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THE ADMINISTRATION OF COMMUNITY COLLEGE BLOGS:

CONSIDERING CONTROL AND ADAPTABILITY

IN LOOSELY COUPLED SYSTEMS

By

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December 2010

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ABSTRACT

THE ADMINISTRATION OF COMMUNITY COLLEGE BLOGS: CONSIDERING CONTROL AND ADAPTABILITY IN LOOSELY COUPLED SYSTEMS

Troy A. Swanson
Old Dominion University, 2010
Director: Dr. Dennis E. Gregory

The purpose of this study using a multiple case study method is (1) to further the understanding of how community college administrators and blog authors strike a balance between organizational control and adaptability when implementing and using blog technologies and (2) to create a model that will help administrators better strike this balance within a loosely coupled system of college units and individuals. The rise of Web 2.0 technologies, which allows for direct publication to the Internet, presents two conundrums for community colleges: the conundrum of control and the conundrum of adaptability. As the oldest implementation of Web 2.0 technologies, blogs present an opportunity to understand how community college administrators are addressing these conundrums and how they may move their organizations toward the use of other Web 2.0 tools such as Facebook and Twitter.

To my loving wife Kim,

this dissertation pales in comparison to our children, our marriage, our home, and our lives

all of which we created while I have been in this Ph. D. Program.

I could never have finished or thrived in this program without your support and love.

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INTRODUCTION

Over the past two decades, much of the effort made by community colleges in terms of technological adaptation was placed in automating and moving processes like registration, library services, tutoring, and purchasing textbooks to the online world (Randall, 1992; Doucette, 1993; Levin, 1998; Ayers and Grisham, 2003; Smith, 2006). A new wave of technological changes, dubbed Web 2.0, may further transform the operation of community colleges by creating new ways to communicate, aggregate, and create knowledge within organizations. A large portion of this potential originates from the ability to directly publish, create, and contribute information across the Internet at low cost with low technological barriers (Reed, 1999; Baker and Ward, 2002; Blood, 2002; O'Reilly, 2005).

As one of the oldest examples of Web 2.0 technologies, the management of blogs may provide a guide for existing and future technologies. In terms of organizational decision-making, there is a "conundrum of control" (Weinberger, 2007) community colleges must face when considering how blogs are used. At the heart of this conundrum is the tension between organizational controls that regulate actions and the need of individuals to directly utilize this technology to easily create and distribute content on the Web.

Additionally, there is a second conundrum related to the adaptability of blog technologies. This conundrum centers around the tension between organizational control through the standardization and the need of blog authors to adapt the technology to solve the local, departmental problems they face. The purpose of this multiple case study is to further the understanding of how community college administrators and blog authors strike a balance

between organizational control and adaptability when implementing and using blog technologies and to create a model that will help administrators better strike this balance within a loosely coupled system of college units and individuals.

Background: The Development of Web 2.0 and Blogs

Web 2.0 is the term given to a number of related technologies that are changing how we understand and view the Internet. These technologies allow for ease of publication to the World Wide Web, creating content that is largely community-based and can be accessed via Web sites and numerous devices such as handheld computers or mobile phones. Podcasts, which are a stream of audio or video files; social bookmarking, which is a way to save, label, share, and comment on Web sites; microblogging, which is a stream of short messages; and social networking, which is a personal page networked to the pages of "friends," are a few examples of Web 2.0 tools. Blogs, which are formally defined in Chapter 2, are one of the oldest and most used Web 2.0 tools (Baker and Ward, 2002; O'Reilly, 2005; Alexander, 2006; Lindstrom, 2007; Weinberger, 2007). Through Web 2.0 tools, it is no longer necessary to know markup languages like html to create Web pages, editing software to build Web sites, or graphic design to make attractive pages. Web 2.0 allows for easy, immediate, and inexpensive publication to the Web (Jones, 2006).

For the average person, blogs exploded into the popular consciousness around 2004. The word *blog* was the most searched term on the Merriam-Webster Web site for 2004, and because of this, *blog* was chosen as the word of year (BBC News, 2004; CBS News, 2004). The rate of people who read and created blogs doubled from the end of 2003 to the end of 2004 (Lenhart, Horrigan, and Fallows, 2004; Rainie, 2005). By 2007, there were about

120,000 blogs created each day, which is about 1.4 blogs per second (Sifry, 2007). Weinberger (2007) noted that taken as a whole "the blogosphere," as the sum of all blogs is known, is more than just the ephemera of the Web. It is a shifting and growing debate on all topics and all events. It is a "global dialog."

Despite the large numbers of blogs, they are often easier to recognize than they are to describe (Blood, 2002). The most common understanding of a blog is that it is an online journal that has dated entries about personal views and opinions on a range of topics (Blood, 2002; Stauffer, 2002; Alexander, 2006). While the "journal" metaphor is somewhat simplistic and risks undervaluing this technology, it is an easy description to grasp. Most blogs are a running flow of short or long articles that are dated, have a title, allow readers to comment, and most of the time link out across the Web. The technology also, importantly, includes XML syndication, which allows external users to redirect and extract the blog's flow of content from the blog as it is created. This is the key technology that allows users to "subscribe" to the content and access it in screen readers, personal homepages, or other pages. Thus, the content of the site can be redirected and accessed without actually visiting the site itself (Alexander, 2006; Blood, 2002; Lindstrom 2007; Stephens, 2007).

Importantly for the current study, blog technology has moved beyond personal use. A range of organizations, including those in higher education, have been using blogs to relay news, reach out to supporters, and give a more personal face to the organization's Web site. Sometimes, organizational blogs are maintained by just one person, but more often they are maintained by several people (Kline and Burstein, 2005a; Kline and Burstein, 2005b; Richardson, 2006).

Not to be left out of the growing blogosphere, community colleges have utilized blogs for a range of reasons. Several community college presidents maintain their own blogs as a means to directly communicate with students, faculty and staff (Blobaum, 2007; Johnson, 2007). Marketing departments, public relations departments, and recruiters have used blogs as a way to reach out to prospective students (Merker, 2008). Campus marketers have also asked current students to blog about their experiences on campus (Merker, 2008, November 25). Additionally, blogs have been used by libraries (Marin, 2005; Swanson, 2006), faculty members (Downs, 2004), and public safety and police departments (Jones, 2008).

The Conundrum of Control

The World Wide Web has always been known for a certain degree of lawlessness in terms of inappropriate comments, downright rudeness, and even open threats. The ease of publication via blogs and other Web 2.0 technologies has only caused this problem to be more pronounced (Davidson, 2007; Deloitte, 2009; Goldsborough, 2005; Goldsborough, 2007; Holahan, 2007; Tennant, 2007). While most blog authors have a degree of self-imposed controls over what they post (Stephens, 2007; Viegas; 2005), the direct publication to the Web presents some subtle risks. These may include the disruption in traditional campus communications, conflicts over marketing messages, or disagreements over appropriateness for online communications (Alexander, 2006; Deloitte, 2009). Publishing online content to the Web 1.0 environment was a more controlled process requiring technical know-how and often the participation and review of content by the information technology or public relations staff (McAfee, 2006). The value in blogs is the timely, direct publication on the Web that necessarily eliminates the need for technological knowledge and any review by content editors (Blood, 2002; Burstein, 2005; Richarson, 2006; Stauffer, 2002).

Blogs are essentially creating new public spokespeople for community colleges. These new voices present what Weinberger (2007) calls a "conundrum of control." This conundrum states that organizations have an inherent interest in molding and directing how online technologies are used to meet organizational goals, but the more control imposed, the less value these tools give to their users. A total absence of control presents risks, and yet, a total imposition of controls returns the creation and distribution of content to a Web 1.0 paradigm and removes the value blogs present.

There are four types of controls that guide and limit the ways individuals within an organization make decisions including the use of technology. The first of these controls is formal policies. Policies are put in place to alter behavior, alleviating problems before they occur (Ouchi, 1978). Formal policies such as usage guidelines, objective statements, or implementation documents seek to do this by standardizing actions and making the connections between technology use and organizational mission and values explicit (Mars and Ginter, 2007; Ouchi, 1978). Policy statements also enable the coordination between organizational units and create the structures allowing group members to define relationships and work together (Eddy, 2003; Kanter, Stein, and Jick, 1992; Weick, 2001). Over time, policies can lose meaning as they are communicated within the organization or as organizational contexts shift (Pope, et al., 2006).

The second control mechanism is budgetary, which dictates staffing levels and availability of resources. Budgets can direct funds to and away from technology projects making hardware, software, and training available (Baldridge, et. al., 2000; Collins, 1983; Etzioni, 2000; Knirk and Gustafson, 1986; Mintzberg, 2000; Vaughan, 2006).

The next control is participation rules, which defines who gets to make decisions. When a decision presents itself, the individual must decide if he or she is empowered to make the decision or whether he or she must seek permission. Formal policies help to define participatory structure, but the decision to participate goes beyond formal policies. Within any unit, there are explicit and implicit rules about who gets to take what kinds of actions. These rules may be formalized as policies, or they may be discussed and agreed upon while remaining unwritten (Fryer and Lovas, 1991). In terms of technology, participation rules can be hardwired as systems architecture which is the functionality defining how people can come together, who can access particular tools, and what consequences may occur due to particular actions (Lessig, 1999).

Organizational culture is the final, and perhaps most important, control mechanism impacting the utilization of technology. Organizational culture defines the unwritten rules of the organization that fill in the gaps between individuals and even between the other control mechanisms. Culture acts as the primary means of interpreting actions and making meaning of events. It is embedded within the organization and helps to socialize new members into the organization. Culture takes written and unwritten rules a step further by taking the rules of operation to an almost subconscious level (Birnbaum, 1989; Fjortoft and Smart, 1994; Peterson and Spencer, 2000; Schein, 1992; Schein, 1999; Tierney, 2006).

These four control mechanisms are interrelated and separating them conceptually risks undervaluing how they work together in practice. In some instances, the differences between these controls are clear. In other instances the lines are blurry. This is especially true for the lines between formal policies, participation rules, and organizational culture. All four controls are derived directly from the governance structure of community colleges and

underlie the decision-making process within the organization (Amey, Jessup-Anger, and Jessup-Anger, 2008; Miller and Miles, 2008). As community colleges have grown into well-established institutions, they have witnessed increased levels of staff performing specialized tasks seeing an "increased fragmentation" where each area of the college pursues "specific operating objectives within the structure of a loosely coupled parent organization" (Alfred, 2008 p. 84).

The four types of control mechanisms seek to guide action and adapt technology to meet institutional needs, but it is impossible for any administrator to put in place controls that clearly meet all of the situations that might arise when technology is used. Organizational actors will face situations where control mechanisms offer unclear direction and the long term impact of past actions may not provide an accurate understanding of current situations to guide action (Cohen and March, 2000; Senge, 1990; Weick, 1987).

Community Colleges as Loosely Coupled Systems

Johnson (2002) calls community colleges the "most loosely coupled of all organizations" (p. 14) due to their open access and entrepreneurial approach. Organizations that are loosely coupled systems, such as educational systems, do not react as directly to strict inputs and outputs as a tightly coupled system, such as an assembly line. Loose systems are made up of units responsive to one another, but they maintain their own identity and maintain a degree of separation. The parts of the system are fairly independent where "normal" operation means relationships are poorly defined. This lack of definition does not mean structural looseness, as structures and hierarchies may exist. This lack of definition focuses on a looseness of process, where processes between units are redefined as needed

and created to meet changing needs (Collins, 1983; Orton and Weick, 1990; Weick, 1976/2000; Weick, 2001). Some units may be more or less tightly coupled to other units. Some processes may engender tight coupling in one instance, but another process may be looser. On the whole, processes within the organization may fall on a continuum of looseness (Orton and Weick, 1990).

Perhaps, the most essential form of coupling is carried out at the individual decision-making level. Even in cases where the organizational structure may appear to be tightly coupled, the individual can act in ways more loosely coupled simply by deciding when and when not to engage the larger decision-making structure. The essential decision the individual must make is whether to act or to seek permission to act (Fryer and Lovas, 1991).

When considering educational organizations, and in this case community colleges, loose coupling can be considered in two directions, horizontally—across departments—and vertically—up and down the administrative hierarchy. Horizontal couplings include functional or task performance relationships, financial relationships, and communication patterns. Vertical couplings include budgetary dictates, personnel utilization, formal authorization, and location within the organizational hierarchy. Horizontal couplings can be viewed more as divisions of labor, while the vertical couplings are administrative and managerial in nature (Rubin, 1979; Collins, 1983).

Johnson (2002), Mars and Ginter (2007) and Robson (1998) found Weick's model of loose coupling to be applicable to community colleges. Mars and Ginter (2007) examined technology adoption at three community colleges, noting units were loosely coupled to each other and to initiatives originating further up the organizational hierarchy. Their findings

emphasized successful sharing of innovations was fostered through structures that enabled tighter coupling, such as technology committees and strong policy-structures that created consistent views of technology. Nazzaro (1987) has noted there may be higher degrees of coupling across units the further up the organizational hierarchy one moves. Vice presidents and deans may easily communicate across units in administrative meetings, but lower-level employees may not have many opportunities to directly interact with individuals from other units within the college. The planning process community colleges utilize may also introduce some degree of looseness. Organizational planning is often viewed as a rational endeavor with clear goals and measurable outcomes, but behind the formal planning documents and final reports, one finds a large degree of internal politics buffering units and molding outcomes at all phases of the planning process (Robson, 1998; Johnson, 2002).

Critics of loose coupling point out that the model has been used as a means to justify dysfunctional communication, planning, and control within organizations (Lutz, 1982; Lutz, 1983), but these criticisms overlook or undervalue the most important advantage loose systems present. This advantage is that as new challenges or needs arise in the environment, a unit within a loose system can address this challenge without risking the entire organization, since units are relatively independent (Collins, 1983; Weick, 1982a; Orton and Weick, 1990; Weick, 1976/2000).

Thus, adaptability becomes a key advantage for loose systems, but the issue of adaptability presents a second conundrum for organizations. This conundrum of adaptability implies that the more standardized a process is and, therefore, the more controls are in place, the less creative the organization (Blau, 1973; Mitzenburg, 2000). Organizational adaptability is the potential for change that exists within an organization. Adaptability is

increased through increasing levels of variation or "novel inefficiencies" (Weick, 1977a, p. 222) within the organization. Variation is increased when individuals across the organization are allowed to test ideas and their own solutions to problems within their own sphere of responsibility thereby generating ideas from which to choose. Looser systems that allow for more autonomy at the individual and unit level generally have a greater potential for adaptability (Weick, 1977b; Birnbaum , 1989; Weick, 2001; Frei, 2006). Once one adaptation has been selected and acted upon, adaptability is reduced. As decisions are made and resources devoted to change, then the potential to change—adaptability—is necessarily reduced. Second, innovations are more successful in tighter systems, while adaptability thrives in looser systems (Hage and Aiken, 1970; Cameron, 2000, Weick, 1976/2000; Weick, 2001).

Statement of the Problem

The conundrum of adaptability intersects with the conundrum of control in two ways. First, adaptability and control intersect within the actual utility of technologies and practices. Controls can limit the usefulness of existing technologies, and they can limit the ability of organization members to adapt the technology to meet new needs. Second, they intersect within the loose structure of the organization itself. Controls can build structure and better define how units within the organization interact. As interactions become routine, units are less able to adapt to changes in the environment. The logical response to these two conundrums is for organizational leaders to seek balance between control and looseness.

Organizational leaders must seek to understand and encourage the advantage of looseness, namely, the ability to create variation to challenging problems. Yet, they must

also encourage the advantage of tightness, namely, the ability to communicate innovations and efficiently put them in place. This balance must allow for local operation and variation, while still transmitting the necessary control (Birnbaum, 1989; Ouchi, 1978; Weick, 1982b). Organizational leaders must appreciate that their organizations are not singular entities. They are groups of individuals making multitudes of individual choices and solving local problems (Weick, 1976/2000; Weick, 2001). Organizational leaders, therefore, have a role in enabling these interactions and encouraging the successful solution of local problems. The problem that this study explores is how well are organizational leaders empowering individuals to act but ensuring individual actions do not endanger the larger organization or conflict with organizational goals.

Purpose of this Study

The purpose of this study, using a multiple case study method, is (1) to further the understanding of how community college administrators and blog authors strike a balance between organizational control and adaptability when implementing and using blog technologies and (2) to create a model that will help administrators better strike this balance within a loosely coupled system of college units and individuals.

Significance of This Study

This study seeks to understand a key paradox in the post- industrial organization identified by Cameron (2000). That is, identifying and developing innovations requires loose coupling, but implementing this innovation across the organization requires tighter coupling. Organizational leaders must maintain both. They will face the challenge of maintaining stability, identity, and history in the short term but also supporting long-term adaptability.

There has not been a study to examine this paradox in relation to community college technology use. Such a study is important because community colleges are tied closely to their service areas (Cohen and Brawer, 2003). Blogs offer a new avenue for connecting to students and community members. They present a way to open the doors to activities, marketing, learning, and a range of ideas that can increase the value community colleges bring to their service areas. The ability to adapt to changing needs in the environment and better serve students is at the heart of the community college mission.

Definition of Terms

For the purposes of this study, the following definitions will guide this research.

Coupling defines the connectedness or autonomy of the individual or unit within the organization. Coupling will be defined in three ways for this study. First, individuals are coupled together through their position within the organization. Second, units are coupled horizontally across the organization as they accomplish the organizational mission. Finally, each unit is coupled vertically to the organizational hierarchy. Coupling is not an absolute measure. It is a relative relationship that varies with different processes.

Adaptability is the potential for change or innovation. This represents the amount of variation that exists within the system.

Organizational development is planned innovation or change put into place. Organizational development typically originates from above in the organizational hierarchy.

Organizational adaptation is unplanned innovation or change put into place. Organizational adaptation occurs when individuals enact a change to solve a local problem.

The *unit* is the smallest grouping of individuals working to fulfill a specific mission or service within the organization. Individuals within a particular unit may fulfill different roles and have different responsibilities, but they all work to provide a unique service.

The *organization* refers to the entire community college made up of a range of units consisting of staff, faculty, and administrators fulfilling their individual responsibilities.

A *blog* is a string of date-organized articles of varying lengths on similar or related topics. These articles typically have a title, are displayed on a Web page, and utilize an XML feed to allow for content syndication by outside readers.

Control mechanisms are put in place to regulate how a technology is used within an organization. Their intent is to protect the broader organization and the individuals within that organization. For this study, control mechanisms include organizational culture, participation rules, budgets, and formal policies.

Disintermediation refers to the use of blogs and other Web 2.0 tools to bypass traditional lines of communication such as public relations departments.

Web 1.0 refers to the less participatory incarnation of the World Wide Web where publishing content required the cumbersome manipulation of html files.

Web 2.0 refers to set of technologies that allow for easier content publication to the World Wide Web. These include blogs, social networking sites, and mircoblogging.

Research Questions

This study seeks to answer the following questions

Question 1: What control mechanisms have community colleges put in place to guide the publication of information to the World Wide Web using blog technologies?

Question 2: How do these control mechanisms impact the adaptability of blogs to new needs that arise in the environment?

Question 3: How do these control mechanisms impact the coupling between the blogging unit and the unit responsible for maintaining Web content within the organization?

Overview of Methodology

This study utilizes a multiple case study approach of three community colleges. The multiple case study method was chosen because of its descriptive, practical nature that gives the researcher a holistic standpoint from which to consider how the present state of realty came into being within the specific case (Creswell, 1998; Creswell 2003; Merriam 1988; Patton, 2002). When examining the conundrums of control and adaptability within loosely coupled systems, it is important to understand the organizational context where these issues exist. Case studies provide the opportunity to examine the "bounded system" (Merriam, 1988) represented by each particular case. By examining multiple case studies, comparisons can be made between cases and a broad degree of variation in controls and contexts (Merriam, 1988). Qualitative approaches, such as case studies, provide rich, thick data that can capture nuance and degree (Strauss and Corbin, 1994; Strauss and Corbin, 1998; Creswell, 1998; Creswell, 2002; Denzin and Lincoln, 2005; Patton, 2002), which is important in preserving the complexities of modern organizations and loosely coupled systems (Coutu, 2003; Weick, 1976/2000; 2001).

The unit of analysis for the present study is tightly or loosely coupled groupings of individuals that operate or support a community college blog. These individuals will include blog administrators who are responsible for the management of the blog content, blog authors who create content, and college Web managers who are responsible for managing the content of the broader college Web site. The Web managers include members from the college's information technology department and members of the marketing or public relations department. Every effort was made to include the lead administrator from these areas who has the primary responsibility for managing Web content. When this person was not available, the most senior person who is available was included.

This study drew on three types of data for its analysis. The first was interviews with participants, the second was documents that guide the use of technology on each campus, and the third was a content review of the blogs themselves for evidence of control mechanisms impacting blog content. Cases were selected based on the following four criteria. First, each case must have had at least one active blog that has been posted to within last month and been in existence for more than a year. Second, the blog must have been authored by a department or program with the goal of delivering departmental/operational information as opposed to information for a class or personal reflections. Third, size of the organization was considered. Nazzaro (1987) has noted that institutional size does have an impact on coupling. Larger organizations are more loosely coupled, have greater degrees of adaptability, and hamper innovation through administrative structures. Two larger colleges with close to 10,000 full time equivalent students were included and a contrasting case with an FTE near 5000 students was included. Finally, cases were selected based on the number of identifiable blogs. The cases that were selected had more than one identifiable blog. Once data were

collected, content analysis was used to categorize and create themes (Kaid, and Johnston Wadsworth, 1989; Krippendorff, 2004; Neuendorf; 2002).

Limitations

This study has several limitations. First, the interviews of participants necessarily report back their perceptions that may or may not represent external reality (Fontana and Frey, 2005; Merriam, 1988). Second, as a case study, this study aims for a holistic, detailed exploration with the recognition that this will not be generalizable across the entire class of community college blogs. As such, the study findings are not intended to be predictive in nature (Crewswell, 1994; Merriam, 1988: Patton, 2002). Third, the exploration of loose systems is inherently political and, therefore, will more than likely be biased by campus politics (Merriam, 1988).

Summary

This chapter has outlined the conundrum of control and the conundrum of adaptation faced by community college administrators when utilizing blog technologies and Web 2.0 technologies. As loosely coupled systems, community colleges could potentially be an effective test bed for the growth and adaptation of new technologies such as blogs. However, the organizational controls put in place to manage the ways these technologies are used can impact how they adapt and meet new needs that may arise. This multiple case study explores how specific colleges manage their blogs and how blogging departments are coupled within the organization. Chapter 2 provides a more detailed examination of the literature supporting this study's research questions.

Chapter II

LITERATURE REVIEW

In the past, there have been short forms of writing very similar to blogs, but thanks to the World Wide Web and the spread of personal computing, the rise of blogs has given individuals the ability to publish content on a world-wide basis like never before (Burnstein, 2005). The impact of blogs is still relatively short lived, but it is the loosely coupled nature of community colleges that could make them an important test bed for the use of Web 2.0 technologies. If community college administrators are to foster an organization that adapts technologies to meet changing needs, they must recognize the interrelated nature of adaptability, adaptation, organizational development, and organizational control. There is a need for a balance allowing organizations to have controls that protect the organization and guide action while creating a range of potential innovations within structures that allow bottom up and top down change. Bergquiest (1998) notes that community colleges are increasingly complex network of individuals, and it necessarily follows that managing this network will grow increasingly complex.

A Short History of Blogs

Yu (2003), the director of the National Institute for Technology and Liberal Education, recognized blogs as the "most impressive personal publishing phenomenon to date" (p.112). She noted that they are playing a role in forming communities. Others have noted that blogs are quickly replacing traditional news media and breaking the dominance of newspapers and television as primary ways we learn about our world (Blood, 2002; Levy and Stone 2006; Posner, 2006; Sifry, 2007).

Blood (2002) outlined a short history of blogs starting with creation of the first Web browser. He noted the original homepage of Mosaic, the first Web browser and precursor to Netscape, is often considered to be the first blog. This site was an ever-growing list of new sites added daily from 1993 to 1996. The original Web logs were sites chronicling the growth of the early Web. Blood (2002) credited Jorn Barger with coining the term "Weblog" in 1997, and Cameron Barrett writing the foundational article "Anatomy of a Weblog" in 1999 around which time the term started to be shortened to "blog." Around this time, Andrew Smales created Pitas and the company Pyra created Blogger, both of which were among the first free blog sites. Thus, anyone with Internet access could visit and create a blog. Blogs had made the shift from lists of links to more personal, journal-like entries. Entries had always been organized by date, and even in these early days in the blog world, communities of writers and readers formed around topics and interests. Authority was often a factor of readership, comments, references from other blogs, and overall community notoriety. Kahney (2000) also recognized the idea behind blogging to be one of the earlier forms of content on the World Wide Web.

Burstein (2005) placed blogs within a broader context by recognizing a "bloglike phenomena" throughout history from cave paintings, to Leonardo de Vinci's diaries, or to Tom Paine and his pamphlets. The online version may be new, but the act of "blogging" has long cultural roots. However, he noted the key shift to blogging on the Web was instant publication and distribution globally. Thanks to ingenious software engineers the average blogger doesn't need to have extensive technical knowledge, and there is a great potential for public conversation never seen before. Importantly, Burstein (2005) noted that for decades

we've been promised many things from the "information age" and the "knowledge society", but thanks to blogs, we may actually see some of these promises come true.

Stauffer (2002) also recognized blogs as an online version of the very traditional literary form of personal journaling extending through Tocqueville and Twain. He noted the major innovation offered by blogs to the average person interested in publishing to the Web was a level of interaction that only the largest Web sites, supported by major IT departments, could offer. He wrote,

> A weblog or blog is a website that's designed to be updated with items in a linear, time-based fashion, similar to a personal journal or diary, except that the contents are meant specifically for public consumption. Often implemented using special software, Weblogs contain articles or entries that are grouped primarily by the date and time they are posted. Weblogging--or just blogging--is the act of adding articles or updates to such a site at regular intervals (4).

