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REDESIGNING FOR COLLABORATION WITHIN HIGHER EDUCATION INSTITUTIONS: An Exploration into the Developmental Process

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As a result of both the external pressures and the known benefits of collaboration, many higher education institutions are trying to create learning communities, service and community-based learning, and interdisciplinary research and teaching. However, over 50% of collaborations fail. There has been virtually no research on how to enable higher education institutions to conduct collaborative work. This article focuses on examining *how* institutions moved from a culture that supports individual work to the ones that facilitate collaborative work. A three-stage model emerged. The first stage, *building commitment*, contains four contextual elements—values, external pressure, learning and networks. Here the institution uses ideas/information from a variety of sources to convince members of the campus of the need to conduct collaborative work. In the second stage, *commitment*, senior executives demonstrate support and re-examine the mission of the campus and leadership emerges within the network. The third phase is called *sustaining* and includes the development of structures, networks, and rewards to support the collaborations.

KEY WORDS: collaboration; organizational change; college and university administration.

Higher education institutions are realizing the importance of enabling internal and external collaborative work, e.g., interdisciplinary research or community partnerships. In recent years, researchers have documented the benefits of organizational collaboration including greater efficiency, effectiveness, and perhaps most important for higher education institutions, it can enhance student learning (Kanter, 1994; Senge, 1990). In addition, accreditors, foundations, business and industry and

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government agencies have been espousing the importance and value of collaboration for knowledge creation and research, for student learning and improved organizational functioning (Ramaley, 2001).

As a result of both the external pressures and the known benefits, many forms of both internal and external collaboration have begun to emerge nationally. For example, in terms of external collaboration some campuses partner with local businesses to increase their teaching pool and internship potential and provide needed labs and materials for conducting research. An example of internal collaboration is the formation of cross-disciplinary learning communities that bring faculty and students together to study an issue, capitalizing on intellectual capacities throughout the institution for teaching. Similarly, faculty have begun to form multi and interdisciplinary research centers to address the pressing problems of our times and student and academic affairs divisions are working together to deliver joint programs and services.

However, institutions are, generally, not structured to support collaborative approaches to learning, research, and organizational functioning. Departmental silos, bureaucratic/hierarchical administrative units, unions and other rigid structures act as barriers to cross-divisional work and partnerships (Kanter, 1994; Senge, 1990). Within this environment, collaborative ventures struggle to emerge and be sustained with an over 50% rate of failure (Doz, 1996). Because of the high failure rate, much has been written about the barriers to collaborative work. Although it is important to understand barriers, there also needs to be work on how to foster collaboration and success models provided for institutions to follow. There has been virtually no research on how to reorganize higher education institutions for collaborative work. Although there are articles and books about how to implement specific initiatives such as learning communities, K-16 partnerships, or interdisciplinary research, these works focus on the particular dynamics and strategies for the creation of these initiatives (Kezar and Hirsch, 2002) Few, if any of these works, examine the broader challenge of how institutions have to be transformed to enable collaborative work, with the exception of usually noting the need to change reward systems within institutions (see Jacoby et al., 2003; or Smith and McCann, 2001). This article focuses on four types of cross- institutional collaboration: academic and student affairs collaboration, interdisciplinary and community-based research, team teaching and learning communities, and cross-functional teams.

The corporate/industry sector has conducted research on how to reorganize to enable collaborative work (Kanter, 1994; Liedtka, 1996; Mohrman, Cohen and Mohrman, 1995; Ring and Van de Ven, 1994). This provides a foundation for testing and developing a model of

collaboration in the higher education area. Research from organizational theory demonstrates that models are usually more successful if modified to the context in which they are used (Birnbaum, 2002). The corporate model by Mohrman et al. (1995) was explored (Kezar, JHE, in review) for relevance in the higher education setting and unique features were identified. The following eight core elements are necessary to redesign in order to create a context that enables collaboration: (1) mission; (2) integrating structures; (3) campus networks; (4) rewards; (5) a sense of priority from people in senior positions; (6) external pressure; (7) values; and (8) learning. This study fills a gap in our knowledge by describing campuses that showed exemplary progress reorganizing to foster both internal and external forms of collaboration. In addition to identifying the contextual elements that enable collaboration, another gap in the literature is understanding the developmental process or how the process of creating such a context unfolds. This article focuses on examining *how* institutions moved from a culture that supports individual work to the ones that facilitate collaborative work.

LITERATURE REVIEW

In this section, I begin by defining collaboration. Next I describe the focus of this study-examining the developmental process for creating an environment that supports collaboration. Lastly, I review the research that has been conducted on the evolution or development process of the collaboration that comes primarily from the corporate sector and that was used to frame this study.

Defining Collaboration

Collaboration has been defined in a multitude of ways and studied across a host of disciplines from political science, to biology, to sociology (Whetten, 1981). In this study, I draw primarily from the organizational studies literature on collaboration. Most comprehensive definitions of collaboration refer to stakeholder interests or who is involved in the collaboration, describe common purpose and shared rules or norms and detail what is being pooled—financial capital, human resources, skills, or expertise. In their meta-analysis of definitions of organizational collaboration, Wood and Gray (1991) developed the following definition that was used to guide this study: ''a process in which a group of autonomous stakeholders of an issue domain engage in an interactive process, using shared rules, norms, and structures to act or decide on issues related to that domain'' (p. 437). In order to be considered collaboration, it is key that the process entail an interactive process (relationship

over time) and that groups develop shared rules, norms and structures, which often become their first work together. In addition to defining collaboration, it is important to understand that the literature is typically divided into two areas: internal (intra) and external (inter) collaboration. Internal collaboration includes areas such as cross-functional teams, interdisciplinary teaching/research, and student and academic affairs collaboration. External collaboration includes steering committees, K-16 partnerships, community partnerships, and business and industry collaboratives.

Evolutionary/Development Focus

Most research on collaboration has focused on antecedents/reasons for collaboration or the outcomes of collaboration (Doz, 1996; Saxton, 1997). Very little research has focused on the process of collaboration or its development. When research has focused on the process of collaboration, researchers emphasize individual and group dynamics and miss the systemic elements of the organization that need to be changed in order to make collaboration successful (Tjosvold and Tsao, 1989). Denison, Hart, and Kahn (1996) were among the first to identify that researchers have not studied how the *overall environment or organizational context* can enhance collaboration, noting this as one of the most important areas for future studies and which is the focus of this study.

Doz (1996) noted that within the limited amount of literature on process, there was also a gap in knowledge about whether there was an evolutionary or developmental component to the process. He states that, ''only Van de Ven and Walker (1984) and more recently Ring and Van de Ven (1994) have developed an explicit model of the evolution of [collaboration within organizations]'' (p. 56). By development, the authors are referring to how a partnership emerges and grows over time and whether any predictable phases or stages emerge. This study sought to fill this gap in knowledge by examining the developmental process for institutions that reorganize to enable collaborative work.

