is misplaced focus put on adoption of instructional technologies. However, argued here is that the innovation in question is the application of new pedagogical strategies or the implementation of proven, sound pedagogical strategies based on the reflection that has been caused by the uses of instructional technology forms. In other words, instructional technology serves as the means for designing, delivering and evaluating teaching and learning with many different tools and forms.

Thus, justifying this study's focus on the academic culture to determine what changes, if any, have been created by the adaptation and integration of instructional technologies. There is little, if any, empirical data to explain the phenomenon of instructional technologies in terms of adaptation, (i.e. revitalization movements and cultural change in academics), therefore, this study will fill this knowledge void.

Summary

The literature in this review has revealed that culture in higher education is complex and multifaceted. When studying culture in the context of higher education, the researcher should be aware of its many layers, some of which are the institutional culture, the academic culture, and the disciplinary culture. These layers, while being interdependent, each have unique influences. Influences of each culture have been revealed in studies of cultural change in higher education. Finally, the notion of instructional technologies has emerged in the literature under different connotations. Most documentation of instructional technologies has been of its varying forms and its uses or barriers to those uses. However, some researchers contend that instructional technologies are really a more encompassing idea that describes the structure and nature of instruction itself. Therefore, to study instructional technologies as a change force is to accept its firm roots in the academic culture and direct the focus of study to that context.

CHAPTER III

CASE STUDY PROCEDURES

A qualitative case study (Merriam, 1988) was employed to study the phenomenon of the integration and adaptation of instructional technologies. Characteristics of case study design are that they are bounded or they focus on one particular phenomenon, process, group, or institution. Case study designs are often chosen because the researcher can focus on a particular instance of the phenomenon and the variables that are closely associated with the context (Merriam, 1988). Qualitative case studies can be descriptive, interpretive, or evaluative. For the purpose of this dissertation, the following cases are presented from an interpretive point of view, meaning that descriptive data will be used to "illustrate, support, or challenge theoretical assumptions held prior to the data gathering" (Merriam, p. 28). If the lens of revitalization movement did not adequately explain the phenomenon of instructional technology relationship to cultural change then interpretations, implications, and conclusions outside of the revitalization framework could be presented based on data gathered about the phenomenon.

Case study procedures include interviewing the faculty members in two colleges to determine their perceptions, observing settings where faculty members conducted their work, and gathering information from documents such as syllabi, course web sites, academic policy and procedures, and faculty meeting minutes.

Case Study Sites

The study includes two colleges in a large university with a sample of faculty chosen who represent a wide variety of instructional technology users. The college was chosen as the unit of analysis based on the literature. Dill (1982) states "academic

institutions possess distinctive cultures which are developed and sustained by identifiable actions of the community members" (p.304). Furthermore, academic institutions are discernible by their different levels, that is, the institutional culture, sometimes called the "culture of the enterprise," the academic profession, and the academic discipline. The unit of analysis chosen to be representative of the academic culture was the college. While individual colleges can represent many disciplines, they are more localized, homogenous representatives of the institutional and academic culture; in addition, the colleges chosen also consist of disciplines that are close in their nature and purpose.

The selection of two colleges is determined an appropriate sampling size because of the following factors. First, a study of three colleges risks becoming too extensive. Massive amounts of data spread across three sites may take away from the study's profundity. Second, it is useful to compare colleges of different missions, purposes, and sizes to determine how the chosen conceptual framework can be applied in different settings. It may also be useful to explore and compare faculty perceptions and determine if commonalities or differences exist across colleges.

To assist in the selection of the colleges chosen for this study, members of the university's academic computing services were consulted. The university's director of computing and academic services assisted in conveying a global view of how colleges "ranked" in their overall technology use compared to each other. Also consulted was the head of faculty support services for the university who provided a ranking of the colleges in their uses of instructional technology tools. Furthermore, colleges in the university were examined for their purposes, sizes, and missions to determine which colleges would be representative of a more homogenous population. Colleges that represented a large

array of disciplines, like the College of Arts and Sciences, which represented a large variety of disciplines from botany to theater, were determined to be not appropriate because of their broad scope in purpose and size.

Participants

The participants at each site included an Associate Dean, faculty members, and instructional technology personnel. Associate Deans, who were also teaching at the time of the study, were selected because of their charge with overseeing instruction and/or technology in their college. Initial meetings were scheduled with Associate Deans and during the meetings, the research project was described to the Associate Deans along with discussion regarding the types of participants needed for the study. Associate Deans then forwarded the names of viable faculty that fit the profiles of instructional technology users sought for the study. Faculty participants were then either contacted via phone or e-mail to schedule the interview and gain their willingness to participate in the study. At the time of the interviews, participants were informed of confidentiality standards (Appendix B) and that they would be assigned a pseudonym. Therefore, all data presented in this chapter will reflect those participants who were assigned a pseudonym. A special note on the interviewees must be added here. Although the Associate Deans provided names of many of the faculty members that were contacted for interviews according to the profiles discussed with them, not all interviewees actually interviewed matched the profiles. For example, in the College of Human Ecology, I was given the names of two faculty members who were not using technology; however, neither responded to any of my communication attempts either by phone or e-mail.

Interviews

Two types of interview formats were used to gather information: the semi-structured and unstructured interview. Unstructured formats were used when initial background was needed regarding the site and at the conclusion of the data collection and analysis when no new information was emerging (Rubin and Rubin, 1995). I contacted all participants via e-mail and/or phone to set up an interview time in their place of choice. Most chose to be interviewed in their office, with the exception of several faculty members in the College of Veterinary Studies who chose to be interviewed in their labs.

Each interview began with the informal gathering of background information regarding the respondent and was then followed, in the case of the semi-structured interviews, by a more structured discussion of their perceptions of instructional technologies. These interviews typically lasted anywhere from forty-five minutes to one and a half hours. In the case of unstructured interviews the topic was generally introduced and the nature of the discussion took place in a dialogue.

A series of questions was structured to facilitate the long interview (Appendix C). These questions were developed to reflect the main constructs represented in the framework of revitalization movements. For example, revitalization movements focus on the movement away from the individual or group's perceived status quo or distinct way of doing things due to perceived dissatisfaction or pressures. Questions would naturally consist of opportunities for faculty to describe their current routines as well as how those routines have developed and any perceived problems they may be experiencing and how they are managing those difficulties. Questions were designed to elicit faculty members descriptions from two distinct perspectives: the perspective of the college in which

member's worked and their perspectives regarding themselves as individuals in order for them to describe how what they do fits into the overall college.

The semi-structured interviews were constructed of five main questions (Appendix C) or "grand tour" questions (Rubin and Rubin, 1995, p. 179). These questions allowed the respondents a chance to describe various aspects of their college, practices, histories, and significant events. In order to elicit further elaboration and detail or clarify information on specific topics and descriptions, probes and follow-up questions were used.

In the College of Veterinary Studies, seven semi-structured interviews and four unstructured interviews were conducted. In the College of Human Ecology eight semi-structured interviews and four unstructured interviews were completed for a total of twenty-three respondents. Since the nature of qualitative data collection is an iterative, reciprocal process, simultaneous analysis and data collection were continued until no new information emerged.

Observations and Document Collection

Several observations were carried out during the data collection phase of this research project. Observations were conducted as a "passive participant" (Spradley, 1980, p. 60) meaning that little or no direct involvement was made with the people during that particular observation. Observations were typically conducted during the same time frame as interviews. Since the topic of research paralleled my own work at the time, I felt it necessary to detach somewhat from the setting and subject and attempt to gain more of an outsider's perspective.

Documents were collected through varying means. Several documents were given to me directly by faculty members, such as an article written describing experiences in an online class or examples of compensation for faculty members conducting online classes. Other documents were collected from both colleges' Web sites, including course syllabi, mission statements, course catalogs, descriptions of specific multimedia existing in classrooms, and academic policies and procedures. An additional source of documents was the university library's archived documents and special collections room where many folders of department histories and faculty council minutes existed.

Data Analysis

Using Merriam's (1988) guidelines for data analysis in a qualitative case study; data analysis consisted of multiple layers and intensity which changed in its focus and function depending on the time and phase of data collection. The onset of data analysis began with data collection and occurred simultaneously throughout the initial phase of data collection (Merriam, 1988).

As data were collected from verbatim transcriptions of interviewee responses, field notes, and document analysis, it was initially organized and filed using the qualitative software NUDIST. In addition, hard copies of data were also bound and organized into notebooks according to college. The use of "observer's comments" during interviews and observations (Biklen, et. al. as cited in Merriam, 1988, p. 125) and memos were used to stimulate reflection, further induction, and initiate coding categories.

As data collection progressed, data analysis intensified to an additional level. Once the decision was made to end data collection because of the emergence of no new

categories, coding categories were further developed by searching through the compiled data of each college for regularities, patterns, ways of thinking, relationships, etc. (Biklen, et. al. as cited in Merriam, 1988) using the qualitative software as well as by using traditional methods of colored highlighters and colored index cards. Categories were developed from smaller segments of data that resembled each other in their characteristics (Allen et. al. 1993). Using the lens of revitalization movements (Wallace, 1979), these coding categories were used for sorting data and assisting in the conceptualization of themes. Themes that emerged were examined to determine if they were suitable for describing the chosen topic arena and providing "theoretical significance" to the study (Rubin et. al., 1995, p. 256). The use of qualitative software was helpful in transferring selected quotes that reflected themes into the final written case report. The final level of data analysis consisted of further interpretation of the assembled case reports in order to make explicit connections to the framework of revitalization movements and the original research questions.

Research Criteria

Data collection and qualitative analysis are considered an interactive process and should involve those strategies that increase the study's trustworthiness and credibility. The triangulation of data by seeking many sources or "between-method triangulation" (Denzin, 1989, p. 244), such as documents, interview transcripts, observation fieldnotes, along with member checks, peer reviews of analytic content, purposive sampling, and rich description added to the credibility and trustworthiness of this study (Erlandson et. al., 1993, Mathison, 1988). In addition, the strategy of triangulation enabled the researcher the opportunity "to make sense of the social phenomenon" by pointing out

"inconsistencies" and "contradictions" that may exist in the data (Mathison, 1988, p. 15). Specific examples of how trustworthiness was established for the purpose of this dissertation are discussed below.

Credibility. The nature of qualitative research reflects the multiple realities and perspectives of its participants. Therefore, credibility is ensured when the researcher has presented those realities by thick description and accurate portrayal of the participants context and their experiences and perceptions. Thus, the presentation of the case reports in this dissertation allows the reader a picture of what is actually occurring in each college as seen by its members. Member checks were used to establish credibility of the information with completed case reports presented to Associate Deans in both colleges. The Associate Deans were given the opportunity to review the reports and modify or challenge data to ensure factual information. Additional methods to ensure credibility were the use of peer debriefings. These peer debriefings allowed outside professionals to analyze the research process and provide feedback about findings and conclusions allowing for refinement and further clarification.

Transferability. Transferability refers to the "extent to which the findings of one study can be applied to other situations" (Merriam, 1988, p. 54). To increase the probability of transferability the use of thick description was used to develop the case reports. The use of thick description along with purposive sampling presents the reader with enough information to put themselves in the particular contexts under study. In addition, the use of multiple sites lends to this study's transferability in that "an interpretation based on evidence from several cases can be more compelling to a reader than results based on a single instance" (Merriam, 1988, p. 54).

Dependability and Confirmability. Erlandson et. al. (1993) and Lincoln and Guba (1985) suggest that dependability refers to the level of reliability and "consistency" (p. 288) of the research process. Obtaining dependability in the study suggests that future researchers could, given the same research process, be able to make sense of the data and draw similar conclusions. In order to achieve this, multiple methods were used such as triangulation of data collection methods. In addition, a journal and calendar were maintained which documented the process and the many questions that arose as a result of the data collection and analysis. Likewise, the notion of confirmability adds to the study's accuracy by reducing the possibility of the researcher's bias to impede accurate portrayal of each context. Confirmability is established with a clear audit trail that consists of raw data in the form of interview transcripts, field notes from observations, memos, observer's comments, journals, and the original proposal for the study.

CHAPTER IV

PRESENTATION OF CASES

The purpose of this study is to describe and interpret the significant events and perceptions of faculty associated with the integration and adaptation of instructional technologies in two colleges using the lens of the revitalization movement (Wallace, 1979). Collection of data focused on faculty member perspectives of their college and instructional technologies use and development; and perspectives of their own use of instructional technology and evolution. Based on consultation with university-level academic computing administrators and by reviewing the nature, scope, mission, and purposes of each college in the university, two colleges in a large land-grant university were chosen as the sites for this case study. The information drawn from each college is presented in this chapter. The purposes of data collection, presentation, and analysis are to characterize each college within the constructs presented in the revitalization movement framework, to present the data findings in reference to the framework and literature, and to speculate on the relationship between instructional technologies and the practice and beliefs of faculty as elements of the revitalization movement.

Reporting

Data collected from interviews and fieldnotes completed from observations and documents were analyzed and coded to form general categories, then themes. The results or findings have been written in the style of case record (Merriam, 1988), meaning that particular and general descriptions (Merriam, 1988) are presented "in which the sights and sounds of what was being said and done are described in the natural sequence of their occurrence in real time" (Erickson, 1986, p. 150-151 as cited in Merriam, 1988). These

descriptions are the foundations for the analysis or "interpretive commentary" that is viewed through the lens of revitalization movements and will be presented in Chapter V. The first case record presented is the College of Human Ecology which is followed by the case record of the College of Veterinary Studies.

The University

Founded in 1890, the university chosen for this study is located in a north central town in the state. Located near two metropolitan areas, the university considers itself "readily accessible" and has an approximate enrollment of 26,000 students spread across four area campuses. The university offers a range of degree programs at a bachelor's, master's, and doctoral level. The university also houses two professional programs, one focusing on veterinary studies, the other osteopathic medicine. The university claims bragging rights to the largest library and student union in the state, as well as claiming "modern research laboratories and equipment" as a distinction among its many outstanding features. The university's mission focuses on serving not only the state student population, but national and international students, as well, and focuses on the priorities of providing "exceptional academic experiences" and the facilitation of "activities and scholarly research that will further advance knowledge" (University Course Catalog, 99-00).

Case One: The College of Human Ecology

The Setting

The College of Human Ecology (CHE) is composed of three departments, which the course catalog states are "science-based" (99-00): Design, Housing & Merchandising; Family Relations and Child Development; and Nutritional Sciences--and the School of

Hotel and Restaurant Administration. Each entity shares the common purpose of focusing on "the reciprocal relationship between people and their natural, constructed or social environments" (University Course Catalog, 99-00). The college is described as "interdisciplinary, multicultural and global in perspective" while advancing students for careers in "people-centered professions that develop solutions to many of today's most pressing issues" (University Course Catalog, 99-00). Issues such as development of the family, nutrition and health, aging, and the home and work environment are the focus of the curriculum.

The building is located in the heart of the campus near many of the campus's residential facilities. A "U" shaped building consisting of two large wings, the building was constructed in the very early 1950s at the beginning of the University's sixth decade. By all outside appearances, the building resembles many of the others on campus, but on the inside, the effects of age are becoming apparent in many areas of the college. At the time of this study, some areas of the college were undergoing remodeling, so students and workers were competing for space inside the building.

The college is the focus of much activity. It houses a fully-equipped, state-of-the art child development lab including a new "Outdoor Learning Classroom" that serves community and university parents with a full daycare/preschool. The child development lab represents one of the latest remodeling efforts in the college. The Outdoor Learning Classroom of the child development lab is located adjacent to the college and is packed with brightly colored playground equipment. The voices of children playing is such a typical sound outside of the college that one becomes accustomed to it, and the sound of children has become a part of the natural ambiance of the college.

The college also features three eating places that are managed by the School of Hotel and Restaurant Administration. One boasts a more formal dining experience while the other two are fast food eateries. The latter are located on the second floor of the college, so the smell of food is continually wafting through many of the hallways and mixes with the musty smell sometimes present in older buildings. The formal dining room is open during the lunch hour only and is always inhabited by university faculty members and administration from across campus, as well as community members. The fast food bar is primarily frequented by students from across campus and is open for a lengthier period of time. Many times, one can see students scattered around tables in and outside of the restaurant studying and visiting. This room is open with high windows and plants that make this particular area of the college seem bright, open, and new.

Upon entering the college, the hallways are teeming with the activity. Students are a continuous presence in the halls, either sitting on the floors or in the chairs littered throughout the halls outside of the classrooms or hurrying quickly down the long corridors with their backpacks loaded. It is very easy to blend in and remain inconspicuous. The halls are lined with directories, portraits of students and faculty, and advertisements of events in the college. In the hallways near the design classrooms, cases hold exhibits of student work, and many other display cases filled with student work are scattered throughout the building.

Many of the classrooms do not appear to be modernized by any means and appear to reflect the traditional methods of instructional delivery via lecture. Most are plain with neutral, dim cinder block walls on three sides and one wall with high windows looking out on the adjacent busy street that runs through campus. A large chalkboard or, in some

classes, a large whiteboard, cover the length of the wall behind where the instructor stands. Most all classrooms are "wired" meaning that network connectivity is available for access to the university's Intranet and Internet. One classroom in the college is equipped with multimedia capabilities such as computer, visualizer, VCR, projection system, and various software needed for presentations. If multimedia is to be used in other classrooms for instruction, then it must be physically brought into the classroom via one of the multimedia carts available for that purpose. In addition to the classrooms for instructional spaces, there is a lab used for computer-aided design and a spacious laboratory/kitchen designed for the instruction of nutrition and food preparation.

The College Perspective

The following section reveals the history of instructional technologies in the college, the factors influencing instructional technology and faculty perceptions of significant events in the college that may be associated with instructional technologies.

Historical and Significant Events

So I think we've got a ways to go before we realize what it really is for and what it's all about, but it'll be interesting." (Defoe, 4-10-00)

Data were collected to determine what, if any, significant events had happened in the college that had influenced the college as a whole in its integration of instructional technologies. Through documentation and faculty recollection, the evolution of instructional technologies was described. Faculty members also described some specific events that influenced the college as a whole. This section presents data that describe that evolution and the faculty view of those specific events.

Early historical documentation of the college revealed that instructional technologies had a variety of forms. The early kitchen laboratories consisted of equipment used for instruction in the preparation of food, such as all of the necessary utensils and appliances. Labs also consisted of materials needed for instruction in the domestic sciences such as materials and equipment for the study of the science of food (Published college history, 1989).

The then-Department of Clothing, Textiles and Merchandising appeared to be very instrumental in helping the college propel further into uses of instructional technologies. The department in the 1960s housed labs containing equipment and materials used for the design and creation of clothing and apparel. Other early documentation reveals specifically that in 1966 this department received funding from the Title VI Higher Education Act for the purchase of "innovative" materials for the classroom. Their prospective use is described below:

> to supplement classroom lectures with materials for students' study and use as needed and to make accessible audio-visual equipment which facilitates students' comprehension by providing a variety of learning experiences through seeing, hearing, and touching as opposed to only 'talk and chalk' lectures. (Published college history, 1989, p. 113)

The "audio-visual" equipment was to be placed in an audio-tutorial laboratory during the 1967-68 school year. This lab, when completed, consisted of six audio-tutorial carrels. At that time, the University was one of the first universities in the country to have a lab that was designed to supplement learning outside of the classroom by varying methods. This department was continually "aware" of other new developments in the

industry, technological or otherwise, and stayed abreast of the latest technologies to provide "innovative courses." One justification for staying current was the fact that textiles and fabrics were very expensive, and consumers who invested in these expensive fabrics did not want to have them fit improperly.

By the 1970s and 1980s the department had established a "center" that allowed students to consult with retailers to improve "their skills in merchandise management, marketing strategies, and manufacturer/retailer relations" (Published college history, 1989, p. 116). The center began using teleconferences as a means of outreach across the nation while utilizing graduate students as some of its many participants. Many faculty members dreamed of a time when the department and college would benefit from a "computer-aided design laboratory." Moreover, the importance of graduates being able to understand the relationship of their field to innovation and its many related variables was documented:

> Graduates have an understanding of the psychological, sociological, economic, and aesthetic, aspects of clothing and textiles. Whether creating garments for themselves, shopping for ready-made clothing, or working in design, industry, marketing, or education, [center] alumni understand the relationships between fiber, fabric, and fashion, and know how to buy for themselves or advise other consumers in this ever-changing world of technological advances. (Published college history, 1989, p. 116)

Through the remainder of the 1980s and on into the 1990s, the college continued its advancements and continued to utilize new technologies for instruction in all areas of the college. Faculty members could recall the "earlier days" of classroom instruction and

the beginnings of multimedia technologies known today. Dr. Harrington, an associate professor in the department of Design, Housing and Merchandising for nine years, reflected on the college's history and her view of its evolution:

> As far as technology in this college when I got here nine years ago, there were overhead projectors in all the classrooms. It's all a blur. I'm sure that probably we started evolving with technology in the office, with faculty, I'm guessing, because they started trying to upgrade everybody's computer, slowly. Obviously, resources aren't put into colleges and departments overnight, and that probably was the first time I saw technology moving in. Eventually, e-mail was available. And there were computers on most faculty members' desks, but the one that was on my desk, which I inherited, was really a word processing kind..., it wasn't really a computer as such. It wasn't any kind of a Windows-based computer. So there clearly was no technology being used much to deliver the content to students, or anything like that. (Harrington, 4-10-00)

Dr. Carlyle, an associate dean and faculty member in the Design, Housing and Merchandising department, also recounted her remembrance of the college in its history of instructional technology:

> I would say that we've been fortunate in that, as a college, the instructional technology equipment has been very available to us for between five and six years. And from a distance aspect, really three to four years. [And] before that? Equipment wise, [in] instructional technology I think we were still talking about VCRs. Slide projectors. Overhead projectors. Chalkboards. What I think of as

very traditional equipment. Nothing new. As a matter of fact, I think people were excited when they got color overheads. (Carlyle, 4-5-00)

Dr. Wells, an associate professor in Nutritional Sciences for five years, recalled her impressions of the college when she began as being "farther along technology-wise" and recalled the beginning uses of e-mail and having to use a modem to connect. She also described the widespread use of overhead transparencies and slide projectors to supplement lecture.

