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Faculty, staff, and administrators at a small independent college determined that planning with a Concept Mapping process efficiently produced strategic thinking and action plans for the accomplishment of a strategic goal to expand experiential learning within the curriculum. One year into a new strategic plan, the college enjoyed enrollment growth as one indicator of the success of the Strategic Plan. However, no progress on the strategic goal to expand experiential learning was evident. Planning literature cautioned planners to adapt planning techniques to fit the particular traditions and expectations of the individual campus. Should a planner advise administrative intervention as a hierarchical approach to planning might indicate, or would an alternate planning model, such as a Concept Mapping process better engage key leaders to devise strategy? The college opted to invite local experiential learning experts and practitioners to work together in a four meeting structured planning process. The participatory and democratic aspects of the Concept Mapping process (Trochim, 1989) fit the traditions of the campus, as did the group component. Qualitative data (the key leaders' brainstormed ideas) and quantitative data (key leaders' sorting and rating of those ideas) provided input for multivariate analyses (multidimensional scaling and hierarchical cluster analysis). The analyses produced visual displays or maps to show the collective result of the groups' input. The visual displays aided group discussion and decision-making to prioritize actions related to the strategic issue of expanding experiential learning. This process produced a Concept Map of strategic action areas supplemented by specific action plans to address the goal of the expansion of experiential learning for students.

HIGHER EDUCATION PLANNING FOR A STRATEGIC GOAL
WITH A CONCEPT MAPPING PROCESS AT A
SMALL PRIVATE COLLEGE

by

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CHAPTER I

INTRODUCTION

Institutions of higher education have faced changes in the form of new technologies, public concerns about costs and accountability, shifts in the demographics of students, and the impact of globalization in recent years (Norris & Poulton, 2008). Colleges and universities borrowed planning models from business to help address changing conditions (Bryson, 1995; Dolence, Rowley, & Lujan, 1997; Keller, 1983). However, the planning models designed for a business organization did not easily transfer to higher education without adaptation (Birnbaum, 1988, 2001; Mintzberg, 1994; Schmidlein & Milton, 1990). The orderly, rational approach underlying many planning systems contrasted with the actual linkages found in the organizational structure of a college (Weick, 1976). Schmidlein and Milton (1990) advised college planners to begin with a planning model, but to adjust it for the particular needs of the institution. Rowley and Sherman (2001) concluded that for planning to be successful, the model and process must be adapted to the uniqueness and expectations of the individual campus.

Townsley (2002) reported on the special planning issues that concerned small private institutions. The fiscal health of these primarily teaching-focused institutions depended directly on student enrollment and the associated tuition and fees that could be charged. Tuition-dependent institutions typically relied on current enrollment rather than research dollars or endowment funding as the primary funding source for operating

budgets. Crucial factors for the success, and even survival, of these small institutions have included successful adaptation to changing external conditions (Hunt, Oosting, Stevens, Loudon, & Migliore, 1996; Townsley, 2002).

The problem then, is the design of a planning model and process to fit nuances of how things are done at an institution and then to implement the fully developed plan to reach the goals. Successful plans result in actions and change (Byson, 1995; Keller, 1983; Sevier, 2000). Once an institutional plan is developed and adopted, the institution must integrate the plan and actions with other existing planning activities such as budgeting, assessment, and with school and departmental planning (Hollowell, Middaugh, & Sibolski, 2006).

What do institutions do when a strategic goal is unmet? To begin to answer this question, this study examined the strategic plan at a small college in the south where such a situation occurred. This institution enjoyed apparent broad support and some success for the institutional strategic plan. Yet a year into the plan, the institution found no progress on one of the major strategic goals. The planning process had failed to produce action and change to accomplish this strategic goal. The context of the study is described next.

A private college, primarily residential, small, and teaching-focused four year institution adopted a new strategic plan. The college's student population was predominantly full time and at the traditional age for college. Strong public institutions in the region, as well as other private institutions, provided prospective students with many options for undergraduate education at varying costs. The college's annual operating budget was approved only after the fall enrollment numbers for full time students (and

the revenue from tuition, room and board charges) were finalized. In this competitive environment, successful planning mattered.

The College's planning model included the typical steps of a review of the mission, revision of values, broad campus input, use of external data as well as internal data on strengths and weaknesses, design of goals, campus forums for review, and finally approval. The design process, in accordance with campus practice, included comment opportunities throughout the plan development via multiple campus open meetings. A strong assumption of the strategic planning model was that departments would take action to support institutional goals to achieve the institutional targets. After a two year process that produced multiple drafts, a final plan was endorsed by the faculty and the Board of Trustees.

One of the strategic goals addressed a point of pride and a perceived strength, experiential learning. Many of the college's undergraduates completed some form of experiential learning for credit as a part of curricular requirements within the major. Through a transcript review, 70 percent of seniors in a typical year had completed one or more activities defined as experiential learning: internship, field experience, clinical experience, student teaching, service learning, or study abroad. The strategic plan goal for experiential learning called for 100 percent of the students to complete documented experiential learning at some point during the undergraduate years.

Student enrollment grew in the year following the approval of the strategic plan, which was considered as partial success of the strategic plan. However, no change or progress had been made on expanding the percentage of students with experiential learning. Nor were any proposals on the drawing board to systematically address the

goal. Additionally, an earlier task force assigned to work on experiential learning had ceased activity. The issue is one where the strategic goal had not been met, where leadership was diffused, and yet where active involvement and support for experiential learning existed in many departments. The institution needed a new approach to engage leaders in institutional strategic issues and design of relevant strategic level actions to achieve goals, especially for issues that crossed unit boundaries.

One such approach suitable for a group of people to do strategic thinking was Concept Mapping (Trochim, 1989). Concept mapping was a general method used to show connections between ideas in the form of a picture or graphic. Novak and Gowin's (1984) approach to concept mapping, helpful as a teaching tool, used visual displays of ideas that indicated the mental models used by the individual. Concept Mapping as discussed here, was a facilitated, structured method of organizing a group's ideas and developing a conceptual framework related to a issue (Kane & Trochim 2007; Trochim, 1989; Trochim & Linton, 1986). It was considered a participatory mixed method approach (Greene & Caracelli, 1997) utilizing both qualitative and quantitative methods. Trochim's Concept Mapping consisted of structured activities where groups of people generate, rate, and organize ideas to address a specific issue. Following analyses of the participant data with multidimensional scaling and hierarchical cluster analysis, the group viewed the results of their thinking in a map. The facilitator guided the group through the process as prioritizations become clear and lead to the identification of areas for action (Trochim, 1989).

Three broad research questions, each with detailed supporting questions, provided structure to the investigation of the problem of a complete planning model for a small private college.

What strategies/decision making models that were used by the college administration in the planning, implementation and evaluation of experiential learning?

What ideas/strategies concerning the expansion of experiential learning at the College were generated by the administrative stakeholders?

What are the perspectives of key leaders toward Concept Mapping as an effective model for planning at a small private institution?

A participatory action research method allowed aided the investigation of the research questions. Theoretical considerations as well as practical issues informed study decisions (Kemmis & McTaggart, 2000). Because of the shared decision-making where the leadership team and the researcher worked together to make decisions about the implementation of the process, the method of participatory action research fit investigation requirements (Kemmis & McTaggart, 2000). The needs of the institution included how to achieve an unmet strategic goal. Even so, the use of Concept Mapping as a planning tool provided an example to similar institutions as to the design of a customized planning approach. For the third research question, key leaders indicated their perspectives on Concept Mapping through actual attendance during the project and through the reporting of feedback on a written survey.

This research offered practical benefits to the institution and can be used as an example by others. Institutional planning in higher education is critical to successfully attract, retain, and graduate qualified students in a changing environment. Small

institutions are especially dependent on enrollment and associated tuition revenue for fiscal health and survival (Townsend, 2002). However, the approach to customizing a planning process with Concept Mapping can be employed by other planners and leaders. Individuals from multiple academic and staff areas were involved in the issue of how to expand experiential learning at the college. Planning across departmental lines brought people together to make decisions who did not typically work together as a group. Yet, with the Concept Mapping process, the group achieved its task in, what for this campus was, a very short period of time. A definition of terms used throughout the study may be helpful to the reader.

Table 1.