In general, the concept of development or evolution within organizational theory is concerned with describing and understanding the emergence, growth or implementation, and success or dissolution of collaborations. Theories or models of development examine the emergence and growth in order to understand success or failure (for instance, are there common elements of success or failure?). For example, in one study they described the evolution as passing from low collaboration, through at-stakeness, to transparency, to mindfulness, to synergy at the highest level of development (Jassawalla and Sashittal, 1999). The developmental process tends to move from superficial forms of collaboration

to deeper or more institutionalized approaches. I will review the prominent five models of evolution (Mohrman et al.; Doz; Ring and Van de Ven; Arino and Torre, and Kanter) and examine the main components of the models: (1) the driving force in development—learning, relationships, external conditions or assessment/evaluation; (2) stages of development; (3) formal versus informal processes; and (4) importance of initial conditions. A summary of the elements of these models is presented in Table 1. These elements will be explored within the study of collaboration within higher education. I have chosen those models because they represent the main schools of thought related to evolutionary models; they are the most cited models; and they represent varied perspectives on development that help understand distinctive factors that might be explored within the current study.

Most developmental models have examined the creation of single collaborative initiatives—either internal (cross-functional team) or external (alliance). Instead, the focus of this study was to explore the evolution of a context for collaboration, since that is considered the most understudied area. Mohrman et al. (1995) developed the only developmental model that is focused on creating a *context for collaboration*, but was created within the corporate context. This model was tested within the higher education setting. This model was selected because it was the most closely relevant to the phenomenon under study, but also because it is one of the most comprehensive developmental models.

Models Collaboration Development

Mohrman et al. (1995) (MCM) propose a developmental model for intra-organizational collaboration, which is based on a learning approach and formal processes of redesign. Within this approach, no set linear stages of development can be outlined, instead, each organization has to go through a self-design process that is unique and dynamic. Within the self-design model there are some areas of focus. The first is *laying the foundation* in which values are clarified and key outcomes identified, organizations read and visit other organizations to learn about the process of collaboration and they diagnose performance gaps and organizational issues affecting collaboration. The second area or phase is *designing* and redesigning. The hope is that a design team will develop a framework for a new team-based organization. Initial implementation establishes the teams and provides assistance and support for the new collaborative work. Then the last phase is *evaluation* of the new system of supports and on-going adjustments to ensure that they provide needed support for collaborative work. Learning occurs at all

TABLE 1. Models of Collaboration Development

Author of model	The driving force in development	Stages of development	Formal versus informal processes	Importance of initial conditions
Mohrman, Cohen, and Mohrman	Assessment and learning	Less formal stages: laying foundation, designing, evaluation	Formal process: mission, work modified, training, processes altered, Rewards	No initial conditions must be in place
Ring and Van de Ven	Relationships and learning	Stages: negotiation, commitment, execution	Informal process: build trust, reach agreement of obligations	Initial conditions critical: clear goals, trust
Doz or Arino and Torre	Learning and assessment. For Arino and Torre: Relationships more than learning	Stages: groundwork structuring, formalizing, all with period of evaluation and adjustment	Formal process: environment, task, process, skills, and goals	Initial conditions critical: task definition, expectations of performance, motives and others
Kanter	Relationships	Stages: courtship, engagement, commitment	Informal process: sensemaking, learning about each other	Initial conditions are only minorly important as collaboration is constantly renegotiated and constructed
Author—study presented	Relationships	Stages: Building commitment, Commitment, Sustaining	Formal process: (1) values, learning, external pressure; (2) sense of priority, mission; (3) integrating structure, rewards. Network throughout	Initial conditions critical: a network, values, external pressure, learning

three stages and is extremely important in the first stage where people need to be brought together in dialogue to understand what it means to work cross-functionally or to model collaboration.

The specific developmental model that emerges begins with redesigning the strategy or mission of the organization. Second, the work of the organization, for example teaching and research, needs to be modified. Third, people need to be trained to conduct collaborative work and the structure needs to be altered, such as new roles and offices based on collaborative principles. Fourth, the processes of the organization have to be modified to support collaborative work such as goal setting or performance management, so that collaboratives have the ability to form their own goals, for example. Strategic planning processes that are top down will not work within a collaboratively designed organization. Lastly, rewards need to be established to motivate and support collaboration. Rewards should be put in place last as the design of collaborative structures should be stable. They note that the process is iterative and stress the two-way feedback loops so that the development of processes will have implications for the development of people. Mohrman et al. also highlight the importance of the centralized and decentralized levels working together as the developmental process unfolds; too much local decision-making can become problematic: ''an inability to understand design and process choices across teams can inhibit the ability of the organization to function as a larger performing system'' (p. 329).

There is little attention to specific initial conditions that need to be in place. However, they do note that internal collaborations, the focus of Mohrman et al.'s book, have to take place gradually and involve redesigning existing systems; they note that ''a potential evolutionary path might be from a model that includes one first-line supervisory for each team, to a model that eliminates that first level supervision altogether as first-line supervisory responsibilities are gradually moved into the team. This sort of gradual transfer of responsibilities is one response to the reality that if management skills are not at first present in the teams, they will have to be developed'' (p. 340). Also, formal processes are seen as more important than informal. With external collaborations and partnerships, the groups are often starting from scratch and can design systems anew and potentially move more quickly into collaboratively designed structures and supports.

The second model reviewed focuses on inter-organization collaboration and was proposed by Ring and Van de Ven (1994) examining corporate alliances. This was the first model of development for inter-organizational collaboration and it focuses on three phases—*negotiation* (working out joint expectations, building trust and bargaining), *commitment*

(agreement is reached on the obligations and rules for future action) and *execution* (systems put in place to make collaboration happen). Each of the stages entails repeated interaction by the individual/groups involved in the partnership and the outcome of each interaction is assessed in terms of efficiency and equity or fair dealing. This model is based on human relations, political and structural assumptions about organizations—that clear goals, good interpersonal relationships and bargaining are key to collaboration. Based on this model, they developed a set of propositions about conditions that will affect the evolution of the partnership such as congruent sensemaking among parties increases the likelihood of concluding the formal negotiation and moving from stage one to stage two. Their model focuses on relationships as key to moving the collaboration forward as well as learning that occurs between partners as they negotiate and become familiar with each other. Informal negotiation processes among individuals/groups is more important than formal processes and initial conditions such as trust or joint expectations are critical for beginning the process.