While an early form of blogs have been part of the Web since the Web's inception, it was the exponential growth of blogs around the year 2004 that brought them to the attention of the general public. Lenhart, Horrigan, and Fallows (2004) and Rainie (2005), all with the Pew Internet & American Life Project, reported significant increases in reading and creation of blogs during 2004. Their survey of Internet users found 2% of users who reported creating blogs in late 2003 into early 2004. One year later this had more than doubled with 7% of users reporting they had created a blog. While this was a small minority of Internet users, David Sifry, CEO and founder of blog tracking site Technorati, reported in 2007 that

there was an average of 1.4 blogs created per second, which is around 120,000 blogs created each day.

As noted in Chapter 1, *blog* was chosen by Merriam-Webster as the 2004 word of the year, because it was the most searched word during the year (BBC News, 2004; CBS News, 2004). This may reflect the popularity and impact of blogs, but blogs can be somewhat difficult to recognize and define. Blood (2002) wrote about the difficulty of defining blogs when she said a blog is a

> webpage with new entries placed at the top, updated frequently--sometimes several times a day. Often at the side of the page is a list of links pointing to similar sites. Some sites consist only of a weblog. Others include the weblog as a part of a larger site. More than a list of links and less than a full-blown zine, weblogs are hard to describe but easy to recognize (1).

She noted the best way to define blogs was to identify the common elements between most blogs. Stauffer (2002) did just that by identifying four criteria for blogs. The first is format. The entries are chronologically organized and typically short. Software is the second criteria. Blogs typically use major blog sites or blog software, which offers some uniformity to sites including titles for each entry and XML or syndication feeds of content. Blogs are often personality driven, revolving around ideas and interests of a single person or people. Finally, the key criterion is community. Comments, responses, and links to others bring people together in virtual communities.

A common set of definitions for blogs centers on comparing blogs to personal journals. Huffaker (2004) did this by defining blogs as

> ...personal journals made up of chronological entries, not unlike a paper diary. The features of a blog include instant publishing of text or graphics to the Web without sophisticated technical knowledge, ways or people to provide comments or feedback to each blog post, the opportunity to archive past blog posts by date, and hyperlinks to other bloggers (§2).

Merriam-Webster's definition of "blog," recognized as word of the year in 2004, agrees with the comparison to online journals by defining the technology as, "a Web site that contains an online personal journal with reflections, comments, and often hyperlinks provided by the writer" (Blog, 2008). The over-simplified view of blogs as online, personal journals is very common, because so many blogs *are* personal journals. But, Kline and Burstein (2005a; 2005b), Jones (2006), Yu (2003) and Stauffer (2002) all noted that the ability to publish content directly to the Web allows for a wide range of uses ranging from organizational newsletters, classroom-centered communications, product reviews, and organizational news to just name a few possibilities.

Starting up a blog is fairly easy, which is why Stauffer (2002) referred to blogs as fulfilling the promise of the Web. Since the Web's inception, it has been promoted as "the Great Equalizer in democratic publishing, allowing everyone a forum for their ideas with a reasonably low barrier to entry" (Stauffer, 2002, p. 9). However, most corporate Web sites were very polished, while personal sites were sparse and difficult to maintain. Stauffer (2002) and Jones (2006) agree blogs have changed that to some degree. Granted, most corporate or organizational Web sites that are supported by a team of Web developers will have a degree of sparkle outside of the reach of the average personal site. None-the-less, blogs have allowed the average person to create usable and attractive sites at almost no cost.

For this reason, the blogosphere is often regarded as a powerful subset of the news media. Some forecasters believe blogs are on the verge of replacing traditional media. Levy and Stone (2006) noted the Web has replaced the phone and the newspaper for most of the "non-arthritic population" and emphasized that the real impact of blogs is that they are participatory. The participation of millions of people around the world gives the Web its power.

In July of 2007, Internet critic and author, Andrew Keen, and Internet-forecaster and author, David Weinberger, debated the challenge that blogs and other social networks were posing to traditional media. They highlight the potential advantages and potential costs. The advantages include a distributed network of individuals contributing and reporting about their local world. The costs include an erosion of traditional media where we have some degree of authority mechanisms that control access and ensure a level of quality of information. Both of these individuals identify blogs as the key technology to this participatory network. During this debate, Weinberger said,

> Consider how much more we know about the world because we have bloggers everywhere. They may not be journalists, but they are sources, and sometimes they are witnesses in the best sense. We know and understand more because of these voices than we did when we had to rely on a single professional reporting live at 7 (Full Text: Keen vs Weinberger, July 18, 2007, p. 5, paragraph 17).

Posner (2006) also casted blogs as challenging mainstream media, but he goes so far as to make the claim that blogs are actually more effective than traditional media. He even identified the mechanism that makes them more effective. He said, "the blogosphere as a

whole has a better error-correction machinery than the conventional media do" (p. 60). This machinery exists in the millions of blogs, comments, pooled ideas, and massive brain-power that the blogosphere brings to bear on a subject. If a piece of misinformation is posted to a blog, typically a comment is left, an additional blog post is created, or an email is sent. He pointed to the multitudes of communities making up the blogosphere as its most distinguishing feature. Huffaker (2004), Blood (2002), Burstein (2005), Viegas (2005), and Jones (2006) all agreed that the communities forming around blogs are the most powerful feature to this publishing medium.

Journalist and well-known blogger, Sullivan (2008), emphasized the word *log* as being at the root of *Web log*. He noted that the very nature of this technology is like a ships log where the regular updates provide the real value of the medium. It is the ongoing conversation, not the well-thought-out arguments, of blogs that make them have impact. He contrasted blogging with more established media discourses,

> No columnist or reporter or novelist will have his minute shifts or constant small contradictions exposed as mercilessly as a blogger's are. A columnist can ignore or duck a subject less noticeably than a blogger committing thoughts to pixels several times a day. A reporter can wait--must wait--until every source has confirmed. A novelist can spend months or years before committing words to the world. For bloggers, the deadline is always now. Blogging is therefore to writing what extreme sports are to athletics: more free-form, more accident-prone, less formal, more alive. It is, in many ways, writing out loud (p. 108).

Sullivan aligned the rhetoric found in blogs with the dialogs of Plato, Pascal's *Pensées*, and Montaigne's essays. All of these are historic examples of short, almost stream of consciousness pieces that have captured "the imperfection of human thought, the inconstancy of human affairs, and humbling, chastening passage of time" (p.110).

This study examines this technology that reveals the "imperfection of human thought" within the organizational context. It looks at community colleges which have broad missions with many organizational members loosely coupled together. Johnson (2002) called community colleges the "most loosely coupled of all organizations" (p. 14). As a descriptive model, loose coupling provides a lens through which to view the organization and understand how organizational members interact.

Loosely Coupled Systems

Collins (1983) traced the concept of "loose coupling" to biological evolution where it was viewed as a characteristic providing an advantage to the system by allowing change--adaptation--while allowing the system to remain stable. Gumport and Sporn (1999) situated the concept of loosely coupled systems into the larger category of Open Systems Theory. It is Weick's 1976 article from *Administrative Science Quarterly* that is most often cited as the quintessential piece on organizations as loosely coupled systems (Orton and Weick, 1990; Robson, 1998; Gumport and Sporn, 1999; Weick and Quinn, 1999; Johnson, 2002; Pajak and Green, 2003).

In his 1976 article, Weick outlined the conceptual framework for loosely coupled systems. He framed his discussion as a move against the rational theories that dominated organizational theory. These rational models had strict inputs and outputs that did not work

for many types of organizations including higher education. He noted many processes within organizations that were loosely coupled remained responsive to one another but they maintain their own identities and a degree of separation. He did delineate between loosely coupled things and loosely coupled systems. In systems, he notes that there are often many ways to reach the same end, actions can be delayed as participants wait for resources to become available, and decentralization is a core concept in the organization. These types of organizations lack the linkages between all or several units. These separations can make it difficult to impact outcomes (Weick, 1976/2000).

Naturally, Weick (1976/2000) acknowledged there are advantages and disadvantages to the system. The first of the advantages is that loosely coupled systems are insulated from the environment. Part of a system may be impacted by the outside environment but the rest of the system is not affected. A unit may respond to the environment and, therefore, act as a sensing mechanism to detect a need for change. Thus, a unit within the system may change, but will not require the entire system to change. If a breakdown in the unit occurs, then the entire system is not damaged. Additionally, loose systems may be inexpensive as resources are not spent on coordination. Loosely coupled systems can be effective if they can communicate adaptation across the system. If a unit makes a needed change, then this change can be replicated across the system. Weick (2001) reminded the reader that looseness is not necessarily uniform across the system, and this may complicate adaptation.

There are some disadvantages with loose systems. First, they can be inefficient and slow to change due to the lack of linkages between units. Weick noted an inability for individuals to truly observe change in a system since change is unpredictable. He suggested

that researchers should look at outcomes in order to determine the mechanism of coupling (Weick, 1976/2000).

In 1982(a), Weick refined the loosely coupled system concept by contrasting it with systems that are tighter in nature. He described four traits of tightly coupled systems. First, they have rules. Second, people agree on the rules. Third, there is a system of inspection to judge the fulfillment of these rules. Finally, there is feedback created to improve the process. In loose systems, one or more of these are missing. Typically, the second or third are missing. The nature of tighter systems is one of standardization and agreement. Often this is done at the expense of experimentation and variation. Looser systems, on the other hand, allow for differentiation. As Weick (1982a) wrote,

> Loosely coupled systems preserve novelty, so then they are good reservoirs of flexibility. Loosely coupled systems can also adapt to small changes in an environment, especially when that environment is diverse and segmented. Departmental units that are free to vary independently may provide a more sensitive mechanism for detecting changes in the environment, and they allow the school to adapt quickly to conflicting demands (674).

Weick (1982b) demonstrated how traditional views of change need to be altered when taken in light of loosely coupled elements. As opposed to constantly valuing inputs and outputs or working to standardize processes, he noted that leaders need to recognize when looseness or tightness is an advantage. While many traditional models of change focus on connections and support systems, there are instances where connections and support systems may actually reduce variations and, therefore, hamper change. He noted

> To understand a loosely coupled system is to understand more clearly why predictions about that system may fail. To talk about a loosely coupled system is not to talk about structural looseness, but about process looseness. The image is that of a sequence of events that unfolds unevenly, discontinuously, sporadically, or unpredictably, if it unfolds at all (Weick, 1982b, p. 381).

He challenged leaders to think of change in a new light. Change is not a neat and tidy process to be outlined and distributed to employees on a new flowchart. Change is messy, sporadic, and incremental.

As Weick (2001) wrote,

> In summary, change in loosely coupled systems is continuous rather than episodic, small scale rather than large, improvisational rather than planned, accommodative rather than constrained, and local rather than cosmopolitan. Furthermore, loosely coupled systems may store innovations that are not presently useful. Change diffuses slowly, if at all, through such systems, which means that components either invent their own solutions--which may be inefficient compared with other solutions available in the system--or they die. To construct a loosely coupled system is to design a system that updates itself and may never need the formal change interventions that sometimes are necessary to alter the hard-wired routines in tightly coupled systems (p. 391).

Weick (1982b) also noted that loose systems teach us about how the structure of organizations may impact tightness and looseness. For instance, he says that it is often assumed that specialization of units means that units will be more tightly coupled, since units

must rely upon each other. However, specialization often means units start to become self-contained over time by adding functions previously carried out by other units. Additionally, he noted that when studying an organization, one must be sure the levels of analysis are the same. When different levels in a hierarchy are examined, then an organization may appear looser than it actually is.

Weick (1982b) highlighted the most important issue when considering the impact of the structure of the organization. That is the balance needed to preserve novelty while still maintaining the ability to communicate innovation. As Weick (1982b) wrote,

> Flexibility is required to modify current practices so that nontransient changes in the environment can be adapted to. This means that the organization must detect changes and retain a sufficient pool of novel responses to accommodate to these changes. But total flexibility makes it impossible for the organization to retain a sense of identity and continuity. Any social unit is defined in part by its history, by what it has done repeatedly, and chosen repeatedly. Stability also provides an economical means to handle new contingencies; there are regularities that an organization can exploit if it has a memory and the capacity for repetition. But total adherence to past wisdom would be as disruptive as total flexibility because more economical ways of responding would never be discovered and new environmental features would seldom be noticed (p. 386-387).

In Chapter 1, this was referred to as the conundrum of adaptability. This is the need to balance flexibility and stability. Weick (1982b) noted that loose coupling makes adaptability

possible, but tight coupling increases the efficiency of adaptation. Loose coupling allows for testing while the rest of organization is sealed off.

Weick (1982a; 1982b) noted the socialization of individuals into the system as very important, because people assume or hold certain assumptions about organizational operations. Most of the time, they are not in a position to see cause and effect. For this reason, doubt in a process can bring change to a halt. This undermines assumptions. Top managers can direct change by influencing assumptions and by setting premises by which to act. They can do this partly by impacting socialization process. Change in a loose system is to "resocialize people away from provincial views" (397) to broader views. A shift in context can help recognize needed changes and new responses to the environment. Centrally driven change often does not reach units because socialization insulates individuals. He also discussed the ways particular units may buffer other units. One unit may lessen the variability between other units. Thus, two units that are connected by a third may lose a richness in variability due to the middle unit.

In his 2001 book, *Making Sense of the Organization*, Weick took us deeper into the loosely coupled system idea. For Weick, this concept really emerges from his understanding of organizations as "collections of people trying to make sense of what is happening around them" (5). Organizations come into being around individual actions made at the local level within the organization.

> The picture of an organization that emerges from these ideas is that of a stream of problems, solutions, and people tied together by choices. What happens over time is that choices mobilize reasons and justifications, which people then use to make

> elements in the stream more orderly. Organizing starts with a set of choices and streams. When the streams converge, people pay attention and construct explanations for the convergence" (Weik, 2001, p. 28).

Again, this is a move away from rational systems toward more open systems. In rational systems, there is an assumption made that with proper data and evaluation, the correct decision will be made. Open systems, on the other hand, emphasize complexity. Their key feature is the loose coupling of units and individuals. The parts of the system are fairly independent where "normal" operations means that relationships are poorly defined. He emphasizes that this lack of definition does not mean structural looseness, as structures and hierarchies may exist. This lack of definition focuses on a looseness of process. Here processes between units are redefined as needed, created to meet changing needs. Loosely coupled systems are often criticized for being inefficient, but this is really the wrong measure to use against them. The measure that should be applied is a measure of adaptability and flexibility (Weick, 2001). They, often, have a high degree of improvisation and self-design. Their looseness gives them an ability to adapt. However, there is a paradox in that present adaptation that requires a tightening of the system often prevents future adaptability, which thrives in a looser environment. At times, it can be difficult to diffuse changes and adaptations across loose systems. Unlike a rational system, change is not viewed as a measured process with strict inputs and outputs.

Weik (2001) put forth several properties of loose systems that must be addressed if change is to occur. First, since people cannot always see cause and effect in these systems, they often assume a certain logic held within the system. People use this understanding to infer cause and effect and create understanding around actions. In order for change to occur,

these assumptions may have to be broken down. Second, members of loose systems are socialized around a set premises defined by top management. There are formal and information socialization processes that take place. In order for change to happen, there may be a resocialization process that must take place. Third, people participate at varying levels within the system. This occurs for a range of reasons, but in order for changes to move forward, there may be a need to alter patterns of participation. Individuals who may have answers or who may play key roles must be brought into the process and grow more sophisticated connections across the organization. Fourth, some units within the organization connect other units. These units in the middle buffer the interactions that occur. Thus, if the middle unit restricts interactions and removes variability then the outer units will have less meaningful interactions. In order for change to occur, the units that pull together various pieces of the organization must increase variability and enrich interactions between units. Finally, feedback loops are often seen as suspect in loose systems. There is a difficulty in interpreting feedback since it is not always clear how feedback should be used. In order to make change happen, feedback must be addressed. Feedback should not be seen in the mechanistic ways often seen in other systems.

While Weick's writings on loosely coupled system are at the heart of the current study, these writings are a part of a broader body of work conducted by Karl Weick the larger theme of which deserves note. This theme is that too often organizational theoreticians and practitioners over-simplify organizations and actively work to reduce variation and complexity. Weick himself said, "My worry when executives say, 'keep it simple, stupid,' is that they're underestimating the complexity of their own organizations and environments" (Coutu, 2003, p. 86).

In terms of leaders, he encouraged them to be good listeners to really understand the thought processes within the organization in order to understand meaning, but also to be free to introduce randomness or even playfulness in order to enrich discussions and increase variation (Weick, 1974; Weick, 1977b; Weick, 1978). In terms of planning, he saw plans as tools to direct attention and create action, but he emphasized that plans must grow, evolve, and be completely discarded. The need to be creative, innovative, and adaptable greatly outweighs the need to stick to a plan created prior to action and prior to any new knowledge generated by action (Weick, 1977a; Weick, 1977b; Weick, 1987; Gioia, 2006). Weick does not really separate the organization from the individuals that make it up. In fact, he emphasized that organizations do not really exist at all. He also did not separate individuals from the actions they take. As he wrote,

> The word, organization, is a noun, and it is also a myth. If one looks for an organization, one will not find it. What will be found is that there are events, linked together, that transpire with concrete walls and these sequences, their pathways, their timing, are the forms we erroneously make into substances when we talk about an organization (Weick, 1974, p. 358).

His view of organizations and individual actions underlie his emphasis on complexity and help to provide a deeper understanding of Weick's approach to loosely coupled systems. Loose systems are designed to take advantage of the complexity within organizations. They use complexity to react, adapt, and grow (Bakken and Hernes, 2006).

Rubin (1979) studied whether "structural aspects of organizations increase their ability to adapt when resource levels decline" (p. 211). She noted that adaptability requires

interpreting the environment, defining long and short term change, responding to long term threats while resisting short term pressures, strengthening units to be successful in the new environment, and monitoring changes to alter behavior as needed. She defined three aspects to looseness: horizontal, across units; vertical, from top to bottom; and a feedback loop to the environment. Her study was of five universities conducting interviews and document reviews. She found when resources were reduced looseness allowed some units to shrink without hurting the whole organization. Conversely, looseness also preserved some units that should have been eliminated. In these cases, the vertical power was too weak to fully eliminate these extraneous units. Most of the time horizontal units didn't support each other unless there was self-interest or if criteria to eliminate other units became threatening. Then horizontal units banded together. Vertical looseness buffered the units from short term pressures, but it limited the ability to communicate changes. She noted that feedback loops had little impact on activity and buffered against good and bad change. Her findings did not indicate benefit from of loose structures. The degree to which coupling between horizontal units allowed the transfer of innovations or influence over operations, depended on the looseness or tightness in the vertical direction. Tighter connections from higher levels of the organizational chart tended to lessen the influence of horizontally coupled units to each other. She also found loose feedback loops increased vertical looseness.

Collins (1983) also looked at whether loose coupling "has power to explain the process of structural change in the American college/university" (p. 1). She studied the addition of "academic computer centers" that were put in place prior to the year 1980. These centers gave faculty and students services relating to computer technologies. She noted that these centers respond to faculty needs, but they do not conduct mutual planning. The

academic departments were generally more loosely coupled, and they had more authority. Technology directors had to respond to faculty needs. The budgets of the computer centers were stable and fairly independent of the amount of services provided. No formal patterns of communication were put in place between the centers and faculty. While the centers are more tightly coupled vertically through staff reviews and budgets, they were fairly loosely coupled horizontally. Across institution types, the addition of technology-based units were added in a loose fashion. They were brought on as additions without disrupting functioning units. Over time the technology units become more tightly coupled. In instances where advisory committees or more formal patterns of communication were put in place, coupling grew tighter.

With this study, Collins (1983) added to the conceptualization of loosely coupled systems by studying *how* units were coupled. She looked at the horizontal couplings (across departments) and vertical couplings (up and down the administrative hierarchy) dimensions. Horizontal couplings include functional or task performance relationships, financial relationships, and communication patters. Vertical couplings include budgetary dictates, personnel utilization, formal authorization, and location within the hierarchy. Structurally, the horizontal couplings can be viewed more as divisions of labor, while the vertical couplings are hierarchical in nature.

Horne (1992) noted that one of the reasons that many innovations fail in educational settings is because so many innovations are initiated at the top of the organizational hierarchy, they do not match the local needs of frontline staff members, and they essentially dump resources into areas that distract from the true needs of the organization. Horne (1992) makes the important point that innovations in loose systems that challenge organizational

culture can be very slow and painful. All innovations exact a price on the loose system. The decision leaders must make is whether or not the price is worth it.

Gamoran and Dreeben (1986) looked at loose coupling in the K12 setting. Their primary finding was that administrators in K12 systems impact teaching and learning via resource allocation. They also emphasized two limitations cited by Weick: 1) not all connections are loose, 2) this framework does not identify mechanisms that hold systems together. They show that there are ties between pieces of the system and these ties can be tighter and weaker depending on situation.

> It appears to us that coupling in educational organizations is accomplished through the coordination of work, after all. Despite the attenuation of bureaucratic authority, administrators influence technical work by regulating the flow of resources to classrooms on a system-wide basis. We do not dispute the role of administrators in coordinating values and symbols and agree that this contributes to the integration of educational organizations. But to view school systems as organizations in which integration of purpose is not achieved through the coordination of technical activity is to miss important internal linkages that enable teachers to accomplish their tasks (Gamoran and Dreeben , 1986, p. 629).

Their findings support the view of change that Glathorm (1981) emphasized in loose systems. This is that change in loose systems is most effective when it is bottom up, because of the loose ties that administrators have over the system prevent or hamper top-down innovation.

Birnbaum (1989) described the community college as the "bureaucratic institution," where lines of authority are mapped on an organizational chart, subgroups work in isolation, and means are matched to ends. He saw the units within the organization as being loosely coupled, which makes them able to react to their environments, but also means that the system has certain costs in terms of loss of efficiency. He noted that cause and effects are not linear in these systems. It can be difficult to recognize change as it may be delayed or appear in unexpected places. He noted that colleges should not attempt to act rationally, but should set up self-adjusting systems that test options and choose the most effective option. Administrators should seek to keep the system in balance intervening to ensure that information is shared across the system and that necessary structures function. Birnbaum's (1989) description of community colleges emphasizes that they are not pure organized anarchies due to the administrative bureaucracy within community colleges. This is why the loosely coupled system model is a better fit as a descriptive model for community colleges.

Mars and Ginter (2007) looked at community colleges as loosely coupled systems. They studied instructional technology at three community colleges and examined how environments impacted the valuation of instructional technology. They noted that technology can alter structures and approaches that have helped to form the organization over time. This can cause tension and pressure. They found a lack of research on organizational elements and faculty adoption of technology. They used a flexible, multiple case design utilizing interviews and document analysis. They interviewed 16 faculty members at three urban campuses. They found a disconnect between the promises made about technology in documents and the views faculty members held. They noted that faculty members pushed technology into the curriculum and that the departmental environments were loosely tied to

the organization. These environments created the backdrop for technology use. They reported cases where work groups materialized at lower levels independently from initiatives from above. They found tighter coupling occurred in situations where policy structures created consistent views of the environment. An example of such a structure was a cross-curricular committee with a strong central control. They found that environments were very influential in how technology was implemented and that looser systems provided less consistent and more "sporadic" patterns of instructional technology use. They call for an environment that is tightly coupled around initiatives for technology.

Robson (1998) conducted a comparative case study of two community colleges, one in Canada and one in Australia, consisting of 40 interviews. His study was a big picture view of major restructuring within the organization. He noted that when considering change at community colleges one must consider "cores and crusts." Innovations do not travel through the entire organization. Innovations may hit the crust, outer or new processes. But, they rarely penetrate to the core of the organization, which is older and more stable. He found that Weick's model of loose systems enabled the researchers to better understand community colleges as systems. As he wrote,

> Weick's frequently cited article (from 1976) argued that people tend to over rationalize their activities and to attribute greater meaning, predictability, and coupling among them than in fact they have. As a counterbalance to prevailing theories or rational action, loose coupling provides a way of understanding the prevalence of non-rational behavior in educational institutions (Robson, 1998, p 26).

Johnson (2002) conducted a naturalistic case study of strategic planning efforts. He called community colleges the "most loosely coupled of all organizations" (p. 14) due to their open access and entrepreneurial approach. His findings emphasized the role organizational politics plays in the planning process. These political realities undercut the rational approaches to planning that are attempted. He found that rational planning does exist, but that another type of planning exists. This type of planning is "entrepreneurial" and "emergent" in nature. It is this unseen planning that plays a role in the loose coupling of community colleges. He noted that at the unit level, each unit will

> ...have its own strategic agenda. These agendas will have been formulated through negotiations, positioning, bargaining, and analysis of past practice between management, staff, faculty, and external parties over time and in light of the external mandates that apply directly to each area and its own set of internal needs (Johnson, 2002, p. 140).

In 1990, Orton and Weick published a review of the literature on loosely coupled systems in which they criticized some of the ways the concept had been used and evolved up to that point. They noted that the concept had the problem of attractiveness without a strict definition to guide its use. It is a flexible model that can be used to describe closed systems that are stable and also open systems that interact with their environment. It is this flexibility that allows it to be useful and to survive. In their "dialectical" view of loosely coupled systems, they used internal distinctiveness, or specialization, and the idea of responsiveness to the environment as concepts that help to define loosely coupled systems.

> If there is neither responsiveness nor distinctiveness, the system is not really a system, and it can be defined as a noncoupled system. If there is responsiveness without distinctiveness, the system is tightly coupled. If there is distinctiveness without responsiveness, the system is decoupled. If there is both distinctiveness and responsiveness, the system is loosely coupled (Orton and Weick, 1990, p. 205).

Orton and Weick (1990) saw this dialectical view as a more accurate use of loosely coupled systems as a descriptive model. Researchers should avoid a one dimensional view of loosely and tightly coupled systems that place these two ideas on opposite ends of a single spectrum. An organization can be loosely coupled or tightly coupled in many different ways.