Glossary

Phrase or term	Working Definition
Experiential learning	The college used the Association for Experiential Education (AEE) definition: "A philosophy and methodology in which educators purposefully engage learners in direct experience and focused reflection in order to increase knowledge, develop skills, and clarify values." However, the College's strategic goal targeted only credit-bearing and course-related activities such as internships, field experiences, clinical experiences, student teaching, service learning, and study abroad.
Legitimacy	Schuster, Smith, Corak, and Yamada (1994) defined legitimacy as what was acceptable to the people affected. The implication being that what was acceptable on one campus might not be acceptable on another campus.
Loose coupling	"...what happens in one part of a university often has little direct or immediate effect on other parts of the institution." (p.150) Birnbaum (2001) further explained that actions at the top administrative levels may be only loosely connected to behaviors of those at lower levels of the institution. Kezar (2001) concluded that most campuses were loosely coupled, often decentralized, characterized by high levels of

Phrase or term	Working Definition
Small colleges	<p>specialization among employees, and high levels of differentiation among units in the system. Weick (1976) described events as loosely coupled if they are related, but still maintained a unique identity and separateness.</p> <p>The Carnegie Classification of institutions for size defines categories according to the full time equivalent (FTE) student enrollment: Very small as less than 1000 FTE Small as 1000 to 2,999 FTE Medium as 3000 to 9,999 FTE Large as a minimum of 10,000 FTE</p>
Shared governance	<p>Generally, management responsibilities for an institution are divided where administration attends to the business issues, faculty make decisions about the curriculum and academic matters, and a governing Board oversees all (Rowley & Sherman, 2004). Decision-making patterns for these groups may vary with a clear hierarchy for the administrative component and a system of faculty committees to make academic decisions (Kezar, 2001).</p>
Strategic Planning	<p>Tromp and Ruben (2004) described a typical framework for higher education strategic planning with attention to the following areas: Mission , Vision, Values Beneficiaries and collaborators, also called stakeholders Environmental Scan (internal and external data) Goals Strategies and Action Plans Plan Creation Outcomes and Assessments</p>

CHAPTER II

A REVIEW OF THE LITERATURE

Planning Overview

George Keller (1983), in the classic *Academic Strategy*, advocated for academic planning characterized by broad involvement and the use of key data to design strategy. Keller (1983) focused on the institutional mission and competition in marketplace. This kind of planning incorporated the political realities of decision-making in higher education, yet targeted broad goals as in the formal rational model. Birnbaum (1988) and Norris and Poulton (2008) concurred with Keller in that higher education, planning leaders must consider the internal forces in the design of planning processes and plans. Peterson (1997) wrote "Planning is often seen as the attempt to deal with issues of the fit between institution and environment" (p. 4). Mintzberg (1994) wrote "Planning is a formalized procedure to produce an articulated result, in the form of an integrated system of decisions" (p. 12). Taylor and Karr (1999) described strategic planning as "a matching process between an institution and its environment predicated on a realistic evaluation of both" (p. 225). Kaufman, Herman, and Watters (2002) characterized strategic planning as proactive.

Why Plan?

Changes in global economics, technology, political, and social arenas affected institutions of higher education (Dooris, 2002-03; Peterson, Dill, & Mets, 1997). Events like the GI Bill, the growth of community colleges, the increased demand for higher

education, the extensive technological advances, the degree of public support, and the focus on accountability, all influenced how higher education institutions planned (Dooris, 2002-2003; Keller, 1983; Norris & Poulton, 2008). Pointing to planning requirements from all six regional accrediting bodies, Hollowell, Middaugh, and Sibolski (2006) suggested that that planning was linked to institutional vitality and viability.

In the 1970s and the 1980s the enrollment growth of two year colleges characterized what Peterson and Dill (1997) called “mass higher education” that was fueled by the GI Bill designed to help veterans prepare for re-entry into the workforce. Researchers noted events in the external environment that threatened the business as usual approach preferred by higher educational institutions (Birnbaum, 1988; Hunt, et al., 1996). Increased competition, as in the expansion of proprietary institutions in the 1990s, provided alternatives to the traditional four year college model (Peterson et. al, 1997).

Marked by an economic recession, the early 1990s saw growing public concerns about college costs. Other planning issues were increased use of technology on campuses, shifts in the demographics of the students (more adult students and international students), investment in new equipment and facilities, and the search for improvements and efficiencies. Planning responses included the adoption of systematic program reviews, experimentation with Total Quality Management, and interest in the Baldrige Award in education (Norris & Poulton, 2008).

By the 2000s, higher education experienced challenges to public funding and calls for assurances and improvement of higher education performance (Norris & Poulton, 2008). Planning in higher education now addressed external accountability,

global competition, technological changes, environmental sustainability, measurement of results, and regional accreditation interest in effective planning (Norris & Poulton, 2008). Dooris (2002-2003) categorized planning as mainstreamed in higher education by the late 1990s. The quest for financial survival was another reason to plan. Townsley (2002) noted that 30 percent of the small private colleges (enrollments of under 2000 students) showed deficits for five out of the nine years reviewed. This indicated that these schools were in financial difficulties and were barely keeping up.

Characteristics of Institutions of Higher Education

Institutions of higher education were characterized by decentralization, shared governance, and distribution of power (Keller, 1983; Neufield, 1999; Rowley & Sherman, 2004; Schmidtlein & Milton, 1990; Stark & Lattuca, 1997; Wergin, 2003). Additionally, Swenk (1998) and Yaure (2004) noted that the shared governance model added organizational complexities. Birnbaum (1988) defined governance broadly, “to refer to the structures and processes through which institutional participants interact with and influence each other and communicate with the larger environment” (p. 4). Generally, management responsibilities for an institution were divided so that the administration attended to the business issues, faculty made decisions about the curriculum and academic matters, and a governing Board held general oversight of all (Rowley & Sherman, 2004). Decision-making patterns for these groups varied, with a clear hierarchy for the administrative component and a system of faculty committees to make academic decisions (Kezar, 2001). Governance structures in higher education are often criticized for slow-moving processes and Schuster, Smith, Corak and Yamada (1994) reported that a pre-occupation with preservation of the status quo resulted in an

unwillingness to address any re-alignment of priorities with external realities. Therefore, planning systems for higher education must incorporate the decentralized nature of higher education, and consider the preference for collegiality of consensus building in a shared governance setting (Weick 1976).

Kezar (2001) nicely summarized the attributes of higher education institutions: "...interdependent organization, relatively independent of environment, unique culture of the academy, institutional status, values-driven, multiple power and authority structures, loosely coupled system, organized anarchical decision-making, professional and administrative values, shared governance, employee commitment and tenure, goal ambiguity, and image and success" (p. 26). Birnbaum (1988) explained loose coupling as the situation where stronger linkages are found within subsystems than between subsystems. Stark and Lattuca (1997) and Wergin (2003) have reported that faculty valued professional autonomy with the freedom to teach and learn based on interests above centralized planning. Birnbaum (1988, 2001) suggested that the loose coupling was an advantage because it permitted subunits (departments) to respond faster to changes in the environment. Summing up a loosely-coupled organization, Clark (1983) concluded that higher education planning must consider the bottom-heaviness of the university. Faculty allegiance to discipline methods and approaches resulted in the situation where the individual parts of the institution may move in different directions (Clark, 1983 in Peterson, 1997).

Kezar (2001) referred to organized anarchical decision-making in institutions. Cohen, March, and Olsen (1972) listed characteristics of decision situations that fit organized anarchy as 1) unclear, vague or competing goals, 2) how things are done

(how decisions are made) was not understood by those involved, and 3) inconsistent or uneven attention to issues. These characteristics differed from what would be expected in a hierarchically designed (as in typical business) organization, thus contrasting higher education and business (Cohen, March, & Olsen, 1972).

Other descriptions of higher education institutions relevant to planning systems design have included: a value on dissent and critique (Schmidtlein, 1999) and uneven engagement in organizational issues by faculty (Tierney & Minor, 2003). Dill (1993-94) advocated for tighter integration and collaboration across the loosely coupled units as a condition required for widespread change, rather than stronger centralization. Van Vught (Schmidtlein & Milton, 1990) concluded that planning approaches for higher education should provide for institutional flexibility and promote coherence in actions.

Planning and Borrowed Models

The literature of higher education planning invariably included descriptions of the changing external conditions. To deal with these changes, planning and management models were borrowed from business and government despite the clear distinctions in organizational structure and decision-making (Mintzberg, 1994; Neufield, 1999; Schmidtlein & Milton, 1990). The shared governance and diffusion of decision-making typical of higher education was counter to the hierarchical nature of formal rational models of planning.

In a study of how college presidents spent their time, Cohen and March (1986) concluded that institutions not only lack clear goals, but typically have what some would see as competing goals: seeking to attract honors program students as well as students who qualified for equal opportunity access programs. Higher education decision-making

has been labeled as necessarily political and often incremental. In contrast, typical planning approaches were grounded in the rational theory of predictability and defined goals accompanied by bureaucratic frameworks of decision-making and administrative structures (Schmidtlein & Milton, 1990).

The models described in the next section include long range planning for facilities, formal rational models where everything was subject to detailed analysis and formal plans, the organizational development model, a model of incremental decision-making based on advocacy, philosophical synthesis that resulted in no plans, and even a coordinated anarchy model (Peterson, 1999). Strategic planning as seen the 1980s with a focus on the strategic decisions, results, and incremental action steps is also described. For extensive reviews of planning in higher education along with decision-making approaches, see Cope (1987), Norris and Poulton (2008), Peterson and Dill (1997), and Schmidtlein and Milton (1990).