Building on Ring and Van de Ven's (1994) work and developing empirical support for this line of research, Doz (1996) conducted a grounded theory study to examine the evolution of collaboration within strategic alliances or external partnerships. The model has several components starting with a set of initial conditions (task definition, partner's routines, interface structure and expectation of performance, behavior and motives); these conditions either facilitate or hamper learning processes that are the next step in the evaluation of the collaboration. Learning must occur on several fronts for the collaboration to move forward—environment, task, process, skills and goals. If this learning occurs, then it allows for a process of evaluation about the efficiency, equity and adaptability of the alliance. After evaluation there are usually a series of adjustments that result in revised conditions related to task definition, partner's routines, interface structures and expectations of performance. For Doz, the key aspect of the evolution is a learning process that occurs within the evaluation and re-adjustment process; there is greater emphasis on learning and formal processes than Ring and Van de Ven proposed. In order for collaborations to be successful, assessment and learning must take place.

Arino and Torre (1998) also provide empirical support for Doz's model of the evolution of collaborative arrangements, focusing more on why partnerships dissolve such as whether the partnership becomes inconsistent with economic efficiency or a breach in performance results in a deteriorated relationship. Their research provides evidence of the role of relationships and networks, more so than learning, on moving

through the stages and of success. Their research is more closely aligned with Ring and Van de Ven's human relations assumptions, but emphasize the structural components such as clear expectations or assessment. Networks are defined as coalitions, alliances or complex set of relationships among a group of people that are useful to accomplish a present or future goal.

Rosabeth Moss Kanter (1994) has developed some of the most recent work in this area and proposes, like Arino and Torre (1998), that relationships and networks are paramount to the evolution of partnerships, rather than learning or formal assessments (highly structured nature) of the collaborative. In her research she discovered a link between trust and informal relationships during the early stages, rather than controlling people through formal systems, to create collaboration. Kanter found that a dense web of interpersonal connections and infrastructures that enhance understanding and learning are the key elements to help move collaborative ventures along. Collaborations operate more like relationships with a courtship phase (highly informal and based on chemistry and compatibility) and engagement or commitment phase (akin to meeting the family and saying vows). Like romances "collaborations are built on hopes and dreams – what might happen if certain opportunities are pursued" (Kanter, 1994, p. 99). Ring and Van de Van (1994) and Kanter focus on development as a socially constructed process that is highly reliant on individual interpretation of, for example equity and that this is constantly being reinterpreted with further interactions among partners. Kanter places more prominence on understanding and sensemaking and informal processes (similar to Ring and Van de Ven) rather than assessment, learning or formal processes which is emphasized in Mohrman et al. and Doz.

Mohrman et al. (1995), Ring and Van de Van (1994), Doz (1996), Arino and Torre (1998), and Kanter (1994) review concepts that can be explored to create a model of collaboration development within higher education examining—the relative importance of relationships, learning, or formal assessment for development; the notion of stages as well as particular stages to explore; the significance of informal processes versus formal processes within various stages; and the importance of initial conditions, for example. The Mohrman et al. Model focused on specific contextual elements that unfold such as mission, task, skills development, structure, processes and rewards, which were examined.

METHODOLOGY

Case study methodology was chosen in order to explore exemplary institutions that had developed an organizational context to support

collaboration. This methodology is often used when a unique phenomenon can be identified and examples investigated in detail to describe and articulate the issue. In addition, complex organizational processes such as collaboration and broad phenomena such as context and environment are typically studied through case study methodology since it allows the researcher the opportunity to examine structure, culture, institution-wide processes, history and an array of conditions that cannot be captured through other methods (Merriam, 1998; Stake, 1994). The study is rooted in social constructivism and attempts to develop a model based on a shared or collective understanding of events rather than exploring the individual experiences within the context of collaboration and varying interpretations (although these were not ignored). Instead, I examined what seemed to be happening, not based on individual's subjective experience, but experiences that tended to be shared.

The overarching research question pursued was: (1) How does the context for collaboration emerge, grow and become implemented and succeed or fail? The following subquestions were also explored: (a) What is the relative importance of learning, relationships and formal assessment to moving the developmental process along?; (b) Are there particular stages of development? If so, What are they?; (c) Are there any necessary initial conditions?; and (d) What is the role of formal versus informal processes? The unit of analysis was the overall institution, rather than specific collaborations, which has been the emphasis in earlier studies.

Sample

The project utilized intrinsic case sampling which is undertaken because the case(s) illustrate a particular issue, not because the case(s) represent other cases (Stake, 1994). It also used unique case sampling, which entails the identification of cases based on a particular set of characteristics (extensive collaboration and organizational context features that support it) that they share to better understand the distinctive phenomenon that emerges within these cases (Stake, 1994). Uniqueness is more important than representation or generality. The special cases examined were four institutions that demonstrated high levels, perhaps excellence, in internal organizational collaboration. In terms of being special, I mean that these institutions were unusual in the number, depth and institutionalization of collaboration. Institutions were chosen if they had collaboration across various types of internal and external collaboration, not just one area. The assumption was that a single excellent collaboration or two might not reflect organizational features, but

individual leaders. The main forms of collaboration present within these institutions were: interdisciplinary teaching/research, learning communities, community-based learning, team-teaching, student and academic affairs collaboration, cross-functional teams, K-16 partnerships and business and industry collaboratives (each or these meet the definition of collaboration described in the literature review). Certainly, all institutions have to collaborate or coordinate processes in some way, but these institutions are unique in that they are set up and organized specifically to facilitate collaboration rather than individualistic work. Few institutions have completely redesigned themselves for conducting collaborative work, which is what makes these institutions unique.

The American Association for Higher Education, a national association that works to create change within colleges and universities, nominated institutions. These preliminary nominations were based on reputation and working knowledge of these institutions—essentially nomination by experts. Approximately, 30 institutions were nominated from all over the country.

After nomination, institutions were contacted and asked to fill out a brief survey (just for selection purposes, not data collection—each institution filled out the survey) and institutional members were interviewed to determine the depth and perceived quality of the collaboration. Criteria used to examine depth and quality included: (1) number of collaborative initiatives; (2) restructuring or redesign efforts to help facilitate collaboration; (3) reputation for collaboration among peer institutions; and (4) perception of employees of depth and quality of collaborations on their campus in comparison to their peer institutions.

Another selection criterion was that the institutions chosen were 'typical' higher education institutions (without significant funding to leverage partnerships and collaboration) and were non-elite. Many studies of collaboration or partnerships focus on models of excellence among elite or high profile organizations and the findings are often not generalizable to other settings with more limited resources.

Also, collaboration was assumed to emerge distinctly based on institutional type and mission. As a result, within this study, the type of institutions examined was held constant. Four public comprehensive institutions were explored since this is among the largest sectors and one most directly affected by recent budget cuts. These institutions are in even greater need for strategies for collaboration. The institutions were geographically dispersed: one in the Midwest, one in the Pacific Northwest, one in the Southwest, and one on the East coast. All four institutions are in or near a major urban area. Three serve approximately 30,000 students and one serves approximately 15,000. They all have large

numbers of commuter students.[1] Because of the depth needed to examine this complex phenomenon and the need to interview an assortment of individuals on campus, four institutions were chosen for investigation. The number of institutions did allow patterns to be determined across exemplary institutions, while still maintaining the needed depth.