Orton and Weick (1990) defined five different lenses that have been developed in the literature through which we can view an organization in terms of tight and loose coupling. Each of these lenses can be applied in a dialectical way or in a unideminsional way. First, there is the lens of causation. This looks at what causes loose coupling. Generally, these causes come from not connecting processes to outcomes, from a fragmented external environment, or from a fragmented internal environment. Second, there is the lens of typology. This lens does not concern itself necessarily with causes, but, instead, it looks at how different aspects of an organization are coupled. Coupling can be examined between people, between subunits, among organizations, and between many other levels and ideas. This approaches the dialectical view when it describes actions, as opposed to large systems that are static.

The third lens is the direct effects of loose coupling, which places this more along the lines of a management strategy. Loose coupling is useful because of the effect it has. This

view examines how units, individuals or other participants act autonomously, create variety in reaction to the outside, or reduce unneeded relationships within the organization. Orton and Weick (1990) noted that this lens is "a counterrational concept" (211) that takes a step outside of the traditional input/output view of organizations. The fourth lens looks at compensations. That is, it tries to reverse loose coupling by giving managers tools to tighten and influence a system. This approach focuses on leaders' attentiveness to processes and manipulation of values. The fifth lens looks at organizational outcomes with the goal of measuring outcomes. This line of research looks at resistance to change, buffering within the system, adaptability, and effectiveness. They noted that one of the failings of all of the literature on organizational theory is that too often researchers and writers see the organization from a flat, unidementional level. The organizations become "monolithic corporate actors" where order is overemphasized. Loose coupling, as a model, provides a richer framework through which to view organizations.

Lutz (1982) criticized the loosely coupled system conceptual model as unpredictable and, therefore, not useful as a model. He suggested that higher education organizations are not actually loosely coupled, but that they are often inflexible and very bureaucratic. He said these organizations accomplish many tasks that are tightly coupled, but when challenges arise, the organization becomes uncoupled to protect the status quo. He claimed tight coupling would be a better way to reach organizational goals, since loose coupling prevents change. Lutz (1983) wrote,

> I think that when an organization appears to operate largely in ways that can be described as loosely coupled or garbage-can organized, that organization is likely to be dysfunctional in such important aspects of an organization as priority setting,

> communication, control, evaluation, and goal accomplishment. The model is not dysfunctional; the organization is dysfunctional. The model's application is dysfunctional as it permits the administration to excuse the organization's dysfunction (p. 297).

Pajak and Green (2003) largely agreed with the critique offered by Lutz (1982, 1983). Pajak and Green (2003) pointed out some of the problems loose coupling creates in schools. They claimed that loose coupling masks the failures of schools, and it is not useful as a model because it does not allow leaders to predict outcomes. Contrary to the views of most of the individuals who write about loose systems, Pajak and Green (2003) saw the loose coupling as stopping innovation and preventing responses to situations. Fusarelli (2002) noted that the problem with coupling as a model to explain organizations is that it explains why things fail but does not explain how couplings change.

Meyer (2002), Boyd and Crowson (2002), and Fesarelli (2002) all noted that the loosely coupled system model for education arose in response to the hierarchical and somewhat authoritarian management models that dominated in the early to mid 1970s. Loose models that came to dominate the discussion in the 1980s emphasized how educational organizations were different than corporate organizations. By the late 1990s, the push for accountability had started to re-instate models similar to the top-down view of the past. Meyer (2002), Boyd and Crowson (2002), and Fesarelli (2002) also agreed that organizations in higher education need to strike a balance between top-down control and bottom-up looseness. They recognized that tightness occurs in some situations and looseness in others. As Meyer (2002) wrote,

> As educational organizations become more central to knowledge-dependent societies, they need to make quantum leaps in their ability to learn and change. Having until recently been notorious for their resistance to change, they are now expected to confront change strategically and pro-actively. In their new role in the knowledge society, schools and universities need to learn how to change from within, rather than to wait for coercion from without. And they need to learn how to change continuously, as opposed to fall back into the cycle of long periods of stability punctuated by short bursts of crisis and change (p. 518).

Adaptability, Adaptation, Development, and Control

Meyer's (2002) declaration that higher education organizations need to change from within as they becomes more central to the knowledge society emphasized the need to understand the interplay between adaptability, adaptation, and development. This is especially true for organizations as complex as community colleges where change across the institution can be difficult to perceive by individuals at different levels in the organization and across units in the organization (Eddy, 2003; Van Wagoner, 2004).

Weick and Quinn (1999) presented a valuable literature review and discussion of change research. They draw a contrast between change as "episodic, discontinuous, and intermittent" and "continuous, evolving, and incremental." They traced the roots of change research to Lewin's 1951 work that proposed the basic "unfreeze, change, and refreeze" (Weick and Quinn, 1999, p. 362) model that has been retold in countless variations over the decades since its creation. These many approaches that include systems thinking, radical change, discussions about resistance to change, and other approaches all have a commonality

which is that some sort of constant view of the organization is held up in contrast to another constant view of the organization. They commented on this approach,

> The continuing centrality of these established ideas may suggest a certain torpor in the intellectual life of scholars of change. We think, instead, that this centrality attests to the difficulty of finding patterns when difference is the object of study (Weick and Quinn, p. 363).

Episodic change is the key example of this traditional view. "The presumption is that episodic change occurs during periods of divergence when organizations are moving away from their equilibrium conditions" (Weick and Quinn, p. 365). This is seen as short term, wide in scope, and purposeful with the change agent as a key figure.

Yet, views of continuous change are not always quite accurate either. "The distinctive quality of continuous change is the idea that small continuous adjustments, created simultaneously across units, can cumulate and create substantial change" (Weick and Quinn, p. 375). These views often assume tight coupling when small changes are directed and controlled across the organization. They noted that their needs to be a shift in perspective from change to changing.

> A concern with "changing" means greater appreciation that change is never off, that its claims of causality are longer and less determinant than we anticipated, and that whether one's viewpoint is global or local makes a difference in the rate of change that will be observed, the inertias that will be discovered, and the size of accomplishment that will have been celebrated (Weick and Quinn, p. 382).

Changing involves inertia that is ongoing and nonlinear. This inertia represents adaptability or the potential for adaptation within the organization. The richer the environment that greater the ability to adapt. Encouraging adaptability—the potential to adapt—allows organizations to respond to the environment (Cameron, 2000; Weick, 1976/2000).

The literature indicates that different facets of the organizational environments are better at supporting this momentum and allowing it to gain speed than others. As was mentioned above, the first of these are the looseness of the system at a structural level. The looser the system the greater the ability the system has to adapt to the environment, seek innovations, and make change. This looseness can exist on the horizontal level between units where one unit is buffered from another unit. This frees one unit to act independently to solve problems while preventing failed innovations from impacting other units. Looseness can also exist on the vertical level, which would free a unit from micromanagement from above. Looseness can also exist at the individual level, where individuals are empowered to solve problems and act on their own (Duncan, 1976; Rubin, 1979; Weick, 1982a; Weick, 1982b; Collins, 1983; Weick, 1976/2000; Cameron, 2000; Weick, 2001).

Beyond this structural factor, adaptability is also increased when individuals can freely create new ideas. When people come together to share and have rich discussions, new ideas are proposed and mental experiments are shared between the group. Rich discussions can be inefficient at solving problems, but, none-the-less, organizations must work to generate the raw materials used to adapt. The raw material comes in the form of information and ideas about next steps to take (Weick 1977a).

Additionally, organizations increase adaptability when they increase playfulness. This reduces consequences for failure which encourages new ways of thinking that increase variability and options for change. By supporting playfulness, people approach problems from a new perspective. At times, individuals need to forget the institutional memory that reminds them of past failures or ineffective plans. Memory can reduce variability and limit options (Weick, 1977b).

Routine is another enemy of adaptability. Routine procedures are often tightly coupled, lacking variation. Individuals move through the same actions, expecting the same results, and ignoring environmental factors that may indicate opportunities for change. The further into the routine a process moves, the less feedback that will exist. Thus, recursive processes often have to play out once they begin. They are unresponsive as individuals do not have an expectation for change and, therefore, do not recognize situations where change may occur (Weick, 1974). Conversely, randomness is a friend to adaptability because randomness breaks routines. Trying something new or simply altering existing processes provides information and perspective on routine processes and actions (1977b).

But, as one discusses adaptability, one should not lose sight of the fact that to talk about *adaptability* as if it is really independent from adaptation is to talk about an academic abstraction. Adaptability is the potential for change or a set of circumstances within the organization creating a degree of variation between individuals or units. "Adaptability" in and of itself does not really exist, because it cannot be observed outside of actual adaptation. The observer can only see adaptability as a shadow of adaptation. If there is a rich pool of options individuals can use to solve problems or if individuals are free to experiment and seek out solutions, then one can say a high degree of adaptability exists as compared to other

alternatives. But this degree of adaptability cannot be viewed unless the adaptation has already happened.

The focus on increasing adaptability, which is a central advantage of loosely coupled systems, encourages a rethinking of how change occurs within organizations. The traditional view of change is of the "freezing, unfreezing" process, where a manager halts activity, makes changes, and then sets the organization moving forward again (Lewin, 1951; Hage and Aiken, 1970; Schein, 1992). The focus on adaptability demonstrates that the change process is often messy, erratic, and clumsy. It happens in small increments without a clear plan (Weick, 1977b; Goodstein and Burke, 1991; Weick and Quinn, 1999; Weick, 2001; Smart, Kuh, and Tierney, 2006;).

Cameron (2000) noted that organizational adaptation is the ongoing adjustments organizations make in order to meet the changing expectations of the external environment. She sees this as maintaining a sort of equilibrium against imbalances caused by external forces. Yet, the real interest is not to just see isolated pockets of adaptation within the organization, but that individual adaptations occur and that the successful and effective adaptations are shared and spread across the organization.

Kanter, Stein, and Jick (1992) called adaptation "grassroots innovations" (497). They saw this as a way to build capacity, and they acknowledge loose couplings as a source of this variation.

> Departures from tradition provide the organization with a portfolio of grassroots innovations--a foundation in experience that can be used to solve new problems as they arise or to replace existing methods with more productive ones. This foundation

> in experience also suggests the possibility of a new strategy, one that could not be developed as easily without the existence of those experiences (Kanter,Stein, and Jick, p. 498).

Weick (2001) stated that adaptations more easily spread across tightly coupled systems where there are fewer barriers to communication. Loose systems do not diffuse information very easily, so there is the possibility in loose systems that an innovation may have been put in place in one unit but other units that might benefit from this change may not be aware of it. Pajak and Green (2003) went so far as to say that loose coupling stops innovation and prevents responsiveness to situations. Rubin (1979) noted that the influence that horizontal and vertical couplings have over the spread of innovations is complex. Tighter vertical couplings tend to override horizontal couplings. Morrison (2002) noted that shocks in the system can force adaptation to take place. Shocks or threats such as budget reductions or competition are ways to break routine and increase action. Senge (2000) saw learning as a central piece to adaptation, but the individual does not learn without actually acting and observing the consequences.

Rogers (1995) noted that the diffusion of information about an innovation does not take on a linear pattern. This is a give and take between individuals within the organization as they debate alternatives. He defined four main factors in the diffusion of innovations. First, the characteristics of the innovation itself play an obviously important role. It must provide some sort of advantage, be somewhat compatible with existing operations and structures, and be tested and trialed. Second, communication channels within the organization must allow for knowledge about the innovation to spread and be understood. Third, time is a critical factor in the diffusion. Innovations must be viewed on a time scale.

The curve of diffusion is typically an "s" with a few early adopters trying the innovation at the early flat part of the curve, a large majority of individuals accepting the change at the steeper center of the curve, and a few late-adopters utilizing it at the flattening end. Fourth, the innovation necessarily moves across the social system of the organization, so the makeup of that system, especially organizational culture, comes into play.

Rogers (1995) emphasized that within diffusion and the information-decision process "re-invention" will occur. This is the degree that the innovation is changed. He examined this,

> Some innovations are difficult or impossible to re-invent; for example, hybrid seed corn does not allow a farmer much freedom to re-invent, as the hybrid vigor is generally locked into the seed for the first generation in ways that too complicated for a farmer to change. Certain other innovations are more flexible in nature, and they are re-invented by many adopters who implement them in a wide variety of different ways. An innovation is not necessarily invariant during the process of its diffusion. And adopting an innovation is not necessarily the passive role of just implementing a standard template of the new idea (Rogers, 1995, p. 17).

Services—and this research will view blogs as services provided by organizations to their employees to enable them to fulfill their job responsibilities—cannot always be generically adapted to the meet the multitude of uses their utilizers may need. Organizations can either adapt their services to meet the variable needs and expectations of users, or they can standardize services, force users to adjust expectations, and reach out to the most general

target preference (Frei, 2006). The reduction of variability through standardization hampers future adaptability and re-invention that may exist.

Rogers (1995) went on to define three types of knowledge about innovations. First, there is "awareness-knowledge" that is the individual knows the innovation exists and recognizes the benefits. Second, there is "how-to knowledge" that is the technical knowledge required to make the innovation happen. Finally, there is the "principles knowledge" that is the recognition of the underlying principles of the innovation. This is theoretical knowledge and ensures that the innovation is not misused over time. Often, evaluation information is gained from peers. There are often "innovation champions" who communicate knowledge and defend the innovation within the organization. This person may or may not be someone with managerial authority. They are often risk takers.

Roger's discussion of the mechanics behind the diffusion of innovations made it apparent why loose systems can hamper the spread of innovations, since the ability to spread information about the innovation is central to the adoption of the innovation. In loose systems that lack connections, the ability to spread information is lessened. The paradox is that the spread of adaptation is increased in tighter systems, while adaptability thrives in looser systems (Blau, 1973; Mitzenburg, 2000). Cameron (2000) saw this as the paradox of the post industrial organization. She noted that structurally, organizations must remain loose, but in terms of communications they must be tight. She stated,

> ...managers and administrators in institutions in a postindustrial environment will be exposed to a greater number of environmental elements (i.e. time and distance buffers will be greatly reduced by communication and transportation technologies, and more

> elements in the environment will be directly relevant). This abundance of environmental elements will force a greater degree of specialization of managers and administrators since overload could quickly occur otherwise. Increased specialization will, in turn, lead to the even great interdependence among managers and institutions. Although institutions will have to be more loosely coupled in structure to cope with this environmental complexity, they will also need to become more tightly coupled in their information exchange (Cameron, 2000, p. 280).

Duncan (1976), using a more traditional "unfreezing" view of organizational change, suggested actually shifting from a looser to a tighter structure to encourage adaptation. While this may not be practically possible in many circumstances, this does support Weick's (1982b) point that the underlying need for managers is to recognize when looseness and tightness are advantages and disadvantages and act accordingly. This may mean that when a manager recognizes a local adaptation, he or she may act to encourage and support the sharing of that innovation. It may also mean that mangers encourage looseness during instances when new ideas are needed.

Even in loose systems, there are times when organizational leaders must direct change using a more centralized approach. Cameron (2000) used the term organizational development to refer to planned, centralized change, and she observed that like organizational adaptation, organizational development is more efficient in tighter systems that provide more top down control and stronger lines of communication between units. The planning and goal setting that are central to organizational development have become standard operating procedure for higher education.

Chaffe (1985) discussed how quickly higher education absorbed strategic planning as an important practice in institutional operations and management. Gumport and Sporn (1999) noted that administrators are increasingly expected to coordinate and bring about innovation and are often seen as the gatekeepers between the organization and external agencies and leaders. Gumport and Sporn (1999) outlined some of the key environmental factors that are pressuring higher education. These include economic, political, technological, costs, quality, accountability, and access. Birnbaum (2000) explored a number of management fads that have moved from the corporate sector into higher education including Planning Programming Budgeting Systems, Business Process Reengineering, and Total Quality Management.

Regardless of the management fad *de jure*, there are many instances where wide-spread innovation cannot be successful through local, small scale adaption. Most notably, innovations requiring significant budgetary resources may require planning over several years. This is especially true for the purchase of items that are larger than the budgets of any particular unit. Additionally, innovations and change requiring coordination between units may need a stronger, central authority to ensure changes are implemented smoothly (Gamoran, and Dreeben, 1986; Nazzaro, 1987; Baldridge, et. al., 2000).

While adaptation and development are set in contrast to each for the sake of exploring how innovations occur, it is often difficult to pull these concepts apart in practice. Many organizational leaders see an advantage in comingling the these concepts. As Varella and Jagdev (2008), observed,

> This expanded view of business strategy acknowledges that many of the realized organizational strategies follow an emergent process so that the strategic management process originates from within the ranks of the organization. This perspective requires a shift in thinking toward the viewpoint that goes beyond a top management strategic planning approach. Instead, all decision makers within the firm become strategic definers who incorporate strategic thinking in their everyday decisions (p. 300).

DiBella (1992) found that implementing planned change can be difficult. One cannot guarantee that a shared vision of the outcome of that change will occur. He found that the more "uncoupled" the structure of the organization, the more likely it would be that "an emergent structure that is divergent from the aim of the planned change" (p. 63) may occur. He also noted that there may be differences between perceived direction given by leaders and the actual directions. Directions may even be seen as coercive, when they were not intended to be so. Pope et. al. (2006) found that uncertainty between levels of an organization can be detrimental to change. Communication between levels and differing views of the organization between individuals at different levels impact the way messages are received and implemented.

Weick (1987) gave importance to planning, but not the type of importance that are traditionally given to plans.

> Strategic plans are a lot like maps. They animate people and they orient people. Once people begin to act, they generate tangible outcomes in some context, and this helps them discover what is occurring, what needs to be explained, and what should

> be done next. Managers keep forgetting that it is what they do, not what they plan, that explains their success. They keep giving credit to the wrong thing--namely, the plan--and having made the error, they then spend more time planning and less time acting. They are astonished when more planning improves nothing (Weick, 1987, p. 222).

Weick (1987) saw planning as providing a path to action. Action creates the inertia that brings about results. Strategic planning is one way to get people moving. He called for a need of "just-in-time strategy" (p. 229), which is somewhat improvisational and less front-end in terms of planning.

However, encouraging action through planning is only one piece in the puzzle. Organizational leaders must also ensure that actions move toward organizational goals. Blau (1973) recognized a long-standing tension in the academic arena in this regard. This is the tension that exists between the bureaucratic authority that is vested upon the administration of the college and the professional authority that is vested in the expertise and knowledge of the faculty and professionals on campus. He recognized that some systems such as financial systems are highly centralized and, arguably, tightly coupled, while other systems, generally curricular in focus, less centralized and, therefore, loosely coupled. He noted a central irony to higher education which is that it tries to foster creativity while building bureaucratic processes that hamper creativity.

Mintzberg (2000) also recognized this inherent tension within the higher education system. He describes a dual hierarchies with one that is top-down, administration and one that is bottom-up, professional. He noted that professionals serve toward the boundaries,

setting goals and defining priorities for themselves. They also have a voice in the administration and enact change. The structure "relies on mutual adjustment for coordination" (p.56). In this setting, innovation requires cooperation, and, when disagreement is present, change can be difficult. Change that requires the cooperation between units that are horizontally coupled can be especially difficult when disagreements arise.

Etzioni (2000) emphasized that knowledge and creativity in higher education organizations rest at the individual level. Unlike other organizations where actions may be closely proscribed and outlined, actions in the classroom, in the laboratory, or even in the library are largely situational depending on the unique needs that might arise. Knowledge and creativity are monitored after the fact, while organizations seek to control and coordinate between individuals and units ahead of time.

Baldridge (2000) outlined more complex ways to view the internal operations of higher education institutions. He outlined four key factors that impact higher education and separate it to some degree from business or corporate structures. The first is goal ambiguity. Academic institutions have many goals within the organization, and the goals they share in common, such as student learning, are so broad that they almost lose meaning to specific units. The second is a strong client service, so strong, in fact, that the clients (students) have a very strong voice in the process. The next is professionalism. The product created by academic organizations are the credentials given to students which represent new knowledge and skill development. In organizations that create knowledge, the expertise and knowledge that professionals within the organization hold must be granted some autonomy and respect. This autonomy creates divided loyalties between the needs of the larger institution, the needs

of smaller departments and divisions, and the needs of the profession. The final factor is environmental vulnerability. Academic institutions are tied closely to environmental pressures in terms of student needs as they enter schools, pressures from the job market and employers, and funding pressures from state and national levels.

Birnbaum (2000) also noted this tension and that the complex relationships between individuals and units at the various levels of higher education organizations make the management of these systems difficult. He noted that there is no single system that provides mechanisms to perfectly control that many moving parts within higher education.

> A perfect institutional management system would have mechanisms to ensure that institutions were operating legally, efficiently, and effectively. The perfect system would satisfy the interests of managers, those to whom the managers were responsible, and those who were subject to the system itself. Some of the many systems that have been developed in higher education have met some of these criteria. Some have met none. No system has met--or can meet--all, in part because the demands of legality, efficiency, and effectiveness may be mutually inconsistent and in part because the interests of the various groups participating in institutional management are often in conflict. Different systems serve different purposes. The acceptance of a specific management system is as much a political judgment about whose interested are to be served as it is a technical decision (Birnbaum, 2000, p. 29).

Ouchi (1978) noted that the study of control in educational organizations is important, because if an organization cannot transmit policy, "then they are incapable of organized

action" (p. 264). He saw higher education organizations as "nested" units within larger units. Individuals are often more closely tied to their units than to the larger organization. He sought to understand the necessary balance in terms of control. This balance must allow for local operation and variation, while still transmitting the necessary control. He cast control as a matter of "monitoring, evaluating, and providing feedback" (p. 266). Ouchi (1978) reduced control down to two types. The first was behavior control which dictates how people act. The second was output control, which dictates result levels. Controlling behavior is often the preferred option, but this is not always possible or practical. Output control is often more measurable and less variable than behavior.

Naturally, the ways controls are put in place are directly impacted by the interests within the organization. These interests include faculty organizations such as academic senates or collective bargaining units, departments within the faculty or student services, administrative interests at differing levels within the organization, governing bodies such as boards of trustees or representatives of the Chancellor, and various groups within the local environment such as business groups (Read, 2000; Johnson, 2002; Meyer, 2002; Garfield, 2008; Potter and Phelan, 2008).

One of the few means to control behavior is through organizational culture. Peterson and Spencer (2000) discussed how culture is a major factor in effectiveness as it is the primary means of interpreting actions and making meaning. Culture helps to socialize new members to the organization. Culture and climate fill in the gaps between units, but they are slow to change as they are "soft variables" (179) that are loosely tied to activities and individuals. Weick (1982a, 2001) agreed that the socialization of the individual is important. This brings people to agreement on what is happening and bring them together into a system.

People coordinate their actions through shared understanding. He noted that resocialization can be a means to make change happen.

Schein (1992; 1999) explained that organizational culture is a strong influence over actions, and that in mature organizations, culture is embedded and is not easily altered. It is often taken for granted and forgotten, which can cause trouble. He placed organizational culture within the context of group learning where past experiences guide future actions. Trial and error play a major role in how organizational actors view their role within the organization and the larger organization itself. Horne (1992) made two important points in terms of organizational culture and innovation. First, innovations must not conflict with culture too much or they will not gain enough momentum to move forward. Second, top down innovation can be very difficult because, often, top down innovations do not meet the needs of frontline staff members. Therefore, true change does not occur.

Adaptation and Control in Community Colleges

The importance of organizational culture in adaptation and development is very important for community colleges, because as Levin (1998) reminded us, community colleges are people-based, highly political, unpredictable, and highly-social. He defined organizational change in community colleges in the following way:

> Organizational change in the community college is conveyed by storytelling: through descriptions and explanations that organizational members give to make sense not only of their organization but also of the relationship between the organization and its environment (p. 44).

He conducted over 200 interviews with community college administrators, faculty, board members, and staff in the U.S. and Canada at six community colleges during 1996 and 1997. He noted several factors that fall into two categories that impact change. The first was external determinism which are the extra-organizational pressures that force change. This includes everything from political pressures to local demands. Technology was also seen as an external force that is redefining the ways individuals interact within community colleges. The second category forcing change was the need for internal control. This includes groups vying for control, which may cause them to push for change or to resist change. Levin made some observations from his interviews. First, managers cannot directly influence the environment. They can only control symbols and interpretations of meaning. Second, actors within community colleges are keenly aware of the larger higher education system and their perceived place within that system. This is a key influence on their actions. Third, the more that individuals perceive external systems as having control the less they are willing to commit their institution to particular actions. Fourth, the view of organizational identity held by individuals impacts how they respond to the environment. Individuals ignore some issues in the environment if the issue does not fit into these perceptions. Fifth, existing structures contain the seeds of change. Organizational history and culture play key pieces in moving the institution forward. Levin summarized his view of change as follows:

> Organizations are neither solely influenced and altered by external forces nor directed and controlled by internal managers or other internal individuals or groups. The actions or organizations are neither totally determined by external forces nor fully influenced by internal forces. These stories and explanations as a whole suggest that organizational change is the interplay between external and internal forces, between

> the perceptions of internal members of organizational identity and the external environment and between the organizational symbols that match environmental needs (p. 53).

Bergquist (1998) saw the shift in community colleges from modern to postmodern to be technologically driven. The modern approach relies heavily on hierarchies to manage and keep control, where the postmodern relies more on networks and webs of individuals. Community colleges cannot afford the micromanagement of the past. He saw community colleges extending themselves beyond their current form into multicollege organizations like The League for Innovation as an extension of the traditional form. He noted that many initiatives exist across the country where schools work together to serve the community. He also noted that a clear mission is important as boundaries in the external environment shift. The college will be pushed and pulled in multiple directions. They must always keep focused on the needs of students.