Dr. Harrington noted differences in how CHE responded to integrating multimedia in the classroom as opposed to some of the colleges on campus and specifically described the multimedia in the classroom:.

> Our college was rather forward-thinking, I think, compared to some, in terms of identifying a classroom in the building that they wanted to outfit with multimedia capabilities when that technology was available, and so we've had a classroom in 102, which is down on the Dean's hallway. It's the large classroom in the building, with a permanent setup there, with a PC and the kinds of software needed to do multimedia presentations, and projectors installed in the ceilings, those type of things. Of course, you see those all over campus now, but we actually had, I think, one in our building before a lot of colleges did. And I don't know why. I don't know if it was because we were open about that or what, but it did appear here rather early compared to some places. (Harrington, 4-10-00)

Dr. Carlyle also recollected the fact that the college was one of the first colleges on campus to be networked and to start integrating technology and attributed that to the negotiating of the newly hired Dean:

> I think as a college, all of our faculty have had computers on their desks, with the exception of maybe engineering, longer than any other college on campus. We were one of the first to get our building networked. She [the Dean] negotiated in technology money as she came. And so we started very carefully trying to figure out how do we get computers on everyone's desks, so anybody that wanted a computer, we figured a way to get that, and we took money from other areas and put it there. We had some faculty the first round who said 'I don't want it.' And so we didn't force it. But within a year, every faculty member, staff member had a computer. And then, we've tried, really, to keep that going, so that we keep them rotating and moving up. (Carlyle, 4-5-00)

Many faculty commented on the pace with which new technologies starting appearing in the college--and, in general, the university--and noted it as progress: "I just think where we were five years ago. Nothing. So we've made a lot of progress in a very short period of time" (Defoe, 4-10-00). Dr. Bradbury, an associate professor in Family Relations commented "...historically, I kind of see we've kind of moved really fast in leaps and bounds from classroom instruction to distance education" (4-5-00).

Faculty not only noted historically how the college had progressed but also described some events which had occurred in the college that had prompted some of the integration of instructional technologies. Dr. Carlyle noted that of particular significance to the college were influx of new faculty and the development of a Faculty Scholars program for the new faculty around seven to eight years ago, plus several college-wide grants that were developed through a new consortium.

She described the nature the Faculty Scholars program and how it indicated a faculty development need for instructional technologies; moreover, she emphasized the fact that that new faculty played a vital role in the growth of using new tools and promoting that use throughout the college:

> ...we started a faculty development program about seven years ago. Actually, we're in our seventh year, called Faculty Scholars. And it was for new faculty, because what we had found, we had gone through a transition time with an interim Dean for about two years. And so when we had a Dean come aboard, we had the hired faculty, and in some cases, we just had adjunct faculty. So we had a lot of vacancies. And what we found was we had a lot of brand-new faculty, but we didn't have very many full professors to mentor, and so we really decided that we needed a faculty development program. Now it really started out around the whole grantsmanship area. We thought we needed to increase our external funding, and so we needed to help faculty develop the skills, so they would be better proposal writers to bring in external dollars. Now those external dollars could be for instruction, research, and/or an outreach program. It didn't have to be just research. And what they [new faculty] told us was, they really liked the grantsmanship, and that was really appropriate, but they'd like us to incorporate some other things. So instructional technologies came in as an area that we needed to do some things with. (Carlyle, 4-5-00)

As a result, Carlyle noted that many of the "existing faculty" began requesting some of the same types of faculty development that the new faculty were getting. She noted that in the past, as far as faculty development, issues surrounding teaching had

always been addressed such as "critical thinking,...assessment, teaching large classes, getting students engaged, changes in higher education, distance education." However, faculty started requesting "hands-on" training in areas such as PowerPoint; "...the faculty said...we'd really like some hands-on learning to use better the technologies we have available to us" (Carlyle, 4-5-00).

A second event that Carlyle immediately brought up as significant following the development of the Faculty Scholars Program was the initiation of a consortium named the Southern Deans Group. The purpose, she explained, was to compensate for a lack of faculty when offering certain programs and expand their offerings by sharing programs with other institutions. "For instance," she stated, "we don't have faculty in Family Economics...nor could we afford to put faculty in place, so we said why don't we start sharing programs." The result of this consortium, she explained, was the writing of a grant to facilitate faculty development for all institutions involved. Faculty development sessions were always held in Kansas City and focused on many different instructional methodologies and changing technologies. According to Dr. Carlyle, "...[it] wasn't necessarily focused on Web design or compressed video or whatever. It was really on what's happening in technology, how do people learn, and how do you change the classroom environment?" (4-5-00). What they discovered, she explained, was that once faculty participated in these sessions, "they would come back and teach differently" (Carlyle, 4-5-00). She described a particular discussion faculty members had on the way back from one of these faculty development sessions:

> I remember in the van coming back from one of them...there was a Nutritional Science faculty and she said, 'we never even talked about

> teaching instructional kinds of things at any of our national meetings. It's always really on research.' And she said, 'all I ever knew that one did in the classroom was lecture because that had been her role model. And some of the faculty from Interior Apparel Design said, 'we rarely just lecture, because it's very much a hands-on kind of thing.' So you started seeing what happens as different disciplines approach their teaching. (Carlyle, 4-5-00)

Dr. Carlyle described this experience as "real fun" and spoke animatedly about it. She continued by describing a subsequent grant through the Great Plains Deans Group that allowed faculty to receive training specifically in online course development, assessment in the distance education course, and instructional design. Training for these areas was done in Nebraska, with a few faculty members attending training at a local training institute. Many faculty members with whom I spoke made reference to these training opportunities and the associated grants as well as the abundance of training opportunities overall; therefore, I referenced them as significant events.

Several faculty members described one more event that I inferred as significant to the college: the development of a computer-aided design laboratory. Early documentation of the college's history discussed the desire of some of the faculty in design, housing, and merchandising for a lab that would have CAD equipment. Dr. Harrington described the lab's inception:

> Something happened that was rather a forward-thinking and probably a big event for our department, but because we're a department of design, housing, and

merchandising, obviously computer-aided design is an issue for any field of design. So, one of the things being worked on when I arrived, at least the discussion had started, that we needed a computer-aided design laboratory. But there was no computer lab in this college, and there still isn't a computer lab, except for the computer-aided design lab that our department established. Now the college has, over time, come to suggest that the lab be open to students, other students in the college, when we're not teaching classes in there. You know, for word processing purposes, and that sort of thing. And other faculty in the college now use the lab. But it was actually established by our department. Our department head and some interior design faculty members, primarily, secured donations from interior design industry people. And over time, obviously, they've had to be upgraded, and the college has bought some with technology money, that sort of thing, that has impacted the upgrading of the lab. I would say the development of that CAD lab probably had a huge impact on our department, because then we started teaching computer-aided design classes to the interior design students, and after a couple of years, we had our first CAD class for the apparel design and production students. So when that happens in any college, it impacts the rest of the college in terms of the use of technology (Harrington, 4-10-00).

A final "event," which nearly all faculty referenced in one way or another, was the "thrust" for the creation of online classes. Dr. Bradbury recalled his impression of this new development:

> There was actually a kind of university-wide goal or university-wide thrust, some type of larger plan to try to implement more, or to at least open the dialogue for teaching classes on the Internet, and I kind of got a sense that there was a race, kind of between universities in the [state], to see who could get the first classes online. So there kind of a push, not only by the colleges, but by the university to implement some Internet classes to show that [our university] was kind of a leader. (4-5-00)

Dr. Atwood, an assistant professor in Hotel and Restaurant Management, noted that this desire for online courses and distance education probably served as reason for much of what was happening in the college. Julie Swift, a coordinator in the extension office of the college who assists many of the faculty in their online course development stated that she had to "soak up a lot fast so I could help faculty."

Faculty voiced concerns regarding distance education and online classes such as how those methods of delivery fit into the "traditional" landscape of teaching. In order to clarify some of these questions, the college designed what is known as the "Learning Link" document that is to serve as a set of distance education guidelines for the college. The document notes that it will reflect the "continual change as the environments of the college , the university, distance education, and higher education evolve." It covers a range of issues, including the definition of distance education and specifies a number of objectives and strategies such as quality instruction, rigor of classes, rewards and compensation of faculty, and evaluation and marketing of the distance education programs and classes in the college. It is also noted on the document that any policy that is developed by the university will supercede what is written in the document.

Influences: Expectations, Leadership & Individuality

While the above historical and significant events that were described by faculty appear to stand out, they were at times blurred into the many other influencing factors that were also described. For example, while many faculty members commented on those specific events that may have perpetuated the integration of instructional technologies, they would often note in the same breath their relationship to other factors. One such instance was the faculty member who stated that they (the college) were like everyone else on campus and just trying hard to "keep up with it" (Milton, 5-25-00). When recalling the grants and subsequent faculty development, a faculty member stated that being somewhat "on the leading edge of the campus "means it has been sometimes a painful experience" but also a "valuable experience" (Barrie, 4-4-00).

Expectations

Faculty described the many different levels of the expectations that surrounded the integration of instructional technologies in the college. Most all of these expectations centered around students in one form or another. Either faculty members described perceptions of students' expectations of them, or they described the expectations of the "industry" for preparing students to work in the industry. Many perceived that students, as well as faculty, should be using technology in the classroom in order to prepare them for the work world. In a recent newsletter published by the college, Dr. Carlyle was quoted as saying, "Our graduates learn more than information while in school. They learn how to grow and adapt in an ever changing world. They know how to creatively solve problems, think critically and use technology" (CHE Magazine, 2000).

Dr. Barrie also elaborated on the expectation aspect of using instructional technologies:

> It's where things are going. If we don't learn to use it now, and if we don't expect our students to learn to use it, we're all going to be behind. And it's so true. I think all we have to do is look around, but the average business now is using instructional technology to make a presentation, and if we can't do it or won't do it, why should we be able to expect our students to do it, and then take that into their professional career? So I think it's just a stubbornness, and knowing that it's the future. (4-4-00)

Dr. Milton, an assistant professor in Hotel Restaurant Management, spoke of the college in terms of its acknowledgement of preparing students by having them use the technology in the classroom. "I really feel like this college is very sensitive to that, and understands the fact that our students need that type of preparation" (5-25-00). Dr. Harrington expressed her thoughts to me as well: "I think it's important to use technology...the world is technology-based, and it would not be very forward-thinking of us to sit and say, 'well, we don't want to use technology because we don't feel like it.' Our students need to be exposed to technology..." (4-10-00). Dr. Carlyle even mentioned the concern of graduating new students to academe in that field and not exposing them to technology in their classroom experiences yet expecting them to use it when they got in the classroom themselves. She stated that this was "not doing them a favor" (4-5-00).

Faculty spoke of their views on students using the technology in class to help in their learning and the fact that there was a reciprocal relationship between their

expectations of students using the technology and students expecting them to use the technology as well. Dr. Wells mentioned that many of her students have mentioned that it was hard for them (the students) to remember what it was like to not use the technology and have access to it. Dr. Harrington spoke of the fact that she does not even have to require students to use technology in their class work or assignments:

> We're insistent upon using the technology so much that it seems to be expected. I teach a sophomore-level class right now and they're working on team projects right now. I'm not requiring them to use a technology presentation, but the majority of them will use PowerPoint, or are saying that they will create a Web site of their own and show it to the class. (4-10-00)

She also stated that it is important for students to perceive that faculty can use the technology:

> I think to be believable to students today, that a faculty member needs to have knowledge of technology, and to be able to demonstrate that knowledge in front of the class. And I don't think that everybody needs to be a techno-wizard. But I think they need to be able to use language that's accurate in front of the classroom. (4-10-00)

Dr. Defoe discussed that, as a whole, it is good to use technology simply because students like the technology, particularly web-based technologies that allowed students more flexibility. "I think as a whole, they like it because they can do it (class work) when they're interested, they can go back if they didn't get something. All those kinds of things help them out" (4-10-00).

Dr. Bradbury, on the other hand, summed up the expectations to use technology for students very clearly as not always being related to learning:

> We need to be aware of other avenues to reach students. And of course, that historically goes back to what's the goal of the university? Part of it relates to bringing in students. That's the audience we're servicing. It sounds like an economic thing, and in reality it comes down to dollars and cents,... the number of students you have is kind of the lifeblood of the university." (4-5-00)

Dr. Wells also reiterated that idea and voiced that using technology can sometimes be a competitive tool. She indicated that she has not yet learned all the benefits of using it in her class.

> I think it's attractive. It's sexy, I guess. That's not exactly the right word, but it's, you know, something that they (the college) can brag about, that we have this capability. And you know, some *other* [italics mine] people have it, so we should be thinking about this. (4-14-00)

Leadership

The idea of leadership surfaced in interviews and conversations with faculty. By no means was any one person continually targeted as having more influence over the course of events, different people or groups. That is not to say that the college "leaders," such as the Dean and Associate Dean, did not have significant influence. In fact, one faculty member made a comment in jest regarding the Dean and her influence, "Actually, we've had quite a bit of faculty development on that [speaking on instructional technologies], and I think, actually, for a while, people were going, 'I really wish the Dean would get off this jag about media and education and that sort of thing.'" (Wells, 4-

14-00) She made this statement in a joking manner of course, but it was clear from her tone that the topic had been circulating among faculty members. Dr. Defoe commented on what she thought was the administration's role in the college as far as instructional technologies:

> I think they need to provide access. I don't think you can talk everybody into doing it, so give it up and let the people who like it do interesting things with it, and then let the other people use it the way they want to. I mean, I think everybody should get to use it the way they want to. If they don't want to use it for instruction, fine. There are hundreds of neat things to do. It isn't the only thing in the world. And I think eventually, another 20 years, it will be just like overheads. (4-10-00)

However, Dr. Barrie, an Assistant Dean felt that it is primarily the administrations' responsibility to help faculty learn. She commented on the importance of directing faculty to new technologies, giving them opportunities to learn it, and providing the support needed afterward to sustain what they've learned:

> ...if I don't think of or look for ways to expose faculty, and to give them some hands-on time and some support with the technology, then they won't adapt to it. I don't know. This is just a suspicion I have. But I think faculty are very, very busy, and they don't have time to always be looking at the new technology, so if I can provide opportunities, I think that's a more successful route. (4-4-00)

Dr. Carlyle echoed her sentiments and reiterated that that was one of the primary reasons for establishing the Faculty Scholars program. Comments made to her by faculty, as well as results from surveys, have indicated that faculty members have

appreciated the fact that "administration has cared about their development" and that they are there and "supportive" (Carlyle, 4-5-00). She also expressed that it was important that the leadership in the college model whatever they were expecting faculty to use:

> One of my basic thoughts that I said to the Dean was, 'if we're gonna be suggesting that faculty start doing this stuff, we need to be modeling it.' I really think that modeling has a lot to do with our expectations. And if we're always saying, do something, but don't ever try it yourself, then we've got a problem. (4-5-00)

By using the concept of modeling and establishing cohorts of users in the college, the administrators believe it filters on down to the other faculty and prompts them to start using technologies. Dr. Barrie agreed with this perception stating that it typically happened in this manner: "The first one who picks up on it, or they like it, they start to use it, and show things. They then become a resource for questions and answers to other faculty" (4-4-00) She stated that faculty would typically ask other faculty they were close to any questions they had about problems. "They don't want to look dumb" (Barrie, 4-4-00). Dr. Carlyle further stated that sharing was indeed helpful particularly when faculty were learning a new tool and solving problems regarding its use. She added that, as a whole, they really tried to approach faculty development in an "integrated nature" (4-5-00).

Individuality

Despite these examples of leadership, faculty members thought that much of the impetus for development and leadership of faculty came from the faculty members themselves. Moreover, it has also been suggested that all has not gone smoothly on the

integration front. When dealing with these new technologies, many different personalities and motivations come into play and respond differently to their integration (Carlyle, 4-5-00; Milton, 5-25-00). Dr. Carlyle mentioned specifically that sometimes finding what motivated people could be difficult (Carlyle, 4-5-00).

One of the first things that Dr. Milton stated when asked to describe instructional technology use in the college was that she thought, "There are probably as many different technologies as there are faculty in the college. Some use traditional methods, and some experiment with new methods" (5-25-00). While most reactions to the integration of new technologies have been positive (Harrington, 4-10-00), there have been some faculty members who have been "more enthusiastic than others are" (Carlyle, 4-5-00). Yet no faculty have opposed the use of instructional technologies or "dug in their heels" (Carlyle, 4-5-00). There were those faculty members who have continued to teach in a "traditional" manner (Bradbury, 4-5-00; Carlyle, 4-5-00; Harrington, 4-10-00). Dr. Bradbury shared one example regarding faculty members who did not want to teach online:

> That's where some faculty are, and this is where it kind of comes down to, some faculty may feel like, well, maybe Internet class is a good idea, but I don't want to get involved in it, because it's not gonna be very beneficial for me, or it's not going to help me get promoted, or will it help me with my salary increases. They're kind of treading on tradition. I think some of the faculty that have developed an Internet class are more of the faculty that have been willing to take risks, and I think it does have to do with risk-taking, because you do have to maybe try something different, and

you have to do an Internet course a little differently, and the teaching style is different, and some of the things you've been trained in may not be appropriate, so you may have to relearn a lot of things, and I think that's key in those faculty that have actually implemented classes or the ones in those departments where there's a little more risk-takers in trying something different. (4-5-00)

He further went on to explore the fact that many faculty members were also probably motivated by the "what's in it for me" notion or the reward system and that he heard the complaint many times from faculty. He stated that those faculty were constantly trying to determine how the notion of teaching online classes or using instructional technologies "fit into their normal experience" (4-5-00). Dr. Carlyle noted hearing the same types of comments from faculty members quite a bit and admitted that at times "some of them bother me a lot" (4-5-00). She added that what she really wished faculty members would do is "...start looking at where students are, and what students' expectations are, because they're no longer in the same place" (4-5-00). Dr. Defoe, however, offered a different perspective on those faculty who had not chosen to integrate instructional technologies. She advocated that it be a matter of free will:

I think when we try to force people to do things, you end up with them digging their heels in, and it defeats the purpose. I'm a big believer in providing access to things people want, encourage their use. I don't think you need to reward people or anything else for using it, because usually it's the most fun to use for those people. They really like it when they get down to it. It's rewarding in and of itself. It is fun, no matter how

> frustrated you get when you're making something, you have this wonderful, glorious thing that you could never make any other way. People [faculty members and students]get just so delighted. They may not have seemed delighted when they were doing it, but when it's done. Especially when the students like it. And I've got lots of students thanking me for being one of the early ones to take tech to class. You know, even when we were doing stupid stuff, and couldn't get it to run half the time, and they still said, 'Thank you.' (4-10-00)

Individual Perspectives: The Classroom Experience

Faculty members described their experiences in the classroom with using the many instructional technologies available in their college. Faculty comments and concerns ranged from typical uses during class and how they directed students to utilize the technology to how they coped with frustrations and how the use of technology was fitting into their overall notion of teaching.

Uses and Functions

According to faculty, the forms of instructional technology in the college have evolved from overheads to Internet, from VCRs to compressed video. For the most part, it appeared those faculty members were able to choose the types of instructional technologies that met their needs. Many faculty members described using several different forms depending on what subject they were teaching. Design faculty stated that not using some form of instructional technology in the classroom was "almost atypical" (Harrington, 4-10-00). However, some faculty members in the early childhood classes deferred to just PowerPoint or nothing at all unless they were teaching an online course

(Lessing, 4-12-00). Several faculty noted that early "pushes to use multimedia such as PowerPoint" in the college resulted in no more than "glorified overheads" and "transparencies with flying words" (Barrie, 4-4-00; Harrington, 4-10-00; Wells, 4-14-00). Dr. Barrie noted that her thinking began to change as she continued to use PowerPoint and observed students reactions to it. She noted that when she initially began using PowerPoint she tended to put many notes on the slides; consequently students would then be "writing like crazy, because they're copying every word down that's on the slide" (4-4-00). She stated that she learned that to keep students focused on her she would use the PowerPoint more as an outline with "key words and phrases" and print out the notes so students could have them. "...they end up paying more attention to what I'm saying rather than what's up on the screen, and so they're filling in more of the blanks" (4-4-00). Dr. Lessing had a different perspective of this technique having tried it in her classes. She observed students had a "passive attitude" when she used the PowerPoint and made notes available. She described this attitude as a negative factor and as a concern (4-12-00). Dr. Atwood downplayed the use of PowerPoint as well, saying that it was a "good attention getter [but that] you have to have some substance behind it" (5-30-00).

The issue and use of PowerPoint was a constant with the faculty that I interviewed; Dr. Defoe spoke immediately of its use when we began talking about instructional technologies but quickly added its purpose in her class along with the other technologies that she used and their function:

> I use all kinds of stuff. I always take a multimedia projector to class, and we always use PowerPoint, and I try to use it for more than just flashing electronic versions of overheads. I teach a lot of classes that have what I'd

consider very graphic visual merchandising and things, so I take a lot of pictures that way. And then we do things, of course, with Excel. And sometimes I do web pages for classes. If I'm out of town or something like that. I don't use it to post notes. I don't use it for a way for them [students]not to come to class. (4-10-00)

Dr. More, a new assistant professor in the department of Nutritional Sciences, also uses PowerPoint as a baseline in her technology skills but questioned its value.

I'm a neophyte. I know how to make PowerPoint slides. I suppose it makes me at least an introductory person. I can make them pop up on the screen. In my maternal and infant class I did a lot. Instead of just standing and lecturing, I had the PowerPoint in addition, so it's like I had the big points. I'm not sure whether that helps or not. To some extent, I'm not sure whether it doesn't, it really doesn't help better to just come up with something like that and then hand all the stuff out and then expect people to pay attention. I didn't hand it out, because I thought maybe people wouldn't pay attention. But I think if I was going to do it again, I think I would give the notes, and then they could write down on them because I spent all that time organizing it. The main points. And you certainly want them to walk away with the main points. Particularly in this class, because it's not something that people are necessarily going to do, but it's sort of the kind of thing where you stick all of the stuff in a notebook. (4-19-00)

Dr. Defoe put the use of PowerPoint into perspective as being nothing more than a "neater, cleaner version of overheads" and her view of its function was not necessarily to enable students but simply a management tool. "So what I bring to class is more contemporary. No, they're not learning anything new, but it's sort of nice not to have to work so hard. It was awful. Much harder to keep students captivated" (4-10-00).