Long Range Planning. Plentiful resources and a very supportive public characterized the environment for higher education in the era following World War II to 1975 (Peterson & Dill, 1997). Competition for students was not intense and generally only within institutional type (Dooris, 2002-2003). Norris and Poulton (2008) named and analyzed six decades of planning in higher education beginning with the 1950s as the *Age of Authority*, in which they characterized decision-making as less participative and noted the beginning of a shift from stable enrollment growth to a boom in growth from enrollment by veterans with GI Bill benefits. Schmidtlein and Milton (1990) noted that as conditions changed, higher education looked to the formal rational planning models used in business as a way of managing the rapid growth. Long range planning models

projected past decisions into the future, with the assumption of a linear relationship between the past and the future. Formal institutional plans or campus facilities plans were developed to guide growth and justify financial resources. Long range planning was possible where the forecasts for resource acquisition and enrollment were reasonably accurate (Shirley, 1988). According to Norris and Poulton (2008), the 1960s or the *Age of Developing Quantitative Techniques*, saw the beginnings of administrative computing and an increased use of information and research in decision-making. Enrollment forecasting was an example of a quantitative technique.

Rational Models of Planning. Planning approaches designed for business and government in the 1960s and '70's made assumptions about how organizations functioned. The *rational model* is a traditionally top-down, formal approach where everything is subject to planning (Neufield, 1999; Peterson, 1999; Schmidlein & Milton, 1990). The formal rational model of planning was widely recognized and most complete model in higher education (Peterson 1989/1999). It was well suited to hierarchical structures and for internal or external issues where the path from the means to ends was clear and where predictability of results was possible. The model was appropriate for any type of planning dealing with substantive and strategic concerns like mission or efforts closer to the implementation level as in tactical or operational plans. Schmidlein & Milton, 1990 (citing Peterson, 1980 and Schmidlein, 1983) wrote that planning approaches were tailored to the expectation that the organization had specific goals, that actions can be designed to achieve these goals, that decisions about which actions to follow are reached logically, and that implementation and follow-through was feasible. Lindblom (1959) described the extensive analysis steps for complex issues: identify

relevant and common values, research associated theories that relate to issue, investigate alternatives with implications of each using models and quantitative tools, and finally, choose among the alternatives considering the values and capacity of the organization. The formal-rational planning model was based on the assumption that mission and goals can be clearly defined and can function as a guide for program and resource allocation strategies, along with other planning, implementation and review activities. The model operated as a cycle in that systematic review of activities guided periodic updates or revisions. Participation was representative or based on expertise.

Application of this planning approach included a view of the institution as a set of clearly defined structures, functions, and offices; each with assigned planning responsibilities within the planning process. Decision-making tended to reflect a problem-solving mode associated with the particular planning element (Peterson, 1999). Advantages of the model included visibility, clarity, and continuity of the planning process. The disadvantages related to the observation that governance processes and college functioning tend not to be fully rational. The planning elements like budgeting and periodic program review tended to be on different calendar cycles. The integration of planning in different levels of the institution also added to the complexity of the process. All of this required planning expertise that smaller institutions may not have had. Another disadvantage was that this model tended to support incremental change (Peterson, 1999). Models of planning are described in the next section.

Organizational Development Model. Peterson, (1989/1999) discussed the stages of the *organizational development model* as diagnosis, action planning, implementation, and evaluation and noted the similarity to the formal-rational model but

with a strong internal focus. This planning approach was less concerned with strategic decisions in response to external environment. Also, this model was based on the view of the organization as a collection of individuals or groups such that if they thrive, the organization itself will succeed. Attention in planning then became a learning exercise that optimized the human system aspects (performance improvement and development opportunities) rather than the formal structures of the organization. Change in procedures and tactics that affected the culture may result. Neufield (1999) identified the organizational development model as one where the institution assumed openness and broad participation as a necessary step for change; yet tended to be utopian in that it assumed the natural tensions between organizational needs and personal needs can be talked through and reconciled, even in times of cutting back. It utilized a consensus style decision-making approach with a rational problem-solving style of considering alternatives openly and evaluating performance (Peterson, 1997). One advantage of this approach was the motivational effect on individuals and the strong connection between the planning and the implementation. The disadvantage was the time it required, the possibility of unrealistic goals when external considerations were not integral to goal development, and the reliance on outside experts because of the difficulty for an insider to initiate the process. Another disadvantage was the difficulty of reaching consensus in times of declining resources (Peterson, 1997).

Political Advocacy. The advocacy approach of planning was not well-developed as a model and focused primarily on issues of interest to subgroups (Neufield, 1999; Peterson, 1999). Policy formation was the goal of this non-hierarchical approach and the analysis of issues from different perspectives is characteristic of this model. Given that it

was issue-oriented, it was possible to see shifting alliances based on issue. Decision styles included bargaining, negotiation, and compromise. Conflict was expected and generally some participants are in a better position than others to make their case. Peterson (1989/1999) noted that many institutions operated this way, making understanding of the dynamics of this approach useful to the planner. The challenges included a tendency to deal with issues on a piecemeal basis, so the institution must take care not to develop conflicting policies. Another disadvantage was that the overall institutional sense of direction could be compromised by this approach (Peterson, 1989/1999).

Incremental Model. Similar to the political advocacy approach to planning, incremental models addressed issues of interest to subgroups, relied on negotiation, and favored only marginal changes. Peterson (cited in Schmidlein & Milton, 1990) suggested that these approaches may leave the institution without a unifying sense of direction. Only slight changes were periodically attempted in the incremental model of planning; a model that included and expected conflict (Neufield 1993/1999). Economist Charles Lindblom (1959) wrote that “successive limited comparison” (p.81), also described as “muddling through”, was the rational approach to both evaluating alternatives and to achieving agreement. Neufield (1993/1999) noted however, if those small adjustments were aimed toward broader goals and direction, this approach can eventually brought about desired change, although slowly.

Philosophical Synthesis. Like the advocacy approach and a coordinated anarchy, philosophical synthesis attended to traditional aspects of how the academy works that were left out of typical rational-analytic processes in formal rational, planning

approaches (Peterson 1989/1999). The philosophical synthesis approach as summarized by Peterson (1989/1999), examined the underlying assumptions of an issue like a new delivery system, the design of a mission around a single issue like the environment, or a new approach to education. The purpose was to identify basic societal, political, and ethical trends underlying an issue so as to develop an informed mission. Because implementation was not part of the model, the philosophical synthesis approach was not considered a complete planning model and may not lead to change, although it could lead to a strong consensus as to the larger purpose of such an effort. However, institutions found it time consuming, inefficient, and it required planners with the intellectual expertise and the ability to deal with philosophical debate in order to lead this effort. Reasoned debate, logical argument and persuasion may be decision styles associated with philosophical synthesis (Peterson 1989/1999).

Coordinated Anarchy. Cohen and March (1986), Kezar (2001), and Swenk (1998) compared decision-making in colleges and universities to an *organized anarchy* because of multiple authority structures, the typical existence of conflicting subunit and institutional goals, multiple means that resulted in the same ends, and a lack of alignment between means and ends. Peterson (1999) found the coordinated anarchy model hard to describe and suggested that it may only work for self-sustaining units of a large complex organization. This model acknowledged the loose connection and autonomy of subunits (also referred to as loose coupling or a federated system). Also that for the good of the institution; the loose connection should be encouraged, not limited by central constraints. One advantage of the model was the quick response capability and spontaneity possible from the subunits. The disadvantage was an

assumption of slack resources and the potential delayed organizational response to a decline in a subunit, that resulted in a drain on resources to the detriment of the other parts of the organization. Large scale change was difficult (Kezar, 2001).

Technocratic or Empirical Model. The technocratic/empirical pseudo model (Peterson, 1999) was not a process model, but rather highlighted the use of technology or data systems to quantify issues. It fit well with a rational, problem-solving decision style that weighed alternatives. The basic assumption was that one gained a view of the organization through data; and that the data were linked to structures, programs, activities, and outcomes, so were useful in making planning decisions. The focus of the data or the technique was either internally directed or directed to the external environment as in environmental scanning. Examples included trend analysis, market research, modeling, needs assessment of institution or clients, scenario development, budget analysis, Delphi, cost-benefit techniques, and evaluation (Peterson, 1999). To use this approach, the planner must be skilled in the techniques and analysis. A disadvantage of this approach was its inability to deal with the non-rational choices associated with planning, like value-based decisions. It also might isolate planners from the functional units and governance channels, and the tools or data systems might be expensive.