As discussed earlier, Mars and Ginter (2007) applied loosely coupled systems as a model for community colleges. They emphasized a need to create tighter structures to enable control, communication, and wider change around technological innovation. In cases where structures such as cross-unit committees or policy statements created consistent views of the environment, they found tighter coupling and more consistent decisions. This is a strong example of control mechanisms influencing technology implementations.

Nazzaro's (1987) view of community college adaptation contrasts that of Mars and Ginter (2007). Nazzaro (1987) found that larger institutions had larger degrees of adaptability. He did see a benefit in sharing information between coupled units. However,

he noted that coupling was more likely to exist further up the organizational chart than at the frontlines.

Robson's (1998) study of two community colleges, one in Canada and one in Australia, supported the importance of organizational culture and the difficulties in implementing change expressed in the higher education literature. He found that there is an inner core within each community college that is resistant to change. This inner core is loosely coupled to newer and more fringe services at each college. Read's (2000) findings also support the broader higher education literature. He found that organizational climate was very important to directing change within community colleges. The attitudes and feelings of organizational members directly influenced behavior and actions.

Johnson's (2002) case study of a community college was also in line with the broader higher education literature. Johnson (2002) found that there are dual planning processes that both exist at the same time. One is a formal, more rational planning process. The other is more hidden and more highly political. This emphasizes the complexity in organizational development and organizational adaptation. This is an example of an emergent planning process working side by side with a formal planning process.

Randall (1992) used a mixed-methods, case study to explore the decision-making process for the allocation of resources and acquisition of educational technology at a community college. He interviewed 6 administrators, conducted a document review, and a faculty survey. He found two "process loops" (p. 8). One was a formal loop that outlines the process, weighs needs, and sets priorities. The second loop is a more informal process made up of interdepartmental competition, hidden agendas, forces external to the community

college, individual conflicts, and internal politics. The longer an individual was on campus, the more likely that individual was to understand the informal process. Additionally, administrators viewed the requests for technology that came from the department level as a team building strategy that expressed common needs, but a majority of faculty members felt that their own roles in the process were unclear. He used the qualitative section of the study to get "in depth awareness of problems and needs associated with the utilization and allocation of educational technology by the faculty and administrators" (p. 60).

DeLisse (2000) studied the use of computer ethics policies in the North Carolina Community College System. She surveyed 58 administrators and found they perceived regular, although typically minor, misuse of computers and the Internet on their campuses. This included privacy, intellectual property, and harassment concerns. However, these same administrators also noted that almost all of their campuses had ethics policies were intended to prevent these types of actions. DeLisse (2000) emphasized that policies needed to be communicated and enforced. She also noted that they must be part of the fabric of the organizational culture if they were to have any impact. She also noted that all of her survey respondents recognized the need to balance access and utility with the values of the larger community.

Summary

The rise of blogs has given community college employees a powerful new communication tool that they can use to directly publish content to the World Wide Web. The loosely coupled nature of community colleges means that relationships across departments, such as the relationship between a department that blogs and the department that monitors Web

content, may be ill defined. The ability of individuals to directly publish to the Web presents a situation where message conflicts between different areas of the organization may arise. Given the impact that blogs could have and the list of additional Web 2.0 technologies that are under development, there is a need for community college administrators to understand how to balance control with the need to allow these tools to adapt and change over time.

CHAPTER III

METHODOLOGY

Purpose of This Study

The purpose of this study, using a multiple case study method, is (1) to further the understanding of how community college administrators and blog authors strike a balance between organizational control and adaptability when implementing and using blog technologies and (2) to create a model that will help administrators better strike this balance within a loosely coupled system of college units and individuals.

Research Questions

This study seeks to answer the following questions

Question 1: What control mechanisms have community colleges put in place to guide the publication of information to the World Wide Web using blog technologies?

Question 2: How do these control mechanisms impact the adaptability of blogs to new needs that arise in the environment?

Question 3: How do these control mechanisms impact the coupling between the blogging unit and the unit responsible for maintaining Web content within the organization?

Research Framework

The framework for this research is the loosely coupled system descriptive view of organizational design proposed by Karl Weick (1976/2000). This view provides a lens through which the researcher can view the interactions between individuals within the

organization and in the external environment. The advantages of the loosely coupled system model for this study is that it (1) views the organization as a collection of individuals, not as a single entity, (2) it helps to describe the interactions between individuals and groupings of individuals on a continuum of looseness or tightness, and (3) it helps to describe how innovations are developed and spread across the organization. Strauss and Corbin (1998) noted that "explanatory schemes" help to make sense of events and provide some small degree of predictability over behavior.

Weick (1976/2000; 2001), Orton and Weick (1990), and Coutu (2003) discussed approaches to studying loose systems and understanding organizations. They emphasized the researcher must work to capture and preserve a variety of activities. The researcher must resist the temptation of dissolving away the richness of activity across the organization by reducing the activities of organizational actors into too few conceptual boxes. Thus, any attempt to study loose systems must explicitly work to preserve the detail of activities the organization generates.

Research Design

In order to preserve the variety of activity within community colleges within the data, this study takes a qualitative approach. As Patton (2002) noted, "thick, rich description provides the foundation for qualitative analysis and reporting" (p. 437). The very nature of qualitative research is aimed at observing the world, transforming observations into data, and analyzing that data. This assumes an inductive approach that is useful for new phenomenon or for understanding how the world came to be (Creswell, 1998; Creswell, 2003; Denzin and Lincoln, 2005; Merriam, 1988; Strauss and Corbin, 1998; Strauss and Corbin, 1994).

Qualitative analysis is also emergent in nature where the researcher learns as data is collected and uses new insights in further data collection (Merriam, 1988; Strauss and Corbin, 1998; Patton, 2002).

In accordance with the qualitative approach, this study uses a multiple case study design. Case studies are both descriptive and interpretive. By capturing the rich variety of activity within the organization, they are descriptive. By seeking to understand this activity, they are interpretive (Merriam, 1988). As Merriam (1988) noted,

> By concentrating on a single phenomenon or entity ('the case'), this approach aims to uncover this interaction of significant factors characteristic of the phenomenon. The case study seeks holistic description and explanation (p. 10).

She defined four characteristics of case studies. She noted that they are "particularistic," which is to say they are very practical by focusing on everyday activity. They are "descriptive" by having detailed meaning. They are "heuristic" by drawing out the reasons for the current situation or why things work or fail in the environment. They do not get hung up on theory but focus on what is practical. Finally, they are "inductive" by taking large quantities of data to create hypothesis and seeing new relationships. The multiple case study allows for greater breadth of comparison across the selected cases. Categories can be viewed in a greater degree when data is compiled from several cases (Merriam, 1988).

The multiple case study was selected for this study for several reasons. First, multiple cases will enable the observation of a wider range of control and adaptability than a single case. Second, the multiple cases allow for comparison across the selected college blogs. For many blogs there may be only one or two authors, so if the focus was only on a single case

this would provide a narrow set of data from which to draw conclusions. Having multiple cases will increase the number of authors and other actors, which will enrich the data. Third, the multiple case study approach still allows the researcher to account for organizational culture by placing the blog within the context in which it functions. This is extremely important when observing the looseness or tightness between the blogging department and the department responsible for monitoring content. Finally, the comparisons between cases make it possible to create a broader model for blogging than a single case might. This model includes more nuance than a single case could provide. The hope is that this model will be useful for administrators and blog authors as they manage blog technologies and other Web 2.0 technologies in the future.

Case Selection

Cases were selected based on several criteria. Each case must have an active blog that has been in existence for more than a year. The blog must also be authored by an individual or by individuals in a department, program, or other unit within the organization, with the goal of delivering departmental or organizational information that enables the unit to operate. Personal journaling or blogs that communicate information for a particular course are outside of the scope of this study. The focus on departmental information is important, because this more directly connects the blog author to the organizational chart. It also removes or lessens the impact of academic freedom since departmental information tends not to be related to research or classroom content. Personal journaling is beyond the scope of this study, because personal journals may or may not be directly related to a work-place responsibility, so the content of such a blog may come under debate as to whether or not the college can regulate this sort of speech.

In selecting the specific cases, several factors were considered. First, Nazzaro's (1987) findings indicated that institutional size does have an impact on coupling, which intuitively makes sense. He noted that larger institutions have greater degrees of adaptability but acting on this adaptability can be hampered by administrative structures. Therefore, a contrasting case was included among the three cases. Two cases with student populations near or above the 10,000 student FTE level were included and a contrasting case at the 5000 FTE level was included. This case was included to enrich the data and see how themes may differ or match the other cases. It was not included to draw a causal links between organizational size and themes.

The number of identified blogs is an additional factor. The cases that were selected had multiple blogs. This provides richer data since there were more blog authors to interview. Appendices E, F, and G list the blogs that were included in each case. In total, eleven blogs were included across all three cases.

Unit of Analysis and Data Collection

The unit of analysis or "bounded system" (Merriam, 1988) was the individuals and documents around an individual blog. An advantage of a case study approach, and qualitative research in general, is that as the design emerges from the data the researcher can purposefully seek out individuals and data sources that reveal new insights (Patton, 2002; Strauss and Corbin, 1998). This is what Merriam (1988) called "purposive sampling." Boyatzis (1998) called this "sampling by relationships," where the factor for inclusion or exclusion in the study is the way individuals are related to each other.

This study started by interviewing blog authors and blog administrators. Blog authors are individuals who create content and post this content to the blog. Blog administrators, who may also be blog authors, are individuals who have responsibility within the department for the management of the blogs. This is not necessarily the individual who maintains the software that supports blog, but is the person in the department who ensures the blog operates. This is an administrative role and not a technological role. Following the blog authors, this study interviewed individuals from information technology and from marketing or public relations who were responsible for Web content. Every effort was made to interview the individual who has primary responsibility for Web content within these areas. When that person was unavailable, the most senior person available was included. Appendices E, F, and G list the participants for each case.

The interviews were semi-structured with different questions for blog authors/administrators and Web content reviewers. The questions for authors established the purpose and context for the blog, the ways the blog content changed over time, and the ways the blog impacted the coupling between the blogging department and the Web content reviewing department. The questions for the Web content department explored how aware and connected they are to the blog. Appendix A lists the interview questions. The important goal in interviewing participants was to make the implicit visible. The goal of the interviews was to understand the meanings and motivations behind actions taken by individuals within the organization (Fontana and Frey, 2005; Kaid and Johnston Wadsworth, 1989; Merriam, 1988; Neuendorf, 2002).

In addition to these interviews, relevant administrative documents were analyzed. These documents represent one form of control over the utilization of the blogs. These

included policies about Web use, guidelines for bloggers, or other related documents. Appendices E, F, and G list the relevant policy documents that were identified by participants. Merriam (1988) noted that documents can be a broad range of written artifacts that shed light on the data given in interviews.

The final set of data was the actual content of the selected blogs. Using the interviews and documents as guides, the actual content posted to the blogs demonstrated the technology in action. They are the outcome of the execution of the decision making process by the blog authors within the organizational structure. Since this content is a snap shot in the life of the blog, it was determined that the content should be matched to the time period of the interviews to avoid significant changes in context that may exist by reviewing older or newer blog posts. In order to have enough content from the blogs that do not post very often, the blog posts that were reviewed came from the six month time frame when interviews were held. Appendices E, F, and G list the summary of the blog content.

Informed Consent

Fontana and Frey (2005) emphasized the importance of gaining access to the group being studied through informants who are willing to open up their world to the researcher. In order to gain this access, the researcher must gain the trust of the participant by ensuring anonymity and creating an open line of communication between the researcher and participant. Appendix B is the letter of invitation for this study that was emailed to all participants. This clearly outlines the purpose and scope of the study and the ways that data will be used and stored. It also emphasizes that that participants may withdraw from the study at any time. The informed consent information was reviewed with each participant at

the start of the interview. When participants indicated that they were comfortable with process, the recorder was turned on and the interview started. Following the interviews, the recordings were transcribed and participants reviewed a copy of the transcript to ensure accuracy. The larger goal of these protocols was to act as the foundation to an open relationship with participants.

Data Analysis

The data analysis was ongoing starting with the first interview. Interview notes were reviewed within a week of each interview. Krippendorff (2004), Kaid and Johnston Wadsworth (1989), Merriam (1988), and Corbin and Strauss (1998) emphasized the emerging nature of the qualitative design and the ability for the researcher to react as new data reveal new directions.

The data analysis drew on an initial codebook based on the literature on loosely coupled systems and the literature on innovation within the framework of study's research questions. This provided an initial starting point for labeling and organizing interview responses in an effort to engage the present study with the rich literature that has been developed over the past three decades and to set a benchmark for comparison with new themes that will emerge. Appendix C lists the initial codebook. As data was collected and themes emerged, the codebook changed and became more nuanced.

The recorded interviews were transcribed, put into chronological order, and printed. Each interview was given an initial reading along with the notes taken at the time of the interview. A second reading was then given labeling with themes from the initial codebook by hand. After all interviews within the case were given this initial analysis, a third, more

detailed analysis was performed by hand. Once all interviews for a particular case had been given a third review, the interviews were loaded into the Altas.ti qualitative data analysis software where they were given a fourth round of coding this time in the software. Reports were run and printed out for each code. The reports were reviewed to see where codes could be consolidated and where larger themes might emerge. The codes were organized into thematic clusters based on concepts highlighted in the data. These clusters present a view of patterns and descriptions discussed in Chapter IV.

Each case was developed and analyzed independently. Then a cross-case analysis was conducted in order to see broader themes that may contribute to a representative model (Corbin and Strauss, 1998; Merriam, 1988). The cross-case analysis used what Yin (2003) referd to as "pattern matching." The goal was to draw out larger patterns and relationships between controls within loose systems across cases. These patterns made up the raw material used in constructing a model for managing blogs in community colleges. Yin indicated that this approach is useful for studies such as this one that are exploratory in nature.

Trustworthiness

Yin (2003) defined four ways to judge quality of the research design and ensure trustworthiness. These four tests are internal validity, external validity, construct validity, and reliability. Internal validity is the degree to which causal relationships can be identified when one circumstance brings about another circumstance. This study, following Yin's approach, used pattern matching in the cross-case comparison, which strengthens internal validity. The goal was to build explanations from data source to data source and case to case, so that relationships become visible in a tangible sense across data. Additionally, this study

addressed rival explanations for causal relations to ensure that relationships match external reality. The idea behind rival explanations is to purposefully seek out alternate causal relationships.

Peer examination is another method discussed by Merriam (1998) that moves toward internal validity. The data, coding, and analysis has been reviewed by an external auditor in order to ensure identified themes actually match the data, that there are no additional themes not apparent to the research, and that researcher bias is prevented. Boyatzis (1998) noted that one of pitfalls of data analysis is "projection," which occurs when a researcher projects his or her beliefs or character attributes onto subjects. He also emphasizes that reliability is really about consistency and not about verification of findings. It was the goal of external auditor to protect against projection and to review the consistency of the data analysis. Yin (2003) said that it should be the goal of the researcher to document the case in a way that another researcher could reproduce the same findings given the data. He indicated that an auditor who can follow the documentation and review the data is "performing a reliability check" (p. 39). Appendix I includes the review by the external auditor.

Another approach to ensure internal validity discussed by Merriam (1988) is to examine researcher bias. As the researcher, one does not conduct this study in a vacuum, but, instead, brings experiences and perspectives to the research. Most pertinent to this research is the author's experience in authoring and administering four blogs as a community college librarian. Naturally, this experience was part of the initial draw to the topic, and these experiences have shaped the present research. As a blog author, the researcher recognizes the value that this technology provides and understands the challenges of implementing blog technologies within the organization. As a librarian, the researcher also

recognizes his own bias toward free and open information and away from organizational control, even while understanding that organizational control is necessary.

Yin (2003) views external validity as the extent that the study's findings can be generalized. As noted in Chapter 1, one limitation of case studies is that they are not generizable in a statically representative way. Yin indicates that researchers who use case studies should strive for "analytic generalization," which connects the finding of the case to theory. He notes that a way to strengthen this connection is to see replication across cases. The cross-case analysis discussed in Chapter IV starts to build a picture of the replication between cases. This is an essential part of the study design that offers a foundation for the model discussed in Chapter V.

Yin (2003) identified construct validity as the need to identify appropriate data sources and measures for the concepts being studied. He indicated that construct validity can be strengthened by using multiple sources of information. Merriam (1988) discussed the need for triangulation between the three data sources. The goal of triangulation is to identify and confirm themes across different data sources. By using three different types of data, research themes can be confirmed between sources and viewed in more dimensions, and, ideally, blind spots or shortcomings of one data source may be compensated for by another data source. Merriam (1988) suggested asking participants to review their interview transcripts. This allows participants to correct any errors made by the researcher and for participants to ensure the accuracy of the data. This review helps to ensure the trustworthiness of the data and any themes that may emerge. Yin (2003) regarded participant review as an approach to strengthen construct validity. As discussed above, triangulation and participant review have been utilized in this study.

Yin (2003) identified reliability as the fourth test for trustworthy case studies. He viewed reliability as how clearly procedures were communicated and easily the study could be repeated. The discussion in this chapter as well as the attached appendices, which include interview questions, informed consent procedures, and the initial codebook, are intended to strengthen the reliability of this study. Merriam (1988) and Yin (2003) indicated that the review of the auditor also strengthens reliability by providing and external review of procedures, data, and findings.

Pilot Study

A pilot study was conducted to test the research methodology and to give the researcher practice conducting interviews. The results of this pilot are not part of the final data analysis. Midwest Community College (MCC) was chosen as a sample case. MCC was chosen because the researcher helped the MCC library staff when they were setting up their library blog. The Library Blog Author at MCC agreed to be interviewed and to locate IT and PR administrators who would agree to be interviewed for the pilot. MCC has 9752 full time equivalent students, which makes it close to the 10,000 FTE size for this study. Three interviews were held. One was with the Library Blog Author who is an instructional librarian, a second was with the Director of Marketing and Creative Services who oversees content on the college Web site, and a third was with the Associate Director of Technical Support Services who manages the portion of IT that includes the campus Web site. The interviews were recorded and transcribed following the same protocols used in the actual study.

The pilot study largely confirmed the direction of study. The assumptions made about the difference between the standard, 1.0 college site and the use of blogs appeared to be in line with the views of the pilot participants. The pilot study confirmed that the Marketing and Creative Services Department in partnership with IT played a significant role in managing content on the standard college Web site, while they had very little involvement with the library's blog. Additionally, the library blog author showed a great deal of self-regulation in publishing content via the blog. Interviewees connected blogs to other Web 2.0 technologies such as social networking sites. The pilot study confirmed that the initial codebook reflected themes that were present in interviews. Appendix D lists codes that emerged from the pilot study. A review of the MCC Web policy and a review of the library's blog content convinced the researcher that these data sources could be used with participant interviews to build a context for understanding the larger case.

Several minor changes resulted from the pilot study. Most significantly, several interview questions were rewritten following the pilot study to more explicitly ask about issues related to organizational control and coupling between units within the college. A question about resources budgeted to support the blog was added. A question about desired support for the blog from other campus departments was added. The interview questions in Appendix A are the result of the pilot study.

CHAPTER IV

FINDINGS

The three case studies reported in this chapter provide a glimpse into the creation, management, and conceptual understandings of blog technology in community colleges. From these glimpses, one can view the loose connections between individuals and departments and consider how technological innovation takes place. Each case consisted of interviews, a policy review, and a review of blog content. The interviews were made up of at least two blog authors, one IT administrator, and one marketing or public relations administrator. Appendices E, F, and G provide descriptive information for each case. Appendix C lists the initial code book drawn from the literature used as a starting point for the content analysis of these interviews. Appendix H lists the final code book, which is richer in scope and description. Four thematic clusters emerged from participant interviews: *control mechanisms, innovations, disintermediation, and coupled relationships*. As discussed in chapter III, this chapter includes a discussion of the study's research questions for each case and a cross case analysis, which draws broader themes across all cases.

Case 1: Eastern Community College

Eastern Community College (ECC) is located in a former industrial-center that has become economically depressed as manufacturing jobs have left the area. ECC has 5832 full-time equivalent students. Seven blogs were identified at this institution that met the criteria for selection. Five blog authors responded to inquiries and participated in the study. One of the blog authors was also a public relations administrator. An IT administrator also participated. Appendix E provides descriptive information for ECC.

Case 1: Themes

Control Mechanisms

The discussions around control mechanisms emphasized their informal nature at ECC. The participation rules for initiating and operating campus blogs are unwritten. The college's standard, 1.0 Web site appears to be more formal, with IT and marketing playing a role in starting up and maintaining pages. However, departments are free to post content as they see fit for their standard site and for their blogs. The decision about appropriateness of content and general use of the technology rests on the shoulders of blog authors based on knowledge of the organizational culture and past practice.

When marketing or IT intervenes in a departmental Web site, it appears to be more about design issues than about content. There were no documented instances where marketing or IT had intervened in any blogs. Blog authors including the college president, PR Blog author, and Innovation Champion A referenced an unwritten community standard such as "proper communication" (Innovation Champion A) or media-appropriate standards that should guide blog authors. It is worth noting that all of the blog authors that were identified for this study are middle to upper-level administrators or are faculty members who claimed protections under Academic Freedom. They all had been at the college for a number of years and appeared to have a command of the college culture and structure. The Library Blog Author and the College President indicated that the college was small and, therefore, did not need formal rules to manage their blogs. Authors felt that if a blog post was deemed inappropriate, they could go in and make changes after it had been posted. None of the blogs have a formal publication review process or department-level policies for their blogs. Several interviewees noted that college administrators must place a degree of trust in their bloggers to

post appropriate subjects and address sensitive subjects in appropriate ways.

The blog authors made it clear that the low cost of starting a blog was an important factor in adopting this technology. As the Library Blog Author noted, "We would not have gotten it off the ground if it wouldn't have been free." Blog authors did, however, indicated they would be willing to contribute a moderate amount of budget money for their blogs if needed in the future.

Innovation

Several themes relating to innovation arose from the interviews. Most of them revolved around issues of adaptability and adaptation. First, blog authors indicated they felt free to make changes to the ways they used their blogs. They posted new types of content and freely revised blog designs. Second, blog authors also discussed ways they incorporated other Web 2.0 technologies in to their existing blogs. There appears to be a high degree of adaptability to meet new needs with existing blogs. There is also some evidence blogs increased the general adaptability of campus. They help spread information and become a resource for authors to use to share ideas even if they just posted the information and emailed this link to individuals who may be interested.

There were several factors brought up that could limit adaptability. First, technological and staff limitations impact the adaptability of blogs. The IT administrator made it clear the IT department had limited personnel. However, the hands-off approach taken by IT and the low numbers of administrators to provide oversight has given authors some freedom to experiment. Second, the college president did mention that staff members were spread between many buildings, so the ability to spread the innovation by word-of-mouth may be limited. Third, the Library Blog Author and the College President mentioned

legal concerns with blogs that may cause them to limit how they use blogs. Finally, Innovation Champion B indicated the need to interpret culture and recognize informal controls may be hampering adaptability of blogs on campus because organizational members do not have a framework from which to understand what is appropriate and what is not.

Training was a related theme that enabled and limited adaptability. It is clear that the training efforts of Innovation Champion A played an important role in spreading blog technology. At the same time, the Library Blog Author indicated they received no training from IT and that a little support from IT might help make their blog better.

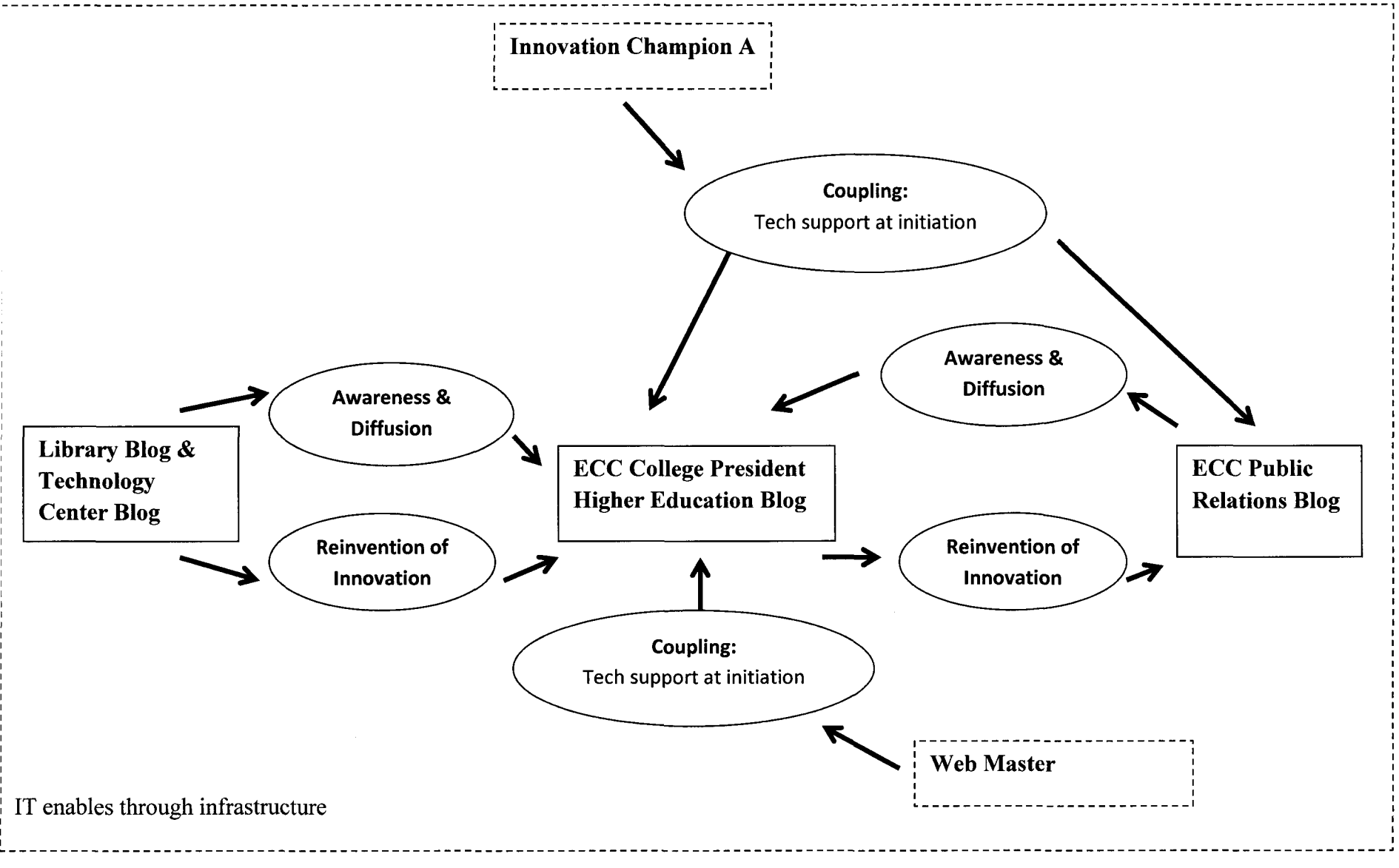
Blog authors showed a high degree of awareness of each other's blogs, which is an indication of how easily the innovation has spread. Academic freedom was referenced by the IT Administrator, the college President, and Innovation Champion A as a factor that increased adaptability by being a protection given to faculty that prevented administrators from intervening.