Other forms of technology were talked about differently. Faculty commented numerous times about the Internet and how it was used in their class. Many either used it as a supplement to the classroom or as a totally online course. "I love being able to have the Web for the students to use. One of the things we do is talk about evaluating information, and a lot of them get their information on the Internet. It's really teaching them from a research standpoint" (Wells, 4-14-00). Dr. Harrington described her students' uses of the Internet as a supplement to her class: "it was used to support what I had introduced in class, so they would have backup information to read and clarify instructions and give examples of job circuit correspondence and resumes. I even had things in there like mock interviews where they respond to questions. Practice thinking on their feet" (4-10-00).

Online or Internet classes seem to be a whole other issue, and those faculty members who have taught them all had concerns about the time spent doing them and went back and forth on the values of face-to-face learning versus online learning (Atwood, 5-30-00; Lessing, 4-12-00, Thoreau, 4-6-00; Wells, 4-14-00). Some noted, specifically, that they valued the interaction that occurred in the online classroom and described it as a "kinship" (Thoreau, 4-6-00). Dr. Bradbury described his teaching in the

online class and noted that it was easier to see learning occur as opposed to the traditional classroom.

> I've tried to actually implement my Internet class very similar to my teaching style in class, so I have not, there are some courses that are much more structured, that they give true and false assignments every week, and they give a number of graded papers, but I try to have more dialogue and discussion, and feedback, and have the students do things in the class, so I've actually implemented my Internet class that way, where I kind of set the tone, set the discussion, and then I have the students give each other feedback and respond to everyone else's response. And that's what I try to do in the classroom, too, to open it up for discussion, and kind of get their feedback. I've actually tried to implement a similar type of format for my Internet classes, where we've actually, I've spent more time in the discussion room with the students. And that's where I see the learning actually occurs, when they're talking about the ideas that they've just read about, or they've talked about, and they've gotten feedback, and you can see them kind of grow through their responses. (4-5-00)

Besides the presentation software, Internet, and online classes, other software was mentioned as being used in the classroom if it met the needs of that particular class:

> Brainstorming was one of the things we do in that class. And so we bought, a software called 'Idea Fisher' and it's simply a brainstorming tool. And so each semester since then, I've taken the students for the creative problem solving class to the lab, and we learn how to use 'Idea

Fisher' and how to use technology, in other words, to enhance our creative thinking. (Harrington, 4-10-00)

Of the many viewpoints discussed by faculty members , Dr. More commented that what she had really taken away from all of the talk and training about instructional technology was that "It's not really a technology thing...good teaching is good teaching." The realization was, as she described it, "another one of those big things" (4-19-00).

Coping with Problems

The faculty noted, often with chagrin, the problems they would have in using the technology, what they would do in the event of failure, and how they were adjusting to these occurrences. Often they resorted to what they called "Plan B":

> Well, I've learned to not expect it to be there, unfortunately. So initially, it was a bit of a shock. 'Okay, well, let me just read you what I have. Pretend like you can see what I've got here.' Actually, the first year, I would carry my handouts with me that I would use, I mean, my overheads that I'd used previously. Now I just plan some way to be able to do something to give them something to take with them and look it up later. But it is frustrating. Notice, I haven't incorporated it into all of my classes. Part of it is the rooms where they're assigned. If I was in a classroom where the equipment was there permanently, I would use it. (Wells, 4-14-00)

Dr. Barrie described what she has done in the past when things went wrong. She and other faculty member tried to emphasize the positive side of the problems but admitted it can still be "frustrating" and at times "painful" (Barrie, 4-4-00; Harrington, 4-10-00). She

posed that when she has had problems with technology, it is good for students and other faculty members to witness all the trappings of the technology. "It's good for students to see it, that everybody has problems with technology. It's not just them. And I think that other faculty members need to know that we all have problems with it" (Barrie, 4-4-00). She elaborated further on her attempts and attitudes in fixing technology problems in class:

> Students have seen me crawl on the floor to hook up cables that were supposed to be hooked up that weren't hooked up. They've heard me talk to myself about what's not working when I was trying to figure out why something wasn't happening the way it was supposed to be happening. Somebody decided that the LCD projector in the multimedia room that's in the ceiling had to be turned off by the button on the front of the projector, and so they stood on a chair and turned the projector off instead of using the remote control. And I'm not tall enough to stand on the seat of a chair and turn it back on, so I had to recruit a student who was taller than I was to turn the projector on. I mean, these are all simple little things that can be very frustrating. (4-4-00)

Faculty generally had the attitude that these were things that just happened and were part of the game. They noted that, despite all the wonderful faculty development and support, that technical support and availability remained issues. Many surmised that many of the technical problems would not be as noticeable if there were more equipment to go around (Barrie, 4-4-00; Defoe, 4-10-00; Harrington, 4-10-00; Wells, 4-14-00). "Yeah, I really like technology. So yeah, it doesn't work all the time perfectly, but it's

the puzzle of making it work. It's almost like a game in a lot of ways" (Defoe, 4-10-00). In the meantime, they were content with having "back-up plans" until the kinks were worked out of the technology.

Case Two: The College of Veterinary Studies

The Setting

The College of Veterinary Studies' primary purpose is preparing individuals to enter veterinary practice. It is considered a "professional" program and consists of a curriculum that provides training in "medical education in addition to training in diagnosis, disease prevention, medical treatment, and surgery" (University Course Catalog, 1999-2000). The degree of Doctor of Veterinary Medicine or DVM requires six years total of academic work. Most students enter the vet school after three to four years of "preparatory" course work or a completed bachelor's degree.

The college is composed of three academic departments: Veterinary Clinical Services, Veterinary Pathobiology, and Physiological Sciences. Enrollment in the Veterinary Medicine program is "restricted," meaning that each year only a certain number of students are accepted into a class. The class is structured as a cohort, and students proceed through the curriculum of the program together. The class size currently ranges in the mid-seventies but has fluctuated throughout the history of the college. The curriculum runs through the course of four calendar years, with the first two years of the curriculum parallel to the standard University semester. The last two years are continuous, with the fourth year consisting of mostly clinical work of three-week "rotations" in the teaching hospital.

In addition to the Veterinary Studies program, the college does offer some additional graduate work in the area of Veterinary Biomedical Sciences (VBS). In this program, students can either obtain a Master of Science or Doctor of Philosophy. The VBS program focuses on infectious diseases, pathobiology, and physiological sciences. The Master of Science program is specifically designed to "prepare individuals for careers in teaching and research, and specialization" (University Course Catalog, 1999-2000). Students may complete this work beyond the DVM or as a separate profession upon completing a Bachelor's degree.

The college is located on the edge of campus and consists of several buildings: The Veterinary Studies Building, which was originally built in the late 1940s, the Teaching Hospital, which was completed in the early 1980s, and the Disease Diagnostic Laboratory. Most interviews and observations were completed in the Veterinary Studies building as many of the faculty offices and located in that building. In addition to faculty offices, this building houses many classrooms, the library, learning resources center, labs, and computer labs. The Teaching Hospital serves as a place for both "clinical and academic" instruction. This clinic also serves the community with its large-and-small animal clinics. The surrounding area of the hospital can be rather noisy due to large animals staying at the facility. Some area residents have often complained of the smells, which are attributed to the many animals visiting.

My visits to the Veterinary Studies Building usually were made on the pretense of visiting faculty members, and I could not help noticing how different the building and its surroundings were from many of the other buildings on campus. When you first walk into the building, you immediately notice how clean everything appears. The floors were

very shiny, swept, and appear as if they had just been cleaned or as if no one had walked on them. You also immediately spot the symbol of veterinary medicine, the Aesculapius, and pictures of the many classes that have previously graduated. The building was very quiet all of the times I was there, except for one time when I entered, and the sounds from a class being conducted in the lecture hall could be heard in the hallway. Even then, all you heard was the faint sound of the lecturer. Upon entering the hallways to the faculty offices and labs, students are still scarce. I did see several students who had white lab coats on, and several others were dressed in normal clothes. They would typically look at me curiously, and I would be acknowledged. I could not blend in and be inconspicuous.

The building has several computer labs for students and, at times, several students were clustered at the machines, but still very quiet. The halls had bulletin boards scattered throughout. Some had notices of upcoming events for veterinary students, apartments for rent, refrigerators for sale, and the usual college advertisements. Others contained veterinary positions available throughout the U.S. or research findings from the latest journal.

With no one in the halls, I typically would have to ask directions, for the building seemed like a maze. Usually, one of the administrative assistants in the admissions office would help me. Sometimes one would call the faculty member I was looking for to see if they were available, even if I had told them I had an appointment. Other times, I would generally roam the halls until I found the office I was looking for, or someone would step out and see if I needed help. The many offices I visited looked like mini-labs in themselves, packed with books, microscopes, cameras, and slides scattered everywhere. Some faculty members had purchased a lot of technology equipment that is special to

their field such as video cameras with flexible lenses that fit microscopes and cameras. Some areas in the building smell like either alcohol or antiseptic, something strong that will kill germs or be a preservative.

One of the rooms I found most interesting was the "office" of Multimedia Curriculum Development. It is rather large and was probably previously a lab. All along one wall from about waist high, glass shelves are full of preserved animal parts. They were obviously old, as some of the labels on the jars were yellowed. The shelves were back-lighted and with the room appearing dim, they gave an eerie glow. (I asked Ms. Howells, the instructional technologist what she thought about sharing her office space with these "parts." She replied that she "just got used to it after awhile.") The space also houses all of the technology tools for multimedia development, such as scanners for slides and regular flat images; microscopes with cameras; and computers, with the additional desk and computer that belongs to Ms. Howells.

The Teaching Hospital resembled a typical clinic setting. I visited the clinic to interview faculty on two occasions. The front entrance consisted of a waiting room, and there were several people there with their animals, one a large dog and two other terriers. There was animal wallpaper on the walls, which looked cheery, and there was a place to weigh an animal on a big scale. The clinic seemed busy with two receptionists up front taking phone calls and ushering "patients" into the back. There were two doors leading to the back. The door I had to enter for my appointment took me into an area of the teaching hospital that I believe contained labs and classrooms. Doors were hardly open, so the hall seemed to go on forever, and I could not necessarily see in the small windows.

No people were around in this hallway either, and I stood in the hall until someone came out a door and helped me to my destination.

The college houses several classrooms equipped with "state-of-the-art" (College Web site) multimedia equipment. The purposes of the classrooms range from lecturing to first-year students to continuing-education programs for veterinarians.

> Room 101 is used primarily as a classroom for third-year veterinary students. All classroom *lectures* for these students are taught in this room. It is also used as an auditorium for guest lectures and other programs presented to the college 's faculty, staff, and students. Continuing education programs for veterinarians are also sometimes held in this room.
>
> Room 259 is used primarily as a classroom for second-year veterinary students, and Room 263 is used primarily as a classroom for first-year veterinary students. All classroom *lectures* for these students are taught in these rooms. Graduate students in the college also use these rooms for multimedia presentations to their graduate committees. Faculty also use these rooms for organizational meetings where multimedia presentations are utilized. (College Web site classroom descriptions)

The Teaching Hospital has a similar classroom that is used by fourth-year students, interns, and residents. "Grand Rounds" presentations, where students present over various topics associated with their studies, are usually given in this room and most recently have been streamed live on the Web.

The College Perspective

This section of the data represents faculty members' perspectives of their college and instructional technologies in that college, including historical and significant events and factors which may influence the integration of instructional technologies in the college.

Historical and Significant Events

All I'm trying to do is use the technology to provide information, maybe in a more useful, maybe in a more entertaining, maybe in a more understandable format than simply talking to them. (Smith, 5-16-00)

Data were collected to determine the evolution and significant events which may have influenced the integration of instructional technologies in the college. Documents and interviews with faculty members revealed some significant events which may have influenced the college. This section will present the data regarding those events.

A published history of the college reveals that beginnings were rocky. Dominating the discussions of the college were issues of class sizes, curriculum changes, and appropriate facilities. The 1970s appeared to bring the beginning of change to instructional methods. Overall, the University's focus was on teaching and the establishment of the University Institute for Teaching Effectiveness had facilitated some change in teaching methods and practices. "Computers and closed-circuit television had taken their places beside blackboards and laboratory tables" (Published college history, 1986, p. 135).

The University had encouraged all colleges on campus to establish their own Learning Resource Centers "where students and faculty could review in-depth presentations on a wide range of subjects on tape and/or slides at their own pace"

(Published college history, 1986). The college received a grant from the Department of Health, Education and Welfare for $102,000 in 1970; and spurred on by negative reports from the State Regents for Higher Education, the funds went for the establishment of the college's own Learning Resource Center. The 1,100 square foot space dedicated for the Center contained audio-visual equipment and emphasized the use of "closed circuit television for teaching purposes" (Published college history, 1986, p. 143). In addition to the Learning Resource Center, changes were made to the auditorium, where a "sophisticated audiovisual system" with a "back-lighted projection screen and booth which could be operated from the podium" was installed along with carpet and new permanently mounted chairs (p. 143). It was joked that "now the students could sleep in comfort!" (p. 143).

Outreach and continuing education became an increasingly important priority for the college. In the early 1980s, the first teleconference from any college of veterinary medicine in the world was broadcast; its topic was regarding new surgical techniques. The conference was made possible through satellite and an audio bridge so that veterinarians across the country could call in and ask questions about what they were seeing. This conference was only the first of many teleconferences to be broadcast from the college all in the name of continuing education for veterinarians.

The late 1980s saw the beginning of instructor evaluations which looked at various instructional methods and continuous discussion of the college's Honor Code which was developed to ensure academic honesty (Faculty Council Minutes, 1-1987). Policy for the reappointment and tenure for faculty was introduced and approved. Faculty candidates for promotion and tenure had to meet several criteria, one of which

was effective teaching. Effective teaching criteria would reflect the new student evaluations, "quality of curriculum development, laboratory preparation, and instructional material produced," and in addition, be evidenced by the candidate's "effectiveness in clinical instruction" and "teaching awards and honors." Faculty members also must show evidence of accessibility to students and success in their students (Guidelines for Reappointment, Promotion, and Tenure, policy no. 1.4.1).

New technologies in the shape of Internet connections, and more updated computers began appearing in the college. Students and faculty members now have access to laser printers, scanners for image processing, 35 mm slide scanners, and other associated software in several areas throughout the building. In many of the labs, medical equipment, such as wall mounted radiographic viewing boxes, would be side-by-side with computers and multimedia equipment. The late 1990s also saw classrooms being upgraded with many having multimedia equipment installed. The college completed three classrooms by 1996 in the Veterinary Studies Building and one classroom in the Teaching Hospital in 1999. And in the '90's, talk of curriculum changes began again. In 1998, the curriculum changes were put in place; however, to many, changes were deemed as "drastic" and "unnecessary." Many faculty members felt as if the curriculum changes put them behind and were compromising. "You make changes, whether you need changes or not. I mean, we've just gone through a reasonably bitter curriculum change, and a lot of us said, 'Well, there's nothing wrong with our current curriculum. Why are we changing it?'" (Shaw, 5-16-00). Dr. Morris, an associate professor of Histology described the impact the changed curriculum had on her:

> We had a drastic change in the curriculum. I think '98 was the first year that it affected us. We were the first people it affected because we teach in the first year of the curriculum. There were a lot of changes throughout the curriculum, but it had a big impact on the way we teach histology and physiology. In the fall of '98, we were dealing for the first time with the new curriculum, so I didn't want to introduce any new technology. I just wanted to get my lectures organized, and see what I was gonna do. It was the Spring of '99, right after that semester ended, that I started working with Ms. Howells, who is our web-based instruction expert. (Morris, 4-13-00)

Dr. Shaw also described the indirect impact the curriculum change had on students and his teaching:

> With the change in the curriculum, we've changed the emphasis, really trying to keep the laboratory experience up, and the classroom formal lecture to a minimum. I try to get the students into discussions, but that's very difficult to do with 70-some students. They're all intimidated and afraid to talk out. (5-16-00)

Another event that many faculty addressed was the arrival of a new Associate Dean of Academic Affairs, Dr. Piercy. Many credited Dr. Piercy as influencing the use of web-based media in the college (Cabet, 5-16-00, Morris, 4-13-00; Smith, 5-16-00). When I spoke with Dr. Piercy one day in his office, he mentioned his concerns for quality instruction and in "developing pedagogies with multimedia that fit different strategies" (4-5-00). His vision is that students would be able to use the Web not to gather information, but to synthesize and analyze information.

Influences: Expectations, Leadership, Veterinary Medicine & Outreach

During my conversation with Associate Dean Piercy, he immediately began speaking of "what other schools are doing" (4-5-00). He handed me a "interactive CD on Veterinary Neurobiology from a school of Veterinary Medicine in Colorado and gave me the distinct impression that it was something he envisioned faculty at the college doing. The CD was full of tutorials and exercises that students could complete as modules in the classroom or as extra study. Dr. Piercy spoke of accessibility being one of the factors driving most of the integration of instructional technologies, particularly Web-based technologies.

Other faculty members picked up on this message, but indicated that they believed the college was merely responding to outside pressures:

> It's because its happening places, and we aren't gonna be able to compete for good students. We aren't gonna be able to compete for money. We need more research money, so we have to build research facilities. We need more technology...the more you have, the more you have to upgrade and keep going. (Shaw, 5-16-00)

Dr. Shaw, an associate professor in anatomy, was very vocal throughout our conversation regarding the college's direction and why there was the need for so many changes. "Why are we changing it? Well, everyone else is changing it. Why did we change the numbers of departments? Well, other people are changing numbers of departments" (Shaw, 5-16-00). Dr. Bacon, an associate professor in histology, echoed the same sentiments but described it as political and that the college was basically being carried along. "I really think institutions like this have to be behind the curve. Wait and

see what really works, that is what's valuable...here it's so political. The administration has to slow down...see what's working" (Bacon, 4-13-00).

Expectations

The perception from faculty members that student expectations were driving much of their integration of instructional technologies was a pervasive theme throughout my study of the college. The perception manifested itself in the conversations I had with faculty and was apparent in the way the college presented itself. One of the ways the college presented itself was on the Web. A substantial amount of information existed for students on the web; information for students pertaining to their rights and responsibilities, the curriculum, student organizations, and (what I found very interesting), sites for each one of the classes, Class of 2002, 2003. Each of these sites contained information that was relevant for the class and was maintained by members of the class. For example, each class had its own "bylaws" so there was a section that explained what those bylaws were. It also contained class schedules, composite pictures and profiles, and resources and notes for most of that class's coursework. The passing down of notes from class to class is a common occurrence. One of the faculty members remarked that students are very organized about this and will sometimes sell their notes to lower classes or circulate the notes amongst their own class members, particularly now that more of the information is accessible on the Web.

> They get really professional with this. One person makes it and then they sell them to each other. It's very sophisticated. It's nicely done. One class will pass them on down to the next. They're pretty good at that sort of stuff in the vet school. (Dr. Adams, 5-25-00).

Other ways the perception of student expectations manifested itself was from comments made by faculty members; many of which I followed up or probed further. For example, during my interview with Dr. Cabet, he spoke of the "drive" to integrate instructional technologies; I asked him where he felt the drive for integrating instructional technologies was originating. It was clear that he believed students were driving most of the use. "The drive for integrating is coming from faculty who want to make it better for students, and also the students that are demanding it. Prospective students are extremely more comfortable if they seem to be getting their money's worth" (5-16-00). When I asked him if he could give me any concrete examples of their "demand," he hesitated and stated that it was not anything they had formally assessed and drawn "statistical conclusions from" other than comments at the bottom of evaluations. He described it more as a perception that he had:

> Well just since I've been here, in the teaching program, there's been a trend, I guess, in attitudes. I perceive there's been a trend, an attitude change in students. General student population, they're certainly more computer literate. They're better able to utilize these resources. They're used to that kind of environment, and they respond well. Some of them respond better to that sort of presentation than they do to a traditional lecture presentation. (5-16-00)

Dr. Smith also described his perceptions of this student-driven push for technology:

> So it's changing, but it's not completely changed. The students who are very good at it [the technology], want more. They want things that are more interactive. Over the last five or six years, I've had everything from students stand in the doorway and say that that's the best thing that's ever happened, to those

> that said, I don't have a computer, I don't want a computer, and I'm never gonna use a computer; you can't make me. That's changing obviously. With these classes now, there's more people that are extremely computer literate. Most of them far more than myself, than there were, and it's obviously gonna move that way. (5-16-00)

Dr. Shaw postulated that what the issue really boiled down to was a new generation of students who had grown up with video games and now needed to be entertained and that was having a great impact on their learning. "What I've seen is some of those people [students] come in, and get bored, and they really get turned off. They need all those bells and whistles and graphics to learn the material" (5-16-00).

Leadership

In visiting with faculty members, many spoke of individuals in the college other than students who facilitated the integration of instructional technologies and "led the way." The same faculty names continued to emerge as other faculty members spoke of the leaders. Dr. Smith spoke of Dr. Cabet as being one of the instigators of the technology movement:

> We have a number of faculty, Dr. Cabet, and a number of other people around, that are actually quite good. I believe that Dr. Cabet was the first person over here that utilized technology in teaching. He did that before other people and got it all started. (5-16-00)

Dr. Cabet described it more as a group effort: "Yeah, there was a core group of faculty, that were interested in struggling with the development process, just getting the technology out there for students" (5-16-00). Other faculty attributed the arrival of the

new Associate Dean, Dr. Piercy, for getting the college thinking in the direction of integrating new technologies in teaching (Adams, 5-25-00).