Other Kinds of Planning. Total Quality Management (TQM) made popular in the business world by Deming, Juran, and Crosby was implemented by some colleges as an improvement effort (Cornesky, 1990). Codjoe and Helms (2005) described the use of TQM techniques for specific improvement projects and referred to it as a set of techniques or processes to implement change rather than a planning model at the

institutional level. Sherr and Lozier (1991) discussed the substantial training commitment and institutional structure created to support TQM at one community college. DeCosmo, Parker, and Heverly (1991) noted that colleges are typically poor in providing staff development and that TQM required very specific skills and roles from participants. Also, quality control to some faculty meant uniformity accompanied by a loss of control by faculty (Coate, 1991).

Strategic Planning. The 1980s were marked by a shift in higher education planning from a reactive to a pro-active stance in consideration of external forces (Norris & Poulton, 2008). Bryson (1995) described strategic planning as a rational planning model that assumes agreement can be achieved on the basic elements of the model: goals, policies, programs, actions. Fundamental elements of strategic planning include mission, audience served, program priorities, comparative advantage, and key objectives to be achieved informed by the resource needs to do so (Steeple, 1988). Strategic planning in higher education could be thought of as the introduction of marketing concepts and the adaptation of services provided to address the demand (Sevier, 2000; Steeples, 1988). Strategic planning models addressed the congruence between the organization and the external and changing environment (Peterson, 1999; Sevier, 2000). Yet, at the same time, planners considered the institutional mission and the principles that guided learning (Keller, 1983). Thus, strategic planning included the emphasis on staying abreast of external environmental conditions in which the college or university competes. Flexibility was achieved by thinking of strategic approach as a cycle, not as a static and finished plan. George Keller (1983) called for strategic planning based on long term goals to set the direction, but also with the specific short

term actions that achieved the desired state in stages and allowed the necessary flexibility. The focus on data and results set up an ongoing approach to management that positioned the institution to deal with the realities of the uncertainty in the external environment. Where long range planning analyzed the environment so as to respond to it (Peterson, 1997), under strategic planning an institution adapted itself to the environment so as to better compete (Peterson & Dill, 1997; Taylor & Karr, 1999). Sevier (2000) characterized strategic planning as proactive, participatory, future-oriented, and often designed to improve the competitive position in a marketplace.

Kaufman, Herman, Watters (2002) advocated strategic planning with the societal impact of education as the starting point for discussion. They labeled this consideration of what will be needed for the future by society as the mega level of planning and the key element of effective strategic planning.

Summary of Planning Models

Key characteristics for the planning models are listed in Table 2 with particular considerations for institutions of higher education.

Table 2.

Summary of Planning Model Characteristics

Planning Models	Key characteristics	Higher Education
Rational Planning Models	Designed for hierarchical organizational structure with a top-down approach to management	Higher education has both hierarchical and a collegial professional association–type structure for decision
	Borrowed from business where measurement in terms of profit or loss can be precisely determined connected to costs, markets	Political considerations of decision-making typical

Planning Models	Key characteristics	Higher Education
	Everything subject to planning, analysis, goal-setting and review in an ongoing cycle	
	Planning responsibilities assigned to each unit in organization	
Long Range Planning	Useful when pace of change was slower and predictable with accurate forecasts	Little used in recent times; precursor to other rationale planning models
Organizational Development Model	Internal focus External institutional factors de-emphasized in favor of the development of people	Risk from lack of adaption or response to external changes (political, economic, social, environmental, technological)
Incomplete Models – but worthy of study	Analysis of issues from different perspectives to consider interest to subgroups in policy formation.	Not connected to action, used primarily to influence policy
Political Advocacy	Decisions followed bargaining, negotiating, and compromise	May lead to attention to topics in a piecemeal fashion, rather than holistically. Those best equipped to argue for a position have an advantage
Incremental Model	Addressed issues of interest to subgroups, relied on negotiation, and favored only marginal changes	Some advocate as effective for higher education environment, if guided by an overall direction and moving toward overall goals or direction Slow change
Philosophical Synthesis	Clarified underlying philosophy of the issue under consideration through debate and discussion Could lead to consensus and support for issue	Implementation and action not part of model

Planning Models	Key characteristics	Higher Education
Coordinated Anarchy	<p>Important in that planners may find that this aspect is important to a campus for a new initiative</p> <p>Decision-style more than a planning model</p> <p>Multiple authority structures</p> <p>Acknowledged loose connections between units and overall institution where decisions may conflict</p> <p>An advantage was that the unit could respond quickly to changes</p>	<p>Large scale change difficult</p> <p>Assumption of slack resources allowing units to be somewhat independent</p> <p>A disadvantage of the loose connection is that the central authority may be slow to address declines for individual units, resulting in a detriment to the overall organization</p>
Technocratic or Empirical Model	<p>Highlights utility of data for planning as in trends, modeling, and analyses</p> <p>Data was linked to structures, programs, activities, and outcomes so useful to describe organization for planning</p>	<p>Value – based decisions may not be included in this approach</p> <p>Need skilled analysts</p>
Strategic Planning	<p>Connections across types of institutional plans was necessary</p> <p>Measurable goals</p> <p>Required established linkages with academic planning, resource planning, and facilities planning</p> <p>Regular assessment activities and ongoing planning activities for continuous monitoring</p>	<p>Widely adopted by higher education since the 1980's</p> <p>Institutions cautioned to adapt procedures for traditions of campus</p> <p>Often includes response or adaptation to external trends</p>

The challenges presented to higher education planning noted from response to the early planning models may assist planners in the customization of a planning process to fit a campus. For instance, scheduling time to explore the value and philosophy of a new initiative (philosophical synthesis approach) may still be an important part of “what is done” to introduce a new program or plan at a campus.

Lessons Learned

Criticisms. The extensive data use for long range, rational planning (identifying and clarifying options, then choosing best), simply produced too much information; humans can't manage that amount of information. Herbert Simon (1997) suggested that human cognitive limitations prevented the implementation of a fully rational system; he called this limitation bounded rationality. Therefore, planning resulted in a good enough solution instead of the optimal solution. Simon labeled this compromise “satisficing” (Shakurn, 2001). Another criticism for planning was documented by Cohen and March (1986). They found through interviews with college presidents that although presidents reported that planning was extremely important, they could not point to benefits achieved or in some cases, find the most recent planning document for the institution (Cohen & March, 1986).

Lack of fit between academic institutional organizational characteristics and those assumed in the design of a planning model for business lead to failed attempts at planning system implementation or resulted in a sit-on-the-shelf fate for plans (Schmidtlein & Milton, 1990; Yaure, 2004). Further, Schmidtlein, Birnbaum, Mintzberg and Tom Peters advised against rigid adherence to a set planning procedures (Dooris, 2002-2003). Mintzberg (1994) summarized complaints about the formalization of strict

rational planning and analysis methods as fundamentally different from the creative and integrative approach needed to actually devise strategy. Instead, an emphasis on strategic thinking, the use of appropriate data, and a focus on action and results was recommended (McLaughlin & McLaughlin, 2007; Mintzberg, 1994; Trainer, 2004).

Dooris, Kelley, and Trainer (2004) concluded that convincing empirical evidence as to whether or not strategic planning works for higher education has yet to surface. Yet from their text, *Successful Strategic Planning*, these authors noted simply that “planning can be done poorly or it can be done well” (p. 10).

Leadership. Visible presidential involvement and leadership was key to successful institutional level planning (Lisenksy, 1988; Sevier, 2000; Swain, 1988; Tromp & Ruben, 2004; Winn & Cameron, 1998). However, Winn and Cameron (1998) investigated effectiveness through the Baldrige model and found that leadership worked through systems to affect results; leadership alone was not sufficient. Schuster et al. (1994) concluded that the role of the leader was to provide proactive, decisive leadership to guide the vision as well as the planning, and to see that resources are directed to achieve institutional goals.

Planning groups or leadership teams served as a representative body and coordinated the overall the planning process (Sevier, 2000; Tromp & Ruben, 2004). Kotter (1996) described the individual qualities needed for such change management teams: position power, expertise, credibility and leadership. Others added commitment to the organization, commitment to the broader purpose, and the sense of openness (no hidden agenda) to the list of leadership team characteristics (Kaufman, et al., 2002). Rowley and Sherman (2001) cautioned that the formation of such a committee should

adhere to the organizational structures and social processes of the individual institution to achieve legitimacy. Peterson (1997) noted that the composition of the decision-making group should reflect the traditions at the particular institution in the following ways: method of selecting members, composition of members, permanence, type of charge to group, and level of expertise of group members. President Donald Swain noted the importance of a faculty advisory group in the strategic planning process at the University of Louisville (in Steeples, 1988). For community college planning, Ammentorp, Warner, Harmening, and Christenson (2004) advised the creation of a working group that includes business leaders and community leaders as well as faculty, support staff, administration and students.