Data Collection

Mixed methods were used to collect data including interviews, document analysis and observation, which is common to case study methodology (Stake, 1994). Prior to the campus visits, documents were reviewed such as institutional planning documents, cross-campus committee and accreditation reports. Twenty interviews were conducted at each site for a total of 80 interviews. The interviewees were identified through an institutional representative, usually the provost, as individuals who had knowledge of, or experience with, a host of collaborative activities. I spoke with a mix of faculty from various disciplines, administrators and staff from across various divisions. It is important to gather data from individuals across the institution as faculty, staff and administrators often have varied perspectives about organizational life to ensure the views were commonly held and not reflective of their specific positioning within the institution. Also, I was interested in individual/group difference in perspective of how the developmental process unfolds.

I also used snowball sampling and asked people I interviewed for the names of others I should interview. Because collaboration occurs within so many different areas on these campuses, to have an accurate picture, I needed to speak with people across different collaborative ventures to ensure a developmental perspective was not specific to any one collaborative activity, but was found across collaborative activities.[2] Each interview was tape-recorded and a transcript of each interview developed. Follow up interviews by emails were conducted of individuals who appeared to have a particular insight or to clarify information from the interviews, observation or document analysis. Observation of various collaborations (e.g., meetings of the groups or activities such as an interdisciplinary research symposiums), where possible, was also conducted to triangulate institutional members' perceptions. The research used several sources of data to examine the developmental process: (1) perceptions of members of the institution; (2) observation of collaborations; and (3) official documents related to the collaboration and the campuses.

Data Analysis

Data analysis proceeded following the case study techniques outlined by Merriam (1998) and thematic analysis outlined by Boyatzis (1998). All transcripts were read an initial time for themes that emerged (inductive) as well as the themes brought to the study from the model and literature (deductive). Transcripts were then coded according to the inductive and deductive theme codes. Secondarily, field notes and documents were also reviewed and coded.

The main items that facilitated collaboration were documented through the various sources of data and then the researcher attempted to determine how the elements unfolded. This analysis/interpretation was based on the following criteria: (1) examination of the interview question where I asked them to describe collaborations unfolding on campus; (2) review of answers to individual questions and notation of stories about how the collaborative context unfolded; (3) comments from a person on campus who seemed to have particular insight into the workings of the campus—they tended to be a person with a long history or new on the campus having been at several other campuses for comparison; and (4) triangulation by the researcher, based on information from document analysis, interview data and observation.

The model developed emerged from reviewing the data using the criteria above and developing detailed data tables. For example, mission was mentioned at each institution as critical among almost everyone interviewed. Mission was also noted in documents and through observation. All comments related to mission were put into a table. The key aspects related to mission were coded as themes such as ''makes collaboration part of the identity or role of individuals.'' Then, key quotes were chosen to signify these themes mentioned (yet the themes would have been mentioned many times). The quotes were key if they seemed to clearly represent the theme or issue being described. For any given quote, there were usually 20–25 similar quotes. Since the focus was on what individuals had consensus about related to development, representative quotes were chosen. Because there were more than 120 quotes related to mission, for example, only a few are used that highlight key points. The focus in the data analysis was to determine if a developmental model existed, some of its components and emergent themes as well.

Trustworthiness and Limitations

Multiple sources of data ensured trustworthiness, in particular, observations and field notes by the researcher were carefully compared to

interview data. Different interviewees' perspectives were also used to ensure trustworthiness (which is why 20 individuals were interviewed per institution). Lastly, I asked individuals interviewed to review my interpretations of the contextual conditions that were important as well as the model.

In terms of limitations, the findings are reflective of people's perceptions about how a process unfolded and reliant on memory. Two campuses had been operating in this manner for over a decade. The researcher was not on the campuses at the time of the change to a collaborative environment and had to rely on perceptions and opinions. The researcher aimed for shared understandings about how the process unfolded. Yet, when there was disagreement or differing perceptions, the researcher had to make judgments about the way events unfolded, using trends in the data and triangulation with documents to make such judgments. Lastly, the model presented in the results section may only be reflective of comprehensive institutions and needs to be explored within other institutional types for fit. Future research should examine institutional differences. Liberal arts colleges, research universities, etc., will likely have distinctive approaches to collaboration. The same organizational conditions may be used, but they may vary in importance and priority.

RESULTS

The results of the study are presented as a model that will be compared to the existing models/literature. In brief, I will review the overall findings. A reminder, there are eight core elements that are necessary to redesign in order to create a context that enables collaboration. The elements are: (1) mission; (2) integrating structures; (3) campus networks; (4) rewards; (5) a sense of priority from people in senior positions; (6) external pressure; (7) values; and (8) learning. These elements are described in earlier research (see author, in press). In this paper, I focused on how these elements unfolded in a developmental way in order to create the context for collaboration over time. The elements of the model are presented in Fig. 1 and fall into a three stage model. The model that emerged can be compared to the other models reviewed in the literature in Table 1.

The first three elements (values, external pressure and learning) seem closely related to Ring and Van de Ven's (1994) negotiation stage or Kanter's (1994) courtship phase, and I have labeled *building commitment*. Here the institution uses ideas/information from a variety of sources in order to try to convince the members of the campus of the need

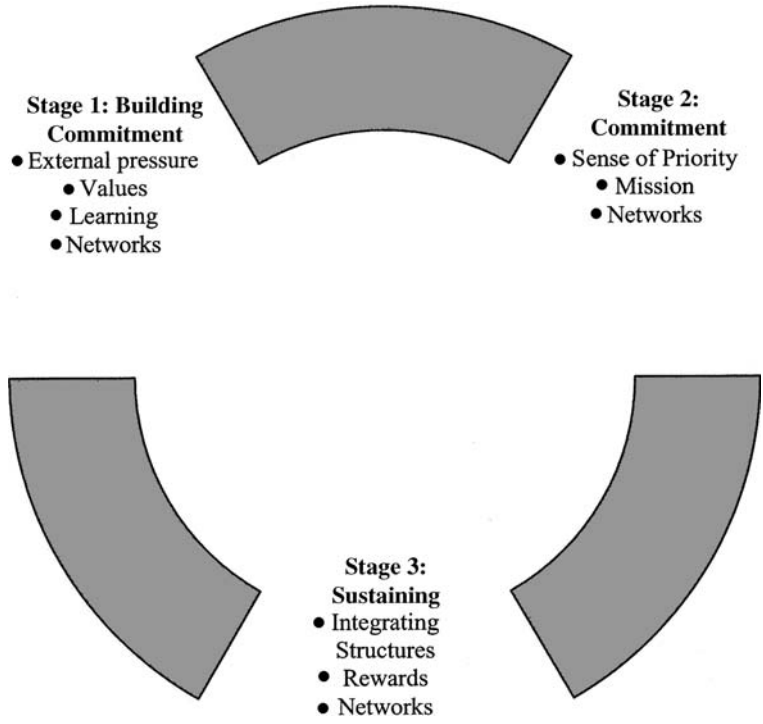

FIG. 1. Stage model collaboration in higher education.

to conduct collaborative work. An element that emerged that is unique from other models is a campus network, which was critical across all three stages. The network was most important in stage one for helping to communicate the ideas from the new values, external messages and learning.