> We all had the interest of the students at heart. We sort of went different directions, and even now, I suppose there are a few different directions, but one of the big factors here in the college that really helped was when Dr. Piercy came as Associate Dean, he was very interested in having someone at that level really get behind what we were interested in. That helped immensely. (Cabet, 5-16-00)

I asked Dr. Cabet what he felt Dr. Piercy's role in this was in addition to "getting behind them" he replied that he felt Dr. Piercy's role was to "sort of keep an eye on the big picture. To help faculty interact" (5-16-00).

An interesting outcome from the interaction of the faculty members and the Associate Dean was a committee that was formed to look at technology and teaching in the college. The committee was also primarily responsible for observing how the newly established Office of Multimedia Curriculum Development was working. In place since 1998, the office housed the instructional technologist, Ms. Howells, and a faculty multimedia development lab. I heard varying thoughts about this office. Some expressed the concern that the money put into this office could better go to other things (Bacon, 4-13-00). Other faculty were appreciative of the office and collaborated with Ms. Howells to a great extent (Morris, 4-13-00). When I asked Dr. Cabet his thoughts regarding the office he seemed very cagey and selective in his answers. I detected that the office was a somewhat controversial issue in the college. I asked Ms. Howells' permission to visit with her for my study. She was hesitant when I took notes and apparently uncomfortable in stating her opinion about faculty. Dr. Cabet also stated that very soon he would no

longer be involved with the committee but did not state why. He stated that the committee had just reviewed the progress of the office:

> When that office was established, there was a perception that we were creating a spot for someone [temporarily]. We put a clause in the original document establishing that office, at the end of two years, would be evaluated by a committee of students and faculty. If it wasn't meeting its goals, as stated in the original document, it would simply go away. And the report essentially says that at a minimum level, that facility is meeting the goals stated. There's need for a lot of improvement, and there's a list of things that should be done to improve it. But it was at least, at some minimum level accomplishing what it was set out to do. (5-16-00)

Dr. Bacon believed that although the earlier push by administration had been to integrate and use technology in the classroom or to develop programs, now it had ended up being more a matter of choice among faculty members. They had, in fact, passed a "critical point" (4-13-00). However, that critical point was judged by Dr. Cabet as one where faculty members had retreated back "to their own little corners" to "do what they've been doing" (4-13-00). He was surprised that this, indeed, was what was happening because the college had done a certain amount of marketing for the office in the beginning. He added that numerous seminars were offered addressing all the various teaching strategies and their technologies. Faculty members, he stated, were enthusiastic about using technology at first, still he reported that "surprisingly" the office for Multimedia Curriculum Development was being under-utilized (Cabet, 5-16-00).

Dr. Shaw, who does not use instructional technologies in his classroom, reasoned that he basically was overwhelmed by the expectations that faculty members were expected to be more and more productive just because they had better and faster tools and that he was "becoming more reticent to do anything because the amount of information [he] had out there to go through was just multiplied," and "the thought process just doesn't happen any faster." (5-16-00). Dr. Bacon also replied that he felt most of his time in the past trying to develop tools for his students could have been spent on something else and that he at times wondered why he even bothered:

> You spend 99.9% of your time thinking about the computer program, not thinking about the subject matter. Or writing a book. I would be studying more, and organizing, synthesizing new ideas, carrying it out. I'd be becoming a better scientist, better teacher. (Bacon, 4-3-00)

Faculty members referred time and time again to the time factor which constrained their use of instructional technologies compared to the reward and recognition for research and publication (Smith, 5-16-00; Bacon, 4-3-00). Whereas, some faculty members stated that they enjoyed working with the technology, and that it was "fun." They were "getting a kick out of it," being creative and were "getting used to it," so it did not take as much time anymore (Bacon, 4-3-00; Lytton, 5-26-00; Morris, 4-13-00). Dr. Smith commented that many faculty members took too much time trying to be "computer competent, beyond the point that it is necessary" (5-16-00). He added that he preferred deciding how it would be most appropriate in his class and then having someone else help him do it, whether that be the instructional technologist or his own

child, and that change would probably occur most as new faculty with increased computer knowledge were hired (5-16-00).

Veterinary Medicine & Outreach

Another apparent influence on faculty members in the college and their integration of instructional technologies was the profession of veterinary medicine and the position they had as a college to provide continuing education to state veterinarians. The college's Web site has a special section for that purpose, and the college frequently holds conferences for practicing veterinarians. Although faculty members were a bit wary in using technology as part of teaching their students, they saw a place for it in outreach. Dr. Smith thought that the potential for outreach and even collaboration with other vet schools was "neat" (5-16-00). He gave an example of collaborating with the University of Washington and sharing case studies:

> We can put out a case in a veterinary setting; here we can see certain kinds of problems all the time that maybe a place like University of Washington would never see, they are in different parts of the country, different climates, for example they don't have ticks. If you were a faculty member there and wanted to expose your students to that you could interact with faculty here and the cases presented here. (5-16-00)

The college's Web site has made impact on the notion of outreach in the college . Many faculty members have put instructional materials on the Web site, only to have people from all over the world e-mail with comments and questions about their pets (Piercy, 4-5-00; Cabet, 5-16-00; Adams5-18-00). Some of the faculty members were very pleased that the site generated that much interest. Dr. Adams, who teaches

parasitology, described a recent incident that occurred because of his instructional materials on the Web.

> I wasn't in the process of trying to make a good site, just something useful for other people out there who needed to teach parasitology, and for veterinarians who might be out there. I get questions from people all the time. One lady found something on the tray of her baby's high chair that she put in a baggie and put it on a scanner and scanned it in. She sent the picture to us and we could tell what it was. I was kind of amazed. (5-18-00)

Dr. Huxley, who teaches anatomy and physiology, and does not use any instructional technology tools in the classroom described his collaborative work with other veterinarians across the states using technology. He also explains why he believes that is a far different task than teaching students in vet school:

> I'm an electro-diagnostician. I do electro-diagnostics in the clinic, and so I test muscles, and in Florida, there is a veterinarian who also wants to do that. His computer went through his server to mine at home on a conference call. I can see him on the screen, on my screen, and then I can look at the animal, in a little window here, and I can tell him, I want you to move the electrodes here near this muscle. I can see what it sounds like, and we record it. So I can lead him through the diagnostics from my office at home. And he's in his office. I think it's great. I go to Florida four or five weeks a year, teaching these techniques to people, so that they can get online. But I wouldn't do that to first-year students because they need to see my eyeballs. They need to hear me talk. Watch me think. (5-18-00)

Dr. Cabet and Dr. Lytton both spoke generally of the nature of veterinary medicine and technology, indicating that the field was using more and more technology in their practices and that was having an impact on the preparation of students, not only for their future in the field but also in their preparation for National Board Exams:

> One of the driving forces was the fact that in medicine and professional schools in general, there's certainly a much greater need for technology, a much greater need for integrating learning about electronic instrumentation. And, more recently, national licensing exams are gonna be on the computer." (Cabet, 5-15-00)

Individual Perspectives: The Classroom

The faculty members I interviewed described their uses of technology in the classroom generally; however, most concentrated on pedagogically why they felt integrating instructional technologies conflicted with or enhanced what they were trying to do as teachers. This section of the data reveals their comments and thoughts regarding their classroom practices.

Traditional vs. Technology Enhanced

The instructional technology forms in this college have evolved much like other colleges on campus from audio-visual use, such as video and overheads, to computer-based forms such as PowerPoint and Web-based interactive media. Compared to many of the other colleges on campus, the college has more classrooms equipped with multimedia equipment, such as projection systems, software, visualizers, etc. Some faculty members, however, found frustration with the multimedia classrooms and their use and refused to use them (Bacon, 4-13-00). Others saw that presentation software such as PowerPoint was just a new toy and that very soon it would no longer be of

fascination. "right now, it's a new toy. People like that, but pretty soon after about the second year, when half of your faculty use PowerPoint, then everybody will say, I wish they'd quit using that damn PowerPoint!" (Smith, 5-16-00). Still other faculty used PowerPoint and the Web to post instructional materials such as dozens of images, lecture notes, and quizzes. They commented on the convenience of updating their materials and the potential within the media and hoped soon to have a college-wide database of images used throughout the curriculum that would replace the old slides (Adams, 5-18-00; Cabet, 6-16-00; Lytton, 5-26-00; Smith, 5-16-00).

Different ideas emerged among faculty members regarding the development of interactive Web activities for students to use in the classroom in place of lectures. When I initially visited with the Associate Dean, Dr. Piercy, he had described his vision of using the Web in a way that would teach students to synthesize and analyze information on the basis of cases. He grounded this way of learning in a teaching strategy that he called a "problem-oriented approach" (4-5-00). This problem-oriented approach could benefit first-and second-year students who did not attend clinics, by enhancing their problem solving and critical thinking skills.

Faculty members (Adams, 5-18-00; Morris, 4-13-00; Smith, 5-16-00) had adopted this strategy (or were at least experimenting with it) and integrated the Web-based aspect of it as an alternative to lecture or to supplement their lectures. One of these faculty members was Dr. Morris. Dr. Morris worked very closely with Ms. Howells to develop several modules of Web-based instruction. She described the modules at length and was very excited by what Ms. Howells had helped her accomplish. I asked her what drew her to trying this mode of teaching:

> One thing is I was bored with lecturing. Bored with the same old lecture. Even with PowerPoint, I did a lot of, we did all my presentations into PowerPoint, so PowerPoint's really nice for histology, because you can incorporate the images with text on the same slide, and that's, I've used that this fall, and it made a big difference. Students really like that. And then I got to thinking, I could do so much more with a Web program, because I could do interaction and feedback. And that's been a big part of the programs that I make. But it has taken us, it took us, [Ms. Howells] and I, it has taken us, we started in January, and we had to work really hard to get it done to use in November. (4-13-00)

She described the nature of the Web modules further and demonstrated one in particular that she seemed really proud of:

> Ee had so much fun developing it...I think that's another reason it took us so long, because we kept coming up with all these ideas, and we kept going back and changing things And here [she was demonstrating the Website] you get a video of *real* [emphasis added]sperm moving ...it takes a little while for it to download They [students] like that, too. And we have, one of them is human sperm, and the other one is bull sperm, that students can kind of relate to. But the other feature that's nice about this kind of approach, is at the very end of the program I have three practice quizzes, and there's three for the lecture format, for kind of theory information, but there's also three for the lab, where we do that, cough up an image, and I have like A, B, C. And they have to identify all the structures. And they get feedback. As soon as they click it, it says right or wrong, and it tells them why. And then they have one lecture quiz and one lab quiz that's graded.

> Where they fill it all out, and then they submit it. And they get their percentage. [Still showing me the sperm]. Hey, the first time through, it takes them a little longer, but after that, they go faster. But it shows you the difference in morphology with, different species have different morphology with their sperm. They move a little bit differently. They [students] like that, because a lot of them have never seen a real live spermatozoa before. They have no idea what it really looked like. (4-13-00)

I was intrigued with how they captured some of the video and gave the students live examples instead of graphic reproductions, and she elaborated further:

> Well, this is why it took us so long, because I was like, [Ms. Howells], we need live sperm moving. And then of course, she goes, 'Let's do it!' And then at that time, nobody out here knew how to put a video feed into a Web program. And we didn't even have a video recorder ... Actually, Dr. Bacon helped me do this. His area of research is sperm, and a graduate student got the bull sperm for us, and we just got together one afternoon, and just took a lot of footage, and then we had to edit. It took a long time, it really took an enormous amount of time. I'll tell you, the part that really excites me educationally is the interaction and the feedback though for students! (4-13-00)

She remarked with surprise that, although students loved the modules, they did not want the modules to take the place of lectures. She had experimented with students by taking them to the lab and doing the modules together instead of using lecture. Surveying students after they used the case modules, she found that students emphatically requested that they be used to supplement the course and not replace the lecture. I asked

her why she thought they felt that way. She replied that she thought that lecture was a "security blanket" for students and that is where they were "comfortable" and "probably raised that way." One of my overall comments to her regarding her module was that it looked as if it would be very fun for students. She replied, "That's the point. You can't say that around here, though, because you're not supposed to be having any fun, and education is not supposed to be fun!" (4-13-00).

Although, Dr. Shaw did not choose to use any instructional technologies in his anatomy classes, he noted a similar observation with students when he they added more laboratory experiences in general to the curriculum. He added, however, that he could see where technology could be beneficial to supplement laboratory work, but never replace it. He allowed, "Integration, and not a substitution," but was cautious about instructional technology's use because he did not want it becoming an "entertainment factor" (5-16-00):

> Well, it's because I've been through enough of it that I know it's comfortable for the students to sit there and me say, this is the ...and this is what it does...what they're missing is that they're going into an active profession where they will have to remember it. They have to be able to actually feel and find the structure sometimes when they can't see. And you don't learn that from someone lecturing. And I've taken anatomy from some very good people that could sit up there and chalk talk and reproduce the human limb, the animal limb, and it was fantastic, and you walk out of there feeling so refreshed and like you know it and you walk into a lab and you don't know which end is up. And...quite honestly, most veterinary medical students are going to be better off if they get a little dirty

> and smelly learning the material. They [students] are just in they're 20s and some are in their 30s, and they've never been asked to be something, and come in with questions that they don't understand, and verbalize those questions. (5-16-00)

He added many of his thoughts regarding the pitfalls of teaching students and some of the pressures he felt along with criticism of other faculty members and their reliance solely on lecture. He finally concluded about technology:

> You have to use some of it because education is stuck trying to sell itself, and if you don't entertain the students, and don't entertain your peers and faculty, its kind of like, well he's not really doing a good job. So you're stuck a little bit on that, but I really think you have to fight just on principle, that you can't just start offering entire courses computer-based, or technology-based. Even this distance learning, I think its nice to get out and reach that many people, but I really think we're gonna regret it. (5-16-00)

The faculty members interviewed were often very reflective about their teaching and how they viewed the use of technology integrated into their strategies. Many, it seemed, were aiming at the same thing, which was student learning; but expressed some different ideas about how to get there. I asked several what they thought would happen if they had no technologies to use. Many said that nothing would change as far as learning (Bacon, 4-13-00). Some stated it was not an issue and that they would never allow "a machine to come between me and my students" (Huxley, 5-18-00). Others stated that if this college did not provide instructional technology resources, then they would go somewhere that did (Cabet, 5-16-00). Dr. Smith's thoughts reflected what many faculty members concluded regarding the integration of instructional technologies:

> Most people learned medicine before anything, so obviously it can be done. You can make it easier to learn by using technologies to pick up some of the mundane stuff, and it seems to benefit...but somewhere you gotta decide on how much spoon-feeding you can do, too. I think that it makes it very easy to be spoon-fed. You want to put everything in there. I think, first of all, they have to learn what to do with it, and obviously none of us were ever trained in what to do with computers or this type of technology, so we're adjusting to it along with the students. But none of this is anything new. It's actually only changing the way you want to reveal stuff, and make it organized. (5-16-00)

Regardless of the debate about the integration of instructional technologies, it appears as though traditional methods of lecture still have their place in the landscape of the veterinary curriculum, evident in the course description below:

> **Veterinary Surgery II.** Prerequisites: 5422 and third-year standing in the College of Veterinary Studies. *Lectures* [italics mine] and discussions in operative techniques and practices in veterinary surgery. (University course catalog, 99-00)

CHAPTER V

ANALYSIS AND INTERPRETATION OF CASES

The case reports presented in Chapter IV were analyzed individually and collectively to compare and contrast the colleges through the lens of revitalization movements (Wallace, 1979). Revitalization movements are a "special kind of cultural change phenomenon" and one in which "the persons involved in the process of revitalization perceive that [their] cultural system is unsatisfactory; they must innovate not merely discrete items, but a new cultural system, specifying new relationships as well as, in some cases, new traits" (Wallace, 1979, p. 422).

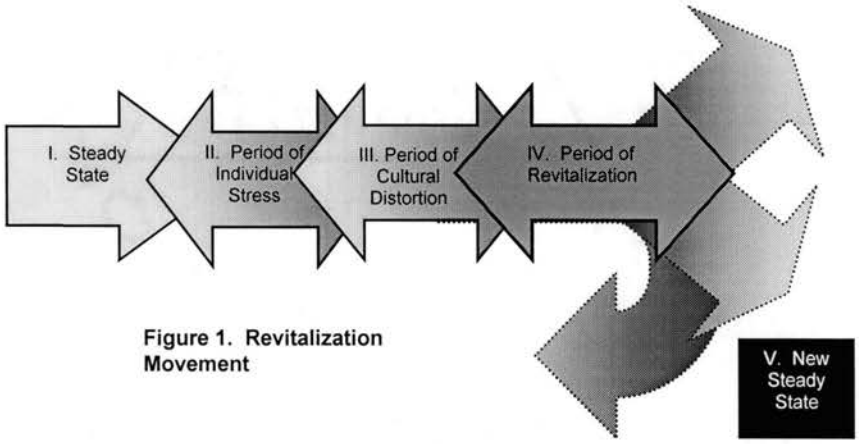

Figure 1. Revitalization Movement

Five stages can occur during the progression of a *successful* revitalization movement. It must be noted that these stages can be described as overlapping, simultaneously occurring and processual. They exist as the:

(I.) Steady State, in which there exists no demand for change. Working life or conditions may not be at their best but are tolerable at this point. Overall, there is

an established routine and cultural norms; and although possible shifting may occur, routines are established.

(II.) Period of Individual Stress, in which members of a group or subculture begin to experience increasing dissatisfaction with the current standards of practice or status quo. Member dissatisfaction also lies in the fact that current needs are not being met; therefore, roles distinction becomes less clear and a new pressure towards acculturation begins to build resulting in some internal conflicts.

(III.) Period of Cultural Distortion, where the building stress and conflicts are prolonged; as a result, members feel ambivalence, apathy, and a sense of disillusionment.

(IV.) Period of Revitalization, here several sub-stages must occur. These have been described as the following: *Mazeway Reformulation,* which consists of the emergence or introduction of a new leader who restructures elements that may already partially exist in the culture or have gained some acceptance; C*ommunication* in which a new message or code/vision is communicated and converts are initially gathered; *Organization* in which converts or "disciples" initialize the beginnings of an organization. The goal in this period is to "convince others that the code offers a plausible solution to an existing state of social disarray" (Muncey, et. al., 1993, p. 405); *Adaptation,* which occurs when organization may begin to experience resistance to the new cultural forms or ideas being communicated. Many times, the code which is being presented as the new gospel may have to be adjusted in order to address ambiguities, "criticisms and affirmations" (Muncey, et. al., p. 408). *Cultural transformation,* which is

manifested when members of the cultural group begin to accept more and more the new cultural ideas, or doctrine; therefore leading to "widespread acceptance of its ideologies and the concomitant effects of this acceptance, that is, extensive cultural change" (Muncey, et. al., p. 411); and, *Routinization,* where the cultural group must complete a move to a position of "preservation" (Wallace, 1979, p. 427). The group is now focused not on innovation but the development of maintenance and support for the group.

(V.) New Steady State, the concluding stage of the revitalization movement where the "new cultural system has proven itself viable, and once the organization has solved its problems of routinization," the new state exists (Wallace, 1979, p. 427).

For the purpose of this study, data collection and analysis were focused on significant events, overall perceptions of the current use of instructional technologies from a college-wide level as well as at an individual level, the development of infrastructure, and personal experiences with instructional technologies. The data were revealed in interviews with faculty, associated administration, and staff; by observations made in context; and from documents. This focus helped to move the study towards its primary purpose, which is to describe and interpret those events, perceptions, and experiences in light of the revitalization movement framework. Data were analyzed simultaneously throughout data collection utilizing Merriam's (1988) notions of the qualitative case study design. The process allowed the researcher time for reflection and synthesis, which further informed the analysis process until appropriate descriptions and interpretations could be made and reported.

The aim of this chapter is to take the descriptive case reports from the previous chapter a step further in order to focus on the unique constructs of revitalization movements and explore other categories and themes which emerged. Goetze and Lecompte suggest that researchers who "fail to transcend what has been termed 'merely the descriptive'...fail to do justice to their data. By leaving readers to draw their own conclusions, researchers risk misinterpretation. Their results may be trivialized by readers who are unable to make connections implied, but not made explicit by the researcher" (as cited in Merriam, 1988, p. 131). While the thick descriptions that were provided in the case reports do stimulate reflection and provide a portrait of "what is going on" in each college, I wish to provide those "connections" as suggested by Goetz and LeCompte through further discussion and interpretive commentary.

For reporting purposes, the following chapter is divided into sections respective of each individual college. For each of the colleges, this discussion will consist of 1) *discussion and interpretive commentary of each college by itself regarding categories and themes which emerged in relationship to the revitalization constructs*, and 2) *attempts to show the actual progression of the college through the revitalization stages.* The chapter will conclude with summative remarks comparing both of the colleges.

Discussion of Themes in the College of Human Ecology

The data which focus on the College of Human Ecology reveal the emergence of several themes. From the college-wide perspective evidence, themes related to historical and significant events, influences, and individuality became apparent. From the individual perspective, classroom experiences with or without instructional technologies

were discussed within a framework of instructional technology uses and functions and how faculty members coped with problems they faced in their use.

The College Perspective

Significant Events

Data collection in both colleges revealed several significant events that faculty members believe may have shaped the colleges' development in their use of instructional technologies as a whole. The time frame for which most faculties could remember and recall events was roughly a five to six year span. Faculty members descriptions of past events were often presented within the same context of present events. One faculty member from the College of Human Ecology even stated that it "all was a blur," suggesting that whatever change had occurred had done so recently or suddenly and others commented that the whole evolution had seemed to occur quite rapidly. One of the major characteristics of revitalization movements is that the cultural change occurs rather rapidly (Wallace, 1979). This rapidly occurring change seems to contribute to the nature of the stages appearing rather non-distinctive and, at times, overlapping. With frustration, I made note of this early in the data collection because of difficulty in trying to piece together early events in order to contrast them to Wallace's stages and illustrate any kind of progression.