Participation and Communication. Winning support for a shared vision can be accomplished through a broad participatory process. Steeples (1988) concluded “The peculiarly decentralized character of colleges and universities requires a careful balancing of initiative from the institution’s leadership with the individual aspirations of faculty and students” (pp. 100-101). Richard Morrill, (1988) called for wide participation in the goal-setting process a key factor in successful planning. Codjoe and Helms (2005) involved students in institutional planning. Swenk (1999) recommended a partial participation model where roles were clearly defined and the reasons for planning were communicated widely. President Swain while at the University of Louisville (Steeples, 1988) assigned specific planning tasks (external analysis, internal analysis, and a group to make recommendations as to strategy), to three different groups but reserved the final decisions for the strategic plan for himself. This fit Swenk’s (1999) call for a partial participation model, but one that incorporated the cultures of both the faculty and the

administrative components of the university. Swenk (1999) concluded that decisions about participation in the planning process must acknowledge that faculty preferences and administrative preferences to planning will very likely be different.

Integration. The link between planning and budgeting was essential (Bryson, 1995; Hollowell, et al., 2006; Keller, 1983; Sevier, 2000). The integration of strategic planning activities with existing cycles and other processes and decision-making within an institution is advised (Bryson, 1996; Yaure 2004). Janaro and Bommer (2004-2005) found that purposeful linking of the departmental values and strategy capacities with that of the institutional level strategy worked well where the market is well defined, as for professional preparation programs. Planning should link the broad vision to specific actions (Yaure, 2004). Keller (1983) advocated for strategy followed by actions to move the institution toward the accomplishment of the strategic goals.

Cordiero and Vaidya (2002) discussed a weakness in a planning model used by California State University at Los Angeles. Institutional performance indicators for the strategic goals and the unit level day to day decisions were not linked. A revision to the model involved a re-organization of the strategic goals into seven categories that reflected the strategic plan, not the organizational structure of the university. Leaders of each area of the institution met to discuss and claim responsibility for specific objectives to achieve the strategic goals. This responsibility included a willingness to allocate division resources to achieve the objective and to fund actual unit plans. This change in the planning model and process provided the necessary integration between unit action and institutional goals for California State at Los Angeles (Cordiero & Vaidya, 2002).

Connections across types of institutional plans was necessary, as in deliberate and well communicated linkages for academic planning, resource planning and facilities planning; as well as between assessment activities and planning activities (Hollowell, et al., 2006; Shulock & Harrison, 1998). Successful planning also included careful attention to and monitoring of measurable goals (Bryson, 1995; Dooris, 2002-2003; Morrill, 1988; Sevier, 2000). The loosely coupled system generated special interests that can result in fragmentation; hence there was a need for clear, measurable, institutional priorities maintain the focus (Shapiro & Nunez, 2001).

Leslie and Fretwell's 1996 examination of resilient institutions concluded with the advice to blend a strategic planning approach with continuous monitoring and what they called organizational learning. Pervasive planning (defined as strategic planning widely communicated, action plans implemented, and complemented by an architectural master plan) was a critical factor for Elon University's success (Keller, 2004).

Process Planning. Planners must tweak the generic strategic planning process so as to fit well with the particulars of a given organization and situation (Bryson, 1995). Peterson described those particulars as the accepted patterns of operation at an institution (traditions, governance, culture). The focus of the planning must be accepted and aimed at important issues in order to be perceived as legitimate (Bryson, 1995; Hollowell, et al., 2006; Sevier, 2000). Neufeld's (1993/1999) analysis of the selected cases revealed planning processes that evolved rather than those that were deliberately selected as a fit for the situation. Her recommendation for a starting point in the model selection process was a strategic model with openness and wide participation built into the process. Decisions for the details of the model include the structure, the scope

(institutional level, disciplinary level or both), and span or timeframe of planning, as well as who will conduct the planning (Swenk, 1999).

Bryson's (1995) work with non-profit organizations included recommendations to clarify the purpose of planning, insure the readiness of the organization to plan, and to define the boundaries and focus of planning. Transparency or openness and clarity of the planning process was also advised (Bryson, 1995; Swain, 1988; Yaure, 2004). A lack of agreement as to the process contributed to the failure of strategic planning in one university setting according to Willson's (2006) analysis.

Decision-making. Schuster et al. (1994) studied decision-making in institutions of higher education and specifically the tension between shared governance and planning. They emphasized the importance of the process of decision-making in issues related to or affecting faculty and found that credible decisions are legitimate and acceptable. Legitimacy, however, is achieved through an acceptable process of reaching the decision, regardless of the content of the decision. Through the examination of seven institutions with a case study approach, Schuster et al. (1994) noted that simple representation did not ensure that constituents felt as though they had a say in decisions made by the group. The representative may or may not function well as a conduit for information. What appeared to be participatory, in fact, may not be perceived as legitimate involvement. They concluded by recommending a council that blends George Keller's Joint Big Task Force concept of a group that worked intensely on a focused issue for only a short period of time, and the idea of involving those key opinion leaders on campus in a group charged with strategic planning issues to integrate the planning with the governance by having the right people at the table.

Eckel (2000) described a study of the extent to which faculty, administrators and Trustees shared in the decisions that lead up to the closure of academic programs. The four cases, drawn from research institutions, revealed variation, but not dissatisfaction, from faculty and administrators at each of the institutions. This study supported the influence of traditions and culture in the determination what was appropriate for decision-making on a campus (Eckel, 2000). The results from Yaure's study (2004) of technology planning supported the hypotheses that while participants indicated a preference for comprehensive decision-making processes, environmental and institutional realities make technology decision-making an incremental process.

Individual Institutional Approach to Planning. Planners and researchers have concurred that any process or model must be adjusted for the specific setting at an individual institution (Bryson, 1995; Peterson, 1999; Rowley & Sherman, 2001; Schmidtlein & Milton, 1990). Taylor and Karr (1999) acknowledged that due to the distinctions in internal approaches to the way things work on a campus and the perhaps different needs for each campus, there is no one template for strategic planning that best fits all institutions. Bryson (1995) agreed. Dill's (1993-94) advised purposeful adaptation of any planning process design to an individual institutional setting. His acknowledgement of both the art and the science in planning design for higher education reflected the challenges of achieving a working integration of naturally fragmented disciplines and units that comprise a university or college (Dill, 1993-94).

Peterson (1989/1999) noted that as an institution developed a planning approach, a primary approach will likely emerge. This approach will likely reflect a combination of planning models instead of strict adherence to only one approach. Others

have also called for flexibility in process (Hollowell, et al., 2006; Sevier, 2000; Swain, 1988). Schmidlein and Milton (1990) concluded that a planning system must provide for institutional flexibility and coherence. To determine an appropriate approach to planning for a campus, they advised planners to consider characteristics commonly found in colleges and universities like diffusion of power, conflicting interests, the role of professionals, and the potential of involving people with limited knowledge about area subject to the planning.

Dooris (2002-2003) described how the Penn State planning system adapted to changing conditions over the years by moving away from a focus on the plan and to a focus on the results intended by the plan. Penn State's long history with planning evolved from a rigid, formal, (rational model) of planning to a more flexible, organizational learning type approach that incorporated expectations of continual improvement (Dooris, 2002-2003).

Planning Successes. In summary, several key factors for institutional planning have been identified. Leadership from the president and from a carefully selected leadership team was a foundational success component (Keller, 2004; Lisenksy, 1988; Sevier, 2000; Swain, 1988; Tromp & Ruben, 2004; Winn & Cameron, 1998). The selection of important issues as a planning target was necessary for successful planning (Keller, 1983; Peterson, 1989/1999). Broad participatory processes were mentioned throughout the planning literature (Betit, 2004; Bryson, 1995; Burby, 2003; Chaffee, 1984; Hunt, et al., 1996; Kaufman, et al., 2002; Keller, 1983; Rose & Kirk, 2001; Schuster, et al., 1994; Sevier, 2000; Swain, 1988; J. Taylor & Machado, 2006; Trainer, 2004; Tromp & Ruben, 2004).

Several researchers cautioned adherence to legitimacy of process as determined by the individual campus traditions and culture as critical to a planning process (Keller, 1983; Rowley & Sherman 2001; Swenk, 1999). Also common was the call for incorporation and use of pertinent data on the internal and external environment (Bryson, 1995; Dolence, et al., 1997; Lisensky, 1988). Flexibility in the process and willingness to allow the process to evolve as needed characterized successful planning (Chaffee, 1984; Dooris, 2002-2003; Mintzberg, 1994). Also, planners should strive for simplicity in the process and the plan (Mintzberg, 1994; Shirley, 1988; Taylor & Machado 2006). Clear, pervasive communication about the plan and the process was considered instrumental for good planning (Bryson, 1995; Chaffee, 1984; Dill, 1993-94; Keller, 1983; Sevier, 2000; Shirley, 1988; Taylor & Machado 2006;). Plans must be clearly connected to both funding and to action (Dooris, 2002-2003; Hollowell, Middaugh, & Sibolski, 2006; Sevier, 2000; Shirley, 1988; Yaure 2004). And finally, a focus on results was necessary (Dooris, 2002-2003; Keller, 1983; Mintzberg, 1994; Sevier, 2000; Steeples, 1988; Yaure 2004).