The second stage also mirrors Ring and Van de Ven's phase two of *commitment*. In this stage, senior executives demonstrate support and re-examine the mission of the campus and leadership emerges within the network. The third phase is called *sustaining* and has elements of Ring and Van de Ven's execution stage or Kanter's taking the vows stage, but is more formal and entrenched than either of the stages in these two models. Sustaining includes the development of structures, networks and rewards to support the collaborations akin to phase 3 of the MCM model. The model had clear phases as described in the inter-organizational developmental literature.

The developmental model for higher education maintained similar elements of the MCM model, however, it unfolded in a different manner than within the corporate setting. For example, mission and task were not the beginning elements that unfolded. Unlike corporations where collaboration can be mandated from the hierarchy, creating a collaborative context within higher education mirrors the process of inter-organizational collaboration where the parties need to be convinced of the importance of the commitment. Other variations in the unfolding of the model will be discussed in the results section and in the discussion.

Relationships were much more important in the higher education setting than learning or formal assessments to the development of a context for collaboration. Learning was important to create commitment, but was virtually nonexistent after that initial phase. The key element to the development of the context was relationship development and the creation of campus networks. I will review the stages of the model and then discuss in detail the role of relationships, learning and environmental conditions. The importance of formal/informal processes and initial conditions are blended into the sections below and will be specifically highlighted in the discussion section. As noted in the Data Analysis and Trustworthiness sections, the model emerged from a review of interviewees' stories about how the collaborative context developed on their campus, focusing on similarities in the stories to ensure accuracy and trustworthiness. The results/model were also presented to a set of interviewees for confirmation.

Stage One—Building Commitment to Collaboration

Three elements were critical for building commitment: values, external pressure and learning. These elements together helped campuses to 'build a story' in support of a new way of conducting work; each one alone was insufficient for building commitment. The development of a set of values related to the importance or value of collaborative work created a new norm or operating philosophy for individuals. Three value systems were most often described on campuses: being student centered, innovative and egalitarian. Campuses that embrace these three values seem to be able to foster collaboration more easily since it provides a common ground for why to collaborate (for students), an ethos to experiment (innovation) and the egalitarian ethic helped people to see the value in other people and obliterated some of the common barriers prevalent in an elite culture such as hierarchies of disciplines, position (faculty/staff, administrator) and of administrative unit (academic versus student affairs). In the words of one faculty member: ''Our values

system has really gone a long way to support a host of collaborations. I have heard people unprompted connect the values with the collaborative work they are doing.'' These values work in concert, like learning, with the environment. But an internal story needed support from external sources.

Campus leaders and change agents identified messages from external groups that supported collaborative work and created public forums for discussion of new accreditation and foundation guidelines, business and industry proposals, and federal agency initiatives. Without a compelling external argument for why collaboration is necessary, it is unlikely to occur. Interviewees described stories of past failed efforts on their campus or on other campuses of trying to create a context for collaboration and a main factor being insufficient support from the external environment or not building a case of the external support.

Some individuals on campus are compelled by the values of collaboration, others by external pressures, but an equal number of people needed to be convinced of the benefits of collaboration; they needed evidence to be educated. Learning was used by change agents as a strategy for informing people of the benefits of collaboration in order to motivate people to conduct collaborative work. Leaders passed out research on the advantages of collaboration, National Science Foundation (NSF) data on partnerships and held forums and workshops on various forms of collaboration they were trying to encourage, helping people to understand the benefits. One administrator's comments epitomized the stories of many individuals: ''After a symposium was given, I got messages from 25 faculty who told me they were fundamentally rethinking their work and it was the evidence presented that convinced them.'' An appeal to people's hearts, minds, and influential groups all appeared significant for changing the overall context since people are motivated by very different factors. The specifics of these external messages and aspects of learning will be described in the section on the importance of relationships, learning and environmental conditions.

Having a campus network emerged as central within every phase of the model. Many people interviewed noted that values or external pressures articulated only from 'on high' among senior executives or learning proclaimed by a few believers, were not sufficient to build commitment. What made the story created through the values and external messages work is that they were fed into an existing network that both transferred the ideas around campus, but provided additional validity since peers were supporting the notion being distributed through the network. There needs to be a critical mass of people on campus that are interested in change, supportive of campus initiatives

and it is helpful if they are interested in collaborative work, but this element is not necessary. As one administrator noted, "we have a great network for infusing new ideas about collaboration. This was absolutely central when we began our efforts to conduct work in a more collaborative way. Luckily there were a few people on campus who realized the value of the network and knew how to use it to get people on board."

These networks can be developed and fostered in many different ways and do not necessarily have to be related to people interested in collaboration. The campuses used the following techniques to develop networks: (1) hosting events on topics related to collaboration; (2) serving on campus committees; (3) opening up meetings to more individuals within units; (4) using physical spaces such as faculty and staff eating areas or common spaces for meeting; and (5) individuals who act as conveners on campus related to cross-functional activities such as assessment or community service; among other strategies. These campuses tend to use a host of strategies overtime to build campus networks. Most had the networks in place before they endeavored to move toward creating a collaborative context. They also noted how a history of trust and mutual respect helps in fostering this type of network that is anxious to support campus initiatives.

Stage Two—Commitment to Collaboration

There were three key contextual conditions that helped to solidify the commitment to building a collaborative context: mission, senior executive support, and network (leadership). The commonality among these elements was a sense of priority being reflected. The first contextual condition was a conscious rethinking of the institutional mission. Leaders realized that unless the overarching purpose of the organization was rethought to highlight collaborative work, it would be unlikely that the commitment would be sustained. This also signaled a commitment across campus. For example, three of the four campuses studied adopted a philosophy of collaborative learning that became infused within all their work. With a collaborative philosophy of learning in place, the core activities of the institution—teaching and learning—and all employees' work become related to working collaboratively. One faculty member helped demonstrate the significance of a philosophy linked to the new mission: "we have a common language now and that common language comes from our shared philosophy in collaborative learning. We better understand each other's work, goals and reasons for working together. That was a really powerful strategy for our campus."

Rethinking and revising the mission statements alone was not sufficient to establish commitment to collaboration. Each campus had mechanisms in place to re-articulate their mission statement on an on-going basis, socializing and re-socializing people to the mission. This might be public speeches, orientations, convocations, or town hall meetings; but they took the opportunity to actively discuss the new commitment to collaboration.