I speculated that some of these events could lead to the determination of any stressors or pressures (whether they be internal or external) placed on members of the college. These stressors or pressures, according to Wallace, are the leading prompt for the revitalization movement. Many of the events described were spoken of either matter-of-fact or in a positive manner but were often placed contextually with features of the

college's growth and leadership among other colleges on campus. For example, Dr. Carlyle stated, "On the whole...all of our faculty have had computers on their desks, with the exception of maybe engineering, longer than any other college on campus. We were one of the first to get our building networked" (Dr. Carlyle, 4-5-00). Similarly, Dr. Harrington described the college in terms of its growth in the area of instructional technologies:

> Our college was rather forward-thinking, I think, compared to some, in terms of identifying a classroom in the building that they wanted to outfit with multimedia capabilities when that technology was available...Of course, you see those all over campus now, but we actually had, I think, one in our building before a lot of colleges did. And I don't know why. I don't know if it was because we were open about that or what, but it did appear here rather early compared to some places. (Harrington, 4-10-00)

Some particular events were described in good detail, such as Dr. Harrington's discussion of the multimedia lab developed by her department and Dr. Carlyle's description of the Faculty Scholars Program. Also, several faculty members commented on the increasing availability of multimedia resources in the classroom.

The only significant event in the college as described by faculty members that alluded to perceived stress were those events that had surrounded the inception of online courses and distance education. Faculty who described the nature of the courses and the college's involvement with distance education usually did so with chagrin or speculation. Dr. Bradbury noted his perception of the "push" in the college to develop more classes and be a "leader" among other colleges.

there was actually a kind of university-wide goal or university-wide thrust, some type of larger plan to try to implement more, or to at least open the dialogue for teaching classes on the Internet, and I kind of got a sense that there was a race, kind of between universities in the [state], to see who could get the first classes online. So there was kind of a push, not only by the colleges, but by the university to implement some Internet classes to show that [our university] was kind of a leader. (4-5-00)

Other speculation surrounding the examination of significant events and history was that these events might give clues as to what specifically the college's members considered the status quo as far as their use of instructional technologies and instructional technology in general. Knowing this view of the status quo would enable the piecing together of the college in its technological evolution up to the present point. If the status quo could possibly be established, then inferences could be made regarding whether the college was in, or perhaps past, the Steady State. Wallace (1979) describes the Steady State as the first "stage" in the revitalization movement. In this stage, there is no recognized need for change and tolerance for pressures and stress is high. There are established routines, and roles are defined. The narrative data or case report did begin to suggest an overall modus operandi for individuals in the college with references in general to traditional teaching methods. For example, the impetus for an earlier grant in the college suggests that new audio-visual equipment would supplement the then-normal routine of lecture:

to supplement classroom *lectures* [italics mine]with materials for students' study and use as needed and to make accessible audio-visual equipment which

> facilitates students' comprehension by providing a variety of learning experiences through seeing, hearing, and touching as opposed to only 'talk and chalk' lectures. (Published college history, 1989, p. 113)

In addition to the establishment of a status quo of traditional methods, the importance of continuing the college's evolution, growth, and management in their use of technologies and teaching improvement was stressed.

While the discussion of significant events and history alluded to a status quo of using "traditional" teaching methods, the culminating aspect of faculty descriptions of significant events and history was the perception of the college's need to progress, grow, and lead whether that was through the integration of multimedia classrooms or Web-based instruction. These factors helped to contribute to the impetus for the revitalization movement in the college and suggested that the college had reached or was past the earlier stages of the movement i.e., Steady State or Period of Individual Stress.

Influences

Expectations. I noted in my case report that while I was describing significant events, other issues began emerging. The first of these issues was expectations. What I was initially alerted to was the observation of one faculty member, Dr. Barrie. She noted that they (the college) were like everyone else on campus and just trying really hard to "keep up with it" (meaning the integration of technologies in the college). Moreover, other faculty members also described a need to progress in order to "keep up" with other colleges. Additionally, there appeared to be a relationship to the colleges use and integration of instructional technologies with expectations of students and the respective fields of study. At times, faculty seemed to shrug off the expectation to use technology

as they voiced quite matter of fact, "it's where things were going." I perceived an air of acquiescence on the part of faculty members as they described the reasons for utilizing instructional technologies. It was almost as if there was no question or choice involved; it was just something they were going to do so students were adequately prepared for the chosen fields of work.

> It's where things are going. If we don't learn to use it now, and if we don't expect our students to learn to use it, we're all going to be behind. And it's so true. I think all we have to do is look around, but the average business now is using instructional technology to make a presentation, and if we can't do it or won't do it, why should we be able to expect our students to do it, and then take that into their professional career? So I think it's just a stubbornness, and knowing that it's the future. (Barrie, 4-4-00)

The message again was that if the college didn't do it, they would be "behind," or worse, that students would be behind. Some faculty members discussed traditional ways of teaching as not appropriate. For example, Dr. Harrington commented that if we were to ignore the use of technology, it would not be "forward-thinking," and Dr. Carlyle stated that not exposing students to technology was "not doing them any favor."

This category's emergence demonstrated three things: 1) that a status quo was indeed evident (whether it be the current one or one which was disintegrating), 2) stressors and pressures that prompt the revitalization movement were becoming more evident, as well. In some aspects, the expectations and descriptions of needs to "keep up" or risk being "behind" could be attributed to Wallace's stage of The Period of Cultural Distortion. In this stage, Wallace posits that cultural members have tolerated the building

stressors and conflicts to the point where there is apathy, ambivalence, and disillusionment. While those commonalities coexist with the stage, what is different is the perception of faculty members' needs being ignored which would also be characteristic of this stage. 3) It is suggested that the reason they have not manifested is that the overlapping or simultaneous occurrence of the Period of Revitalization in the college, which to a great extent, began as the leadership responded to faculty requests for support.

> Comments have been made to her [Dr. Carlyle] from faculty, as well as results indicated from surveys, that faculty members have appreciated the fact that "administration has cared about their development" and that they are there and "supportive." (College of Human Ecology case report)

Interestingly, the Period of Individual Stress, where cultural members become increasingly dissatisfied with the status quo and their level of tolerance decreases creating the move towards acculturation (Wallace, 1979), manifests its characteristics and appears to meld together with the later stages because of the response of administration and its support and because of the short time frame for many of the occurring changes in the college.

At this time in the data collection and analysis, my notes were reflecting that the college showed signs of experiencing a revitalization movement, one that was prompted by outside pressures of the *industry, institution, and students* to integrate instructional technologies. While the Period of Individual Stress did not manifest itself clearly in the data, and it seemed to merge and occur even simultaneously with the next stage, the Period of Cultural Distortion could be seen in the ambivalent nature of faculty members when integrating instructional technologies and the perceived pressures and stress. The

commonalities end there due to the lack of evidence of dissatisfaction or conflict in the college and because of the advance of the Period of Revitalization.

Leadership's Role. The theme of leadership emerged in the data as coming from different directions and not necessarily a sole source. Data revealed that leadership came from the following: Some individual faculty members who were "pioneers" in using instructional technologies, the administration of this college, including the Dean, who was referenced several times, and the Associate and Assistant Deans all seemed to play substantial roles in the integration of instructional technologies.

The leadership concept is a vital element of the Period of Revitalization stage and the revitalization movement in general. Leadership becomes a necessary part of the stage because of the six sub-stages or tasks of *mazeway reformulation*, *organization*, *communication*, *adaptation*, and *routinization* require a leader to communicate or formulate a *new code* that will lead to the reduction in the perceived stress or pressures, therefore, resulting in the beginning of the " 'new, utopian image of sociocultural organization' in a social context where people have been searching for alternatives" (Wallace, 1966, as cited in Muncey and McQuillan, 1993, p. 400). The role of leadership typically becomes apparent in the *mazeway reformulation* sub-stage:

> Reformulation of the mazeway generally seems to depend on a restructuring of elements and subsystems which have already attained currency in the society and may even be in use, and which are known to the person who is to become the prophet or *leader.* (p. 425)

"Restructuring of elements," in this case, would mean the integration of instructional technologies into the traditional teaching landscape as they were already being used by

some faculty members and were being perceived as beneficial in preparing students for their future careers.

Many perceived that students as well as faculty should be using technology in the classroom in order to prepare them for the work world. In a recent newsletter published by the college, Dr. Carlyle was quoted as saying, "Our graduates learn more than information while in school. They learn how to grow and adapt in an ever changing world. They know how to creatively solve problems, think critically and use technology." (CHE Magazine, 2000)

Working in conjunction with mazeway reformulation are the sub-stages c*ommunication*, and *organization;* the leader communicates this new code in a variety of means and forms and gathers "converts." Wallace (1979) presents that some of these converts are convinced with a message of "expediency and opportunity," and Wallace concludes that "frequently the action program from here on is effectively administered in large part by a political...leadership" (p. 426).

While Wallace (1979) might suggest that data describing the administration in this college, evidence of integration of instructional technologies as a way to meet pressures surrounding student expectations and propel the further growth of the college, the notion of leadership coming primarily from different sources contradicts Wallace's notion that leadership in the revitalization movement stems from one individual or visionary in order to construct the new mazeway. In addition, it is not entirely clear what the sequence of events were and what might have served as the impetus for other events. For example, reference was made regarding the hiring of the Dean and her negotiation of "technology money" from the institution upon coming to the college. Also mentioned in

the same context was the need to provide faculty development for the many new faculty members, and to a shift in the college's structure and priorities. The excerpt below is an example of the new priority placed on the integration of instructional technologies and shows an interesting division in the priorities of the administration (securing external dollars) versus the interests of faculty (teaching):

> we started a faculty development program about seven years ago. Actually, we're in our seventh year, called Faculty Scholars. And it was for new faculty, because what we had found, we had gone through a transition time with an interim dean for about two years. And so when we had a Dean come aboard, ...what we found was we had a lot of brand-new faculty, ...and so we really decided that we needed a faculty development program. Now it really started out around the whole grantsmanship area. We thought we needed to increase our external funding, and so we needed to help faculty develop the skills, so they would be better proposal writers to bring in external dollars. And what they [new faculty] told us was, they really liked the grantsmanship, and that was really appropriate, but they'd like us to incorporate some other things. So instructional technologies came in as an area that we needed to do some things with. (Carlyle, 4-5-00)

Again, it is not clear from the data whether these were simultaneous occurrences or how or if one prompted the other; nevertheless, they seemed to help facilitate mazeway reformulation in the college and propel it into the Period of Revitalization. According to Wallace (1979), what *should* be evident next, is the formulation of a *code* or "doctrine" that would essentially help members of the faculty to develop a "new

synthesis of values and meanings" for the integration of instructional technologies (Wallace, 1956, p. 271).

Many faculty members perceived the "push" to integrate instructional technologies, but what is interesting to note in this situation was that there was no concrete evidence to suggest that they were being told to integrate technologies by the administration. Viewed in light of the revitalization movement constructs, there appears to be no clear, documented code that was communicated by leadership or the administration. *The code appears to be implied with its interpretation being subject to the tacit understanding of faculty members*. Leadership provided many implied references to the necessity of instructional technologies through *organization* (a sub-stage of the Period of Revitalization), such as the Faculty Scholars Program with new faculty, development of the multimedia lab, and various training opportunities. *However, the realities of using the technologies were not communicated, agreed upon, or shared by all faculty, consequently, faculty were left to utilize the technologies (or not) in the manner in which would be appropriate for them.* In this setting, I would expect that code to be communicated in the shape of a strategic plan or even be evident in the mission statement, but it was not made evident at the time.

Faculty members' perceptions of values and meanings often related to something other than instructional improvement. For example, Dr. Bradbury hinted that the expectations to use technology for students were not always related to learning:

> We need to be aware of other avenues to reach students. And of course, that historically goes back to what's the goal of the university? Part of it relates to bringing in students. That's the audience we're servicing. It sounds like an

economic thing, and in reality it comes down to dollars and cents...the number of students you have is kind of the lifeblood of the university." (4-5-00)

Dr. Wells also reiterated that idea and described instructional technologies as a competitive tool for the college :

> I think it's attractive. It's sexy, I guess. That's not exactly the right word, but it's, you know, something that they (the college) can brag about, that we have this capability. And you know, some *other* [italics mine] people have it, so we should be thinking about this. (4-14-00)

An additional example of faculty perception was Dr. Defoe's view of the role of administration in the integration of instructional technologies and how she viewed the use of instructional technologies overall:

> I think they need to provide access. I don't think you can talk everybody into doing it, so give it up and let the people who like it do interesting things with it, and then let the other people use it the way they want to. I mean, I think everybody should get to use it the way they want to. If they don't want to use it for instruction, fine. There are hundreds of neat things to do. It isn't the only thing in the world. And I think eventually, another 20 years, it will be just like overheads. (Defoe, 4-10-00)

There appears to be evidence in the case of this college that the role of administration was in a leadership capacity and that of a facilitator, an enabler and a motivator, contradicting Wallace's notion of the prophet or visionary to construct a new image or doctrine. The administration viewed its role as providing faculty with

opportunities to learn new technologies, providing the faculty with resources, and modeling its use, not to establish mandates that may or may not allow cultural members to formulate a new code. Dr. Carlyle, the Associate Dean, stated "if we're gonna be suggesting that faculty start doing this stuff, we need to be modeling it. I really think that modeling has a lot to do with our expectations" (4-5-00).

Many faculty members have responded to this modeling and all of the opportunities that came along with it, and some have not. Take, for instance, Dr. Wells' comment regarding the Dean and the opportunities provided for faculty development on the integration of instructional technologies, "Actually, we've had quite a bit of faculty development on that, and I think for a while people were going, 'I really wish the Dean would get off this jag about media and education.'" Indeed, faculty members are provided many opportunities to receive training and faculty development in integrating instructional technologies. Drs. Barrie and Carlyle described, in some detail, the different trainings scheduled for the faculty and how informal faculty cohorts were developed to provide a support network and promote further integration. Dr. Defoe reinforced that she thought the role of the administration in the college was indeed, to provide access, but not to force people to use instructional technologies. There were other faculty members that echoed that same feeling:

> if I don't think of or look for ways to expose faculty and to give them some hands-on time and some support with the technology, then they won't adapt to it. I don't know. This is just a suspicion I have. But I think faculty are very, very busy, and they don't have time to always be looking at the new technology, so if I can provide opportunities, I think that's a more successful route. (Barrie, 4-4-00)

In sum, the data suggests that leadership, or administration in this case, was active in the facilitation of the revitalization sub-stages: mazeway reformulation, communication, and organization. *It should be noted, however, that important to these stages is the formation and communication of a code or new doctrine.* It would be assumed that this code may define the purpose, strategy, and outcome for integrating instructional technologies in the classroom and take the form of a mission statement or strategic plan. These were not evident at the time of data collection, and it is also not known at this time whether lack of a prominent individual or visionary to facilitate the formulation of a code as Wallace (1979) described, will impact the success of the movement.

Individuality. Most of the descriptions of individuality stemmed from the discussion of the development of the college's infrastructure and the role leadership played in its development. Many faculty members recognized that this development hinged on the intrinsic motivations, disciplines, personalities, and needs of individual faculty members. "There are probably as many different technologies as there are faculty in the college. Some use traditional methods, and some experiment with new methods" (Milton, 5-25-00). The propensity for many to stick with "traditional" teaching methods was mentioned by some, although Dr. Carlyle voiced that she did not think that any faculty had "dug in their heels." She stated that she wished faculty members "would start looking at where students are and what student's expectations are." This confirmed that, although the choice was ultimately up to the individual faculty member whether to integrate or not, it was certainly implied that it would be best to respond to the expectations surrounding students by integrating technology into teaching. Yet, even with

the suggestions by administration, the modeling, the training, and the support, faculty members still perceived that it was up to the individual acting upon his or her academic freedom. As expressed by Dr. Defoe:

> I think when we try to force people to do things, you end up with them digging their heels in, and it defeats the purpose. I'm a big believer in provide access to things people want, encourage their use. I don't think you need to reward people or anything else for using it, because usually it's the most fun to use for those people. They really like it when they get down to it. It's rewarding in and of itself. It is fun, no matter how frustrated you get when you're making something, you have this wonderful, glorious thing that you could never make any other way. People [faculty] get just so delighted. They may not have seemed delighted when they were doing it, but when it's done. Especially when the students like it. And I've got lots of students thanking me for being one of the early ones to take tech [technology] to class. You know, even when we were doing stupid stuff, and couldn't get it to run half the time...they still said, thank you. (Defoe, 4-10-00)

While I reported the nature of individuality later in the case report, the issue that struck me immediately while studying this college and analyzing the data was the amount of influence that was derived from individuality and self-proclaimed autonomy. Although I suspected that there would be some degree of diversity among faculty members due to the different programs and disciplines represented, the diversity resulted in a very scattered frame of reference for the faculty. Many referred to the education of students in their respective discipline for varying careers, and otherwise surmised that

decisions to integrate instructional technologies were to be left to the individual faculty member.

The lack of collectiveness and homogeneity throughout the college created quite a problem in the analysis as the literature regarding culture suggests that members of a culture have a shared values and beliefs system (Trice and Beyer, 1993). Furthermore, the literature suggests that successful management of the academic culture stems from the "shared identity and meaning...among faculty members" and less influence of the individual discipline (Dill, 1982, p. 312). With the presence of so many individual influences, such as each faculty member's discipline, the collective view of the college became a bit skewed.

The status quo or Steady State in the college as far as faculty teaching methods could be confirmed by early descriptions of lecture (Published college history, 1989) and those portrayals by faculty of "chalk talks." However, the break away from that mode by some in response to student expectations and the implied code of leadership that the integration of instructional technologies was best were additional evidence that supported the college exhibited characteristics of the Period of Revitalization. Wallace (1979) stated that many times the stages occurred either simultaneously or elements of the stages overlapped. I found that characterization to be appropriate in that elements of the Steady State were evident with references to traditional modes of teaching that did not include instructional technologies. However, also evident were faculty members integrating instructional technologies and bending the ideas of teaching with technology to fit their own.

The implications for the theme of individuality more than any of the other themes which emerged, are the greatest for the college and for the success of the movement as a whole. The presence of individual autonomy in the college may suggest that the college may never be identified conclusively in any one stage at any one time, especially that of the final sub-stages of the Period of Revitalization. The lack of collectiveness in its members would cause the college to possibly exist in many different stages continuously because of the many different cultural groups in the college. For example, faculty members in the Design department may progress through the stages at a different rate than those faculty members in the Child Development field because their respective disciplines share different values. It also suggests that the academic culture at large lacks a shared belief system that would define the expectations and values related to the faculty role, particularly those associated with teaching.

The Classroom Perspective

The data reflect that faculty members concentrated on describing the many forms of instructional technologies and their functions in the classroom. For some disciplines in the college, the use of technology in the classroom was becoming typical. For the faculty who were regular users of technology, the use of PowerPoint presentations was fast becoming the baseline with the more advanced realm being online course development. Even new faculty judged their proficiencies with instructional technology use on the baseline of electronic presentations:

> I'm a neophyte. I know how to make PowerPoint slides. I suppose it makes me at least an introductory person. I can make them pop up on the screen. In my maternal and infant class I did a lot. Instead of just standing and lecturing, I had

the PowerPoint in addition, so it's like I had the big points. I'm not sure whether that helps or not. To some extent, I'm not sure whether it doesn't... (More, 4-19-00)

The faculty members appeared to be quite reflective when talking about their experiences and I detected that many were struggling with the appropriateness of some forms of instructional technology and whether it was really having any impact on student learning. The earlier presented case report stated the following:

> Dr. Defoe (4-10-00) put the use of PowerPoint into perspective as being nothing more than a "neater, cleaner version of overheads" and her view of its function was not necessarily to enable students but simply a management tool. "so what I bring to class is more contemporary. No, they're not learning anything new, but it's sort of nice not to have to work so hard. It was awful. Much harder to keep students captivated" (College of Human Ecology case report).

There was quite a bit of discussion about using electronic presentations or PowerPoint, which was one of the most common forms described. Some commented that it was more like "glorified overheads." Faculty members went back and forth on its uses and worth; some said they used it to help guide the lecture and some said they used it to post notes. Others integrated it into a multimedia experience, incorporating other discipline-focused software, the Internet, and other tools.

My overall impression was that they were always trying to make instructional technologies fit into their own individual notions of teaching, whether it be using electronic presentations in the classroom or with Web-based teaching.

> I've tried to actually implement my Internet class very similar to my teaching style in class, so there are some courses that are much more structured [and] they give true and false assignments every week and they give a number of graded papers, but I try to have more dialogue and discussion, and feedback...and that's what I try to do in the classroom , to open it up for discussion, and kind of get their feedback...and that's where I see the learning actually occurs, when they're talking about the ideas that they've just read about, or they've talked about, and they've gotten feedback, and you can see them kind of grow through their responses. (Bradbury, 4-5-00)

Faculty members were trying to accept and integrate the implied code, but they did not necessarily embrace it wholeheartedly; moreover, based on their ongoing experiences in the classroom, including the many problems and pitfalls, they would have to bend and modify the code to meet their needs.

> Well, I've learned to not expect it to be there, unfortunately. So initially, it was a bit of a shock. 'Okay, well, let me just read you what I have. Pretend like you can see what I've got here.' Actually, the first year, I would carry my handouts with me that I would use, I mean, my overheads that I'd used previously. Now I just plan some way to be able to do something to give them something to take with them and look it up later. But it is frustrating. Notice, I haven't incorporated it into all of my classes. Part of it is the rooms where they're assigned. If I was in a classroom where the equipment was there permanently, I would use it. (Wells, 4-14-00)

I relate these perceptions to the sub-stage in the Period of Revitalization known as *adaptation* on a smaller scale even though, overall, in the college, the presence of faculty autonomy was strong and the code was ambiguous.

In addition, on some level *cultural transformation* was beginning to appear as many faculty members, in spite of problems they would have technically with instructional technologies, would persist in their integration. Faculty members were quite cavalier in their discussion of problems. For example, Dr. Barrie described how she rationalized her problems with using instructional technologies: "It's good for students to see it, that everybody has problems with technology. It's not just them. And I think that other faculty need to know that we all have problems with it" (Barrie, 4-4-00). Dr. Defoe's rationalization was functionally the same: "Yeah, I really like technology. So yeah, it doesn't work all the time perfectly, but it's the puzzle of making it work. It's almost like a game in a lot of ways" (Defoe, 4-10-00).