The diffusion of the idea of blogs and actual adaptations of this technology can be traced clearly from the initial implementation of the library blog and the technology center blog, through the training of Innovation Champion A, and to the initiation of the College President's and PR Administrator's blogs. Figure 1 outlines this diffusion process. Beyond this example, three blog authors also discussed their involvement with the diffusion of blog technology to uses at other community colleges.

Blog authors expressed a great deal of freedom in making changes to their existing blogs. The college president spoke about the addition of images to blog posts and his change in focus to be a bit more about local issues related to the college. The Library Blog Author discussed a letter writing campaign that was organized through the blog. The PR Blog

FIGURE 1

Diffusion in the Eastern Community College President's Blog



Author discussed adding video to her blog. Innovation Champion B and the Library Primary Blog Author discussed how they have other 2.0 technologies embedded directly in their blogs. Almost all of the blog authors discussed using Facebook and Twitter to serve similar purposes to that of their blogs.

There were no examples of termination or resocialization of blogs by interviewees. The library did offer an example of resocialization of Web 2.0 technologies when upper administration forced them to end the use of MySpace. It was clear that this experience set a context for how they viewed their blog. On a related note, several blog authors admitted considering termination of their blogs when they felt like they have limited readership, but then they indicated they would get a comment or look at access number and get energy to blog. It is clear that a degree of self-awareness of blog authors was vital to the successful adaptation of blogs. Authors expressed self-imposed standards as to what was appropriate in terms of the scope of their blogs and acceptable practice in light of campus controls.

Disintermediation

A third thematic cluster was the notion of disintermediation, which is the idea that the blogs bypassed traditional lines of external communication with might normally exist through marketing departments or public relations departments. Blog authors expressed an understanding that their blogs had a marketing purpose and that part of what they were doing was selling the college to the public. The blog authors also expressed an awareness that their blogs related to or filled in the role of the news media. The PR Blog Author expressly stated that she initiated her blog to compensate for the reduction of coverage from the local newspaper. The college president directly related the information on his blog to information in a newspaper.

Coupled Relationships

The fourth-thematic cluster was the discussion around coupled relationships. The library blog was the only one that relied on IT for hosting the blog. The rest of the blogs were hosted remotely through free blog services. The president's blog and the PR blog both relied on Innovation Champion A during the initiation process and for incidental support. It also appeared that the Webmaster helped with some of the design aspects of the president's blog. These were the limited examples of coupling around the blogs. It was also clear there is a degree of *decoupling* with blogs when compared to the standard Web site. Significant portions of the standard site are managed by marketing and IT. For instance, the PR blog author sends information to the campus Webmaster to place information on the 1.0 site but directly publishes content on her blog. In terms of horizontal coupling, the blogs are largely disconnected from outside departments. The design of the standard site is based on marketing-created templates, while the blogs have no standard design. None of the blog authors interviewed in this case indicated they sought out approval from supervisors prior to initiating their blogs. There is a sense they are largely decoupled vertically.

Case 1: Policy Review

The interviewees only indentified one policy relating to blogs, which was the *Policy on the Use of ECC Information Technology Resources*. This policy is a broad statement on technology use that does not distinguish between levels of participation or responsibility that may exist between students, staff, faculty and administrators. The policy outlines some specific violations, but it does not define a process to use to clarify technology use. The responsibility for understanding the context of technology use falls to the user. The policy does not discuss issues related to representing the college or posting information within the

context of college employment. Most of the violations focus on breaking laws. This seems to be a significant issue, since there are many instances where staff or faculty could use technology in a way supervisors may not approve but they are not breaking a specific law.

Case 1: Blog Content Review

Descriptive information for the ECC blogs is listed in Appendix E. The content of these blogs stays within the purposes defined by each blog author. The Information Technology Blog and the Public Relations Blog are the most focused. In contrast, the Library Blog and the President's Higher Education Blog contain a wider variety of topics and run a greater risk of drifting into gray areas defined as inappropriate by administrators. The fact that the Library Blog has several authors who are part-time employees, and who may not be as aware of organizational expectations, may present a greater likelihood for breaking unwritten rules. For instance, the library blog has a post discussing the state legislature removing several holidays. This short post made mention of insurance premiums and retro pay. While the post may not be a direct violation of the college policy, it does use college resources to publically complain about college policy and payments, which may or may not be deemed as appropriate use.

Case1: Research Questions

Question 1: *What control mechanisms have community colleges put in place to guide the publication of information to the World Wide Web using blog technologies?*

The control mechanisms from case one are largely unwritten. Blog authors refer to the campus computer use policy, but it is clear this policy was written before blogs and Web 2.0 were making an impact. Most blog authors discussed a degree of self-awareness about

what was appropriate. This awareness resulted from their understanding of the organizational culture and the unwritten participation rules about how to act in particular situations. There appears to be a more informal control approach to blogs than that used for the standard Web site.

Question 2: *How do these control mechanisms impact the adaptability of blogs to new needs that arise in the environment?*

Since the control mechanisms are not well defined, there does not appear to be a limiting impact on adaptability caused by the controls. The blog authors did not express any pressures or limitations from control mechanisms. However, Innovation Champion B suggested that some people may be reluctant to use blogs and other 2.0 tools because there is no clear outline for how these should be used, but the accuracy of this statement is difficult to judge. One of the things that may be a limit to adaptability is the lack of IT and technology staff who may facilitate training and help spread the technology. It was clear IT felt stretched and they were not willing to take the lead in supporting blogs. The training held by Innovation Champion A, who is a faculty member, and the resulting blogs present an example of how this technology can be spread with some organizational support.

Question 3: *How do these control mechanisms impact the coupling between the blogging unit and the unit responsible for maintaining Web content within the organization?*

The initiation of blogs appears to have a largely decoupling impact between IT, marketing and formal structures of disseminating information. Blog authors are largely free to post information within their self-defined scope and within their understanding of what is appropriate. IT and marketing have essentially no role in operating these blogs beyond the

maintenance of hardware and campus networks by IT. There is evidence that blog authors are using blogs and 2.0 technology to streamline the publication process by bypassing the 1.0 Web site.

Case 2: Northwest Community College

Northwest Community College (NCC) is located in an urban area of 200,000 people in the Pacific-Northwest. NCC has 9185 full time equivalent students. Three blogs were identified; of which two blog authors agreed to participate in the study. The college's Chief Information Officer and Public Information Officer also participated. Appendix F provides descriptive information for NCC.

Case 2: Themes

Control Mechanisms

Both blog authors indicated their blogs fall into an informally defined management area of the college Web site. The Art Blog Author indicated the that 1.0 site for her department was not useful so she initiated the blog. The Massage Blog Author indicated she and her colleagues felt constrained by the 1.0 site so they started their blog, which essentially replaces and bypasses the 1.0 management structure.

The Massage Blog Author also indicated that the fact that her blog did not have to go through the formal budget process removed its approval from the larger structure of the college. She also said their department had considered doing to an internal blog for sharing information, but they chose not to in order to avoid this formal approval process. The Chief Information Officer and the Public Information Officer were both aware of the Art

Department Blog, but it is not clear that they were aware of the Massage Department Blog. The Public Information Officer and the Chief Information Officer both mentioned the Web guidelines and the Appropriate Use Policy. They both indicated that these documents may need to be updated for Web 2.0, but they also saw them as guiding documents. The Public Information Officer noted the Art Department Blog Author is a trusted employee of the college, and as such, there is no concern over the Art Department Blog.

Neither blog author discussed college-wide policies, but they both indicated an awareness of design-related requirements which are outlined in policy documents. Neither of the blog authors had department-level policies for their blogs. The Art Blog Author discussed the need to create internal policies for the blog since she may be retiring within the next few years and that she is the only person in her department that knows how to use and access the blog. None of the blog authors had resources budgeted to support the blogs beyond staff time. Blog authors also agreed that any costs to managing the blogs would have prevented or limited the use of the technology.

Innovation

In terms of adaptability, the blog authors noted they felt no limitations placed upon them from the organization. The Massage Blog Author felt that her blog may be able to adapt to new needs, but the larger organization may not benefit from this since they are so disconnected from the organization. The Art Department Blog Author thought there may be a limit to the spread of the technology unless there is someone within each department willing to go out and initiate it. The Massage Blog Author felt limited in the use of the blog by the

lack of technological comfort of her audience. She said they had started a Facebook page at one point, but abandoned it due to the lack of use.

There were very few examples of how the blogs helped to distribute information across campus, thus impacting the broader adaptability of campus. The Public Information Officer admits she does not visit the Art Blog and is not aware of the information it contains. The Massage Blog Author mentioned she only heard from students and does not think the rest of campus is aware of their blog.

The blog authors noted a disconnect between their blogs and IT, which could be a limit to adaptability. There seemed to be an unspoken understanding that the blog authors can use these tools as long as they do not expect IT support. Both blog authors indicated they would like more support from IT. They did note the blog gave their departments an avenue to distribute information without this support. Neither author had training from IT or other technology support areas on campus for their blogs.

Participants discussed several themes related to adaptation, which is the actual implementation of change in the use of the blog. In general, both blog authors noted their blogs had evolved since their initiation. They said they had a degree of self-awareness to ensure that content is appropriate, but both authors remained close to their scope so this has never been a problem. The Art Department Blog Author noted that her use of the blog has led to her using Facebook and Twitter also. Additionally, she noted the types of content she posts to the blog has grown and changed as faculty members within her department have become aware of her blog and shared more information with her. Following her success with the blog, she was given the responsibility for maintaining the department's 1.0 Web site.

The CIO discussed the use of student blogs by the marketing department to promote awareness of the college. He mentioned some minor controversy such as a post about smoking. The Marketing Department felt the student blogs were not having a significant enough impact, so they chose to discontinue them. This could be seen as an example of termination or perhaps resocialization of the technology.

There is almost no evidence of internal diffusion of blogs across the campus. The only example might be a new blog that art faculty members organized which used the technology as a makeshift auction tool. The Art Department Blog Author does not necessarily claim it was her blog that fostered this adaptation, but she was the first blogger in the department. The CIO did mention that he has used the Art Department Blog as an example of the technology for other people, but there is no evidence of new blogs resulting from this initial use of the technology. Neither blog author could recall anyone approaching them to discuss how the blogs were used.

Disintermediation

Since both blog authors indicated one of the reasons they initiated their blogs was to bypass the 1.0 Web site, themes relating to disintermediation emerged. The Art Department Blog Author noted the blog is a great way to reach out and promote the work of the department to the community. She noted her dean really liked this idea. The Public Information Officer expressed concern that the public may not recognize the different roles college employees may have and that an employee may not represent the official voice of the college. However, when considering the participatory nature of the technology, the blog authors generally noted they received few outside comments on their blogs.

Coupled Relationships

In this case, it is clear the blogs are more loosely coupled to the organization than the standard 1.0 site. While departments have freedom in controlling their own 1.0 content, they are required to use one of the pre-designed templates. The blogs, on the other hand, are outside of this system in terms of design and content management. The Massage Department Blog Author noted they incorporated the college logo and followed guidelines on fonts, but she stated the blog, "gives us a lot more freedom and flexibility [than the 1.0 site] in the sense to sort of have this thing that we control." The Art Department Blog Author mentioned the blog had resulted in tighter coupling *within* her department as faculty members now give her information to share. In terms of vertical coupling, both blog authors had the approval of their immediate supervisors for the initiation of their blogs. But, beyond this, there was no other evidence of vertical coupling.

Case 2: Policy Review

The interviewees indentified three policies they saw relating to blogs: *Appropriate Use Policy , Web guide, and the Writer's Style Guide for NCC.* The Appropriate Use Policy, which was revised November 2005, does not discuss any Web 2.0 technologies specifically, but it appears to be broad enough to be applied to these tools. While this policy does not distinguish between student and employee technology use, it does include specific examples of misuse such as harassment, plagiarism, gambling, liable, and intellectual property theft, all of which are clear violations of law. There is a general statement at the end of the document entitled "Personal Responsibilities" that addresses some of the gray areas that may not be illegal but may be deemed inappropriate.

The Web guide, revised July 23rd 2009, states that its purpose is to simplify the use of the Web site for visitors. It states that it applies to all pages despite server location and that the college is liable for any material on the site. It also states that the "accessibility, content, formatting and functioning" of a department page is the responsibility of the department head and each department must identify one staff member to maintain pages. The guide does not mention Web 2.0 technologies in any form although it would appear some of these requirements could be applied to blogs. Since many of the standards in this document have not been applied to these blogs, there exists an obvious ambiguity.

The Writer's Style Guide for NCC, revised July 23rd 2009, is a guide for writing conventions for NCC. It includes print and Web-based publications. It is not clear from this document how binding these recommendations are. The Web portion of the document is very short. It does not mention blogs or other Web 2.0 tools. It discusses appropriate fonts, how to create links, and mentions that a "friendly and professional" tone should be used. It does not address content or appropriate use of technology.

Case 2: Blog Content Review

Descriptive information for the NCC blogs is listed in Appendix F. The Art Department Blog content is very focused around department activities. It does not contain commentary or personal opinions. The one area of risk may be in the actual content of art shows and gallery exhibits, which depending on the subject matter some may find offensive. However if this art is in the college gallery one may assume community standards have been addressed. The Massage Department Blog provides an interesting example as it is essentially a grouping of static pages replacing the department 1.0 Web site. There was one actual post

made to the blog during the time period under review. This is an example of the Massage Department faculty entirely removing their content from the rest of the college Web site.

Case 2: Research Questions

Question 1: *What control mechanisms have community colleges put in place to guide the publication of information to the World Wide Web using blog technologies?*

NCC has no formal control mechanisms directly addressing blogs. They have several policies related to Web activities that may address the blogs. These include the *Appropriate Use Policy* and the *Web guide*. Neither of the NCC blogs have department-level policies or guidelines written for their blogs. The Art Department Blog author indicated there was little guidance from the college for content but more for design. The *Appropriate Use Policy* does place the responsibility for content on the department head and offers some direction that may impact content. However, it does not specifically mention Web 2.0 technology, and it does not differentiate between students, staff, and faculty. It leaves a gray area for activities that are not strictly illegal but may be frowned upon by administrators. The participation rules for the standard, 1.0, college Web site are fairly well-defined, but the blogs appear to be outside of this structure. The blogs largely fall outside of the budgetary process, which has removed them from formal approval.

It was clear that cultural factors impact the way the Massage Department connected to the rest of campus. Since they are on the non-credit side of the curriculum and are located at a downtown campus away from the main campus, they appeared to be less connected to rest of the college, which played a role in the initiation and management of their blog. By

contrast, it is the culture of connectedness that seems to direct the Art Department Blog Author giving her an awareness of the informal rules of the organization.

Question 2: *How do these control mechanisms impact the adaptability of blogs to new needs that arise in the environment?*

Since the existing blogs exist outside of formal controls, there does not seem to be much impact on their adaptability. However, both of the blogs under consideration seem to have resulted from the perceived lack of usefulness and limitations of the controls around of the 1.0 site. The de-coupled nature of these blogs may hamper their ability to diffuse the idea to other areas of campus that may potentially utilize it to meet new needs.

Question 3: *How do these control mechanisms impact the coupling between the blogging unit and the unit responsible for maintaining Web content within the organization?*

In terms of the Massage Blog, the control mechanisms did not greatly impact the coupling that existed between the Massage Department and IT or Marketing. In fact, the evidence may suggest that the blog has resulted in looser coupling since the Massage Department has essentially used the blog to replace the standard 1.0 site.

In terms of the Art Department Blog, the control mechanisms seem to have little impact on the coupling between the Art Department and IT or Marketing. The blog itself appears to have resulted in looser coupling between these groups since the blog largely bypasses existing control mechanisms. An interesting result of the Art Department Blog is the blog author is now responsible for the standard 1.0 site, which may end up causing tighter coupling between the Art Department and IT in the future.

Case 3: Southwest City College

Southwest City College (SCC) is located in an urban area of 200,000 people in the Southwestern United States and has 15,811 full time equivalent students. Five blogs were identified of which three blog authors agreed to participate in the study. The college's Director of IT Infrastructure & Systems and Director of Marketing also participated. Appendix G provides descriptive information for SCC.

Case 3: Themes

Control Mechanisms

The controls around blogs are very informal. Since the identified blogs cost nothing beyond staff time, they have not gone through any formal approval processes. Additionally, the college-wide technology policies do not directly address blogs or Web 2.0 technologies. The decision about how to use this technology largely falls on the shoulders of the blog authors to use their judgment about what will be accepted by the college culture. There is a sense among participants that since blogs and Web 2.0 have not posed a problem for the organization, the participation rules have not been formalized.

The larger college Web presence has been divided into separate turfs. Marketing appears to be responsible only for top-level pages and does not focus on department-level pages as long as the departments use pre-defined design templates. It seems IT is focused on infrastructure and mission-critical processes. The Marketing Director and Dean emphasized the importance of participation to the organization and that the over-abundance of rules stamps out participation and creativity. The blog authors indicated they turned to blogs because they provided more freedom to act than tools offered by IT.

All of the blog authors agreed the low costs of blogs were a factor in selecting this technology and cost would have been an obstacle in using it. None of the blog authors had written policies for their blogs. All interviewees were aware that the campus had policies relating to Web technologies but there seemed to be some confusion to the degree that these directly addressed blogs.

In general, the culture around technology appears to be open and supportive of experimentation, which several interviewees agreed helped in the initiation of blogs. The Library Blog Author noted that IT sends people to him when they ask about setting up a blog. IT staff do not feel threatened nor do they tell people they cannot start blogs. The IT Manager, Director of Marketing, and the Dean all indicated they trust the people who blog and the organization must empower them to act. The Dean noted the organization has not given much guidance to bloggers, but that they use their "professional judgment" when they post content. The Library Blog Author noted personal connections and relationships helped him to build trust with people across the organization and this allowed him to experiment and innovate.

Innovations

In terms of adaptability, it appears the campus is philosophically supportive of blog technology but generally limits the potential to adapt by not committing additional resources to support it and requiring departments to figure out how to make their blogs possible on their own. In general, the blogs exist between official channels within the college and support for them has arisen through informal means. Departments that set up blogs need to have someone willing to learn how to operate the software. Staff limits impacting adaptability

were mentioned several times. Most of the discussion of staffing limits focused on the inability of IT to support blogs.

The sharing of information through the blogs appeared to increase the adaptability of the campus in a broad sense. The library blog author does the most to promote his blog and blogs in general. All interviewees were aware of his blog. He discussed how he connected content on his blog to other departments in an effort to build partnerships. The Faculty Learning Center Blog Author noted he had statistics that showed people were reading his blog, but he also felt some faculty may not be prepared to fully participate with the technology which limited his use of the blog.

In terms of adaptation, the existing blogs appear to have a great degree of freedom to adapt to changing needs. Each blog author listed changes in design, in use of other technologies, and in content changes that he or she has made. The primary factor limiting adaptation is the unofficial status that blogs have. Any change incuring costs, significant training, or technological support might be difficult to implement. The Library Blog Author and the Faculty Learning Center Blog Author appear to be the main forces in diffusing blog technology within the organization even though this is not part of their primary responsibilities.

The participants connected blogs to other 2.0 technologies by recognizing issues such as easy publication of information and low technological barriers were similar to other 2.0 technologies. Participants noted there have been few problems so the campus has not defined how to use these technologies. Participants noted blog authors needed a degree of self-

awareness in understanding their audience, their place in the organization, and what kinds of content are acceptable from the organization.

Disintermediation

Several themes relating to disintermediation were brought up by participants. Most significantly, the Director of Marketing saw the decentralization of Web content as a way to ensure the best information was readily available for students. She did note that a key concern for the college should be the distribution of "misinformation" to students and that the college should give guidance so that this doesn't happen. The Dean noted that a goal of her blog was to share news about good work going on in her areas. The library blog author discussed a time during a local wildfire where his blog outperformed the local news media in getting up-to-the-minute information to the public. He also noted a "catch-22" that the college has encouraged people to explore and innovate on their own without real guidance as they represent the college on the Web. All participants agreed that as outreach tools, the blogs were not very participatory since readers rarely commented. The Dean was the only person who viewed blogs as replacing media outlets. In fact, the Faculty Learning Center Blog Author went out of his way to note his blog was not a "newspaper" that just reported news.

Coupled Relationships

Web content at the department level is already largely decoupled from outside processes, but the blogs appear to further decouple the department from the IT infrastructure. None of the blogs are supported by IT beyond the support of basic infrastructure. IT did help set up the server for the Library Blog Author, but that is all the support they have offered.

There is no evidence Marketing has played any role in the campus blogs. The Library Blog Author, The Department Chair, and the Faculty Learning Center Blog Author all indicated they use blog technology because it is easier than campus-supported Web publishing options. This, in effect, has decoupled them from IT. The coupling that does exist around blogs comes from the informal diffusion of the technology from the Library Blog Author and the Faculty Learning Center Blog Author who have helped to set up other blogs. There were no examples of vertical coupling related to the blogs. The blog authors freely initiated their blogs without the need of approvals from above.

Case 3: Policy Review

Participants identified the following policies as impacting blogs: *Board Policy 3721, Web Policy Document, SCC Electronic Communications Policies (SCC Administrative Regulations 3620.1).* Board Policy 3721 is a very short and broad statement from the board of trustees. It essentially advises that staff should use the college Web site ethically and within the law.

The Web Policy Document outlines six "levels" of pages, with top level pages managed by the Marketing and departmental pages managed by the individual departments. This document does not address, nor offer guidance, on the appropriateness of content. It does offer a structure that could address these sorts of questions.

SCC Electronic Communications Policies (SCC Administrative Regulations 3620.1) covers all electronic communications, so blogs and Web 2.0 technologies would presumably fall under this policy even though they are not explicitly defined. This policy outlines a philosophical framework for electronic communications, individuals that can access

resources, appropriate use, and violation process. The broadness of this policy prevents it from truly guiding the use of blogs.

Case 3: Blog Content Review

Descriptive information for the SCC blogs is listed in Appendix G. The SCC blog content remained very close to the purpose of the individual blogs. The Faculty Learning Center Blog content is very focused on learning tools and online videos designed to help instructors. The Library Blog authors posted the widest range of content focusing on library services, but also including news items relating to research or online tools. The Library Blog may run the greatest risk of crossing into gray areas of acceptable practice simply because it has the widest scope and seems the most willing to take risks. The Sociology Class Blog essentially replaces the college's course management system, but, unlike many course management systems, the blog is public.

Case 3: Research Questions

Question 1: *What control mechanisms have community colleges put in place to guide the publication of information to the World Wide Web using blog technologies?*

The SCC blogs have few control mechanisms around them beyond the knowledge of the organizational culture held by bloggers and the Web policies that do not directly address blogs. Informal participation rules appear to be the primary controls in place around the blogs. Part of this appears to result from the decentralized approach to department-level Web sites in general. Another part of this appears to result from the belief in participation and open contributions to the Web site as being more accurate and most useful for users.

Question 2: *How do these control mechanisms impact the adaptability of blogs to new needs that arise in the environment?*

The blogs at SCC appear to be able to adapt to new needs as they arise. There is no evidence they are limited by the college. Blog technology appears to operate outside of the formal channels of Web management through IT or through Marketing. All participants recognized that IT will not support the blogs and that it is up to the ingenuity and determination of blog authors to utilized and develop the technology.

Question 3: *How do these control mechanisms impact the coupling between the blogging unit and the unit responsible for maintaining Web content within the organization?*

The larger impact of blogs appears to be to decouple the blogging department from IT and from Marketing by taking content outside of the Web infrastructure. Web content is already largely decoupled from outside oversight, but blogs take this a step further. However, there does appear to be some coupling occurring within the informal channels connecting blog authors to those who are interested in the technology. The Library Blog Author is even going so far as to create a server in the library to host blogs for other departments.

Cross Case Analysis

The advantage of the multiple case study is the ability to compare and contrast across cases. Despite the facts that these cases represent very different schools and blogs that serve a range of purposes, a great deal of similarities exists between cases. While the points of difference are equally as important, there is a greater degree of agreement in the implementation and management than difference.

Cross Case Analysis: Themes

Appendix H presents an overview of the four thematic clusters, their associated codes, and the participant who discussed them.

Control Mechanisms

The control mechanisms—policies, budgets, participation rules, and organizational culture—were poorly defined around blogs across all cases. These controls were more formally developed for the colleges' standard 1.0 Web site than they were for the blogs. There was strong evidence that blogs were an avenue around using the 1.0 Web site. In all cases, the processes for initiating and operating a blog were informal relying to a large degree on the organizational knowledge of the blog initiator. The policies that addressed Web technology did not directly address Web 2.0 and offered little guidance. The low cost of blogs removed them from formal approval processes. None of the blog authors had written department-level policies to guide their use. There were no examples of misuse of the technology by staff members. There was a general sense that since no problems had arisen from the campus blogs then there was no need to formalize the rules around them. Participants also emphasized that the organizational leaders needed to place a degree of trust in the blog authors to appropriately use the technology.