Implications for Planning

To organize institutional planning, Rowley and Sherman (2001) identified three broad criteria to distinguish types of institutions: size of resource base (small to large), primary orientation to the consumer or to the provider, and the level of risk tolerance. Institutions designed their own planning process; and although there may be planning models to be applied generally, the specifics needed to match the distinctions, characteristics, and traditions of each institution (Schmidlein & Milton, 1990). The orderly, rational, approach underlying many planning systems does not fit the actual

linkages within a college (Weick, 1976). Rowley and Sherman (2001) concluded that “The differences one finds from one campus to the next are gigantic, and attempting to use a cookie-cutter method of planning, let alone a method that is not sensitive to the unique circumstances and needs of colleges and universities, is bound to fail” (p.xxi).

Distinctions among Institutions

The Carnegie Classification of Institutions of Higher Education categorizes institutions according to three broad questions: what is taught, who are the students, and what is the setting. This framework has been in place since 1973, and data from the Integrated Postsecondary Data System (IPEDS) was used to assign institutions to appropriate classifications as a way to help researchers describe distinctions among institutions. Institutional complexity (mission), size, control (public or private), and the presence or absence of collective bargaining units also contributed to the institutional context for planning (Norris & Poulton, 2008). Differences existed in higher education institutions based on the blend of service, teaching, and research expected of faculty as well as in the functioning of shared governance system (Rowley & Sherman, 2004). Birnbaum (1991) labeled the various institutional cultures as collegiums, political systems, a type of organized anarchy (with a premium on ambiguity and the individual’s view), and bureaucracy. Institutional cultures have been defined as collegial, managerial, developmental, or negotiating through Bergquist’s 1992 approach (Kezar & Eckel, 2002). Yet another approach described the unique culture of a campus by examining environment, mission, socialization, information, strategy, and leadership (Tierney, 1991). Further contributing to the uniqueness and complexity of each institution was how

the units of the institution were connected and interacted with each other and with leadership (Weick, 1976).

Independent and Small Institutions. Private, independent institutions are more vulnerable than public institutions to competition and market forces (Kezar, 2000). Size of an institution was associated with financial stability and viability with smaller institutions more at risk (Townsend, 2002). Under the Carnegie Classification system, small institutions are those with enrollment of fewer than 3000 full time equivalent (FTE) students.

Hunt et al. (1997) pointed out that the endowment funds of the majority of private institutions are of a size such that they generated less than five to ten percent of the dollars that make up the annual operating budget. Tuition and fee revenues generated the bulk of operating funds. Therefore, planning issues that dealt with market position and decisions that affected enrollment levels became critical to the financial health of the institution. Hunt et. al. (1996) described the internal culture of private institutions as characterized by “a preference for status quo or the past rather than an unknown future” (p. xii). Therefore, small institutions relied on leadership and participatory processes to overcome both the external threat and the internal tendency to resist change. Through a focus on a mission (Hunt, et al., 1996; Keller, 1983; Sevier, 2000) advised that strategic planning actively seek a fit between threatening or opportunistic external conditions and the internal culture of the institution in order to shape the institution’s future.

In a small institution, the people who carry out the plans should be the ones involved in the planning (Burby, 2003); whereas in larger institutions, deliberate communication with those who will carry out the plans was critical for planning process

effectiveness (Hunt, et al., 1996). Also, smaller colleges and liberal arts institutions may exhibit more collegial cultures than that of larger institutions (Kezar & Eckel, 2002).

Chaffee (1984), in a study of 14 private institutions in financial distress, found greater resilience in those institutions that employed what she called *interpretive strategies* or *intense communication* around purpose and symbols of progress to engage the community. In contrast, Chaffee found that institutions that relied only on the rational goal-directed planning approach enjoyed less recovery and progress through tough economic times. Adding a focus on intentional communication strategies for internal and external audiences, Chaffee's advice to planners echoed that of other researchers (Bryson, 1995; Dill, 1993-94; Peterson, 1989/1999; Rowley & Sherman, 2001; Schmidtlein & Milton, 1990; Taylor & Karr, 1999) to consider the individual culture and levers for change at the specific institution in the design of the planning process. Chaffee (1984) and Hunt et al. (1996) concluded that private institutions in higher education have a unique dynamic and that because of the particular mix of culture, traditions, and individuals, the specifics of successful planning efforts elsewhere may not transfer well.

Overview of Concept Mapping

Concept Mapping is a general method used to show connections between ideas in the form of a picture or graphic. Novak and Gowin's (1984) approach to concept mapping as a teaching tool assists students in the development of visual displays that revealed the mental models in use by the individual. Concept Mapping as discussed here, is a facilitated, structured method of organizing a group's ideas to develop a conceptual framework related to an issue (Trochim, 1989; Trochim & Linton, 1986; Trochim & Kane, 2007). This approach has been used in a variety of fields: public health

(Trochim & Kane, 2005; Trochim, Milstein, Wood, Jackson, & Pressler, 2003; Trochim, Stillman, Clark, & Schmitt, 2003; Wheeler, Anderson, Boddie-Willis, Price, & Kane, 2005), social sciences (Jackson & Trochim, 2002; Rosas, 2005), medicine (Batterham, et al., 2002), evaluation (Barth, 2004; Michalski & Cousins, 2000; Michelin, 1998; Trochim, Marcus, Masse, Moser, & Weld, 2008; Trochim, Stillman, et al., 2003; Yampolskaya, Nesman, Hernandez, & Koch, 2004), business (Gans, 2000; McLinden & Trochim, 1998), and education (Abrahams, 2004; Conroy & Kelsey, 2000; Kolb, 1991; Sutherland & Katz, 2005), policy analysis (Trochim & Cabrera, 2005). Of particular interest were those applications to planning, especially planning in a higher education-related setting. One of the early Concept Mapping articles described university strategic planning in a student affairs division (Gurowitz, Trochim, & Kramer, 1988). Gans (2000) studied strategic planning with Concept Mapping in a non-profit setting. Faculty at a research university completed a Concept Mapping project to identify and reach consensus on new learning objectives for an interdisciplinary undergraduate curriculum (Quinlan, Handley, Pappas, & Kander, 2007). Teacher educators on a national level successfully conducted strategic planning together through Concept Mapping (Conroy & Kelsey, 2000) after earlier failed efforts.

Concept Mapping consists of a series of structured activities where groups of people combine their ideas about a topic to produce a conceptual overview of the issue. Participants generate ideas, rate and organize those ideas to address a specific issue of importance to the group (Trochim, 1989). Generally a trained facilitator guides the group through the steps of the process and performs the analysis to transform the group's input to a Concept Map (Trochim, 1989). Concept Mapping projects can be

accomplished over a few weeks in separate sessions, in a retreat over a few days, or asynchronously using the internet to involve people across distances (Kane & Trochim, 2007). The procedures for Concept Mapping as designed by Trochim (1989) are organized into six stages: 1) preparation, 2) idea generation, 3) idea structuring, 4) representation of the ideas, 5) interpretation, and 6) utilization of those results for action plans.

Concept Mapping is well-suited to higher education. In Table 3, successful planning characteristics are compared to the features of a Concept Mapping process.

Table 3.

A Comparison of Successful Higher Education Planning and Concept Mapping

Successful Planning in Higher Education	Concept Mapping as Planning Process
Visible leadership from President and a leadership team with membership app	High level project sponsor
Planning focused on an important topic	Clear focus stated in the form of a question
Incorporates decentralized nature of institutions; expects conflicting interests	Issue of concern to participants – topics parsed to group
Broad participation in the planning process	Designed for groups
Consider preference for collegiality of consensus-building	Useful where consensus not easily reached
Promotes coherence in actions	Integration of conceptual model with what should be done and actions
	Conceptual view of issue reached

Successful Planning in Higher Education	Concept Mapping as Planning Process
Provides for collaboration across units)	<p>through consensus by stakeholders</p> <p>Organized around the topic; can easily extend beyond unit boundaries</p> <p>Promotes group cohesiveness, enhanced morale and improved decision making</p>
Planning process tailored to traditions and expectations of individual campus to achieve legitimacy	Structured, but adaptable process
Allows for flexibility in the process	Flexibility of how participants engage with each stage of the process provides flexibility in design
Willing to allow the process to change and evolve as necessary	Promotes organizational learning through socially constructed knowledge
Utilizes both internal data on the campus and on the external conditions in which the campus operates	<p>Utilizes participant knowledge of data relevant for issue</p> <p>Participant ideas in response to the statement of issue (prompt) as well as data from participants' rating and sorting of those ideas;</p> <p>Project leaders can incorporate appropriate data presentation as the introduction to the issue at hand prior to brainstorming</p>
Focus on strategic thinking	<p>Interpretation of the conceptual overview</p> <p>Identification of themes or regions on the Cluster Map</p>
A focus on results	The project activities all center on the question (prompt) that is phrased to direct the focus on results. For example: "one action we should take to accomplish the mission is"

Successful Planning in Higher Education	Concept Mapping as Planning Process
Connection of plans to both funding and to action	The Concept Map of clusters with labels of areas for action
Simplicity	Conceptual model includes action ideas The targeted nature of the prompt or question around which the activities are built provides simplicity for participants, yet sophisticated analyses of the data
Consider the role of professionals	Structured, focused process enables participants to participate fully

The preparation stage of Concept Mapping includes the design of a very concise description of the issue phrased as a prompt or question. A typical prompt for planning might be “One thing we should do in the next five years to achieve our mission is....” Data collection begins as participants respond to the prompt. One common approach to idea generation is do brainstorming (Osborn, 1948) with the selected groups of people. The prompt helps keep the brainstormed responses on target. The product of the idea generation stage is a master list of all the ideas collected. The ideas can be edited so that each idea is in parallel form and represents only a single concept. For instance, if a response contained two ideas, it could be re-written into two single statements. For example, a response of “We should hire more people and raise salaries,” would become two statements. Hire more people. Raise employee salaries. This master list of statements is used for the next stage, idea structuring.