Summary and Portrayal of Progression in the College of Human Ecology

This portion of the study examined the descriptive data in the case report in light of the revitalization movement framework. Themes described in the case reports were analyzed for those indicators that most closely represented elements of the revitalization movement stages. Analysis revealed that characteristics and descriptors in the themes represented several stages with the most commonalities being represented in the Period of Revitalization and the sub-stage adaptation, with some scattered evidence of cultural transformation in a small group of faculty members who demonstrated persistence in their attempts to integrate instructional technologies into their teaching (Table 2).

However, due to the large degree of autonomy, individuality, and an ill-defined code, the college could still be characterized as overlapping into the Period of Cultural Distortion with its characteristic ambivalence, apathy, and unclear faculty roles present in its academic culture. These factors suggest some uncertainties in the college's true whereabouts in the stages. Because of this uncertainty, further research is recommended in this particular context to determine if the above-stated factors will truly have an impact on defining the stages or the success of the movement.

Nevertheless, the following section's intent is to show the progression of the stages to a certain degree. Moreover, while it is argued that it is not always possible to demonstrate the stages as discreet entities, history and significant events in the College help to establish the stages to some degree and illustrate the movement in the College.

The Steady State. Through the collection and analysis of documents and faculty recollection of previous and significant events, the nature of the Steady State became apparent. Information, which fit into the confines of the constructs of the Steady State, may describe situations or references to situations that presented the *status quo* or *way of doing things*, evidence of *little stress* and evidence portraying the *ability to cope* well with pressures and problems. There is no perception of the need for change.

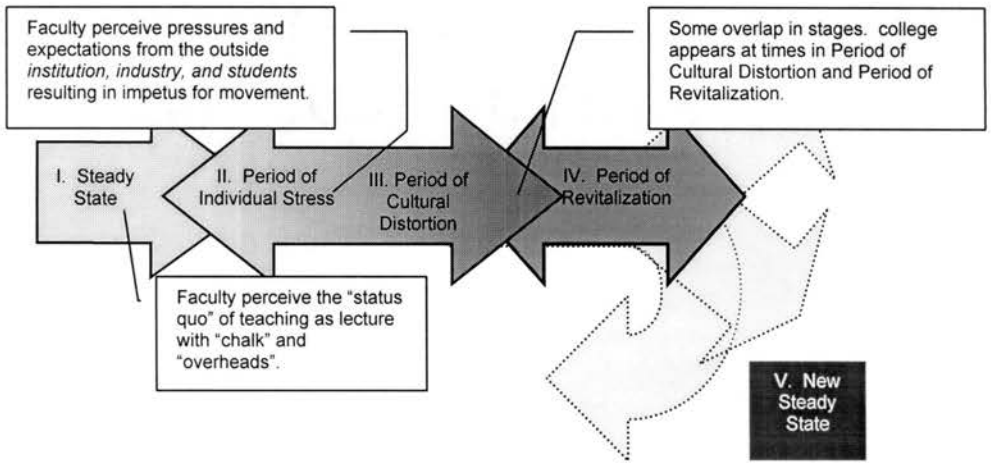

Figure 2. Revitalization Movement in College of Human Ecology

Faculty descriptions in the College of Human Ecology of traditional teaching methods, those professors who would not or did not want to "give up the chalk" and descriptions of "lectures" as published in the College history are examples of what could be perceived as the status quo in teaching. As newer technologies emerged, many integrated standards such as overheads but continued to lecture in a traditional sense. Many faculty members describe teaching with the aid of presentation software such a PowerPoint as a very common way of augmenting lectures. While many consider this media to be instructional technology, it is essentially used the same as overheads. It is suggested that this Steady State is one which, because of the revitalization movement, is evolving or morphing continuously. However, because of the high presence of individual autonomy in the College, it is a stage that may or may not disintegrate totally for some time.

The Period of Individual Stress. In many ways, this stage is non-existent in its manifestation in the data and seems to merge with the details in the next stage, which is the Period of Cultural Distortion. In both of these stages information would be categorized according to increasing levels of pressures, frustrations, and disruption in routines, possible confusion, or disillusionment. Also, what would become evident is the possible rejection of traditional roles and methods of teaching. While faculty did not appear dissatisfied in their overall work environment and did not necessarily reject traditional methods of teaching entirely, they did describe the expectations and pressures that came from various entities such as their respective institution, industry or discipline, and the students themselves. The pressures and expectations were to integrate

instructional technologies in order to prepare students satisfactorily for their careers and continue growth in the college.

The leadership of the college responded to these pressures in a way that would allow instructional technology integration in the college as a means to alleviate those pressures and promote further growth of the college. Some faculty members in the colleges may have been using and experimenting with technologies on their own before the administration began promoting their use, and as a result, faculty roles may been more skewed.

The hiring of a new Dean prompted the integration of many new types of technologies into the college. As a result, classrooms were equipped with multimedia equipment, and a multimedia lab was created. Also, new faculty members were hired who recognized that training and support was needed in new instructional technologies in addition to training and support for traditional faculty requirements such as grant writing. The emergence of leadership in the college to facilitate, enable, and support the integration of instructional technologies differs from that of leadership presented in the revitalization framework. The revitalization framework suggests that leadership would emerge in the form of an individual or visionary; however, in the case of the College of Human Ecology, leadership existed in many faculty members and administrators.

Evidence of the Period of Revitalization. The most distinctive parallels between the college and the framework exist within the Period of Revitalization. It is suggested that this stage is the most recently represented although it, too, appears to overlap with the previous Period of Cultural Distortion. The distinctions denoting its commencement occur simultaneously with many other events in previous stages.

Manifesting itself in administrators and faculty members who responded to external and internal pressures and expectations, *mazeway reformulation* occurred with the increasing use and promotion of instructional technologies that took shape in many forms such as multimedia-assisted lectures and web-based teaching. Wallace describes the code as a "blueprint of an ideal society or goal culture" (Wallace, 1966, as cited in Muncey and McQuillan, 1993, p. 401). However, the code may have been communicated in rather ambiguous forms and seems, in this college to be implied and left to the interpretations of faculty members. The understanding of many faculty members was that the code had political, not solely educational, undertones and was being used as a way to attract students: "It sounds like an economic thing, and in reality it comes down to dollars and cents...the number of students you have is kind of the lifeblood of the university" (Bradbury, 4-5-00).

Organization and communication was manifested in the hiring of personnel and the formal training and support for faculty members who were interested in using instructional technologies. An illustration of this was the jocular description of faculty development as the "jag about media and education and that sort of thing" (4-14-00).

The sub-stage *adaptation* presents a crossroads in both colleges. This sub-stage was made apparent by some resistance and some questioning of the new ideas being presented. Faculty members in the College of Human Ecology overall seemed to accept the integration of instructional technologies as the general direction of higher education but also noted that faculty members should be left alone in deciding whether instructional technologies were appropriate for them and their students. Both views lend support to

the notion that the *code* or message surrounding instructional technologies were ambiguously stated and exhibited unclear purpose.

At the time of the data collection, there was no obvious evidence of the sub-stages cultural transformation (except at an individual level in those faculty members who persist in their use and exploration of new technologies in their instruction), routinization or the final stage in the revitalization movement, the New Steady State. There are too many concerns and ambiguities and not enough widespread acceptance by faculty members. In addition the high presence of individual autonomy and multiple disciplines in the college suggests that there may never be wide-spread acceptance.

Table 1. Characteristics of Revitalization Movement in College of Human Ecology

I. Steady State	II. Period of Individual Stress	III. Period of Cultural Distortion	IV. Period of Revitalization	V. New Steady State
Faculty perceive the "status quo" of teaching as lecture with "chalk" and "overheads". Faculty roles are clear and defined.	New Dean is hired and negotiates technology money for faculty computers, networked building. New instructional technologies are introduced into the college, i.e. multimedia classrooms, labs, web-based/enhanced instruction. Faculty perceive pressures and expectations from the outside *institution, industry, and students* resulting in impetus for movement. Faculty roles becoming less clear, high level of autonomy accentuates this. **Some overlap in stages. Period of Individual Stress and Period of Cultural Distortion seem to occur simultaneously and merge.** **College appears at times in Period of Cultural Distortion and Period of Revitalization.**		**Mazeway reformulation** evident by responding to pressures and expectations with the "restructuring" of traditional teaching with instructional technologies by leadership in college. ***Formation of code*** *appears ambiguous and left to multiple interpretations by faculty.* **Communication** and **Organization** through various means, (i.e. Administration responds with instructional technology training, support, and faculty development.) **Adaptation** manifests itself in faculty questioning value of instructional technology use and fitting its use to own notions of teaching. **Cultural transformation** exhibited by scattered faculty who show persistence in integrating new technologies.	

Discussion of Themes in the College of Veterinary Studies

The analysis of the College of Human Ecology informed much of the data analysis of the College of Veterinary Studies. While the overall themes which emerged in the colleges were similar, there were some differences in their varying categories. From the college-wide perspective, evidence of historical and significant events and influences, including expectations, leadership, veterinary medicine, and outreach became apparent. From the individual perspective, classroom experiences that reflected views of traditional instruction and technology-enhanced instruction were discussed.

The College Perspective

Significant Events

Overall discussion and examination of significant events demonstrate rapid change and progression in the College from a Steady State characterized by traditional teaching methods such as large group lecture to a new curriculum which tries to de-emphasize lecture and increase hands-on laboratory experiences. Like the College of Human Ecology, the College of Veterinary Studies has seen the appearance of new technologies. The development of multimedia classrooms and labs happened rather quickly and seemed to compliment the changes that were occurring with the curriculum in the college. As reported earlier in Chapter IV:

> New technologies began appearing in the college in the shape of Internet connections and more updated computers. Students and faculty now would have access to laser printers, scanners for image processing, 35 mm slide scanners, and other associated software in several areas throughout the building. In many of the labs, medical equipment such as wall-mounted radiographic viewing boxes would

be side-by-side with computer and multimedia equipment. The late 1990s also saw the upgrade to many of the classrooms having multimedia equipment. The college completed three classrooms by 1996 in the Veterinary Medicine Building and one classroom in 1999 in the Teaching Hospital. And by the 90s talk of curriculum changes began again. (College of Veterinary Studies case report)

The curriculum change was the most discussed and referenced event in the College of Veterinary Studies. I derived from the conversations with faculty that the curriculum change had a tremendous impact in this college. Faculty descriptions used language such as "drastic" and "bitter" to describe the change:

> You make changes, whether you need changes or not. I mean, we've just gone through a reasonably bitter curriculum change, and a lot of us said, 'well, there's nothing wrong with our current curriculum. Why are we changing it?' (Shaw, 5-16-00).

> We had a drastic change in the curriculum. I think '98 was the first year that it affected us. We were the first people it affected, because we teach in the first year of the curriculum. There were a lot off changes throughout the curriculum, but it had a big impact on the way we teach histology and physiology. In the fall of '98, we were dealing with the first time with the new curriculum, so I didn't want to introduce any new technology. I just wanted to get my lectures organized, and see what I was gonna do. It was the Spring of '99, right after that semester ended, that I started working with Ms. Howells, who is our web-based instruction expert. (Morris, 4-13-00)

These descriptions suggest that the college was more collective in its thinking, or at least was striving to be. The college also had a more defined academic culture, which was set apart from the outside institution or university, and a shared or collective mission and purpose: the preparation of a unique professional group of individuals, veterinarians. Changes of curriculum appeared to strike at the values of the faculty who were employed to provide that instruction, training, and preparation. In fact, any change in the preparation of veterinary students provoked somewhat of a passionate response amongst its faculty members, hence the language of "drastic" and "bitter" being used to describe recent changes. Prevalent throughout past faculty council minutes were examples of indecision and conflict with previous bouts of adoption and change in the curriculum.

The descriptions of the curriculum change and the development of the multimedia classrooms and labs are clear indications that the college was moving out of what could be considered the Steady State and progressing into other stages of the revitalization movement. The response of faculty members to the curriculum change and their descriptions of it also suggest that they perceived their roles and the dynamics and structure of their classes changing, thus resulting in some of the apathy and dissatisfaction that is typically representative in the Period of Individual Stress and Period of Cultural Distortion: "With the change in the curriculum, we've changed the emphasis, really trying to keep the laboratory experience up, and the classroom formal lecture to a minimum" (Shaw, 5-16-00).

Since faculty members spoke of the curriculum change in the past tense and did not express any major dissatisfaction with the curriculum presently, it is suggested that, perhaps the college has continued in its progression into other later stages, such as the

Period of Revitalization; however, it is suspected that some have retreated back to the Steady State.

In addition to the curriculum change, the arrival of a new Associate Dean of Academic Affairs prompted a more serious effort to integrate instructional technologies, particularly those involving the Web. The new Associate Dean's arrival signified the emergence of significant leadership in the college, especially in the area of instructional technologies and, for that reason, will be discussed in further detail in later sections.

To conclude, significant events and history in the college suggest that the passing of the college out of a Steady State and into the Period of Individual Stress or Period of Cultural Distortion. Factors that contributed to this move were the impact of the curriculum change in addition to the advent of new leadership in the College and new technologies coming into the college. The curriculum change also suggests that faculty members were affected collectively as they tried to make sense of what impact these changes would have on their teaching. Although characteristics of later stages began to emerge with this theme, the distinctions in the stages are not clear and seem to overlap and occur simultaneously. The most relevant factor of this theme is its importance in demonstrating the move from a Steady State in general.

Influences

Several factors emerged as influencing the nature of instructional technology integration in the college and could be directly related to the Period of Cultural Distortion and Period of Revitalization in the revitalization movement, thus adding to some distinction in the stages. Faculty members responded to the events in the college with mixed sentiments. Comments were made that the changes to the curriculum and the

integration of technologies were political and in response to competition among other veterinary programs. Specifically, the comment made by Dr. Bacon summed up the sentiment: "I really think institutions like this have to be behind the curve. Wait and see what really works, that is what's valuable...here it's so political. The administration has to slow down...see what's working" (Bacon, 4-13-00). This reflection seemed to parallel what Wallace suggests as characteristic of the mazeway reformulation sub-stage in which there is an air of "expediency and opportunity" and that integration begins to have political undertones (Wallace, 1979, p. 426). Dr. Shaw's perception seemed to exemplify the political nature of integrating technology into teaching:

> It's because it's happening places, and we aren't gonna be able to compete for good students. We aren't gonna be able to compete for money. We need more research money, so we have to build research facilities. We need more technology...the more you have, the more you have to upgrade and keep going. (Shaw, 5-16-00)

These perceptions demonstrated the overall awareness of faculty members that the pressures surrounding the desire to attract or keep good students were driving much of the perceived need to integrate.

> "The drive for integrating is coming from faculty who want to make it better for students, and also the students that are demanding it. Prospective students are more comfortable if they seem to be getting their money's worth." (Cabet, 5-16-00)

These pressures are added evidence to support that the College was in the overlapping stages of the Period of Individual Stress and Period of Cultural Distortion.

Expectations. The theme of expectations surrounding students surfaced in the College of Veterinary Studies much like those in the College of Human Ecology except that expectations were manifested in even stronger ways. For example, the college's strong presence on the Web, with its many Web pages for instructional materials suggested that students utilized the Web not only for augmenting classroom study but also as a means of strengthening and developing a shared student culture. The perception of faculty members was that they were serving a new generation of students who had matured in a digital age. Dr. Cabet's statements directly reflect this issue, and he added that it was his perception and was not based on any statistical conclusion or formal assessment:

> Well just since I've been here in the teaching program, there's been a trend, I guess, an attitude change in students. General student population, they're certainly more computer literate. They're better able to utilize these resources. They're used to that kind of environment, and they respond well. Some of them respond better to that sort of presentation than they do a traditional lecture presentation. (Cabet, 5-16-00)

This sort of thinking was not only noted by Dr. Cabet but also with other faculty as well and seems to mirror the notion that the integration of instructional technologies is a reaction or response to those expectations. These perceptions of student expectations and the college's reaction to them, in addition to the new technologies, curriculum change, and new leadership also suggest that these expectations serve as an impetus to the revitalization movement:

> So it's changing, but it's not completely changed. The students who are very good at it [the technology], want more. They want things that are more interactive. Over the last five or six years, I've had everything from students stand in the doorway and say that that's the best thing that's ever happened, to those that said, I don't have a computer, I don't want a computer, and I'm never gonna use a computer; you can't make me. That's changing obviously. With these classes now, there's more people that are extremely computer literate. Most of them far more than myself, than there were, and it's obviously gonna move that way. (Smith, 5-16-00)

These expectations also signal a crucial turning point in the college, one of progression from the fuzzy Period of Cultural Distortion to a more distinct Period of Revitalization. The commencement of mazeway reformulation, a sub-stage of the Period of Revitalization, is indicated since there is the restructuring of elements that may already be in use by some, and there is also some partial acceptance of the new ideas. The college had already begun to see the advent of new technologies in its building and, therefore, began to serve students through the use of those technologies, such as Web pages which contained information pertinent to veterinary students. Occurring simultaneously with the emergence of leadership, the movement becomes easier to identify.

Leadership. Like the College of Human Ecology, leadership appears to come from a "core group" of people such as faculty who were the first to try new instructional technologies as they became available. One of whom, Dr. Cabet was mentioned by several faculty members as one of the first faculty members to begin utilizing

instructional technologies. He deferred this honor suggesting that it was really a group of people who initially tried to make technology more readily available for students. The revitalization framework suggests that this faculty member served as one of the initial emerging leaders to assist in the mazeway reformulation in the College:

> We have a number of faculty, Dr. Cabet, and a number of other people around, that are actually quite good. I believe that Dr. Cabet was the first person over here that utilized technology in teaching. He did that before other people and got it all started. (Smith, 5-16-00)

However, Dr. Cabet countered with his recollection:

> "Yeah, there was a core group of faculty, that were interested in struggling with the development process, just getting the technology out there for students." (5-16-00)

The role of Dr. Piercy, the "new" Associate Dean, also seems to be behind much of the *mazeway reformulation* and subsequent *organization and communication* that occur in the Period of Revitalization. When speaking with Dr. Piercy, he immediately described his philosophies and where he believed instructional technologies fit into that overall picture. He envisioned "developing pedagogies with multimedia that fit different strategies" (4-5-00) He described and showed me the development of a Web site that incorporated the instructional strategy of a problem-solving approach.

It was clear that this was an instructional strategy that he wanted the faculty to integrate and had communicated his intention through several means, including collaboration with the college's instructional technologist and the development of a

"template" that could be modified to fit different courses. He used the office of Multimedia Curriculum Development, which housed the instructional technologist, to further communicate the use of this strategy and template. The office was established shortly upon the arrival of the new Associate Dean. Utilizing the office (and its overall inception by the Associate Dean) in this way characterized the *organization* sub-stage of the Period of Revitalization and also suggested, (as exemplified by Dr. Cabet's description below) that the intent or message that was being associated with the integration of instructional technologies was being communicated through this office:

> When that office was established there was a perception that we were creating a spot for someone [temporarily]. We put a clause in the original document establishing that office, at the end of two years, would be evaluated by a committee of students and faculty. If it wasn't meeting its goals, as stated in the original document, it would simply go away. And the report essentially says that at a minimum level, that facility is meeting the goals stated. There's need for a lot of improvement, and there's a list of things that should be done to improve it. But it was at least, at some minimum level accomplishing what it was set out to do. (5-16-00)

That is not to say that this strategy was all the office was utilized for; faculty could utilize the services of the instructional technologist and associated lab in other ways.

Earlier depictions suggest the Associate Dean's approach to problem-based learning with the Web and the use of multimedia to promote early analysis and synthesis in students was the beginnings of a *code vision,* or *message* that is typically evident in *mazeway reformulation.* However, it is interesting to note that despite the ideas

presented by Dr. Piercy and their acceptance by some faculty, Dr. Cabet had described the college recently as passing a "critical point." One that had prompted many faculties to go back "to their own little corners" and "do what they've been doing." He had noticed this with a faint amount of surprise as even the office, which had been established to support the development and integration of these new technologies, was being underutilized and was meeting its goals at a "minimum level:"

> We all had the interest of the students at heart. We sort of went different directions, and even now, I suppose there are a few different directions, but one of the big factors here in the College that really helped was when Dr. Piercy came as Associate Dean, he was very interested in having someone at that level really get behind what we were interested in. That helped immensely. (Cabet, 5-16-00)

This characterization does not appear to be a trivial matter in that it speaks clearly of the *adaptation* sub-stage in the Period of Revitalization. There is evidence of not necessarily opposition in the sense that there is hostility, but, more or less, naysayers in the cultural group who question the value and worth of their utilization. The data representing this notion was presented earlier in Chapter IV:

> Dr. Shaw, who does not use instructional technologies in his classroom, reasoned that he basically was overwhelmed by the expectations that faculty were expected to be more and more productive just because they had better and faster tools and that he was "becoming more reticent to do anything, because the amount of information [he] had out there to go through was just multiplied," and "the thought process just doesn't happen any faster." Dr. Bacon also replied that he felt most of his time in the past trying develop tools for his students could have

been spent on something else and that he at times wondered why he even bothered. (College of Veterinary Studies case report)

Members may respond to opposition defensively, isolating themselves, enlisting new converts, or referring back to the culture's original philosophies. Thus, adaptation, shifts from "a cultivation of the ideal" to "combat against the unbeliever" (Wallace, 1979, p. 427). Division and the deterioration of the movement can be the final outcome with many faculty members retreating back to the earlier stages or trying to get back to the earlier Steady State. In a sense, adaptation, becomes a crossroads for the movement and is an appropriate depiction of what is occurring in this college.

In sum, the theme of influences in the College of Veterinary Studies depicts that the college had arrived in the Period of Revitalization and is beginning to show evidence of the sub-stages of adaptation. In the case of this college, the sub-stage presents itself as a pivotal stage where members of the culture can either retreat back to earlier stages, such as the previous Steady State, or can join other members of the faculty in their continued integration of instructional technologies.