Senior executive support was also critical to solidifying commitment. If people did not feel that the senior executives felt this was a priority issue, most people said they would not get involved (and had avoided certain collaborative efforts that were not deemed a priority). A comment by one faculty member reflected the sentiment of most of the individuals with whom I spoke: "Senior executive support is critical when institutions want to scale up collaboration. I realize that I can not make a major collaboration happen successfully without support from others, especially those that control resources and rewards." It did not always have to be the president or provost; encouragement and support by deans and department chairs was seen crucial by faculty. Sense of support/priority from senior executives is strongly related to mission since typically this group of individuals has the authority to alter or re-articulate the campus mission.

The ways that sense of priority was demonstrated was whether collaboration was discussed often by senior executives; if collaboration was written into official documents such as the strategic plans, accreditation reports, board correspondence; whether collaboration was connected to strategic objectives or work of the institutions (e.g., the major campus initiatives had an element of collaboration—team lead, stakeholder input, etc.) and modeling collaboration. Although people believed that collaborations were best supported and successful when they emerged and had ownership throughout the organization—within the faculty or staff–collaborations usually did not maintain momentum if there was not a sense of priority among senior executives. Support from senior executives needs to be maintained into stage three, since they were usually the only ones with the ability to alter rewards and create integrating structures to support collaborative efforts since they control resources.

The third element was the campus network that operated as a source of leadership within stage two. Most collaborations attained commitment because of a dedicated set of individuals that kept pushing to make the collaboration work. Interviewees kept mentioning the dynamic energy, enthusiasm and momentum that individual leaders within the network brought to a collaborative effort. In the words of one interviewee:

> well, it keeps coming back to the distributed leadership on campus that is part of that 'critical mass' I was speaking about earlier. What has made certain collaborations work? I can see the various people in my mind over time, those who were the dedicated leaders. When the grants went away, senior leadership turned over, new strategic plan adopted, etc. these people kept watch over the initiative and enabled it to succeed.

I heard comments like this on each campus—that there were key individuals that moved the campus past ideas, visions and mission to implementation. This same leadership within the network is also critical in stage three where the collaborations are sustained. This is especially true if other aspects of the campus context lose hold as this interviewee mentioned such as senior executive support or certain rewards run out.

Stage Three—Sustaining Collaboration

In order to sustain the collaboration, more formal elements needed to be put in place, and this is reflective of the literature on the developmental process. The three main elements that emerged for sustaining a context of collaboration were integrating structures, rewards and formalizing the network. Sustained collaboration seems highly dependent on redesigning campus systems from computing systems, to divisional meetings, to rewards and incentives, to the creation of new structures such as institutes, to new relationships.

Each campus had developed three particular structures (a central unit(s) for collaboration, a set of centers and institutes and new accounting, computer and budgetary systems) that helped to integrate work and facilitate cross-functional activities. A unit focused on cross-institutional work, such as assessment, technology, service or community based learning or inter-disciplinary, teaching/research and reporting to the president or provost, ensured that people were working together across campus. One faculty member summarized the importance of a centralized unit:

> we all know what is going on at the X center. That is the one place everyone seems to read the marketing materials and announcements. Plus, we know the work there is a priority for the institution; they work directly with the president. I like to serve on committees or go to events because I meet others, it is high visibility, and I know the work is seen as a priority.

Presidential initiatives also served as a centralized structure for coalescing collaborative activities, providing focus for collaborative efforts and joint planning. According to a faculty member on one campus: "the presidential initiatives have been critical to commitment for

collaboration on this campus. People realize that we cannot fulfill these initiatives without working together. Our strategic work and priorities are now defined by working together. This is really a different emphasis and has changed the way faculty and staff think about their work."

Cross-institutional institutes and centers were also important for establishing commitment to collaboration. The work of faculty—teaching and research—is meaningfully altered by these collaborative structures. One administrator referred to the way that institutes had transformed the campus and how cross-institutional centers and institutes differ from traditional centers and institutes:

> we made an intentional effort about 20 years ago that we wanted to be more collaborative – cross-campus collaboration, especially in the area of interdisciplinary teaching and research. We examined ways that we might foster this work and we felt giving institutes a visible status was important – with independent budgets, high profile, and administrative support. Centers and institutes are on many campuses, at the departmental or school level. We didn't want that model, those tend to be shadow centers with little work going on. We wanted these to be high profile that everyone on campus knew about and would want to be part of.

A third integrating structures was fundamental and many noted how it was initially overlooked—accounting and computer systems need to be altered to allow for sharing of FTE in team taught courses, cross-listing classes, joint appointments and splitting indirect costs for research. One administrator described the significance of new accounting and computer systems:

> we had built commitment and ownership for interdisciplinary teaching and research, but we didn't have the systems to support it. There was a time that I thought the efforts would fail because people kept bumping up against barriers to the work they were being encouraged to do. But, people listened to the complaints and realized we had not built structures to support this new work and we began to do that – starting with our accounting and computer systems, because nothing else works if those are not in place.

Two different rewards (tenure and promotion system and incentives) helped to sustain collaboration across these four campuses. By far the most important reward system to focus on for faculty was the promotion and tenure requirements. If the tenure and promotion system supported collaboration then the members of campus felt the context of collaboration would be fully sustained. Yet, on one campus that had changed their tenure and promotion requirements, there was fear that the new provost was not committed to the principles as articulated, therefore, reinforcing the need for many different structures, processes and systems to be redesigned. Too much dependence on any one aspect of the redesigned system made the overall system weak. This same campus was

hopeful that the collaborative context would be sustained since the mission statement reinforced this work, other senior executives were committed, and campus processes were overwhelmingly collaborative.

Incentives, in terms of grants or administrative support, were also critical in sustaining collaboration. Many individuals expressed how they were excited about the prospect of doing collaborative work (interdisciplinary research, learning communities, etc.), but they felt it impossible to transition to a new way of working without some relief from their day-to-day activities. Everyone I spoke with mentioned that the overwhelming pace of being in a public institution with dwindling funds and growing responsibilities made the notion of changing the way one does work difficult. However, at each of these institutions, funds had been drawn away from the regular operating budget (or grants obtained) to support people in moving to collaborative work. Another lesson drawn from the cases is the need for incentives to be individualized rather than one approach for all design. Disciplines and units vary in terms of what might be an attractive incentive, for some it is a mini-grant, for another administrative assistance, and for a third, help with grant writing.

Networks were also critical in sustaining the collaborative context in two ways. First, they maintained and generated more collaboration on campus. People noted how 'collaboration built upon itself.' As relationships developed through participation in one collaboration it led to other activities and on-going connections and a greater degree of formality to the network. Second, after the collaboration was in place and obstacles encountered, members of the network worked together to cull expertise or relationships needed to overcome barriers. For example, it was the campus network on one campus that helped them determine that they needed to change their accounting and computer systems and that identified new options for the campus to use. This became particularly important for sustaining collaboration. Creating new structures, or rewards to support collaboration was a monumental task and often met with failure. It was usually the networks that created the intellectual resources to overcome barriers and resistance to new structures and processes on campus.