Project leaders determine the ratings to prioritize ideas; generally a Likert-type response scale is used. Levels of importance, feasibility, capacity, and extent of implementation are rating possibilities for planning projects (Kane & Trochim, 2007).

Typical for needs assessment or planning projects is a 5 through 1 relative importance rating where 5 is “extremely important” relative to the other ideas and 1 is “not important” relative to the other ideas. Participants rate each statement as part of the idea structuring stage. Analysis of the rating data includes descriptive statistics using input from all participants, but can also be generated for subsets of the group, where relevant. These results will be instrumental later in the Concept Mapping process for interpretation and utilization stages of Concept Mapping.

Participants organize the brainstormed ideas by completing a sorting exercise. Weller and Romney (1988) refer to the pile sort method as a systematic data collection method useful for obtaining people’s judgments on the similarity of a large number of items. Coxon (1999) likened sorting to categorization with the caveat that each idea can belong to only one pile or stack. Participants are provided with a stack of cards, each card has one of the brainstormed statements printed on it. The directions typically call for the participant to create stacks of cards, putting cards with similar ideas together. The sorting results for each participant are recorded and used to create the Concept Map in the representation stage.

Next, through an analysis of the sort data, a Concept Map is produced through multidimensional scaling followed by a hierarchical cluster analysis (Kruskal & Wish, 1978). The sort data for each participant was converted into an N by N matrix where the rows and columns represented the statements. If the two statements were sorted together, a 1 was entered into the cell, otherwise a 0 was entered (Weller & Romney, 1988). Individual participant matrices were summed to produce a total similarity matrix where the cell values indicated the number of times two statements were sorted together

by the group. Cell values then ranged from zero (if no one placed the statements together) all the way to the actual number of participants who performed a sort (if everyone sorted two statements together).

Through the multidimensional scaling analysis each statement is then assigned an x, y value and plotted in two dimensional space (Kruskal & Wish, 1978) to produce a point map. Fit or stress is measured by comparing the total similarity matrix with the distance matrix of the points plotted. Low stress values indicate better fit or greater correspondence between the total similarity matrix and the distance matrix. The multidimensional scaling analysis is iterative and error is introduced when the placement of points is estimated or interpolated. More estimation is needed as participants sort statements differently, which produces a higher stress value or a map that fits the data less well (Kruskal & Wish; 1978, Petrucci & Quinlan, 2007; Trochim, 1989).

The point maps show the placement of each statement as a point labeled with the statement number. The multidimensional scaling analysis generally depicts those statements most often sorted together in relative close proximity and those statements less frequently sorted together are shown further away from one another on the point map. Figure 1 illustrates a Point Map. Each point represents a statement. Points shown closer together on the map represent statements with similar meanings. For example, statements numbers 28, 39 and 1 all address faculty compensation. Statement 28: Compensate faculty with research credits. Statement 39: Compensate faculty/staff with money. Statement 1: Compensate faculty/staff with time (leave, workload relief).

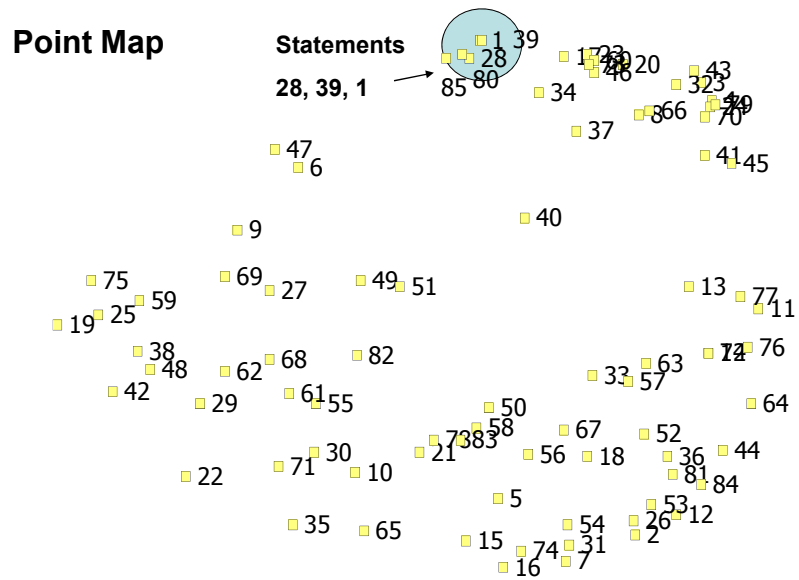


Figure 1. Point Map with Sample Statement Numbers.

Trochim and Kane (2006) noted that interpretation of Concept Maps relied on the relative rather than exact position of statements and so recommended the two dimensional solution for Concept Mapping projects and concurred with the general advice of Kruskal and Wish (1978) on the utility of the two dimensional solution.

Next, with hierarchical cluster analysis using Ward's algorithm (Everitt, 1980) the ideas are grouped into themes (or clusters) based on the sorting data to create the cluster map.

Cluster labels are suggested based on the labels given by participants in grouping like statements into stacks. The label for the participant stack where the centroid is closest to the centroid of the cluster is the default label. The analyst adjusts the cluster label as needed to reflect the meaning of the statements.

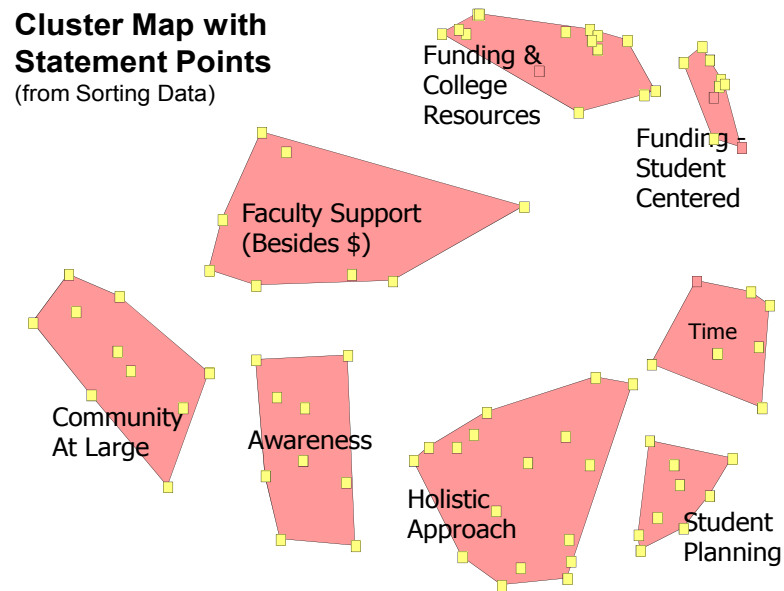


Figure 2. Cluster Map with Cluster Labels and Statement Points. Each Cluster represents a group of similar ideas (from the analysis of the sorting data).

Rating data can be displayed on the map by adding depth or layers to the clusters (or points) to indicate how the group collectively rated each cluster (or statement). Such data provides a starting point for the prioritization of issues within the project.

Involvement by participant groups in the interpretation stage varies. Trochim, Stillman, Clark, & Schmitt (2003) convened an expert panel to interpret the concept mapping results of tobacco industry tactics project; Sutherland and Katz (2005) held separate interpretation sessions for the major stakeholder groups due to logistical constraints for a student engagement project; Gans (2000) included all participants in a strategic planning focused project; project facilitators along with the two project leaders performed the interpretation for a web-based concept mapping project on public health

policy (Trochim and Cabrera (2005) and Conroy and Kelsey (2000) involved the members of discipline-based list-servs and key professional organizational leaders for a project on the future of agricultural education followed with the interpretation session held at a professional conference to involve as many interested parties as possible.