The Classroom Perspective

The discussion surrounding the classroom was very reflective and philosophical. While many spoke of the different forms of instructional technologies they used in the classroom and, of course, the passing fascination with PowerPoint electronic presentations, it seems as if faculty viewed PowerPoint in the same light as the faculty in the College of Human Ecology, as nothing short of flashing overheads. The major differences in viewpoint appeared to be the use of the Internet and how it affected the classroom experience.

> She[Dr. Morris] remarked with surprised that although students loved the [Web-based] modules, they did not want the modules to take the place of lectures. She had experimented with students by taking them to the lab and doing the modules together instead of using lecture. Surveying students after they used the case modules, she found that students emphatically requested that they be used to supplement the course and not replace the lecture. I asked her why she thought they felt that way. She replied that she thought that lecture was somewhat a "security blanket" for students and that is where they were "comfortable" and "probably raised that way." (College of Veterinary Studies case report)

The need for students to be analytic thinkers and have the ability to problem solve was expressed both directly and indirectly by faculty members. What faculty members could not quite determine at this point was how instructional technologies would fit into that overall goal.

> Well, it's because I've been through enough of it that I know it's comfortable for the students to sit there and me say, this is the ...and this is what it does...what they're missing is that they're going into an active profession where they will have to remember it. They have to be able to actually feel and find the structure sometimes when they can't see. And you don't learn that from someone lecturing. And I've taken anatomy from some very good people that could sit up there and chalk talk and reproduce the human limb, the animal limb, and it was fantastic, and you walk out of there feeling so refreshed and like you know it and you walk into a lab and you don't know which end is up. And...quite honestly, most veterinary medical students are going to be better off if they get a little dirty

and smelly learning the material. They [students] are just in they're 20s and some are in their 30s and they've never been asked to be something, and come in with questions that they don't understand, and verbalize those questions. (Shaw, 5-16-00)

Some faculty members even went so far as to say that they would "never let a machine come between me and my students" (Huxley, 5-18-00). The subtle fear that instructional technologies eventually would replace classroom instruction was expressed. "Integration and not substitution" seemed to be the overall message. I found it encouraging that student learning, veiled in the assumption that it would create better prepared veterinarians, was the main concern.

Although the theme of individuality and autonomy did not manifest itself clearly as it did in the College of Human Ecology, there is some evidence of a certain level of autonomy in the faculty members in the College of Veterinary Studies. While faculty members do experience some autonomy in how they approach teaching and student learning, they have less autonomy in what they teach. Collectiveness and shared values seem to reflect the shared purpose of the preparation of veterinarians, but there is no overall agreement about how or what teaching strategies should be employed. This lack of agreement seems to augment the retreat of individual faculty members to more traditional approaches and the level of adaptation in the college.

Even though the debate about integrating instructional technologies as a means to prepare current students existed, faculty members did see the need to continue to train and educate practicing veterinarians with the use of the Internet and whatever tools they had at their disposal. Several faculty members commented that their Web sites,

containing many pages of instructional material, were commonly used by veterinarians and laypersons all over the world:

> We can put out a case in a veterinary setting; Here we can see certain kinds of problems all the time that maybe a place like University of Washington would never see, they are in different parts of the country, different climates, for example they don't have ticks. If you were a faculty member there and wanted to expose your students to that you could interact with faculty here and the cases presented here. (Smith, 5-16-00)

Faculty members shared several interesting examples. Many expressed a sense of pride they felt because they were giving back something to the veterinary community at large. These incidents speak of possible *cultural transformation,* if on a smaller scale, and gives evidence that sometimes the outcomes of revitalization movements can be unintended and slightly modified from the original intent, in addition to the individual transformations of those individuals who seek to integrate instructional technologies and the overall ideology of instructional technology.

Summary and Portrayal of Progression in the College of Veterinary Studies

As described in the discussion of the previous college, themes in the case reports were analyzed through the lens of the revitalization movement framework and those indicators that most closely represented constructs in the framework. Further analysis of the case report of the College of Veterinary Studies revealed that the stage which was most clearly and most recently represented was the *Period of Revitalization* and sub-stage of *adaptation* along with some evidence of *cultural transformation* The college used

many instructional technologies to meet not only the needs of students, but also the continuing education needs of practicing veterinarians and the population at large.

Although there was some degree of autonomy in the college, a shared purpose of the preparation of veterinarians and the values and beliefs that accompanied the profession enabled the stages to be somewhat more distinctive. In addition, the sense that a code or message was communicated that enabled faculty members to make sense of how instructional technologies were to be used facilitated the distinction further. The following section will attempt to show the progression of the college through the stages with reference to the previous discussion of themes.

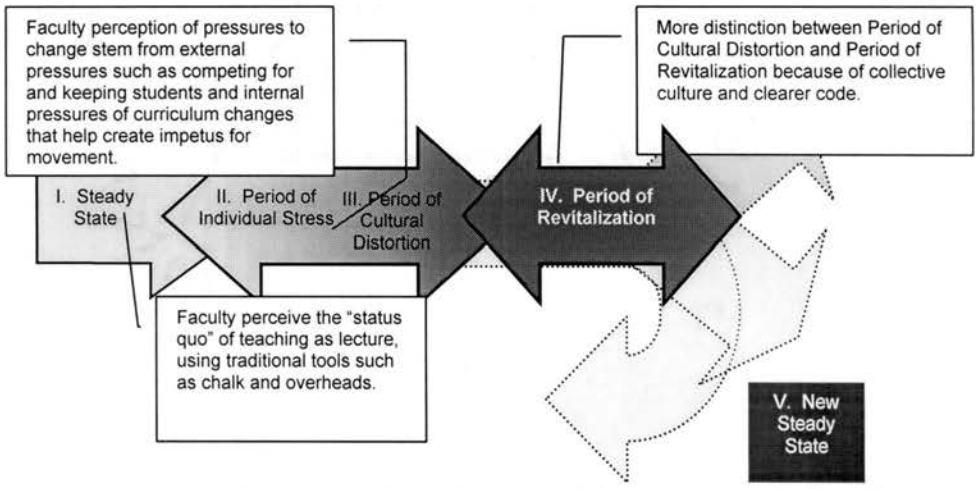

Figure 3. Revitalization Movement in College of Veterinary Studies

The Steady State. Faculty descriptions of traditional teaching methods that were associated with the previous or current curriculum and descriptions of teaching methods in various documents such as the college Web site and University course catalog give evidence of the Steady State. These traditional methods can be considered as the "status quo." For example, Dr. Morris explained that she began experimenting with Web-based

instruction because she had become "bored" with lecture. Course descriptions contain lecture as a mode of delivery:

> **Veterinary Surgery II.** Prerequisites: 5422 and third-year standing in the College of Veterinary Studies. *Lectures* [italics mine] and discussions in operative techniques and practices in veterinary surgery. (University course catalog, 99-00)

Some faculty members continue to teach in this manner, stating that students need to be able to "see" them and "watch them think." It is possible that if not for the curriculum change, which so many faculty members deemed as another unnecessary change, the distinction of the move from the Steady State to later stages may not have been so prominent.

The Period of Individual Stress and Period of Cultural Distortion. These stages again seem to merge and overlap. The distinction between the two is difficult to determine, and I saw no apparent differences that would allow me to characterize them as separate stages. There was the obvious impact the curriculum change had on the college, with it being characterized by faculty as "drastic" and "bitter." Moreover, information regarding expectations surrounding students emerged from the themes and fit these stages. Faculty perceived a shift in "student attitudes" and "capabilities" as students came into the school more computer literate. The increasing number of new technologies that being integrated into the school, in the form of multimedia supported classrooms and labs, added to the perceptions of pressures and expectations. These factors help to serve as impetus for the progression of the college into further stages. Where the lines of distinction become blurry again is surrounding the hiring of a new Associate Dean,

characterized by faculty as someone who "got behind" a "core group" of faculty members that was beginning to develop and experiment with technology-based tools that were more available for students.

The Period of Revitalization. Again, commonalities between the college and the Period of Revitalization are apparent. The events which surrounded the hiring of the new Associate Dean make this stage slightly more identifiable. *Mazeway reformulation* began with a core group of faculty members (including Dr. Cabet) and continued with Associate Dean Piercy as he envisioned that the Web would allow students to not only gather information but to also "synthesize and analyze material" with a "problem-oriented approach." This representation was a specific example of the restructuring of elements and sub-systems currently in use or being experimented with and creating a vision or message to accompany it. Therefore, the formation of a code becomes that message associated with the use of the Web and other appropriate tools to improve student learning and problem solving earlier in the students veterinary and academic career.

Communication and *Organization* is represented by the Office of Multimedia Curriculum Development and the hiring of an instructional technologist to work in that office. First, its goals and purposes were documented to help determine whether it was meeting set goals, and second, a committee was formed to observe its achievements. These are specific examples of the attempt to increase the number of faculty members adhering to the new mindset, or as Wallace (1979) would depict, attract converts and thereby channel the administration of the new ideas or code into a bureaucratic structure.

Adaptation then becomes evident as descriptions of faculty members who have retreated back "to their own little corners" to "do what they've been doing" surface and

faculty members argue the merits of using instructional technologies at all. As is expressed by one faculty member:

> You spend 99.9% of your time thinking about the computer program, not thinking about the subject matter. Even with writing a book I would be studying more, and organizing, synthesizing new ideas, carrying it out. I'd be becoming a better scientist, better teacher. (Bacon, 4-3-00)

However, the use of the Web has had a great impact in how the college views its role in outreach. Many faculty members expressed satisfaction with the ability to collaborate with other universities' professionals on various topics associated with veterinary medicine. This satisfaction hints at a level of *cultural transformation* occurring in the college as many continue to develop Web-based instructional technologies for instructional purposes.

Table 2. Characteristics of Revitalization Movement in College of Veterinary Studies

I. Steady State	II. Period of Individual Stress	III. Period of Cultural Distortion	IV. Period of Revitalization	V. New Steady State
Faculty perceive the "status quo" of teaching as lecture, using traditional tools such as chalk and overheads.	**The Period of Individual Stress and Cultural Distortion overlap considerably and seemingly merge. Their distinction is hardly evident.** New technologies being introduced into the college in the form of multimedia supported classrooms and labs. "Core group' of faculty members begin to integrate instructional technologies in order to increase access for students, including the reference by many of Dr. Cabet as being "one of the first". New curriculum introduced characterized as a "drastic" change and "bitter" process. Some hint of unclear and changing faculty roles with the new curriculum and use of instructional technologies. New Associate Dean hired. Faculties perceive that he supports the integration of instructional technology and is "behind" them.		**Mazeway reformulation** evident by responding to pressures and expectations with the "restructuring" of traditional teaching with Web-based instructional technologies by Associate Dean and number of faculty. ***Formation of code*** *appears to incorporate the notion that students will be able to not just gather information on the Web but learn to analyze and synthesize information in the form of a problem-oriented approach.* **Communicated** and **Organized** through establishment of Multimedia Curriculum Development Office, hiring of Instructional Technologist, and committee to study office's progress. **Adaptation** manifests itself in faculty questioning value of instructional technology use and fitting its use to own notions of teaching, with some retreat back to traditional notions and methods. **Cultural transformation** on small scale with widespread use of the Web and technologies to promote outreach.	

Summary of Both Colleges

Themes were a great deal clearer in the College of Veterinary Studies and it was easier to see the stages of the revitalization movement for two reasons. First, a large part of the clarity resulted from the data being analyzed after the College of Human Ecology; and second, its collective nature and shared purpose enabled a clearer focus allowing me to "see" the significance of events and perceptions. Faculty revelations of perceptions were not as ambiguous because their frame of reference went back to the same purpose and mission: the preparation and continuing education of veterinarians; whereas, faculty in the College of Human Ecology were preparing students for a wide range of professions and careers, thus resulting in a more scattered, less focused frame of reference. Many times faculty members referred to the student population at large without specific reference to a future professional group. Overall, there are strong characterizations of the Period of Revitalization in each of the colleges, although the makeup of each college may have significant implications of the continued "progression" of the revitalization movement. Furthermore, the sub-stage of adaptation is a crossroads for the movement, and it is suggested that each of the colleges exhibits characteristics of being at this sub-stage of the movement with some lesser hints at cultural transformation on individual levels or in the College of Veterinary Medicine. The hints occurred in unanticipated ways such as the enhanced outreach to students, practicing veterinarians, and laypersons provided on the Web.

The most ambiguous characteristic was that of the presence (or rather the lack of), a clearly defined code, vision, or message which clearly outlines the realities of the new ideas being presented by leadership during mazeway reformulation. The code in the case

of the College of Human Ecology seemed to be implied or left to the tacit understandings of the cultural members; whereas in the College of Veterinary Studies, the code was communicated with more clarity through the establishment of an office dedicated to the growth and integration of instructional technologies and the hiring of associated personnel.

The success of the revitalization movement should be signaled by the evidence of cultural transformation in each college, however, the instances exist at more of an individual level and without widespread acceptance. The closest to success at this time would be the College of Veterinary Medicine with its shared purpose and more defined view of integration. There are however, threats to the future of both revitalization movements; threats that have roots in the academic cultures which exist there, and surround the issues of its management (Dill, 1982). Wallace (1979) does not make predictions as to the success of the movement without a strongly defined code, only the code whose realities are skewed or questionable, but it can be speculated that management of those realities is necessary in the academic culture in order for the success of any movement. For the College of Human Ecology, the lack of a defined code coupled with the college's strong sense of academic autonomy can cause the college to perpetually stay in a stage of Cultural Distortion or Individual Stress resulting in lowered overall faculty collegiality, shared values and beliefs, and perpetuation of a sense of isolation among faculty, thereby inducing more future stress and pressures on faculty.

For the College of Veterinary Studies, the code or message associated with instructional technology integration may need further clarification in order to remove some of the political undertones which have accompanied its integration. Faculty

members may question the realities associated with the integration if they are not made aware of the benefits to student learning. Suggestions for assessment of student learning in different contexts may be needed for this clarification.

CHAPTER VI

SUMMARY, CONCLUSIONS, & RECOMMENDATIONS

Summary

The purpose of this study is to describe and interpret significant events and perceptions of faculty members associated with the adaptation of instructional technologies in two colleges. It was intended that each of the following would be accomplished: 1) description of the stage(s) of change each college exhibits in relation to the revitalization movements, 2) description of how the changes brought about by instructional technologies are related to the stages in the revitalization movement, and 3) examination of the usefulness of the framework when explaining the process of instructional technology integration and cultural change.

Using multiple methods including interviews, observations, and document collection and analysis, a qualitative case study design was employed as the means to carry out the study. Collection of data focused on faculty member's perspectives of their college and its use and development of instructional technology and perspectives of their own use of instructional technology and evolution. Based on consultation with university level academic computing administrators and by reviewing the nature, scope, mission, and purposes of each college in the university, two colleges in a large-land grant university were chosen as the sites for this case study. The two colleges chosen for this study were the College of Human Ecology and the College of Veterinary Studies. The purposes of data collection, presentation, and analysis were to characterize each college within the constructs presented in the revitalization movement framework and to present the data findings in reference to the framework and literature.

Data analysis and data collection occurred simultaneously throughout the data collection phase. Triangulation of data was accomplished by seeking multiple sources, such as documents, interview transcripts, observation fieldnotes, peer reviews of analytic content, purposive sampling, and rich description. Peer debriefing from the academic advisor and colleagues in related disciplines, as well as member checks from participants in the study were also utilized as a strategy for triangulation, and new information which resulted from their consultation was integrated into the study as warranted. Once the data collection phase had ended due to a saturation of the data, the coded categories that were developed were examined for significance to the revitalization framework and case reports that presented the data in a descriptive framework were developed.

A limitation to this study is that forms representative of instructional technologies are broad with varying uses and frames of reference. It forces the population studies to be somewhat heterogeneous in their ideas and can result in the study being subject to multiple interpretations. A limitation during the data collection phase was that I was not privy to certain activities in the college that may have led to the discussion of issues surrounding the utilization of instructional technologies and, therefore, further insight.

Findings of this study indicate that while multiple characteristics of the stages existed in both colleges, implications of the stages vary for each college as their overall cultural context and frame of reference are different. Application of the framework was beneficial in the College of Veterinary studies due to a more homogenous culture and shared purpose. This allowed the researcher to identify the college in the Period of Revitalization within the revitalization movement framework. The framework illuminated areas of the college that could be of future concern in the success of the

revitalization movement. Although characteristics of the stages were present in the College of Human Ecology, the heterogeneous culture and the existence of many disciplines did not allow for easy identification of where the college existed in the stages. Therefore the existence of the college in just one of the stages remains speculative.

The findings also suggest that in both colleges there is a narrowed focus on the multiple forms of instructional technologies rather than the ideologies and beliefs that encompass instructional technology and pedagogy. While the model of revitalization movements gave insight as to the use and integration of the forms, it is primarily a processual model of cultural change whose focus is on a change in the existing shared practices and beliefs. The data suggests that there is ambiguity in the notion of instructional technologies integration has resulted in multiple interpretations of cultural members and a high level of adaptation by members of both colleges. The result of the adaptation is that many have retreated to more traditional notions of teaching or continue to fit instructional technologies into their own notions of teaching, whether based on sound pedagogical principles or not.

Conclusions

The following sections will address the original research question posed in Chapter I and follow with a discussion of recommendations for improving the current study and future research.

Describe which of the stage(s) of change exists in each college in relation to revitalization movements. Analysis of data in the College of Human Ecology revealed that characteristics and descriptors in the themes represented several stages, with the most commonalities being represented in the Period of Revitalization and sub-stage

adaptation. Some scattered evidence of cultural transformation was found in a small group of faculty members who demonstrate diligence in their attempts to integrate instructional technologies into their teaching and enjoy the overall experience.

The college can be categorized in this stage as a result of several influencing factors, including pressures perceived from outside the institution to continue the perpetuation of growth on campus, pressures to prepare students for careers in their respective disciplines, and pressures perceived from expectations of faculty to use instructional technologies in the classroom.

However, due to the large degree of academic autonomy, multiple disciplines, individuality and ill-defined code or message surrounding the realities of integrating instructional technologies, there are uncertainties. Therefore, the college could be characterized as overlapping into the Period of Cultural Distortion with its characteristic ambivalence, apathy, and unclear faculty roles present in its academic culture. Further research is recommended in this particular context to determine if the above stated factors will truly have an impact on defining the stages or the success of the movement or on the overall success of the integration and adaptation of instructional technologies.

Analysis of data and the case report of the College of Veterinary Studies revealed that the stage which was most clearly and most recently represented was the Period of Revitalization and sub-stage of *adaptation* along with some evidence of *cultural transformation* as the college used many instructional technologies not only to meet the needs of students but also the continuing education needs of practicing veterinarians and the population at large.

Although there was some degree of autonomy in the college, a shared purpose of the preparation of veterinarians and the values and beliefs that accompanied the profession enabled the stages to be somewhat more distinctive. In addition, the sense that a code or message was communicated regarding ways instructional technologies could be used facilitated the distinction further.

The impetus for the movement in the case of the College of Veterinary Studies was the combined factors of new technologies being introduced into the college, such as multimedia-enhanced classrooms and multimedia labs, the perception of the external pressures of competing for students, internal pressures of curriculum changes, experimentation with instructional technologies by a "core group" of faculty, and the hiring of a new Associate Dean who was cognizant of the possibilities of new technologies.

As described in the literature (Muncey & McQuillan, 1993), the stages were difficult to view as a progression and as discreet entities, and some instances entirely overlapped and occurred simultaneously. The data indicated that in both colleges the changes surrounding the integration of instructional technologies was fast and in some ways drastic, adding to the lack of a clear manifestation of the Period of Individual Stress.

Other researchers who have applied the framework have noted that it is difficult to use the framework as a "stage-by-stage" model while attempting to explain the progression of cultural change (Muncey and McQuillan, 1993). This determination made identification regarding which stage(s) each college existed difficult to answer conclusively; particularly the College of Human Ecology, with its various disciplines.

However, the examination of the history and significant events in both colleges allowed the progression to be demonstrated to some extent.

In sum, the movements in both colleges are what could be considered young because of the relatively short time period in which these changes have occurred. The fact that colleges are in the sub-stage of adaptation suggests that there are still roadblocks ahead for the colleges and questions which must be addressed in order for the movement to continue and progress. There is still ample time to ensure that faculty members do not retreat in isolation when going through the stage of adaptation. If handled appropriately, the adaptation sub-stage can be a time for the college to come together and strategically plan the integration of instructional technologies based on the principles of quality instruction and develop the shared meanings and understandings that are so critical to the success of this movement.

Although the New Steady State has not emerged in either of the colleges, and Wallace (1979) states that it is difficult to predict what a New Steady State would even look like, one could hope that it would include a strong academic culture manifesting itself in a high level of collegiality among faculty members, a shared and defined sense of quality instruction, such as pedagogical principles of learner-centered teaching and increased collaborative learning relationships between faculty member and student. It could also be argued at this point that for colleges such as the College of Human Ecology, that a New Steady State may never exist and that the college could remain in the stage of Cultural Distortion because of a heterogeneous culture comprised of multiple disciplines and high faculty autonomy. It is suggested that viewing the college as being in the Period of Revitalization be only one interpretation and that further research be done

to determine if there are other explanations for the integration and adaptation of instructional technologies in the college.

How are the changes brought about by instructional technologies related to the revitalization movement stages? Cultural change focuses on a change in shared ideologies, values, and beliefs. However, data suggest faculty have a tendency to focus merely on a change in the tools of the classroom or its forms.

Based on previous examination of the stages, it can be inferred that characteristics in the colleges suggest some progression from one stage to another. Nevertheless, at times the progression seemed non-distinctive due to factors such as shortened time-frame, rapid onset, and issues related to mazeway reformulation (i.e., formulation of a "code," in the Period of Revitalization). Specifically, data revealed that as the colleges moved out of the Steady State, traditional modes of teaching were in place with the use of face-to-face lecture and some supplemental use of overheads, blackboard/whiteboard, television, and video cassette. The suggestion was made earlier that data in both colleges indicated that the changes surrounding the integration of instructional technologies were fast-- and in some ways drastic-- adding to lack of clear manifestation of the Period of Individual Stress. As the colleges moved into later stages of Cultural Distortion and Period of Revitalization, instructional technology changes in the classroom manifested themselves in the focus on adding new forms and tools such as electronic presentation software, visualizers and Web-based tools, and not necessarily in developing or reshaping ideologies.