The importance of Relationships, Learning and Environmental Factors

Relationships played a paramount role in all three phases of the development while learning and the external environment (evolutionary theories) played the most significant role in the building commitment phase and to a lesser degree in the commitment stage. Learning also played a slight role on the third stage.

The most significant area of learning that people described was becoming informed of the benefits of collaboration in order to motivate people to conduct collaborative work. Leaning was not described as an aspect of mission, priority setting, or for creating sustaining structure. The difficulty of creating learning within the higher education context was noted since there are so many different groups and subcultures with very different views of the world. It might be the difficulty of creating learning that resulted in people using relationships more as a strategy for moving the organization toward collaboration.

Learning was occurring in the building commitment phase as a critical element of obtaining ownership for the concept. Yet, the struggle to create learning was emphasized by interviewees. For example, one interviewee communicated this point by saying:

> People in the humanities might be compelled by a quote by Hannah Ardent that 'excellence occurs in the company of others.' For a chemist empirical data about the outcomes of collaborative versus individual efforts might be convincing whereas as another individual may have collaboration before they can be aware of its benefits. Individual, disciplinary and other differences need to be taken into account when instructing individuals about collaborative work.

In the commitment phase, learning was mentioned in relation to leaders modeling collaboration to people across campus to learn. Many interviewees believed this was one of the most significant aspects to obtaining commitment: "I know I have heard that one of the most compelling ways to get buy in is for the people in senior positions to model collaboration. If they can't walk the talk, then people are not going to get on board." In stage three, the network helped to generate needed learning to help redesign systems and to identify problems in the redesign. This was similar to the MCM model (1995) where learning played a role in designing collaborative systems as people tested out new designs and altered and changed aspects based on observation of what works. The troubleshooting work of the network was critical in helping to sustain collaboration. However, in opposition to the MCM model where experimental structures or networks were commonplace, once changes were made to redesign campuses they became formalized quite quickly without redesign. In addition, in the higher education context, the role of formal training for sustaining collaboration did not emerge. Learning was most important for moving from stage one to stage two and had a modest impact in moving campuses from stage two to stage three.

In terms of the external environment, it played a key role during the building commitment phase. External pressures to collaborate emerged as an important area that facilitated and enabled this work. There were

a variety of external pressures that acted as a force propelling the institution along in the creation of a context to support collaboration. Disciplinary and professional societies have been emphasizing collaboration in recent years. This finding was mentioned by faculty and administrators at all four campuses. One faculty member commented that:

> the pressure from the National Science Foundation within the disciplines has changed the nature of faculty work on many campuses. I was always inclined toward collaboration, but usually my colleagues were uninterested and, in fact, actively against working with community agencies, other fields across campus and the like. But now, grants encourage collaboration and people have become accustomed to the benefits – the increased dissemination of results, better studies, etc., – so now things are much easier, but it has taken time. I have been at this 28 years and have only recently seen the groundswell of change. In large measure, the change I see on this campus is that we now pay attention to and channel those external messages around campus.

Another enabler for faculty was the pressure from foundations, which are now requiring that organizations that submit proposals work in collaboration with other disciplines, non-profit and state agencies conducting similar work. Accreditors and state agencies have been stressing collaboration, especially around the area of assessment. The pressure from accreditors was a major source of support for administrators and faculty, who believe in collaborative work, but in particular held sway with administrators who saw a poor accreditation report affecting the institutional reputation. One administrator described the influence of accreditation: "collaboration is becoming a larger part of accreditation standards. I am not sure if it was the quality movement with its emphasis on collaboration, but you see it emphasized by the accreditation teams and reports." Business and industry are communicating that collaboration is important for graduates entering the workplace. The pressure from business had a particular effect on certain disciplines and professional fields such as engineering, which had transformed its curriculum on three of the four campuses visits, for example. Furthermore, diminishing resources at the state level provides incentives for divisions and units to work together to preserve important programs and initiatives. These pressures have been persuasive and helped to provide momentum and an ideology for efforts to redesign campuses—building commitment.

It is not merely that these pressures exist, but that these campuses had mechanisms for communicating these messages to various campus stakeholders. Because collaboration is such a difficult transition to make, external pressures seem needed to overcome institutional inertia and disciplinary silos. Leaders on these campuses actively capitalized on these messages from external groups and were vocal about creating

dialogue (e.g., retreats, all campus or school meetings and public talks) about the external environment and pressures for collaboration. One administrator described how they were using external conversations to enable collaboration:

> We take every opportunity – convocations, public speeches, workshops, meetings – to describe the changing environment and what it means for our work, especially the necessity to collaborate and the importance across divisional and cross-departmental work.

These types of dialogues were also used in stage two in order to create a sense of priority for members of the campus. The comment from an administrator summarized the idea that many others expressed:

> it is one thing to get commitment for collaboration and another to get people to start doing it. We have used external pressures as a way to push people from word to deed. I would highly encourage other campuses as I have seen this work. When we talk of external pressures, we are talking about constituent groups that faculty and staff care about and who support their work, it is harder for them to ignore these messages than ones coming from the administration.

In summary, external environmental conditions were significant in moving from stage one to stage two and for moving through stage two.

Relationships and campus networks was the most prominent feature in facilitating the developmental process. It was important for gaining initial support for collaborative efforts, developing ownership and implementation and on-going support of collaborative work. In stage one, networks were used to foster learning, to spread values and to communicate messages from external groups. Several faculty made comments such as the following: "you just can not succeed in this work without a critical mass of faculty and staff and even students who understand the values and translate them to newcomers and anyone who will listen and that know the benefits of collaboration and will speak about it at public events." Senior administrators espousing the values of collaboration had a lesser impact, instead, faculty and staff described the effect of peers who had committed to a new value system or who had become aware of the concern of external constituents.

In stage two, the network diffused collaboration across campus—embedding the sense of priority. Once the idea or concept was in place, people in power became central to enabling collaboration. The network provides a vehicle for the ideas to flow, helping gain momentum and energy. It was also a main source of leadership to drive collaborative initiatives, which was mentioned in more detail under the description of stage two. In addition, once a set of people were on board, more individuals were willing to join and to exert more effort.

In stage three, networks were supportive in maintaining and generating more collaboration on campus and for overcoming obstacles that emerge in the redesigned system. In terms of generating collaboration, the networks created opportunities for individuals to constantly come in contact with or become aware of individuals that might be related to a new collaborative project or that can enhance an existing one, providing new and fresh energy to efforts on a consistent basis. Networks also provided intellectual resources and cognitive complexity needed to overcome barriers that emerged within the redesigned system.

DISCUSSION AND IMPLICATIONS

In this section, I compare the developmental model that emerged within the higher education context to the literature from the corporate sector as well as note ways that this study contributes to the existing debates related in the literature on a developmental model around the role of learning versus relationship, stages of development, initial conditions and the importance of formal versus informal processes (please see Table 1 for a summary of the difference).