Innovations

These cases offer a nuanced view of how blog technologies spread and adapt across the organization. Cases one and three show clear connections between bloggers as one person helps another initiate a new blog, thus re-inventing the technology. Figure 1 provides a visual example of how blog technology diffused on the Eastern Community College campus. Case two is an interesting contrast to the other two. In cases one and three, the bloggers are

administrators or faculty who are active in the governance of campus and thus have a strong awareness of the unwritten rules or the organization. In contrast, the blogs in case 2 are not connected to each other or any other individual on campus. One blog author is in a support staff role and the other teaches in a non-credit program on a secondary campus. The ideas for these blogs came from off campus, and the blog authors provided no evidence of helping to spread the technology on campus.

Case one was made up of the closest knit group of bloggers when compared to the other two schools. The case one bloggers were all aware of each other, they read each other's blogs, and there was a path of diffusion between blogs as the technology spread. Case one was also the smallest of the schools, but it is difficult to clearly attribute this closeness to institutional size. The role of the first innovation champion in case one seems to be a more significant factor. She clearly was an advocate for blogs and ran workshops that helped to spread the technology. She then provided technical support to anyone interested in setting up the blogs. In contrast, participants from case 2 did not identify such a champion on their campus. The Library Blog Author and the Faculty Learning Center blog author in case three definitely played a role in spreading the technology on their campus, but they did not organize training and, therefore, did not have the reach of the innovation champion from case one. Even though it is the mission of the Faculty Learning Center to spread technology, blogs are not one of the primary technologies they are charged with distributing. The Library Blog Author in case three discussed implementing a server to host other departments' blogs, which may put him in a role to enable this technology on a greater scale.

All blog authors indicated they felt free to make changes to their existing blogs. They provided examples of adaptations they had made in terms of design, content, and the use of

related technologies along with their blogs. Several blog authors noted that any future adaptations requiring budgetary resources may be an obstacle to future change, but some blog authors felt that they would be willing to contribute budget money if needed.

There were two primary limits to the adaptability of this technology that emerged from the interviews. The first and most significant was the unofficial nature of blogs on these campuses. In each case, there was not a single department officially charged with supporting or spreading blog technologies. The result of this is that all innovation was from the bottom up, which meant department level staff members had to recognize the benefits of the technology, have the knowledge of and seek help from those who are using blogs, and have support from department leaders to initiate the blog. The second limitation, which was related to the first was, the staffing limitations across the campuses. All of the IT administrators made it clear they did not have the staff to support blogs.

The cases presented evidence that the blogs increased the broader adaptability of the campus by sharing information between departments. Cases one and three provided the best examples of departments sharing knowledge across their campuses. Case two provided evidence of blogs sharing information within the department, but less clear evidence that they spread information across the campus.

Participants in all cases viewed blogs within the context of other technologies. It was clear their understanding of Web 1.0 and email set the context for how participants understood the blogs. Additionally, they also connected the blogs to other 2.0 technologies, especially Facebook and Twitter. When questions about misuse, resocialization, or

termination were asked, experiences with these other technologies were often used to highlight problems or approaches from their campus.

Disintermediation

The theme of disintermediation—bypassing traditional systems of communication—had several dimensions. The first was college employees bypassing traditional media outlets and communicating directly to the public. The second was departments bypassing college channels to communicate directly to the public. All blog authors recognized their blogs were public and they had some responsibility in terms of how they represented the college. Interestingly enough, despite a desire to have a participatory exchange with their audience, almost all blog authors reported very few comments or feedback from readers. The marketing and public relations administrators tended to be the most concerned about who the public saw as representing the official voice of the college even though almost all participants saw this as a potential problem. The Marketing Director and Dean from case three made the strongest arguments that the "official" college voice was not a major concern and empowering employees to reach out and provide information outweighed this concern.

Coupled Relationships

When compared to the standard 1.0 Web sites, the blogs across these cases were largely decoupled from other units. In fact, authors in cases two and three noted that they initiated their blogs in order to bypass some of the requirements placed on the 1.0 Web site. There were a few cases of support from IT or Marketing when initiating blogs, but for the most part, the blogs were implemented and operated with little to no support outside of the department. The blogs in case one are the most tightly coupled example with the innovation

champion working with blog authors to set up and manage their blogs, but even in this example, the publication of content through the blogs is looser than it would be if it was accomplished using the standard college Web site.

There was very little evidence of vertical coupling across cases. Many blog authors indicated they did not need to seek input from above in the organizational structure. Some blog authors did seek approval from immediate supervisors, but there is no evidence that approvals went further than that. The fact that the blogs are low cost removed them from the formal approval process.

Cross Case Analysis: Policy Review

None of the policies directly addressed blogs or Web 2.0 technologies. The policies tended to address legal concerns and not offer guidance to the posting of content to the Web. When policies did address content, it was done in a general way that did not link the technology to the larger purpose of the school or offer a means to submit content for review if there was a question. Thus, gray areas exist between strictly illegal acts and those not deemed an appropriate use of the technology. In all cases, Web policies tended to be more concerned with design requirements than with content creation.

Cross Case: Blog Content Review

The content reviews across cases demonstrate that blog authors remain true to the purpose of their respective blogs despite the fact none of them have formally created policy statements. The contents of the posts reflect the awareness of the unwritten participation rules blog authors discussed. The blogs that have a broader focus run a greater risk of breaking unwritten rules of the organization. These blogs— namely case one library blog, case two

library blog, and case one president's blog—are more likely to have statements of opinion or deal with controversial issues.

Cross Case Analysis: Research Questions

Question 1: *What control mechanisms have community colleges put in place to guide the publication of information to the World Wide Web using blog technologies?*

The control mechanisms around the blogs in these cases tend to be informally defined. They tend to be outside of the budget process and existing policies do not address them. The blog authors must use their understanding of organizational culture and unwritten participation rules to implement and utilize the technology.

Question 2: *How do these control mechanisms impact the adaptability of blogs to new needs that arise in the environment?*

A great degree of adaptability exists around the blogs to meet new needs. For the most part, the control mechanisms do not hamper the adaptability of blogs. However, there is evidence to suggest that new needs requiring organizational support or budget resources may go unmet.

Question 3: *How do these control mechanisms impact the coupling between the blogging unit and the unit responsible for maintaining Web content within the organization?*

To a large degree, blogs decouple the blogging department from units responsible for managing the college Web site. The blogs exist outside of the standard Web infrastructure. Cases one and three suggest the re-invention of blogs across campuses may create coupling between units that had not previously existed.

Opportunities for Examination.

These findings open up an opportunity to examine the ways community colleges manage technology, how technology adapts and spreads across campuses, and how individuals work together to bring about change. Chapter V will consider these issues and the broader implications these findings have for Web 2.0 and technological innovation in community colleges.

CHAPTER V

DISCUSSION

This chapter connects the study's findings to the literature and larger discussions occurring around technology management in community colleges. It explores the loose couplings around blogs, the conundrums of control and adaptability, the need for balance between looseness and tightness, and opportunities for further research. Importantly, the chapter draws a contrast between standard, Web 1.0 sites and the development of Web 2.0 tools like blogs. In this contrast is a warning that the over-simplified organizational controls around 1.0 sites could be implemented around 2.0 tools and stamp out the adaptability that helps organizational members meet new needs in their changing environment.

Community College Blogs and Loose Coupling

The blogs under consideration are textbook examples of loose coupling between units in community colleges. The departmental blogs were both vertically buffered with little to no approvals or oversight from outside supervisors and horizontally buffered from support units across the organization. They were initiated through informal connections and partnerships, and they were largely outside of organizational control mechanisms. They reflect some of the findings presented by Levin (1998) who viewed change in community colleges as interplay between the external environment and internal control. For a variety of purposes including the reduction of local media coverage, a desire to publicize events on campuses, and a desire to spread news about higher education, the blog authors were working to find ways to reach out in the environment while working between internal structures, controls, and limitations.

In a broader sense, the themes related to disintermediation that emerged in this study may demonstrate a further loosening from blogs. Weick (1976/2000) noted that decentralization was a core concept in loose systems. Blogs are a significant move toward the decentralization of content distribution and publication on the Web. Weick (1982b) also noted that specialization within units can lead to looseness because the units become self-contained over time. This is demonstrated by the findings of the present study. Blogs allow local departments to easily distribute information to the public without the support of marketing or public relations departments. Blogs are also fairly easy to operate, so they can be implemented without the support of IT departments.

The initiation of blogs and the management of the standard, 1.0 sites provides some support for Begquist's (1998) notion that community colleges are shifting from a modern, hierarchical approach to a postmodern, networked management approach. The management of the standard 1.0 sites requires direction from individuals in several departments including IT, marketing, and local department content. The use of Web technologies is not a simple hierarchical decision chain. The initiation of blogs demonstrate a downside of this networked management where individuals went around this structure due to its complexity. In a related way, the initiation of blogs also supports Randall's (1992) finding that there exists a formal planning process and an informal process in community colleges. He found the longer an individual is on campus the more tuned into the informal process that person becomes. The evidence from these blogs supports this view of the planning process and that individuals who are more tuned into the informal process, are more likely to implement blogs. This may support one of Nazzaro's (1987) findings that coupling was more likely to exist further up the organizational chart.

Of course, the blogs in this study may also represent the primary disadvantage of loose coupling identified by Weick (1976/2000), which is that these systems can be inefficient and slow to act. While it may be difficult to accurately gauge, one has to question the efficiency with which this technology has spread, considering blogs have been in use on these campuses for many years. Considering this time period, blogs are not very pervasive. Case one demonstrated that some training can help to spread the technology This may support Mars and Ginter (2007) who saw tighter coupling through the use of cross-unit committees and policy as creating a common view of the technology. The lack of awareness of college technology policy by participants support's DeLisse's (2000) recommendations that policies need to be really integrated into the culture and communicated regularly or they will have little impact. Overall, the loosely coupled system model, which was the framework of this study, accurately described the blogging environment of these community colleges.

Conundrums of Control & Adaptability

The conundrums of control and adaptability drove this study. The conundrum of control states that the more an organization establishes control mechanisms around Web 2.0 technologies, the less advantageous these tools will be. But, the less controls, the more risks for the organization (Weinberger, 2007). Formal content reviews, burdensome use guidelines, or technological access limitations would remove the benefits of direct publication to the Web and low technological barriers that Web 2.0 technologies provide. Yet, 2.0 tools bring risks. Blog authors can post offensive or inappropriate content, share internal information with the public, violate student privacy, or criticize college administration or policies. All of these possibilities have the potential to put upper administrators in difficult positions with the public, boards of trustees, system chancellor's

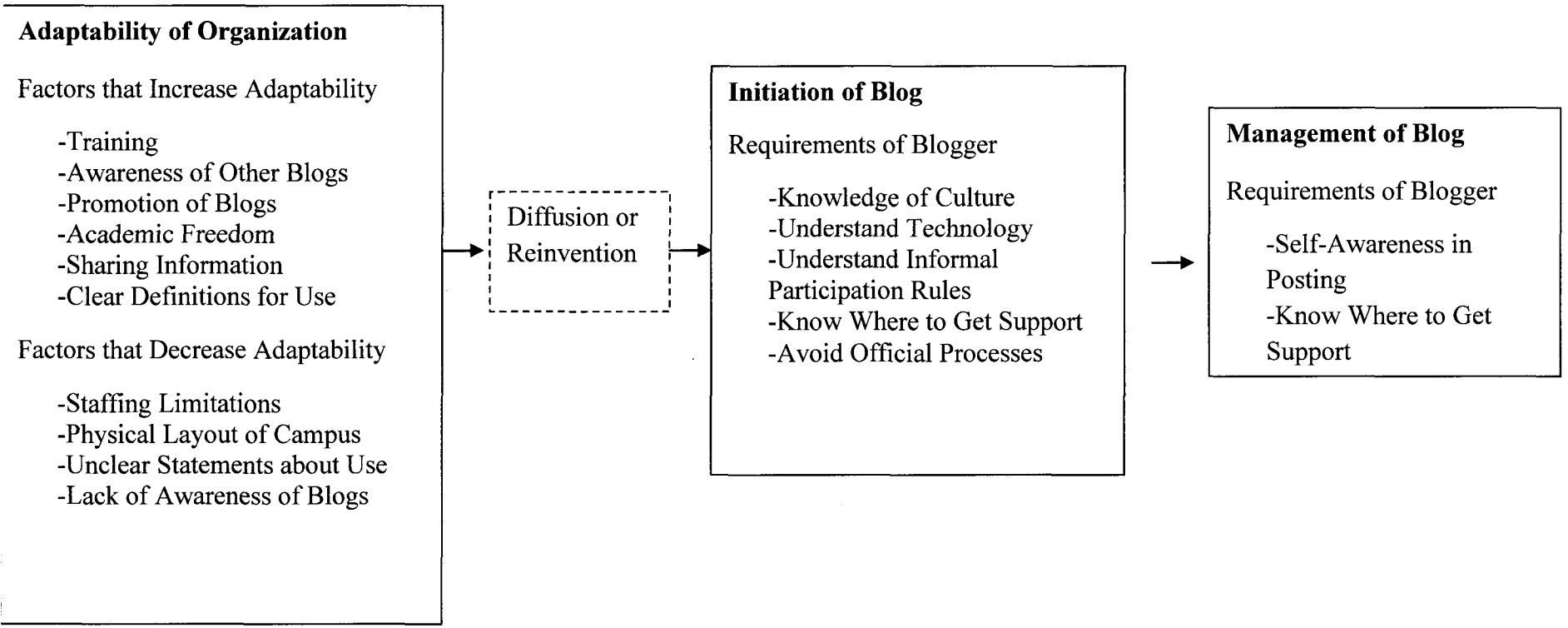
office, or even legal authorities. The conundrum of control forces administrators to consider who gets to represent the college and how it should be done.

In the three cases in this study, there is an absence of control around blogs and around Web 2.0, but blog authors have compensated by drawing on their organizational knowledge and understanding of past technologies. Each blog author remained true to his or her blog's informally defined scope. The authors demonstrated a great degree of self-awareness when they posted content. They recognized the public nature of their content, and they wanted to represent the college in the best possible light. Weick (2001) described the organization as "collections of people trying to make sense of what is happening around them" (5), and it seems the act of blogging on these community college campuses has become an act of sense making. To a large extent, the blogs in these cases operated outside of the formal decision making structure of the colleges. They were a solution to local problems, but they were solutions that made sense within the broader organizational context. Organizational leaders indicated they have not seen any problems with the blogs and have not formalized controls around the technology. Figure 2 presents a visual summary of the blogs in this study. It describes the factors that limit and increase adaptability. It also includes factors that interplay during the initiation process and factors blog authors must consider with using the technology.

The blog authors seemed to agree with the sentiments of Stauffer (2002) and Burstein (2005) both of whom saw the low technology barriers and instant, global publishing offered by blogs as fulfilling the promised democratization of the Web. Blog authors recognized they were bypassing traditional content filters and reaching out on a global scale. However, the blog authors also deflated some of the hype around Web 2.0 and blogs. They did not see the

FIGURE 2

Descriptive Model of Case 1, 2 & 3 Blogs



community participation promised by Sullivan (2008) and Weinberger (Full Text: Keen vs Weinberger, July 18, 2007). Posner (2006) noted that blogs are more effective than traditional media because the blogosphere has a better "error-correction machinery" due to this participatory nature, but it is not clear how this machinery works if readers choose not to participate.

The conundrum of adaptability states the less controls that are put in place, the more adaptable the organizational members can be to meet new needs that arise, but the less able they will be in communicating those adaptations back across the organization. Conversely, tighter controls enable departments to work together through formal structures and shared views of the organization , while limiting the ability to experiment (Blau, 1973; Mitzenburg, 2000; Weick, 1977a). Thus, adaptability is increased when there is horizontal and vertical looseness (Duncan, 1976; Rubin, 1979; Weick, 1982a; Weick, 1982b; Collins, 1983; Weick, 1976/2000; Cameron, 2000; Weick, 1977a; Weick, 2001) because the local unit has more freedom to act and change. This study supports these assertions. The blog authors report a high degree of freedom and few limitations in how they used and changed their blogs. There were no reports of administrators stepping in and forcing changes to the use of blogs.

Cameron (2000) used the term *organizational development* to refer to planned, centralized change across departments. The blogs in this study demonstrated no instances of this. Organizational development is especially effective when the proposed change requires budgetary support and cross-unit cooperation. Since the blogs did not require budgetary support or cooperation of other departments, the change they represented was non-developmental and, instead, were grassroots adaptations. This type of change is in line with the "episodic, discontinuous, and intermittent" process discussed by Weick and Quinn

(1999). They emphasized the episodic nature of change, which is how blogs have emerged in these cases. It is not a smooth process, but one of fits and starts. However, Weick and Quinn (1999) also emphasized *changing* rather than *change*, because the process never really stops. The blogs under consideration are a great example of this. Blog authors discussed an episodic process of initiation, irregular adjustments, and implementation of new uses of the technology. In one sense, each blog posts represents an opportunity for something new whether it be content or embedding other technologies. Blog authors also placed blogs within a broader line of technologies utilized by their organizations. They discussed email and Web 1.0 as informing the use of their blogs and preparing them to move toward other Web 2.0 tools such as Facebook and Twitter.

The blog authors in this study utilized two of the three advantages of loose system outlined by Weick (1976/2000). He noted in loose systems units are insulated and, therefore, able to easily adapt. This is true for these blogs. Loose systems also save money by not requiring coordination between units. This is clearly true in these cases where IT and other units provide little support for the blogs. Blog authors have to find informal ways to implement the technology. The final advantage of loose systems is that innovations can be shared across the system. It is not clear the cases in question are efficiently spreading this technology back across the organization. Clearly, blog technology did spread across cases one and three in this study, but it is not clear how efficiently or evenly this technology spread. All identified blog authors in cases one and three understood how to access the informal networks of their organizations, so some organizational members who were less aware may not have been able to take advantage of the technology. Case two offered a contrast in that the blog authors were at lower levels of the organizational chart, less active in

campus governance, and learned about blogs from external sources. The case two blog authors noted they had not helped anyone else initiate a new blog. Cameron (2000) noted the benefit of adaptation was not just to have isolated pockets of change, but to see useful change spread across the organization.

Weick (1976/2000) said doubt in a loose system can bring change to a halt because individuals will not have confidence to act. Innovation Champion B in case one hinted that the lack of controls around blogs hamper innovation because people do not understand how to use them. In this study, it was not possible to identify individuals who had not heard of blogs or to identify people who heard of blogs but chose not to implement them. But there is evidence to suggest the lack of formal controls around blogs and their existence outside of the formal decision making structure meant there were few support structures to encourage further adaptation and spread of the technology. As noted in Chapter II, we can only see adaptability as a shadow of adaptation. We cannot directly observe adaptability, and, just like administrators in community colleges across the country, it is not possible to really measure adaptability and understand where it doesn't exist.

Another point of comparison within each case that may help shed some light on this is the comparison with the standard, 1.0 Web site. The Web 1.0 sites in these cases have become highly standardized and controlled. While there are generally few limits on what kinds of content can be posted by departments, they have pre-defined templates and technological limitations. The requirements around the 1.0 sites pushed almost all of the blog authors toward the more open and less controlled blog technology. Frei (2006) noted the more services are standardized to the meet the needs of service providers the more users will

have to adjust to utilize the service. If users are forced to adjust too much, they may choose not to use the service. This appears to be the case with Web 1.0 sites in these cases.

Rubin (1979) found that horizontal units that were loosely coupled tended not to support each other unless there was some degree of self-interest involved. Not to oversimplify the three cases, but there is some element of Rubin's findings present with the blogs. In all three cases, IT felt too stretched with too little to gain to help spread blogs. The case three Library Blog Author and case one Innovation Champion A are the two individuals who did the most to spread blogs, and it was clear from their interviews these two benefited in reputation and connections to others from this work. Again, this is only one facet of their work, but there is evidence that self-interest around these blogs impacts the willingness of units to partner together.

The findings of this study are very much in line with the work of Mars and Ginter (2007) who found informal workgroups formed around technology independent of initiatives from above. They found looser systems had more "sporadic" patterns of technology use. They do call for a pattern more tightly coupled around technology in order to see wider use and implementation. If blogs and Web 2.0 do offer advantages to the organization, then the organization would benefit from more tightness to help to spread the technology.

Striking a Balance

As noted in Chapter 1, Cameron (2000) and Ouchi (1978) found there is a need to strike a balance between control and looseness. This balance must limit risks and communicate innovations but still be loose enough to allow for variation and experimentation. The findings of this study suggest a lack of balance, but not because there

are too many controls, but because there are too few. Blog authors have been granted a great deal of freedom to experiment and innovate with blogs. In some instances, administrators may not be aware of blogs, but in most instances, administrators have knowingly given blog authors a free hand. The findings of this study suggest that a little bit of administrative intervention in terms of support and increased awareness for blogs could have significant impact in spreading the technology. The training offered by Innovation Champion A in case one suggests a small amount of support for this training could really spread the technology in significant ways. But administrators need to step in and make this happen, because it is clear IT departments do not want the job.

Additionally, the risks at the heart of the conundrum of control are still real for these three cases. Administrators and blog authors noted there has never been a problem so they did not need to formalize controls, but this is somewhat short sighted. The blog authors have demonstrated a high degree of self-awareness, but this does not mean they will continue to be so aware into the future. Naturally, administrators will always have to grant a degree of trust to blogs authors, since no grouping of control mechanisms can perfectly ensure blog authors will not make a mistake or act irresponsibly. Additionally, as Lessig (1999) noted, there will be latent ambiguities when technologies change and adapt to a point where pre-existing policies do not address the new possibilities that changes bring about. However, administrators could better define how blogs and 2.0 tools fall in line with the college mission and offer guidance on how tools should be used. There may be opportunities for marketing or public relations departments to offer guidance in how to refer to the college or college policy in the very public realm of the Web.

The public relations, IT administrators, and the college president who were part of this study noted they placed a high degree of trust in the individual bloggers on their campuses, but none of these administrators were clear on how they would address a blogger in whom they did not place as much trust. Could any staff member start up a blog and represent the college? At this point, when there were no identified problems with blogs, these administrators did not seem concerned over this prospect.

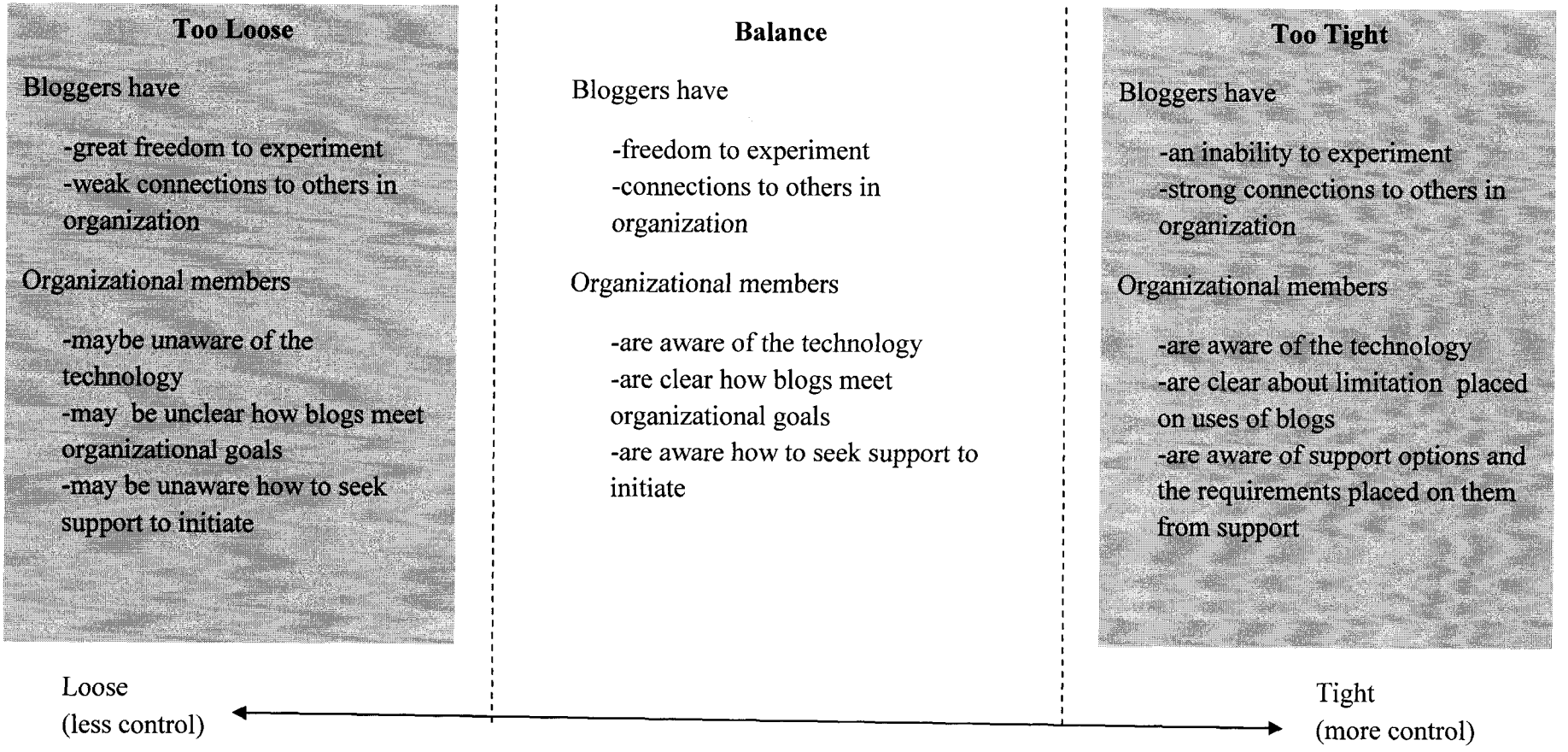
Figure 3 presents a continuum of looseness and tightness in terms of blogs and other Web 2.0 technologies. The three campuses in this study fall on the left side—"Too Loose"—of the continuum. The relationships between the technology and the college goals are poorly defined. The decisions about proper use largely fall on the shoulders of those utilizing the technology. The initiation processes for the technology is largely informal. Naturally, administrators would want to avoid over-tightening the system, because this would hamper the ability of organizational members to experiment. Trust must be given to staff and faculty members to use the technology appropriately, but, at the same time, administrators can work to set up boundaries and shared understandings of the technology.