Few faculty members vocalized the need to integrate new technologies as a way of improving pedagogy. That faculty members responded to the integration of

technology based on the expectations of students suggests that faculty and leadership perceived that using the new tools would allow them to meet these expectations while not necessarily changing their values or beliefs about teaching.

Elements of the revitalization stages do not reflect a focus on forms or tools but beliefs and values. Wallace (1979) states that one of the identifying characteristics of the revitalization movement is that members must "innovate not merely discreet items, but a new cultural system, specifying new relationships as well as in some cases, new traits" (p. 422). What this suggests is that although the move to integrate instructional technologies by these colleges can be considered a revitalistic response because it is in response to the outside pressures of students, discipline, industry, and-- in many instances--the outlying institution, the role of instructional technologies seem to be not wholly the "change force" as speculated in the problem statement and literature. This framework has shown that it is not only tools that bring on reform and cultural change but people, whether it take shape at the level of students, administration, or faculty.

The implication here is that adaptation surrounding tools and forms may occur up to a point when faculty realize that these tools alone will not meet expectations and pressures. It is suggested that if faculty perceived a code or message that focused on the ideology of instructional technology, quality instruction and encompassed faculty as the primary agent of change in the colleges, then different patterns may have emerged. That is not to rule out that the integration of tools can have significant effect on how the culture operates. This effect became evident in the College of Veterinary Studies as they realized the impact of using instructional technologies to provide continuing education and outreach to practicing veterinarians.

Examine the usefulness of Wallace's framework of revitalization movement in explaining the process of instructional technology utilization and cultural change in higher education. Addressing this question provides implications and information that can inform practitioners as they embark upon reform or change efforts that are broad in scope and nature. The fact that the framework enables us to see the cultural change process is not as significant compared to the implications it provides for reform and change efforts in the higher education context. The implications are as follows:

- ***Applying the revitalization framework does illuminate some of the tensions or the potential areas of concern in the overall cultural landscape of higher education that may impede planned change or reform efforts.***

First evident is the misinterpretation of a code, lack of clear purpose, or ill-defined realities and ambiguities in the reform or change efforts and how that code is developed, communicated, and adapted. The data suggest that leadership communicated an ambiguous code left to the interpretation and application by faculty, thus, the multiple questions surrounding the development and further adaptation of that code. Should the development of the code exist at the level of the overall academic culture or at the level of the discipline? If the development of the code did exist at the level of the academic culture, from where should leadership resonate? The deans or department chairs? Some studies have argued that the merits of developing leadership at the departmental level is to help set quality standards for teaching and learning (Knight & Trowler, 2000).

Also brought to light is the overall implication of what the resulting code should look like. Should the resulting code take shape as quality standards of instruction or teaching? "One issue that clearly cuts across the ...implications [of the framework] is a

concern over standards: who sets them, is there agreement about them, and how are they tied to visions and questions about the goal of the reform? The issue of standards is likely to be a central tension of any reform movement" (Muncey & McQuillan, 1993, p. 420). I find this statement to be applicable in these cases as well. As reflected in the case reports, faculty members, no doubt, have definite ideas about the integration of instructional technologies as they pertain to their teaching. Therefore, application of the framework also raises important questions for faculty as they continue to modify the code or adapt, however ambiguous it may be (Muncey and McQuillan, 1993). Which adaptations belong to faculty or how much privilege do faculties have in adapting the code? The answers to these questions will have great impact on how academic culture is viewed and shaped. Since the nature of instructional technologies cuts into the value-laden area of teaching and learning, the issue and relevancy of standards and quality, although a touchy one, must be addressed. Administration and faculty cannot be reticent in articulating clear goals and strategies and leave the change to happen "via drift" (Kanter, 1996, p. 497).

An additional concern that becomes apparent is the role of a weak academic culture (manifested in high faculty autonomy) and its management, for example represented by the College of Human Ecology with its high prevalence of individuality and the view that leadership should take a hands-off approach and merely provide access and that faculty should be left to their own decisions as to the integration of instructional technologies. Muncey and McQuillan (1993) state that "because communicating and adapting the code are central features of the framework, questions of shared meanings and understandings become critical" (p. 418). This notion of shared values and meanings

becomes especially critical in education, particularly where it relates to the context of the academic culture as it is believed that beliefs about teaching and learning are rooted there (Dill, 1982; Kennedy, 1997).

This revelation is not new (Knight & Trowler, 2000, Dill, 1982), but it can have adverse effects in the survival of the academic culture and contribute to future and present faculty role confusion. Dill (1982) states that "a necessary condition for the management of academic organizations is the assumption that they are academic communities; the faculty are committed to a common set of beliefs. Yet academic managers do not discuss the actions by which a common set of beliefs can be maintained. We assume a common academic culture; we do not manage it" (Dill, 1982, p. 304). The framework, therefore, highlights the weaknesses in the academic culture that present a danger to the success of the revitalization movement in higher education, namely the notion in some cultural contexts to protect academic freedom and autonomy and not compromise it (Swenk, 1999). Without a defined sense of shared purpose and collectivity, the cultural group is essentially left teetering between stages and can be in a perpetual stage of cultural distortion or individual stress. For higher education contexts, this stage can signify a heightened sense of isolation for faculty with dependence on their respective academic discipline for purpose (Dill, 1982).

While both colleges had a vision for using instructional technologies, faculty members functioned independently of the vision in their implementation of the technology and fit technologies to their own assumptions about teaching. Again, this suggests that the purpose of these tools was not integrated into the overall context of instruction clearly and that faculty perceptions as a result of their integration may have

resulted from misinterpretations. The nature of integration was alluded to with the establishment of training and support personnel; however, the academic culture prevailed in its notion of academic freedom and choice leaving many faculty to begin to question their worth.

- ***Application of the framework demonstrates how higher education contexts can respond to external pressures and stress when externally rooted.***

Many forms of technologies quickly became part of the landscape in the colleges and outer institution that served an administrative function and helping to increase student access to university services. Both colleges recognized external pressures which were manifesting themselves in perceptions of changing student populations and a need to provide access to technology in order to prepare students for future careers. These perceptions stay aligned with the idea of mazeway reformulation in which some elements in the systems which are currently in use are restructured in order to respond to pressures or stress.

Possible implications of these responses to external pressures or stress can be that integration of instructional technologies occurs with little or no planning or can occur as planning and integration without cultural awareness. "There is a long philosophic tradition arguing that action precedes thought; a 'reconstructed logic' helps us make sense out of events, and they always sound more strategic and fortuitous later. But the importance of defining a clear direction, even if almost at the destination, is to build commitment by reducing plausibility of other directions" (Kanter, 1996, p. 492). In both colleges, the data did not reveal a defined planning process nor did it provide anything but speculation as to the state of cultural awareness. It is suggested that this study would

be vital information for helping the colleges heighten their sense of cultural awareness before embarking on planning efforts or further development and adaptation of the code, even though it reinforces, in some ways, Kanter's (1996) notion of planning after the fact.

- ***The framework allows for the monitoring of cultural change rather than reviewing it retrospectively.***

Muncey and McQuillan (1993) state that the benefit to applying the framework is that it reveals "the ambiguities, uncertainties, nuances, contradictory opinions and actions, details, and struggles that accompany change in a holistic, conceptualized manner--the 'warts and all' of the change process" (1993, p. 421). It is intended that faculty and administration can view this study reflectively and make necessary modifications in order to ensure the ultimate goal of quality instruction for students. The framework is a processual model, but again it is suggested that it be used in a way that will allow the practitioner a way to document, monitor, and reflect on changes that may allow for subsequent adaptations that will ensure the success of the movement.

- ***Application of the framework shows the changes brought about by instructional technologies and the role instructional technologies play in the higher education context.***

As discussed previously in this chapter, the revitalization movement framework illuminates that it is not solely tools, but also people, that bring on reform and cultural change, whether it take shape at the level of students, administration, or faculty. Currently, many faculty members have focused on integrating forms and tools into their classroom to fit their original notions regarding teaching.

A final note: a drawback to the framework is that although the framework presents some crucial elements that enable the researcher and practitioner to view characteristics of the stages that existed in their respective colleges, I could only report their existence or absence, and speculate as to the reasons why they existed or did not. If the researcher's expectation is to use the revitalization movement framework to analyze the progression of cultural change and to also explain why events happened or why themes emerged, it may prove difficult without sufficient background information or complimentary theoretical framework that give more specific constructs as to organizational behavior--or in the context of higher education, academic or faculty culture, and its respective role system.

In conclusion, although difficult to study because of ambiguities in the stages and the cultural contexts which were studied, the framework does illuminate some of the tensions or the potential areas of concern in the overall cultural landscape of higher education that may impede planned change or reform efforts, many of which surround the notion of leadership and academic culture. Researchers must also be aware that the framework itself has many ambiguities and at times appears too simplistic when attempting to explain the complexities of higher education cultural contexts. The result is that at times the researcher can be constrained when analyzing the data and may be forced to too much speculation within the framework.

Recommendations

Practice

The study provides vital information to those who provide support either as instructional technologists or instructional design specialists to faculty. When entering a

culture where the *code* is not focused or grounded in strong pedagogical principals, the meaning and realities of instructional technologies can be elusive for many. These professionals must assist faculty members in the understanding of the overall concept and ideology behind instructional technology and design. Implementing development opportunities not only should focus on the application of technologies but also provide connections between their application and quality instruction. Professionals may want to work directly at the department level and with content experts in order to provide information and applications that are directly related to the faculty members' discipline in order to achieve relevance. This may also mean making a concerted effort of outreach to faculty members in order to discern what their instructional needs are and continue monitoring those needs accordingly.

In this instance, the professionals can assist in the development of that code which is focused on quality instruction; however, it is also suggested that the person in this role have teaching experience or currently be in a teaching role. The collaborative nature of the relationship between faculty member and instructional designer or technologist should be emphasized. (Williams, 2000) Faculty members may view the relationship more favorably if it stems from a professional who has significant experience employing the strategies being suggested and subscribes to the overall belief structure of the academic profession.

Also, provided are strong recommendations for leaders as they help faculty define a clear sense of instructional purpose and collective academic culture. Leaders should establish recognition of teaching excellence and innovation. Also leaders should plan for the socialization and social integration of new faculty and stress the importance of quality

instruction and strategic planning that is not only cognizant of innovation in the classroom, but includes strategies that will reinforce and build a culture of teaching excellence, not assume that it exists. (Dill, 1982) For further information regarding skill competencies of administrators, instructional technologists, and design professionals in the higher education context, see Williams (2000).

Improving Current Study

Suggestions for improving this study lie in methodology concerns. The study of two colleges, while valuable in many aspects, was confusing at times. Since data collection and analysis of one college followed the other college rather quickly, there was danger in allowing data analysis of the previous college to inform my data collection in the subsequent college too much. I wanted to be open to as many contrasts as possible if they existed and not over generalize to the other college. I guarded against this by keeping separate journals for each college in which I wrote memos and notes regarding the data. Although data collection and analysis in the qualitative case study are simultaneously and iterative, the researcher should exert caution when studying multiple sites and practice careful documentation and organization of the data.

An additional concern regarding data analysis arose when coding data with respect to the chosen framework. Although the design of the study reflected qualitative methods which typically do not contain *a priori* categories, for the purpose of the dissertation, analysis did focus on certain constructs in order to categorize data. At times, I found this conflicting as some new themes began to emerge, and I did not know how to handle this data. Glaser and Strauss warn researchers of the dangers in using "borrowed classification schemes" (Merriam, 1988, p. 136):

> Merely selecting data for a category that has been established by another theory tends to hinder the generation of new categories, because the major effort is not generation, but data selection. Also, emergent categories usually prove to be the most relevant and the best fitted to the data...Working with borrowed categories is more difficult since they are harder to find. (as cited in Merriam, 1988, p. 136)

This sentiment appears to be relevant in this study, as I struggled at times with letting go of the framework and letting the themes emerge. My main concern was that emerging themes accurately portrayed what was occurring each of the colleges. This may not necessarily be a direct suggestion for improving the study but a caution to novice researchers as they approach data analysis.

Finally, there were concerns with the framework itself and one of the chosen sites for study. The College of Human Ecology proved to be very difficult to categorize within the framework. The college exhibited several different disciplines and there was a great deal of autonomy exhibited in the college. This resulted in the data analysis seeming very chaotic and muddled at times. Another suggested interpretation, in addition to the one presented in the analysis and conclusions is that the College of Human Ecology is not an appropriate site for study using the framework of revitalization movements. The researcher suggests that contexts which are singular and collective in purpose be selected, such as professional programs and that an additional framework be employed.

Future Research

Several areas of research are related to this study and demand further exploration. They are the application of this framework in other higher education contexts which are

experiencing change efforts other than those related to instructional technologies, and the changing roles of faculty as they integrate instructional technologies. Questions related specifically to this area and to views of the overall culture of teaching and instruction are

1. What is necessary to identify and change faculty teaching ideologies?
2. Where are skills and knowledge levels of faculty regarding innovative teaching practices?
3. How is quality instruction defined by faculty?
4. How do institutions define quality instruction?

Future research could also focus on the nature of higher education leadership as it pertains to cultural change and the management of the academic culture specifically to determine if the different levels of leadership play a role in the success of cultural change, such as those at the department level, or college level. It is suggested that Wallace's (1979) revitalization movement constructs may be too one-dimensional and that a future framework of cultural change in the higher education context contain those variables--in addition to the layers of leadership-- such as autonomy, competition, consumer market, and their associated faculty roles.

Finally, the strategic planning efforts in higher education contexts could be explored to determine the level of cultural awareness in its members as they embark on the strategic planning process. Examine or determine strategies that help build and develop characteristics of a culture of teaching excellence and what types of planning efforts are involved with the integration of instructional technologies in other colleges.

Commentary

This paper would not be complete with out revisiting the initial analogy presented in the introduction. If we examine the analogy of the dominos, we observe that there is an underlying assumption that with change comes planning and little awareness of the cultural context. However, the case studies suggest that in the particular contexts of the colleges studied in this dissertation there was little planning evident. The framework chosen has illuminated the role of adaptation as possibly serving as a catalyst in the planning process and informing the future decisions of faculty and administration. Perhaps the analogy to explain higher education's decision making process regarding instructional technology integration is slightly different and should be portrayed as lining the dominoes in any non-descript way with a "let's see what happens" attitude when they fall, only to rethink and analyze afterward in order to straighten the mess.

The Image Problem of Higher Education. The literature suggests that there are multiple perspectives on the uses of instructional technology in higher education. Most seem to center around the value it has towards increasing access for students. The buzzword to describe education and learning today is *ubiquitous* (Katz, 1999). Provide education that is anywhere, anytime, and anyplace; in other words--continuous.

Resulting from this notion are discussions which seem to hint at a "bottom-line" attitude causing many faculty to feel that it is all about productivity and not learning. During my many conversations with faculty members about their uses of instructional technologies, I am reminded over and over of a particular conversation in which an anatomy professor stated quite eloquently that "education is stuck trying to sell itself" and therefore we "had" to use some new instructional technologies order to satisfy

students, fellow faculty members, and administrators. More recently, a faculty member copied me an e-mail that an online-student sent referring to herself as the "university's customer." These references are dangerous indications that higher education has an image problem and that students and faculty are buying into it. It is suggested by some that higher education is not experiencing merely a paradigm shift but a paradigm clash and facing a great challenge (Gandolfo, 1998). Provided that we own up to the task and not continue to be carried along, some crucial decisions should be addressed. Gandolfo (1998) states that "the key point is that technology must be used judiciously along with good instructional methodology. Well informed discussions among faculty colleagues will help provide the basis for intelligent use of technology for instruction." (p. 32) My idealist perspective agrees with Gandolfo's in that the "design of the instructional event is the critical issue, and that design must be holistic to include all the components of the teaching and learning process" (p. 35). How will this solve the image problem for higher education? It suggests that the resulting high value is, thus, placed on student learning and that technology's focus recedes to the background. Higher education would then be "stuck" trying to sell programs and learning that were designed around quality instruction, not quality tools.

Culture's Role. Cultures which exist in the context of higher education are multi-faceted and complex. Attempts to initiate change in these complex settings appear to take shape in either intense strategic planning efforts or efforts of little planning at all. However, in either attempts, ignoring the cultural landscape can lead to little or no success in the attempted change. Thus, crucial questions are posed and answered. Why be conscious of culture when attempting reform or change in higher education? What is

its significance? If we revisit Tierney (1988), there is the suggestion that many leaders are only minutely aware of their institutions' culture. Culture may be viewed as something that leaders can beat or get around, when in reality, it is the major force that will dictate a plan or innovation's success. The lack of respect for culture when plans are made is evident in many cases. The study of cultural change in the higher education context can be a very viable option. It can arm the leader with valuable information to aid in decision making; it essentially lays the topography or illuminates the lay of the land. (Gandolfo, 1998, Swenk, 1999).

One might ask if all strategic plans be doomed to failure if leadership does not take into consideration an organizations culture? Probably not, particularly if the plan involves automation of some kind and if aspirations of administration are high. In teaching and instruction, if the strategic plan calls for multimedia resources for every classroom and that teachers will use innovative media to teach, then that plan will probably succeed provided resources are available. Will it change teaching and learning? More importantly, will it change the culture of teaching and learning? More than likely, it will not, due to the fact that using innovative media to teach is much different than using media to teach innovatively.

The intent of this researcher is that this study will serve as a tool to stimulate further discussion in the area of instructional technology integrations. Furthermore, from a faculty support perspective, it suggests that faculty could still experience some degree of confusion and stress as the process of change continues. Educational leaders should exhibit some degree of sensitivity to this and help faculty react in a positive, reflective manner.

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APPENDIX A

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD

Date:	January 14, 2000	IRB #: ED-00-190
Proposal Title:	"INSTRUCTIONAL TECHNOLOGIES AND CULTURAL ADAPTABILITY: TWO CASE STUDIES"	
Principal Investigator(s):	Edward Harris Myra Haulmark	
Reviewed and Processed as:	Expedited	

Approval Status Recommended by Reviewer(s): Approved

Signature:

Carol Olson

Carol Olson, Director of University Research Compliance

January 14, 2000
Date

Approvals are valid for one calendar year, after which time a request for continuation must be submitted. Any modification to the research project approved by the IRB must be submitted for approval with the advisor's signature. The IRB office MUST be notified in writing when a project is complete. Approved projects are subject to monitoring by the IRB. Expedited and exempt projects may be reviewed by the full Institutional Review Board.

APPENDIX B

INTERVIEW CONSENT FORM

General Information

You have been asked by Oklahoma State University graduate student Myra L. Haulmark to be interviewed about your experiences and perceptions regarding instructional technologies.

The investigator in the preparation of research report to be submitted for scholarly publication will use the information collected in the interview as a source of data. The interview should last approximately one hour and will be audio recorded. The investigator will develop the questions asked. All subjects will be asked the same general questions. The investigator will type transcripts of all interviews for analysis. These transcripts will be treated as confidential materials and will be kept under locked confines. This data will be kept no longer than what is required for the research project.

The investigator will assign pseudonyms for each person interviewed. These pseudonyms will be used in all discussions and in all written materials dealing with the interviews.

No interview will be conducted or accepted by the investigator before the subject and

investigator have signed this consent form, with a copy provided for the subject.

Subject Understanding

I understand that participation is voluntary; that there is no penalty for refusal to participate, and that I am free to withdraw my consent and participation in this project at any time without penalty after notifying the project director.

I understand that the interview will be conducted according to commonly accepted research procedures and that information taken from the interview will be recorded in such a manner that subjects cannot be identified directly or through identifiers linked to the subject.

I understand that the interview will not cover topics that could reasonably place the subject at risk of criminal or civil liability or be damaging to the subject's financial standing or employability or deal with sensitive aspects of the subject's own behavior such as illegal conduct, drug use, or sexual behavior.

I may contact Myra L. Haulmark at telephone number (405) 707-0711 in case of any problems. I may also contact IRB Executive Secretary Sharon Bacher, University

Research Services, 203 Whitehurst, Oklahoma State University, Stillwater, OK 74078; (405) 744-5700.

I have read and fully understand the consent form. I sign it freely and voluntarily. A copy has been given to me.

Date: _____ Time: _____(a.m./p.m.)

Signed: _____
Signature of Subject

_____
Person authorized to sign for subject, if required

I certify that I have personally explained all elements of this form to the subject or his/her representative before requesting the subject or his/her representative to sign it."

Signed: _____
Project Director (Myra L. Haulmark)

APPENDIX C

INTERVIEW QUESTIONS

1. Describe your institutions current use of instructional technologies.
2. Describe how your institution's technology infrastructure has developed.
3. Describe your current use of instructional technologies.
4. Describe or talk about some of your experiences with instructional technologies that have shaped your thinking towards those technologies.
5. How do you cope with problems that you may have experienced with these technologies?

VITA

Myra Lanette Haulmark

Candidate for the Degree of

Doctor of Education

Dissertation: INSTRUCTIONAL TECHNOLOGIES AND CULTURAL ADAPTABILITY: TWO CASE STUDIES

Major Field: Educational Administration

Biographical:

Education: Graduated from Poteau High School, Poteau, Oklahoma in May 1985; received Bachelor of Science in Speech Pathology from Northeastern State University in 1992. Received Masters of Science in Speech Pathology from Northeastern State University in 1993. Complete the requirements for the Doctor of Education in Education Administration at Oklahoma state University in August, 2001.

Experience: Employed by Luther Public Schools as a Speech Pathologist and Gifted Programs Coordinator, 1993 to 1998; employed by Oklahoma State University, as a graduate assistant and Technology Services Coordinator, 1998 to 2000; and employed by Rogers State University as an Instructional Design and Development Specialist, 2000 to present.