The MCM Development Model was helpful and some elements emerged as significant within the higher education context. For example, many of the areas of redesign did emerge in the second and third stage of the model—for example, mission, structure and rewards. The importance of centralized and decentralized processes working together to keep the process unfolding also appeared significant and was represented through the importance of leadership emerging in stage two among the network. The significance of formal processes was a hallmark of MCM model and was also significant within the higher education setting.

However, many elements did not fit the MCM model. For example, the MCM model did not include a 'building commitment' phase that emerged as very significant in the higher education context. The importance of stage one (building commitment) might be the result of the differences in management and hierarchical structures between corporate and higher education settings. In the corporate setting where there is more control and the management can mandate a change in the environment, there is likely less need to persuade and articulate the reasons why collaboration is necessary. Also, higher education institutions do not appear to advance through development based on learning, but based on well-developed relationships. The importance of a network is also likely related to the fewer management controls and hierarchical arrangements. Grass roots efforts and ownership are needed to create

motivation. Members of the higher education context are likely motivated by people, more so than goals, management, or rewards (Birnbaum, 1991). Overall, the stages of development more closely mirrored Kanter's and Ring's and Van de Van's models of collaboration.

In recent years, there has been growing debate about what plays a greater role in the development of a context for collaboration/collaborative initiatives—learning, assessment/evaluation, or relationships. In this study, relationships or a campus network emerged as the most important conditions across the three stages and was aligned with the most recent research by Kanter and Arino and Torre. The importance of relationships and networks may be a distinctive feature of higher education collaborations. Because higher education institutions are professional organizations where individuals are greatly influenced and persuaded by peers and rewards are less important than prestige, this may account for why networks and relationships are a key lever (Birnbaum, 1991; Kezar, 2001). Yet, it may be that this study demonstrates an area overlooked in the earlier corporate literature that is now being found among recent studies. These findings suggest that there need to be more mechanisms for people to interact such as communal dining areas or retreats that bring people together.

In the research on the developmental process of collaboratives, certain initial conditions have been identified as important for making the process successful. Stage one (values, learning, external messages and network) outlines the initial conditions necessary for a successful evolution within the higher education setting, which is heavily reliant on common understanding/vision and shared decision-making. The initial conditions can be characterized as contextual elements that help to build a persuasive story or case for the reason that collaboration is necessary and beneficial. Because higher education institutions tend to have such diverse faculty and staff (by discipline, unit, etc.), it is important to use a variety of strategies to build the case. A well-developed campus network is the second initial condition needed before the campaign on articulating values, external messages and learning occurs.

Another debate in the literature related to the development of collaborative contexts is whether informal processes should be emphasized first and more formal processes, structures and designs need to be established in later phases. The spreading of values and learning was most often successful when it was formalized as retreats or town meetings, for example. Sometimes it occurred in an informal manner, but the data do not support that informal efforts up front would have led to further development in the higher education setting. This finding about the importance of formal processes may be a result of the focus of the study

on changing to a collaborative context, which may inherently be a more formal process. Establishing one collaborative venture might be more reliant and successful with informal processes and actually be hindered by formal processes that create layers of complexity.

In addition to these theoretical contributions, there are several practical implications from this research. Campus leaders who want to create an environment supportive of collaboration need to examine the relationships of individuals and groups on campus and determine if there is indeed a network of individuals that can support such an endeavor. If no network exists, relationships need to be built and fostered through the techniques described in the results section. This initial condition is critical for campus success. Another initial condition is developing a value system, set of external pressures and understanding of the benefits of collaboration that are meaningful to the particular campus context. Invoking the NSF will be meaningful on some campuses, while on another the League of Innovation will be much more compelling. At religious institutions (collegiality) different values might be appealed to than at a community college (student success). Campuses need to build a very compelling story or case for why collaborative work is important. If a campus does not make the case, it will not build commitment, and will never move out of stage one. The campuses in this study also saw the move to collaboration as a long term and slow evolution. They realized it was not going to happen overnight, but over many years. So, taking time to put the initial conditions in place was seen as a good investment of time. Often campuses are anxious to see change immediately. But the lesson from these campuses is that the time spent up front building commitment where no actual (new) collaborations are taking place is critical for developing the context to support collaboration in the long term.

In stage two, campuses can depend on the efforts put forward toward initially building a network which appears to continue propelling the institutions through stage one as long as senior executives make collaboration a priority by re-examining the mission and philosophy guiding campus work and model collaboration. For most campuses, commitment was demonstrated by formally accepting collaborative learning and research as part of their mission and way of doing work. In order to sustain collaborative efforts, the campus needs to be prepared to make some significant structural and reward system changes. All the campuses mentioned that collaborative efforts would have failed. One campus had revised the entire undergraduate curriculum to be interdisciplinary, but they noted it was on the brink of failure until the campus changed the reward systems and provided accounting/computer

support and campus liaisons were set up (new positions that integrated work across the campus). This suggests that campus leaders can not leave collaboration to chance, to informal processes and need to provide the formal infrastructure to support collaboration, at least of large complex-type campuses such as the ones studied.

The importance of stages of development suggests that leaders need to be cognizant that campuses cannot be propelled into collaboration without some laying of groundwork. They also need to monitor the developmental stage of the campus. They need to take pulse of the campus to know whether they have the proper network formed or have built the case for collaboration before moving to altering the mission or changing the priorities and plans of campus. Also, moving too quickly to change reward structures can be disastrous. A developmental model suggests taking time, moving people along carefully, cautiously building the context and not forcing or challenging the campus before it is ready to move to the next level.

One caveat, this article focuses on ways that campuses can enable collaborative work if deemed appropriate to meet the goals of the institution, but does not necessarily advocate collaboration. I have cited various studies that suggest the benefits of collaboration, but it is important to consider the merits of collaboration before engaging in this process. It is also important to suggest that collaboration is a moral, not just a managerial consideration, so in stage one partners need to consider if the collaboration will benefit each party.

This study also helps campus leaders in understanding where to focus resources and efforts. For example, hosting training sessions on collaborative work is likely not a good investment as few people attend or are compelled by these sessions. Several campuses had tried hosting these sessions and they had not been very successful. Hopefully, armed with this road map of how four campuses developed or made the transition from siloed individualized work to collaborative contexts, other campuses can begin to successfully alter their contexts.

ENDNOTES

1. More detail about these campuses is not provided because there are so few institutions that have a plethora of collaborative activities and much more description would allow for identification of campuses that were promised anonymity. Information about the campuses is not necessary for interpreting the results since they were chosen based on typical case sampling. This is not an ethnographic or interpretive-oriented study.
2. There is a separate paper about differences based on the type of collaborative activity. However, many features were shared across collaborative work making these generalizable conditions important for institutional policy.

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