Implications for Other Web 2.0 Technologies

In these cases, the identified blogs were a very small aspect of the larger college Web sites. The blogs did not have the reach or impact of the standard 1.0 Web site, which may partly explain why they are so loosely coupled and lack organizational controls. However, blogs represent a first step in a new direction. All participants in this study easily connected blogs to other Web 2.0 technologies, especially Facebook and Twitter. Both of these tools have even lower technological barriers to participate. They encourage quick and regular

FIGURE 3

Striking a Balance Between Looseness and Tightness



updates and do not encourage thoughtful, considerate posts. The risks at the heart of the conundrum of control would seem to be more acute for these other tools. The lower technological barriers would increase their adaptability and would presumably help them spread across organizations at a greater pace.

Almost all of the blog authors in this study indicated they used Facebook and Twitter as well as their blogs, so there is strong evidence that these tools are already spreading across campuses. None of the Web policies reviewed for this study addressed any Web 2.0 technologies. Some were broad enough that it would be presumed that 2.0 technologies fell under their scope. Still, these policies offer no guidance and make no recommendations for how tools meet the needs of the college. It would be presumed that college leaders not only want to avoid controversy or conflict that might arise from these tools but also best enable their use to meet organizational needs.

Opportunities for Further Research

This study presents several avenues for further research. First would be a broader examination of blogs in community colleges beyond the three cases included in this study. A wide survey of policy and practice would move toward a more generalized view of this technology in community colleges.

A second direction would be a broader examination of community college Web site management in loose systems. The three cases in this study had fairly controlled and standardized practices around standard, 1.0 Web sites to the point where organizational members found the sites cumbersome to use. Ironically, several participants, including blog authors who said the sites were cumbersome, discussed being part of cross-department

committees which worked to standardize practice. There is potential for an examination of how departmental leaders work together in loose or tight couplings to manage these larger sites.

Another direction would be to examine the use of Facebook & Twitter and other Web 2.0 tools in community colleges. Participants in this study indicated they were using these along with blogs. It is clear they had lower thresholds for initiation in terms of technology, and, as discussed earlier, greater risks surrounding the conundrum for control.

A final area for further research would be a broader examination of control mechanisms in loose systems. The loosely coupled system model was a useful framework for this study, and it would seem to offer many more insights for researchers examining community colleges. The dynamic interplay between individuals and departments within community colleges as they implement, ignore, and remove control mechanisms would appear to be a gold mine for further research.

Underestimating Complexity

The one note that continues to ring at the conclusion of this study is the one struck when comparing the Web 1.0 sites to the blogs. The standard Web sites in each of these cases are much larger, more pervasive into the daily tasks of the college, and utilized by a greater number of organizational members. They are more expansive and require a greater degree of cross-unit cooperation. The standard Web sites in each case are more tightly controlled with standard processes for initiation and defined design templates. It is this standardization that drove almost all of the blog authors to initiate their blogs.

There are many good reasons to standardize 1.0 sites. Among these are standard navigation, consistent designs, and efficiency in providing support to departments starting and maintaining sub-sites. However, those who have participated in simplifying the use of 1.0 sites have limited the technology to a degree where they are not meeting the needs of local departments. More importantly, they lost sight that their jobs were not just to simplify use and standardize practice, but also to facilitate use and meet new needs. As noted in chapter 2, Weick himself said, "My worry when executives say, 'keep it simple, stupid,' is that they're underestimating the complexity of their own organizations and environments" (Coutu, 2003, p. 86). The great promise of the Web in the mid-1990s was its democratizing nature (Blood, 2002; Burstein, 2005), but much of the simplification of the 1.0 sites in these cases have underestimated the complexity of the organization and robbed the technology of this benefit. The ways campus leaders have solved the conundrum of control for 1.0 sites is by tightening down the hatches, limiting variation, and limiting participation.

At this point in history, blogs and other 2.0 technologies are still new and in limited use on campuses. They are not as visible or wide-spread as 1.0 sites, but their potentials seem just as significant. Blog authors are free to experiment and Facebook and Twitter authors are free to implement and utilize these technologies. It is like the mid-1990s all over again. The IT administrators interviewed in this study all noted that their policies did not properly address 2.0 technologies and that at some point in the future they may have to go through the updating process. If use is emphasized and complexity is recognized, control mechanisms could be put in place that foster use and offer guidance that protect the organization while still encouraging local departments to meet their own complex needs. However, the real possibility exists that over-simplified, standardized practices similar to those for 1.0 sites

could be put in place around 2.0 tools. This would surely be a missed opportunity to utilize the advantage that loose systems provide, which is rich innovation, creative practice, and specialized approaches that meet the diverse needs of community college students.

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APPENDIX A

Interview Questions

Interview Questions For Blog Authors

Participant Background

- Name
- Title
- Description of primary job responsibilities
- Description of the unit, # of people, mission, location in organization, Blog Background (purpose, history)
- Purpose/Goals
- Description of Content
- When did you start your blog?
- What process did you use when starting your blog?

Adaptability (new purposes or shifting purpose)

- How have the goals of your blog changed since it was first created?
- What unanticipated changes, if any, have you seen in how your blog is used?
- In what ways do you use your blog that are different than you had anticipated when you first created it?

- Describe the organizational culture of your college.

Control Questions

- How do you know what is appropriate to post?
- Can you describe any times when you have chosen to not post content because you were concerned about how it would be received by others?
- What limits do you have in place within your department for who can post to your blog?
- What resources does your organization have budgeted to support your blog?
- What college policies impact the use of the blog?

Relationship with other units (implementation and use)

- How much do you rely on other departments of your college in order to operate your blog?
- Have you had many comments from other departments or other people on campus about your blog content?
- What, if anything, has your administration/IT/PR dept asked you to change or remove?
- What assessments or evaluations have you conducted to see if your blog(s) has been successful?

Interview Questions For Web Content Managers

Participant Background

- Name
- Title
- Description of primary job responsibilities
- Description of the unit, # of people, mission, location in organization
- Description of Web Content and Workflow to publish information
- How often do you visit the blog or review blog content?

Adaptability (new purposes or shifting purpose)

- What role did you have in the planning and in the implementation of this blog?
- What changes have you noticed in the use or purpose of this blog?
- With whom, if anyone, have to told about this blog, or when have you used this blog as a model for another department?
- Describe the organizational culture of your college.

Control Questions

- Did you have discussions with the blog administrators about what is appropriate to post?

- When, if ever, have you or anyone in your department been contacted about the appropriateness of blog content?
- What college policies impact the use of the blog?

Relationship with other units (implementation and use)

- When, if ever, have you (or members of your department) been asked to help with the operation or implementation of this blog?
- When, if ever, have you had comments from other departments or other people on campus about blog content?
- When, if ever, have you conducted any evaluations or assessments of this blog(s) to see if they have been successful?

APPENDIX B

Letter of Invitation to Participants

Dear [Name],

I am writing to invite you to participate in a multiple case study, An Exploration of the Administration of Community College Blogs, by being interviewed about your involvement with the blog on your campus, [BLOG TITLE]. This blog is an example of the use of blog technology to communicate information within and outside of your college community. Your participation in this study can help expand our understanding of the use of this technology and the broader use of other Web 2.0 technologies. The purpose of this study is to understand how blogs are used and how different departments within the college work together to implement, use, and maintains blogs.

Your interview will provide a unique perspective on these issues. Your participation in this study is entirely voluntary, and you may withdraw your participation at any time. The interview will be conducted over the phone and will last 30 to 60 minutes. The interview will be recorded, and the recording will be transcribed for analysis. You should not expect any risk or discomfort from this study beyond what you would expect in talking on the phone. Your identity will be kept entirely confidential at all times. Your name and position will never be stored with recordings or transcripts. The transcript will be used for analysis only and will not be published or shared with anyone besides the study author and study auditor, who will ensure accuracy and validity of the study. You will be asked to review the interview transcript to ensure that it accurately reflects your views and understanding.

I sincerely thank you for your time and energy in making this study successful. If you have any questions or concerns, I can be contacted via phone at ###-###-#### or via email at [email address].

APPENDIX C

Initial Codebook

1) *Control Mechanisms*: Structures and rules that guide and limit the ways that individuals within an organization make decisions.

   a) Policies: Written guidelines, procedure, or stance intended to guide action.

   b) Culture: Unwritten rules that guide interaction between individuals within the organization.

   c) Budgets: Funding levels that enable or constrain projects.

   d) Participation Rules: Formal and informal rules for decision-making (who is allowed to make the decision)

2) *Types of Innovation* : Different ways that new ideas enter practice within the organization.

   a) *Adaptation*: the implementation of unplanned change that results from individuals solving local problems within their position in the organization.

   b) *Development*: planned, organized, and purposeful change as directed by managers and administrators.

   c) *Adaptability*: The potential for change that exists within an organization which is increased by variation and reduced by standardization.

   d) *Diffusion*: The spreading of an innovation across the organization.

3) *Innovation Outcomes*

a) *Re-Invention*: The degree of change made to an innovation as it spreads across the organization.

b) *Enclaving*: The segregation of an innovation to one specific department or unit to prevent the spread of this innovation within the organization.

c) *Resocialization*: The forced elimination of an innovation within a unit and a return of practice to pre-existing standards.

d) *Termination*: The willful elimination of an innovation within a unit and a return of practice to pre-existing standards.

4) Coupled Relationships

a) *Looseness:* Between individuals, Between Units (divisions of labor), Vertical in Organization (managerial)

b) *No Direction*: Relationship without indication of direction

c) *Tightness*: Between individuals, Between Units, Vertical in Organization (managerial)

APPENDIX D

Initial Codes from Pilot Study

Pilot Codes	Interviews		
	Blog Author	IT Admin	PR Admin
Blog Context—Background	x		
Adaptation	x	x	
Initiation—Coupling	x		
Adaptability—blogs	x		
Adaptability—other technologies	x		
Organizational Culture	x	x	x
Budgets	x		
Policies—related to blogs	x	x	x
Policies—related to other technologies	x	x	x
Looseness	x		
Tightness	x		
1.0 Publishing	x	x	x
Coupling		x	x
Awareness		x	
Diffusion		x	x
Judgment	x	x	x
Vertical Coupling		x	
Horizontal Coupling	x	x	
Control		x	

Related Technologies	x	x	x
2.0 publishing	x		x
Design Templates			x
Termination of Innovation			x

APPENDIX E

Case 1: Easter Community College Descriptive Information

Geographical Area: urban area
Number of students: 5823
Management of Web site: Director of Marketing and her department determine content for college-wide pages on Web site. Marketing generally has review responsibility for content and design of the site. However, departments and faculty members directly post content to their own pages. Marketing worked with IT to create templates for department and faculty pages. IT controls dynamic sections of the site that change and are regularly updated. This content comes from registration, marketing, and other departments. New content for college-wide pages goes to marketing and then to IT for posting.
Policies impacting Web site Name: Policy on the Use of ECC Information Technology Resources,

Interviewees' Relation to Blogs & Official Titles
Library Blog Author: Library Systems Coordinator
Library Secondary Blog Author: Co-Coordinator of Library Services
IT Administrator: Chief Information Technology Officer
College President/Blog Author: College President
Innovation Champion A/Blog Author: Professional Development Coordinator/Professor
PR Blog Author: Director of Public Relations
Innovation Champion B/Blog Author: Executive Director of the National Center for Information and Communications/Professor

Library Blog
Primary Author/Blog Admin: Library Systems Coordinator (faculty position)
Additional authors: six librarians can post, the Blog Admin has ultimate responsibility
Is there an approval process or outside review of content?: No
Purpose: Share ECC Library information, ECC information that relates to the library such as author visits, and other information in media and on the Web related to libraries and information distribution.
Date initiated: 2002
Initiation Process: Blog administrator gathered information from blogs following 9/11. He became aware of blogs and decided to implement one. He had the help of IT to FTP content to a local server that hosts the blog. They did not ask for permission.
Coupling between blogger and other groups: Horizontal coupling with IT for hosting of FTP server for blog content
Internal Blog Policies: Blog Admin talks to new authors and gives places where they can get content, but has no official policies or guidelines.
Resources Budgeted for Blog: None besides staff time

Adaptation in blog operation: Added Flickr account, try to add more images, used for political outreach in a letter writing campaign for college,
Web 1.0 in Department: All content flows through one librarian who is responsible. There appears to be some limitations in how this site changes due to this person's many responsibilities.
Number of Posts January to July 2010: 100
Content: The library blog has a wide array of content from its authors. Between January and July of 2010, most of the posts are related to books or other information sources. Another twelve posts are about library administrative information such as hours of operation, copy machine availability, and the library's scavenger hunt for national library week. Fourteen posts focus on college-wide announcements. These include announcements about FAFSA, new labs opening, graduation information, weather-related closings, and public events. The type and regularity of campus-related events have no order or consistency. The formatting and design of the posts vary greatly. Font size, font color, and use of images are not consistent. Almost all of the posts are within the limits of the technology policy. There was one post about that was labeled as "breaking news" that discussed the state legislature removing several holidays. This short post made mention of insurance premiums and retro pay. This post may not be a direct violation of the college policy since it does not break any laws or violate the policy. However, it does use college resources to publically complain about college policy and payments, which may or may not be deemed as appropriate use.

College President Higher Education Blog
Primary Author/Blog Admin: College President
Additional authors: none
Is there an approval process or outside review of content?: No
Purpose: Discuss issues facing higher education and community colleges. ECC is discussed to highlight issues, but it is not the focus of the blog.
Date initiated: June 2009
Initiation Process: Innovation Champion A helped give idea and set up the blog. She did all set up and design of the blog.
Coupling between blogger and other groups: Coupling with innovation champion for IT support, coupling with marketing to get photos.
Internal Blog Policies: none.
Resources Budgeted for Blog: none.
Adaptation in blog operation: Originally intended to just focus on outside issues and policy discussion, but has moved toward more "human interest stuff" that focuses on the college.
Web 1.0 in Department: Information is distributed through the organizational chart for posting on the 1.0 site. The president does not post information to the site (right?).
Number of Posts January to July 2010: 14
Content: Almost every post of the president's blog works to connect a local issue at ECC

with a broader, national trend. For instance, he discusses the efforts of the college to promote financial aid options to students while framing the discussion with the fact that the federal government spends $40 billion a year in Pell grants. He discusses the local economic down turn and uses this as an opportunity to talk about the business incubator supported by ECC. The president included a photo of ECC students who attended a rally in the state capital for more higher education funding. He also includes photos from several classes and employees. None of the blog posts openly violate any policies. As the president explained in his interview, the posts work to shed a positive light on the college. Of the fourteen posts between January and July of 2010, six of them were about higher education funding or financial aid, two were about workforce development efforts of community colleges, two were about the economic health of the college district, two were about diversity initiatives within the college, one was about a visit the president made to a writing class, and one was about a government report that included the college buildings. While the president's blog is far from controversial, he clearly takes a stand on issues related to the college. He is publically advocating for the college, which comes with its own set of risks.

Re-accreditation Blog
Primary Author/Blog Admin: Innovation Champion A
Additional authors: None, but multiple staff members contribute thoughts and content
Is there an approval process or outside review of content?: no
Purpose: This is part of a collection of pages and documents for the re-accreditation of the college. The blog allows for posting of content with comments by staff members.
Date initiated: Fall 2009
Initiation Process: Innovation Champion started blogs in order for committee members to access information.
Coupling between blogger and other groups or individuals: none, beyond adding content
Internal Blog Policies: none
Resources Budgeted for Blog: none
Adaptation in blog operation: none
Web 1.0 in Department: Not clear.
Number of Posts January to July 2010: Not able to access
Content: not able to access

ECC Public Relations Blog
Primary Author/Blog Admin: PR Administrator
Additional authors: none
Is there an approval process or outside review of content?: none
Purpose: Share news and promote activities at the college. The blog is a part of PR tools such as press releases, radio show, emails to staff, and other outreach efforts of PR department. This was created to compensate for the decline in local media coverage.
Date initiated: June 2009

Initiation Process: An outside friend helped start the blog and then Innovation Champion A helped with final pieces of the set up. This followed the creation of the president's blog.
Coupling between blogger and other groups or individuals: Coupling with innovation champion for IT support. Coupling with IT to post info to the 1.0 Web site.
Internal Blog Policies: none
Resources Budgeted for Blog: none
Adaptation in blog operation: About to start putting video online and post to blog, put links to blog in staff emails, blog replaced the newsletter
Web 1.0 in Department: Press releases and other announcements are sent to IT to be posted to the college news and events page, which is controlled by public relations and not marketing. There is a link to the PR blog from this page.
Number of Posts January to July 2010: 37
Content: The posts between January and July 2010 announce special events on campus, highlight campus award winners, announce scholarship opportunities, discuss newly elected trustees, fundraising events, and new programs among other posts. Many posts include photos. They are short, well-written, and very polished. They include no personal commentary or viewpoints from the blog author. All posts focus on events, news, and people at ECC.

Information Technology Center Blog
Primary Author/Blog Admin: Innovation Champion B
Additional authors: none
Is there an approval process or outside review of content?: no
Purpose: Write about issues that are relevant to the field of information and telecommunications technologies. The blog covers innovations, policy changes, and other outside topics. Not focused on ECC.
Date initiated: 2005
Initiation Process: All hosted internally by the technology center. The webmaster helped set up some of it.
Coupling between blogger and other groups or individuals: Webmaster helped set up the blog at the beginning but that was only at the start
Internal Blog Policies: none
Resources Budgeted for Blog: none
Adaptation in blog operation: Shift in content focus over time from more broadband discussion to other topics. He posts less content these days due primarily to Twitter.
Web 1.0 in Department: The staff of the technology center posts their own information to their 1.0 Web site. The 1.0 site acts as a gateway to their 2.0 tools.
Number of Posts January to July 2010: 48
Content: The blog posts between January and July 2010 do not mention ECC at all. It entirely focuses on technology-related topics such as mobile devices, the new iPad, cloud computing, and broadband issues. There is one post about college online learning programs that would seem a clear avenue into discussing the local campus, but this post does not mention ECC at all. These posts are entirely issue-oriented within the field of the faculty author. They are of a nature that many non-technologically experience readers would

probably not find them very useful or interesting. They do not violate campus policies or run the risk of violating unwritten participation rules.

APPENDIX F

Case 2: Northwest Community College Descriptive Information

Geographical Area: Urban
Number of students: 9185
Management of Web site: The NCC Web site is largely decentralized. The Marketing and Public Relations Department controls content on top-level pages including the homepage, news releases, success stories, and other more visible content areas. IT manages the entire infrastructure. Individual departments control the content on their own pages. The IT department offers technical support in posting content to the site. IT tries to designate an individual within a department to use the campus content management system to publish and maintain information to departmental pages. In cases where an individual cannot be identified within a department, then IT will publish content for a department. There has been an inter-departmental committee that oversees and sets policy for the Web site, but that committee is no longer active. This committee was instrumental in defining the policies that currently exist to govern the Web site.
Policies impacting Web site: Appropriate Use Policy, Web guide, Writer's Style Guide for NCC

Interviewees' Relation to Blogs & Official Titles
Blog Author Art Department: Archivist/Administrative Assistant
Blog Author Massage Therapy Program: Massage Instructor
Chief Information Officer: Chief Information Officer
Public Information Officer: Public Information Officer

Art Department Blog
Primary Author/Blog Admin: Archivist/ Administrative Assistant
Additional authors: 0
Is there an approval process or outside review of content?: No
Purpose: Share and promote events, art shows, and other information related to the NCC Art Department.
Date initiated: 2007
Initiation Process: The blog author was aware of Web 2.0 technologies through her involvement with outside groups as the campus archivist. The 1.0 Web page for the department was "unusable" so the blog was an avenue to get information out to the Web. She brought the idea to the dean, who approved the use of the blog. There is no evidence that any approvals beyond the dean were requested or given.
Coupling between blogger and other groups: Coupling between blog author and members of the Art Department for posting information on the blog.
Internal Blog Policies: none
Resources Budgeted for Blog: None besides staff time
Adaptation in blog operation: The format for blog posts has evolved over time so that now there is more of a standard format for posting information about art shows and other events.
Web 1.0 in Department: There is a departmental Web site. The responsibility for maintaining the site was given to the blog author at the time of the interview. The Blog

Author stated that part of the reason for starting the blog was that the 1.0 site was not useful.
Number of Posts January to July 2010: 27
Content: All of the Art Department Blog content focuses on department activities or the activities of faculty members. Out of the twenty-seven posts between January and July of 2010, ten were about on campus art exhibits, and another nine were about off campus art exhibits by college faculty members. This made up a bulk of the blog content. Three posts were about workshops or class, two more were about lectures held on campus, one linked to another blog post where a blog author wrote about visiting the art gallery, one post was about a local art award, and another post was about a faculty member traveling to Italy for professional development.

Massage Program Blog
Primary Author/Blog Admin: Massage Instructor
Additional authors: 0
Is there an approval process or outside review of content?: No
Purpose: Share information with Massage students about program
Date initiated: 2008
Initiation Process: This blog was started with the approval of the dean. Marketing and Publications staff designed the graphics. No other support was given.
Coupling between blogger and other groups: The only coupling that exists is that content is given to the blog author by members of the department. At the time of initiation, staff in Marketing and Publications designed images for the blog.
Internal Blog Policies: none
Resources Budgeted for Blog: None besides staff time
Adaptation in blog operation: The static pages of the blog are the primary pages that are used. The actual blog posts are a secondary link. The blog was reorganized to place the static pages first.
Web 1.0 in Department: There is a 1.0 page that links to the blog. The blog author indicated that the department chose to use the blog because using the 1.0 page was too cumbersome.
Number of Posts January to July 2010: 1
Content: This is a unique implementation of blog technologies. The static pages, which are typically secondary pages linked off of the blog, are the primary pages used to share information to students. It appears that the blog author posts to the "blog" section of the site about once s semester as a sort of news update. The one post between January and July 2010 was about a spring 2010 law and ethics class. The static pages include contact information and a detailed frequently-asked-questions section that includes a description of the curriculum, costs, and bookstore information.

APPENDIX G:

Case 3: Southwest City College Descriptive Information

Geographical Area: Urban
Number of students: 15,811
Management of Web site: The SCC Web site is divided into several levels, which are managed according to the policy established by the Web team. The top-level pages of the college site are managed by marketing with the support of IT. Some content areas such as course descriptions are locked down and more tightly controlled. The Web team is a cross-department Web team that sets policy and oversees the site. This team selected the college's content management system and set policy. This team appears to be less active now that the site has been redesigned and is operational. Departments directly publish content on their sub-sites of the college Web site, within the predefined design templates. Departments that manage their own sites are required to have one, or more, people go through training with the faculty training center.
Policies impacting Web site: Policy Document, Web Standards: BP 3721, SCC Electronic Communications Policies (SCC Administrative Regulations 3620.1)

Interviews
Library Blog Author
Director of Marketing
IT Manager
Blog Author & Department Chair
Dean
Faculty Learning Center Blog Author

Library Blog
Primary Author/Blog Admin: Library Director
Additional authors: 2 librarians
Is there an approval process or outside review of content?: No
Purpose: Share information on library news & events, items useful to students for research, and other items that stimulates thinking.
Date initiated: 2006
Initiation Process: The library blog was initiated when the current library director was the Technology Librarian. He had the approval of the library director at the time. The blog was initially hosted on the main campus Web server by IT, but IT did not like the idea of the blog being on the primary server so they set up a virtual server for the library's blog.
Coupling between blogger and other groups: The virtual server that hosts the blog is maintained by IT and domain name is provided by IT, but the library blog author maintains the software on the server. The library also uses the blog as a way to connect library services to the work of other departments by posting about activities, programs, and events on campus and linking to library resources related to these activities.
Internal Blog Policies: none
Resources Budgeted for Blog: None besides staff time
Adaptation in blog operation: Several adaptations were clear. First, the blog has moved

from the main campus Web server to a virtualized machine. The blog author indicated that his next upgrade in software would allow him to host blogs for other departments. Another adaptation of the blog is in its use in connecting with other departments. The librarians use this to post information about events and programs that other departments are doing.
Web 1.0 in Department: The library has a standard 1.0 Web site that is maintained by the library blog author. This site links to the blog. However, the library blog is the primary page for the library that links to research tools and other library services. The 1.0 site is more a landing page created by IT and marketing.
Number of Posts January to July 2010: 10
Content: The ten posts during this 6 month period are closely tied to the library's mission. They include posts on a diversity month essay contest, announcements about library hours, an announcement about a community reading project, and information about new items added to the library collection. The diversity essay was the only post about a project related to an outside area of campus, which was to the student-club diversity activities.

Faculty Learning Center Blog
Primary Author/Blog Admin: Director of Instructional Technology/Co-Director of Faculty Learning Center
Additional authors: 4
Is there an approval process or outside review of content?: No
Purpose: Shares information about FLC news and events and information related to educational technology. This blog also acts as a general Web site for the FLC.
Date initiated: 2001
Initiation Process: Started blog when WordPress first became available. They already had their own Web server in the Faculty Learning Center, so they downloaded Wordpress and installed. They did not seek permission from anyone higher on the organizational chart. IT offered no support.
Coupling between blogger and other groups: none, beyond the maintenance of the basic technology infrastructure from IT.
Internal Blog Policies: None.
Resources Budgeted for Blog: None besides staff time
Adaptation in blog operation: The blog has undergone several design changes to keep up with the changes made to the larger college Web site. The blog has seen new technologies such as video or power point slides be embedded in posts. Largely, the blog has remained focused on its primary purpose.
Web 1.0 in Department: The Faculty Learning Center has had a 1.0 site, but the blog largely replaces that site.
Number of Posts January to July 2010: 11
Content: The eleven posts include a video presentation, instructions on posting power point slides to YouTube, updates about campus technology tools, and information on copyright. Eight of these blog posts directly concern pedagogical approach or teaching technologies. The posts are very close to the purpose of the blog with essentially no posts that express opinions, current events, or campus happenings.

Deans' Blog (proposed)
Primary Author/Blog Admin: Dean of Educational Programs

Additional authors: 2 additional deans (others may be added)
Is there an approval process or outside review of content?: None proposed
Purpose: This blog is still being conceptualized. It has not started yet. It is envisioned as being an information sharing tool for all of the campus deans to use to share information and show off projects on campus.
Date initiated: 2010
Initiation Process: The process was underway at the time of interviews. The deans were all meeting to talk about their goals. The Vice President had been made aware of the blog. Coupling between blogger and other groups: This blog is a case of couple between the deans across subdivisions.
Internal Blog Policies: none
Resources Budgeted for Blog: None besides staff time
Adaptation in blog operation: none
Web 1.0 in Department: none
Number of Posts January to July 2010: none
Content: There is no content on this blog.

Sociology Class Blog
Primary Author/Blog Admin: Professor of Sociology and Department Chair
Additional authors: none
Is there an approval process or outside review of content?: no
Purpose: Resource site for students in sociology. Place for faculty member to post files and links that students need for her classes.
Date initiated: 2006-2007
Initiation Process: The faculty member was not very happy with the options the campus provided for online support for her classes. She noted that the options were not "flexible." She consulted with the Faculty Resource Center, and they suggested that she start a WordPress blog.
Coupling between blogger and other groups: Horizontal coupling at initiation with the Faculty Learning Center at the initiation of this blog
Internal Blog Policies: none
Resources Budgeted for Blog: None besides staff time
Adaptation in blog operation: None that is apparent. The use of this software is very focused and controlled around support for the classes.
Web 1.0 in Department: None that is apparent
Number of Posts January to July 2010: Does not apply
Content: This faculty member is essentially using the Wordpress blog software to host a static site. She does not make regular posts. The site consists of three pages. One is a general landing page that links to pages for each class that she teaches. The class pages contain links to articles, files, and videos for students.

APPENDIX H

Thematic Clusters

r = discussion of code in the context not directly related to blogs

Thematic Cluster	**Code Defined**	**Case 1**	**Case 2**	**Case 3**
Control Mechanisms	**Budget:** discussion of the financial resources devoted to blogs	Library B.A. Library 2nd B.A. IT Admin (r) College Pres. PR B.A. In. Champ A. In. Champ B.	B.A.Art B.A. Mass PIO	B.A. Dean Dept. Chair Lib. B.A. IT Admin Dir. Market B.A. F.L.C.
	Policies: Written guidelines, procedure, or stance intended to guide action	Library B.A. Library 2nd B.A. IT Admin College Pres. PR B.A. In. Champ A. In. Champ B.	B.A.Art B.A. Mass CIO PIO	B.A. Dean Dept. Chair Lib. B.A. IT Admin Dir. Market B.A. F.L.C.
	Updating policies: expression of plans to update policies	Library B.A.	B.A.Art CIO	None
	Part Rules-College-Wide: Formal and informal rules across the entire college for decision-making	Library B.A. Library 2nd B.A. IT Admin College Pres. PR B.A. In. Champ A. In. Champ B.	B.A.Art B.A. Mass CIO PIO	B.A. Dean Dept. Chair Libr. B.A. IT Admin Dir. Market B.A. F.L.C.
	Part Rules-local department: Formal and informal rules within a unit for decision-making	Library B.A. Library 2nd B.A. College Pres. In. Champ B..	B.A.Art B.A. Mass	B.A. Dean Dept. Chair Lib. B.A. B.A. F.L.C.
	Culture: Unwritten rules that guide interaction between	Library B.A. Library 2nd B.A. IT Admin College Pres. In. Champ A.	PIO B.A. Mass	B.A. Dean Dept. Chair Lib. B.A. Dir. Market B.A. F.L.C.

	individuals within the organization	In. Champ B.		
	Design: discussion of the look & feel of a Web page	Library B.A. IT Admin (r) PR B.A.	B.A. Mass CIO	Dept. Chair IT Admin Dir. Market B.A. F.L.C.
	Organization size: expression of the way that the organizational size impacts control mechanisms as related to technology	Library B.A. College Pres.	PIO	none
	Trust: expression of the idea that the organization needs to trust employees to use blogs or technology appropriately	Library B.A. IT Admin College Pres. PR B.A. In. Champ A. In. Champ B.	B.A.Art CIO PIO	B.A. Dean Dept. Chair Lib. B.A. IT Admin Dir. Market B.A. F.L.C.
	Misuse: the inappropriate use of technology that violates a policy or participation rule	Library B.A. IT Admin. (r) College Pres. PR B.A. In. Champ B.	B.A.Art CIO	B.A. Dean Dept. Chair IT Admin Dir. Market
Innovation	**Adaptability:** The potential for change that exists within an organization which is increased by variation and reduced by standardization	Library B.A. IT Admin In. Champ A. In. Champ B.	B.A.Art B.A. Mass	B.A. Dean Dept. Chair Lib. B.A. IT Admin Dir. Market B.A. F.L.C.
	Training: expression of the impact of training or the lack of training on blogs	Library B.A. In. Champ B.	B.A. Mass	B.A. Dean Lib. B.A. (r) IT Admin (r) Dir. Markt (r)
	Awareness of	Library B.A.	B.A.Art	B.A. Dean

	Other Blogs: evidence that the interviewee has knowledge of one of the campus blogs	Library 2nd B.A. IT Admin College Pres. In. Champ A. In. Champ B.	B.A. Mass CIO PIO	Dept. Chair Lib. B.A. IT Admin Dir. Market B.A. F.L.C.
	Promotion: evidence of active work to promote a blog	Library B.A. IT Admin College Pres. PR B.A. In. Champ B.	PIO	Lib. B.A. B.A. F.L.C.
	Academic Freedom: reference made to faculty members' academic freedom in putting out blog content	IT Admin College Pres. In. Champ A.	none	Lib. B.A. Dir. Market B.A. F.L.C.
	Sharing Information: the distribution of information on a blog that may contribute to adaptability	Library B.A. Library 2nd B.A. IT Admin College Pres. PR B.A. In. Champ A. In. Champ B.	B.A.Art B.A. Mass PIO	B.A. Dean Lib. B.A. IT Admin Dir. Market B.A. F.L.C.
	Staffing Limitations: expression of the inability to take action due to the lack staffing	Library B.A. Library 2nd B.A. IT Admin In. Champ A.	B.A.Art B.A. Mass CIO PIO	Dept. Chair Lib. B.A. IT Admin B.A. F.L.C.
	Technological infrastructure: expression of idea that there needs to be supporting computer hardware and networks that enable online participation	Library B.A. IT Admin (r) College Pres.	CIO (r)	B.A. F.L.C.
	Physical Layout of Campus: expression of the	College Pres.	B.A. Mass	none

	way that the organization's physical layout impacts spread of information			
	Audience Limits: expression of the inability to use technology due to limits in audience	none	B.A. Mass	B.A. F.L.C.
	Adaptation: The implementation of unplanned change that results from individuals solving local problems within their position in the organization	Library B.A. Library 2nd B.A. College Pres. PR B.A. In. Champ A. In. Champ B.	B.A.Art B.A. Mass CIO PIO	B.A. Dean Dept. Chair Library B.A. IT Admin Dir. Market B.A. F.L.C.
	Diffusion-external: The spreading of an innovation beyond the organization	Library B.A. PR B.A. In. Champ B.	none	none
	Diffusion-internal: The spreading of an innovation across the organization	Library B.A. Library 2nd B.A. IT Admin College Pres. PR B.A. In. Champ A. In. Champ B.	B.A.Art B.A. Mass CIO	B.A. Dean Dept. Chair Lib. B.A. IT Admin Dir. Market
	Web1.0: expression of html-based Web technologies that tend not to be interactive, standard Web page	Library B.A. Library 2nd B.A. IT Admin College Pres. PR B.A. In. Champ A. In. Champ B.	B.A.Art B.A. Mass CIO PIO	Dept. Chair Lib. B.A. IT Admin Dir. Market B.A. F.L.C.
	Web2.0: expression of participatory & community Web	Library B.A. Library 2nd B.A. IT Admin PR B.A.	B.A.Art B.A. Mass CIO PIO	B.A. Dean Dept. Chair Lib. B.A. IT Admin

	tools besides such as blogs	In. Champ A. In. Champ B.		Dir. Market B.A. F.L.C.
	Resocialization: The forced elimination of an innovation within a unit and a return of practice to pre-existing standards	Library B.A. (r)	CIO	Dir. Market
	Self-awareness: The self-imposed limitations placed on a blog author that are a result of control mechanisms	Library B.A. Library 2nd B.A. IT Admin College Pres. PR B.A. In. Champ A. In. Champ B.	B.A.Art B.A. Mass	B.A. Dean Dept. Chair Lib. B.A. Dir. Market B.A. F.L.C.
	Termination: The willful elimination of an innovation within a unit and a return of practice to pre-existing standard	Library 2nd B.A. (r) IT Admin In. Champ A. (r)	none	none
	Motivation to blog: comments made by blog authors referring to the things that motivate them to blog	Library B.A. Library 2nd B.A. IT Admin PR B.A.	B.A.Art	None
	Legal concerns: expression of legal ramifications of technology use	Library B.A. College Pres.	none	IT Admin
	Editing Blog Post: discussion of changing a previously published blog post	Library B.A. Library 2nd B.A. IT Admin College Pres. PR B.A.	none	B.A. F.L.C.
Disintermediation	**Marketing:** expression of using a blog for marketing or	Library B.A. Library 2nd B.A. IT Admin College Pres.	B.A.Art CIO PIO	B.A. Dean Lib. B.A. Dir. Market B.A. F.L.C.

	outreach purposes	PR B.A. In. Champ B.		
	Comments: discussion of reader comments on blogs	Library B.A. Library 2nd B.A. IT Admin In. Champ A. In. Champ B.	B.A.Art B.A. Mass PIO	Dept. Chair Lib. B.A. Dir. Market B.A. F.L.C.
	Media-blogs replace: expression of blogs replacing media outlets or filling a gap created by the lack of media coverage	IT Admin College Pres. PR B.A. In. Champ A. In. Champ B.	B.A.Art PIO	B.A. Dean B.A. F.L.C.
Coupled Relationships	**Coupling-horizontal:** action taken by individuals in two different units that partner across the organizational structure	Library B.A. Library 2nd B.A. IT Admin College Pres. PR B.A. In. Champ A. In. Champ B.	B.A.Art B.A. Mass CIO PIO	B.A. Dean Dept. Chair Lib. B.A. IT Admin Dir. Market B.A. F.L.C.
	Coupling-vertical: action taken by individuals in two different units that partner up and down the organizational structure	Library B.A. Library 2nd B.A. In. Champ B.	B.A. Mass	Dept. Chair Lib. B.A. IT Admin Dir. Market B.A. F.L.C.

APPENDIX I

External Auditor Report
Conducted by Sylvia Jenkins, Ph.D.
November 15, 2010

Title of Dissertation: *The Administration of Community College Blogs: Considering Control and Adaptability in Loosely Coupled Systems*

Purpose of External Audit: The external audit is intended to be a procedural review intended to increase the trustworthiness of the data by ensuring that findings are grounded in the actual data.

Documents submitted for the Audit:

- Draft of dissertation proposal dated January 7, 2010
- Interview transcripts
- Coded interview transcripts printed from Atlas.ti software
- Code summaries for each case
- Draft of CHAPTER IV: Findings

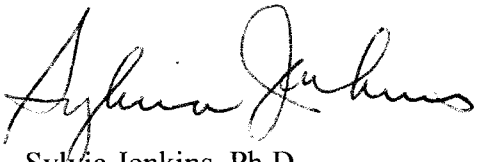
Audit Process: An initial meeting was held between the auditor and the dissertation author on July 20, 2010. In this meeting, a discussion was held about the study's goals and processes. Following this meeting the auditor read the first three chapters of the dissertation taking specific note of the study research questions and methods discussed in CHAPTER III. After this reading, the auditor read the un-coded interview transcripts noting sections that could represent emergent themes. A second meeting was held on September 8, 2010 where these themes were discussed and compared to the themes found by the author. Following this meeting, the auditor reviewed the author's coded transcripts. A meeting between the author and auditor was held on October 12, 2010 where the study findings were reviewed. Following this meeting, the auditor reviewed CHAPTER IV of the dissertation in detail. A final meeting between the author and auditor was held on November 15, 2010 at which time the audit report was finalized and signed by the auditor.

Findings of the Audit: Based on the documents provided and the discussions held with the author, this audit supports the trustworthiness of the study's findings. Specifically this audit finds that:

- the study's findings are represented in the interview data,
- the author directly addressed the study research questions in the participant interviews,

- And the author adequately followed the procedures and methods outlined in CHAPTER III of the study.

Attested to by



Sylvia Jenkins, Ph.D.
Vice President of Academic Affairs
Moraine Valley Community College
Palos Hills, Illinois

VITA

Troy A. Swanson
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t_swanson@hotmail.com
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Education

Doctorate of Philosophy—Community College Leadership
Old Dominion University, Norfolk, Virginia
Dissertation: *The Administration of Community College Blogs: Considering Control and Adaptability in Loosely Coupled Systems*

Administrative Internship: Curriculum Development Process Evaluation, Kankakee Community College, Kankakee, Illinois
Worked directly with the Vice President of Instruction and Student Services and the Dean of Instruction to review the college's curriculum development process. Completed a thorough review of documents, interviewed staff, and conducted a faculty survey to evaluate the existing process and suggest improvements for the future.

Master's of Library and Information Science,
Dominican University, Graduate School of Library and Information Science, River Forest, Illinois
May 2000

Bachelor of Arts,
Augustana College, Rock Island, Illinois
Majors in History and Political Science, May 1998

Experience

Teaching and Learning Librarian,
Moraine Valley Community College Library, Palos Hills, Illinois
June 2000-Present, Tenure granted Fall of 2003

Primary Responsibilities: Teach information literacy sessions, manage library Web site, direct library public events and marketing, and perform reference duties.

Highlights: Coordinator of library's One Book, One College program for which I was awarded Moraine Valley's Master Teacher Award in 2008. Implemented the Critical Information Literacy Model in selected composition classes, which received Moraine Valley's Innovation of the Year Award in 2002. Conducted research into use of epistemological surveys as information literacy assessment. Implemented first Web

logs on the Moraine Valley campus. Grant writer and coordinator for community wide event, Frankenstein: Penetrating the Secrets of Nature, which provided cultural programming across the Moraine Valley district in partnership with nine public libraries in the Spring of 2004.

Selected Moraine Valley Committee Work:

- Co-chair Academic Integrity Task Group, Fall 2008-present
- Co-chair AQIP Systems Portfolio Subcommittee, Student and Administrative Services, November 2006-January 2008
- Co-chair AQIP Project Action Team, Diversity and Inclusion: Review College Practices and Processes to Better Address and Infuse Diversity throughout the Institution.
- Member of the Faculty Development Committee.
- Member of Initial Online Learning Support Team, 2000-2001.
- Member of Moraine Valley Faculty Association Executive Committee.
- Vice President, Moraine Valley Faculty Association, Summer 2006-present
- Coordinator, Moraine Valley Faculty Association, Fall 2002-Spring 2006
- Member of the 2002 & 2006 Contract Negotiating Teams for the Moraine Valley Faculty Association.
- Representative to House of Representatives for Cook County Community College Teachers Union Local 1600, American Federation of Teachers, Fall 2004-present
- Delegate to the Illinois Federation of Teachers Convention, October 2010

Library Intern,
Joseph Schaffner Library, Northwestern University, Chicago, Illinois
September 1999 – May 2000
Aided students of the Kellogg School of Business, University College, the Medill School of Journalism, and the Institute for Learning in Retirement in finding information from various resources within the Northwestern University Library System, and performed bibliographic instruction with students on an individual basis, with emphasis on search strategies using the OPAC, online databases, and the World Wide Web.

Government Documents Student Librarian,
Rebecca Crown Library, Dominican University, River Forest, Illinois
January 1999-April 1999
Used Superintendent of Documents Classification Numbers, and processed newly arrived government documents into existing collection

Practicum,
Library and Research Center, American Library Association, Chicago, Illinois
September 1999-December 1999
Compiled Annotated Bibliographies using bibliographic and online resources in the

LARC in order to update the LARC Fact Sheets, attended ALA Unit Heads meetings with LARC Staff, and wrote practicum final paper concerning the role of ALA in defining the future of the information professional

Library Intern,
Presidio Trust Library, Presidio of San Francisco, Golden Gate National Recreation Area, San Francisco, California
Summer 1999

Library Assistant,
Augustana College Library, Rock Island, Illinois
September of 1994-May of 1998

Related Experience

Web site Manager
Cook County Community College Teachers Unions, Local 1600
July 2004-May 2006
Worked with union officers to update and add content to Web site

Intern,
International Relations Office, American Library Association, Chicago, Illinois
February 2000-July 2000
Coordinated International Librarian Mentor Program for 2000 annual conference, oversaw hotel reservations for international guests for 2000 annual conference, researched grant writing and other funding projects for IRO office

Stumpers Mailserv Moderator,
Dominican University, River Forest, Illinois
Fall of 1998 – April 1999
Administrated exchanges of information over email for Library and Information Science Department's mailserve that solves reference questions that have reference librarians "stumped"

Archives Intern,
Bishop Hill Heritage Association, Bishop Hill, Illinois
Summer 1998
Completed a survey the archival collection of Swedish-American documents from the 1830s-1950s, created finding aids, implemented protection strategies for archival materials, and assisted in design of museum exhibits, and performed clerical duties

Research Assistant,
History Department, Augustana College, Rock Island, Illinois
Spring and Fall of 1997

Assisted Dr. Lendol Calder in researching his 1998 book on the history of consumer credit, *Financing the American Dream*

Peer Reviewed Publications

- Swanson, Troy A. and Jeremy Green (in press). Why we are not Google: Lessons from a Library Web site Usability Study. *Journal of Academic Librarianship.*
- Green, Jeremy and Troy A. Swanson (in press). Tightening the System: Reference as a Loosely Coupled System. *Journal of Library Administration.*
- Swanson, Troy A. (2010). Information is personal: Critical information literacy and personal epistemology. In E. Drabinski, A, Kumbier, & M. Accardi (Eds.), *Critical library instruction: Theories and method*s. Duluth, MN: Library Juice Press.
- Swanson, Troy A. (2006). Information Literacy, Personal Epistemology, and Knowledge Construction: Potential and Possibilities. *College & Undergraduate Libraries*. 13:3, 93-112.
- Swanson, Troy A. (2006). Looking to the Future: Implementing Blogs in a Community College Library. *Internet Reference Services Quarterly*. 11:3, 55-65.
- Swanson, Troy A. (2006). ADDIE in the Library: Building a Model for the Information Age Library. *Community and Junior College Libraries Journal*. 13:2, 53-63.
- Swanson, Troy A. (2005). Teaching Students *About* Information: A Critical Approach to Information Literacy. *Research Strategies*. 20:4, 322-333.
- Swanson, Troy A. (2004). Applying a Critical Pedagogical Perspective to Information Literacy Standards. *Community and Junior College Libraries Journal*. 12:4, 65-77.
- Swanson, Troy A. (2004). A Radical Step: Implementing A Critical Information Literacy Model." *portal: Libraries and the Academy*. 4:2, 259-273. (Select for the Library Instruction Round Table's list of top instruction articles for 2004).
- Swanson, Troy A. (2001). From Creating Web Pages to Creating Web Sites: The Use of Information Architecture in Library Web Site Redesign. *Internet Reference Services Quarterly*, 6:1, 1-12.

Textbooks

- DeVillez, Eric, Tom Dow, Mike McGuire, and Troy Swanson (2010). *Why White Rice?: Thinking Through Writing*. Dubuque, IA: Kendall Hunt Publishing Company.

Other Publications

- Swanson, Troy A. (2008). Google Maps and Second Life: Virtual platforms meet information literacy. *College & Research Libraries News*. 69:10.
- Swanson, Troy A. (2002). Cycles of Support: Iowa's Libraries Get Extra Mileage Out of the State's Annual Bike-a-Thon. *American Libraries*. 44-46.
- Swanson, Troy A. (2001). America: History and Life and Historical Abstracts (review). *Library Journal*, 126:20, 187.

- Swanson, Troy A. (2001). ALLDATA Online (review). *Library Journal*, 126:15, 121.
- Swanson, Troy A. (2000). They're the DJs, We're the Rappers. *American Libraries*. 31:3, 32-33.
- Swanson, Troy A. (1998). Those Crazy Swedes: Outside Influence on the Dissolution of the Bishop Hill Colony. in *Nobler Things to View: Collected Essays of the Erik-Jannsonists*. Bishop Hill, IL: Bishop Hill Heritage Association, 1998.

Professional Presentations

- Co-Presented, I Can't Prove that the Government Didn't Cause 9/11: Bigfoot, Information Literacy and Argument, Information Literacy Summit, April 13, 2010
- Co-Presented, Integrating Second Life & Google Maps: Malcolm X Across Platforms, Computers in Libraries 2008, Arlington, Virginia, April 9, 2008.
- Presented, Control and Survival in the Web 2.0 World: Issues and Practical Applications, Northsuburban Library System, January 2008.
- Presented, The Web 2.0 World, Reference Association of South Suburban Libraries, December 2007
- Presented Feeding the Web: Blogs as Makeshift Content Management Systems at Metropolitan Library System's Library 2.0: Delivering Twice the Value, May 4, 2007.
- Presented What Do Students Know About Information? An Initial Assessment of Evaluation, Purpose, & Value of Information at the 2007 Information Literacy Summit, April 19, 2007.
- Presented Seeking Knowledge: Student Judgment, Epistemology, and First-Year Writing to Information Literacy Illinois Working Group, April 6, 2006.
- Presented Marketing Library Services, South Metropolitan Higher Education Consortium, May 18, 2005.
- Co-presented University Web Logs, Internet Librarian 2004, Monterey, California, November 17, 2004.
- Co-presented Putting Your Site to the Test: A Web site Usability Study, 7th Annual Assessment Fair for Community Colleges, South Suburban College, South Holland, Illinois, February 25, 2003.
- Co-presented Teaching Toward Information Literacy, Innovations Conference 2002, Boston, Massachusetts, League for Innovation in the Community College.
- Co-taught "Integrating Information Literacy Into the Curriculum," League for Innovation's Conference on Information Technology, Long Beach, California, November 17, 2002.
- Panel Member Public Programs Office's Preconference Creating Community Dialog: Cultural Programs for Adults," American Library Association Annual Conference, Atlanta, Georgia, June 14, 2002.

Professional Association Memberships and Professional Activities

- Member Services Task Force, Future of Illinois Library Cooperation, Illinois Library Association, 2010.

- Member ILEAD U Steering Committee, Illinois State Library, 2008-2009
- Member Critical Information Literacy Work Group, Illinois Center for Information Literacy, 2008-2009.
- Advisory Committee for the American Library Association Public Programs Office's IMLS grant to create a library cultural programming portal, November 2007
- ILLINET Network Advisory Council, Illinois State Library, September 2007-March 2009.
- Community College Survey of Student Engagement Survey Item Review Committee, Community and Junior College Section, Association of College and Research Libraries, 2006-February 2009.
- Public Relations Committee, The Consortium of Academic and Research Libraries in Illinois, 2005-2006.
- National Council on Learning Resources, American Association of Community Colleges, Awards Committee Chair, 2002-2004.
- Member 2004 Illinois Library Association Annual Conference Program Planning Committee, 2003-2004 .
- Member American Libraries Advisory Committee, American Library Association, 2003-2005
- Member Teaching Methods Committee, ACRL Instruction Section, 2003-2004
- Member ACRL President's Program Planning Committee 2003-2004
- Alumni Council, Graduate School of Library and Information Science, Dominican University, Council Member, 2000-2004, co-chair 2002-2003
- Web site Advisory Committee, American Library Association, Committee Member, 2001-2003
- Bibliographic Instruction Committee, Community and Junior College Section, ACRL, Committee Member, 2001-present, acting chair, 2003-2004.
- Member Association of College and Research Libraries, American Library Association
- Member Illinois Library Association

Professional and Academic Honors

- Master Teacher 2008, Moraine Valley Community College
- Member of Honor Society of Phi Kappa Phi, Old Dominion University Chapter, inducted Spring 2006
- Library Instruction Round Table's List of Top Instruction Articles for 2004 for article "A Radical Step," in *Portal*, 4:2.
- 2005 Doctoral Fellowship, Community College Leadership Program, Old Dominion University
- Synergy: Illinois Library Leadership Initiative 2003/2004, Illinois State Library.
- Innovation of the Year 2002, Moraine Valley Community College
- ACRL Conference Scholarship 2003, Charlotte, North Carolina
- Member Beta Phi Mu Library Honor Society
- Graduated Cum Laude from Augustana College, Rock Island, Illinois

- 1997-1998 recipient of Barbara Anderson Miller Award, annual award in recognition of the best piece or prose or poetry submitted to Augustana College's Saga: Literary and Art Magazine for short story Chapter Five"
- 1998 recipient of the Olof-Issakson Memorial Scholarship from the Bishop Hill Heritage Association
- Member Phi Alpha Theta History Honor Society, Augustana College