Those involved in the Interpretation stage review the Concept Mapping analysis output (point maps, cluster maps, maps with ratings, and statements that comprise each cluster) to understand the map, typically with the assistance of a facilitator. As the group developed a sense of the meaning of the Concept Map, additional output can be introduced. Visual displays focused on the rating data for each cluster (Pattern Matches and Go Zones, discussed in the next section) add to the group's conceptualization of the issue.

The sixth Concept Mapping stage used the group's conceptualization of the issue to solve the problem via action plans. Pattern matches, shown in figure 3 compare the absolute or relative ratings for each cluster on a ladder graph. The cluster labels are displayed in descending order by cluster mean for the rating. The values at the top and bottom of each vertical line indicate the range of the cluster means for that rating. In the example, the importance ratings for the example clusters were a high of 4.23 and a low of 3.55, as seen on the left vertical line. On the right vertical line, the clusters are displayed in a descending order for mean feasibility ratings. If the rank order of clusters is the same for each rating (shown by the vertical lines), the cluster names will be listed in the same order for both sides of the ladder. The ladder rungs will not cross over another rung.

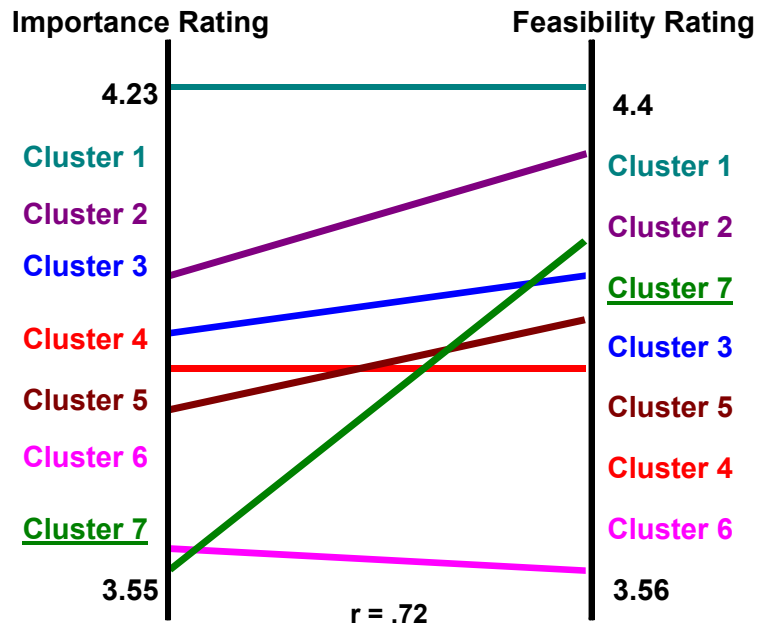


Figure 3. Example Pattern Match

The Pattern Match display indicated the collective thinking of the group in terms of priorities. Subgroup analyses can also be calculated, as needed, using participant demographic data.

The Go Zone visually displayed the statements within a cluster that seem to be likely targets for action. If two sets of rating data are collected, the results can be displayed in a 2 x 2 graph. For example, if participants rated each statement for importance and also for the extent of current implementation, each of these categories would be assigned an axis on a 2 by 2, or Go Zone, graph. To delineate high and low, a line on the graph marks the mean rating for each category, creating four quadrants. Points (statements) falling into the High Importance and Low Implementation are readily

identified visually and are considered to be in the “Go Zone”. Go Zone statements can be evaluated for action to achieve immediate results.

Go Zone for Cluster

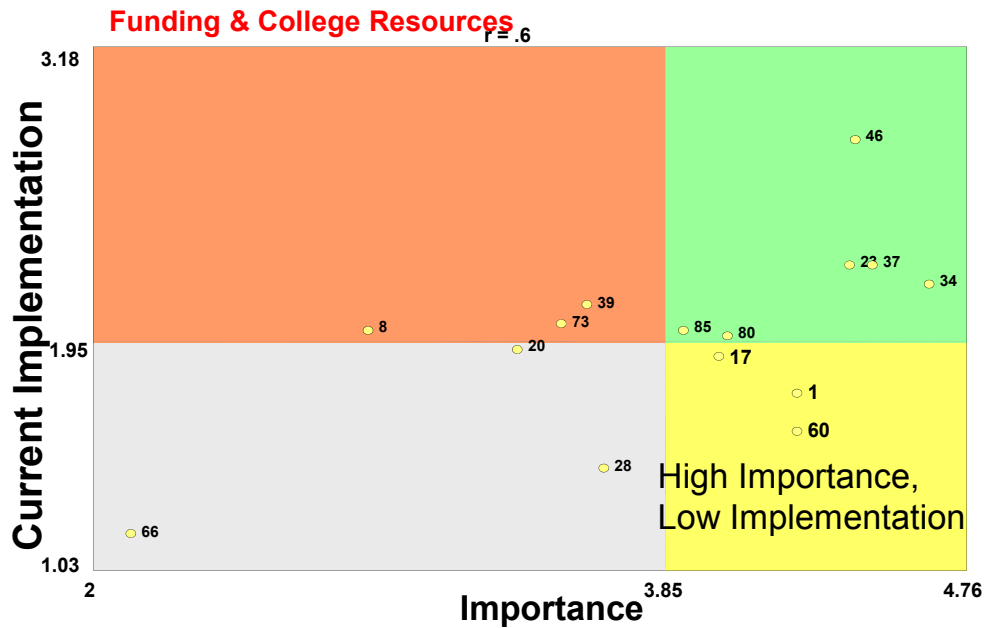


Figure 4. Go Zone Example One.

Again, the visual displays make the analyses easy to see and use. The goal of this stage is to identify areas for actions that represent the group’s thinking as to how best to address the problem at hand.

In summary, each stage in the Concept Mapping process builds specifically on the previous one. An experienced facilitator works with the project leaders and participants to provide expertise in the process, the analyses, and to keep the project focused on the issue.

Planning at a Small, Private College

College Description. This study occurred at a co-educational, primarily residential, private college with a religious affiliation and a mission that emphasized the liberal arts as a foundation for all undergraduate programs. Graduate and undergraduate academic programs attracted students to the liberal arts and sciences as well as to the professional programs in business, health sciences, and education. Student enrollment ranged between 2000 and 2500 FTEs, making this a small college. Faculty workloads varied, though generally included teaching eighteen to twenty-four semester credit hours in an academic year.

The faculty governance system operated through seven meetings of the whole faculty each academic year. Decision-making was supported through the work of elected and appointed committees that brought recommendations to the entire faculty for approval. A typical planning task for the institution also involved an appointed task force that generated recommendations for the appropriate deciding body or individual; generally the Faculty, the President, or the Board of Trustees.

The target campus for this study routinely used planning as a tool to address issues and concerns. However, the planning efforts typically required a large investment of time, often an expensive consultant, and many meetings. Recent planning projects included the creation and updating of an institutional strategic plan, the design of a campus facilities master plan, an overhaul of the academic program review process, adjustment to the insurance and benefits plan following research into options, and the first long term salary plan for faculty and staff. To maintain the participatory tradition of

planning at the institution, all were accomplished via committee or task force, and all of these efforts extended beyond a single academic year.

Fiscal health for small private institutions has been linked to the effectiveness of fund-raising and success in enrollment. A small institution must attract and retain a sufficient number of students to generate tuition and fees necessary to fund operations (Townsend, 2002). For this college, the focus on teaching, rather than research, meant that infusions of grant funds were infrequent which increased the importance of enrollment numbers for fiscal health.

Planning Background. In recent years, this institution had enjoyed enrollment growth so that increased amounts of tuition dollars had been available to fund increased operational costs. However, the typical yield rate of 20 percent or less for admitted-to-enrolled students indicated that prospective students had multiple options for college enrollment. Year-to-year enrollment numbers were therefore critical for the fiscal stability. Regionally, the college competed for students with several well-known and highly regarded public institutions with a lower tuition structure. Strategic planning was recognized as a method to address the effectiveness and the competitive position of an institution (Sevier, 2000).

An extensive institutional visioning process followed by a revision of the mission had already been completed when the President launched the strategic planning process. A nationally recognized consultant was hired to advise the College, a careful review was conducted of both internal and external data, and a series of committees had input to the formation of the plan. The consultant visited campus several times and met with faculty, Board of Trustees, and the Planning Committee. Through open campus

meetings and discussion of a series of draft plans, broad input was gathered and utilized to reach agreement on the issues to be included in the strategic plan.

Two years from the initiation of the planning process, the Planning Committee ended its work when the Strategic Plan was formally adopted by the faculty and the Board of Trustees. The timeframe is consistent with a review of strategic planning at three private colleges by Fogarty (2008) where the shortest process was two years. The Strategic Plan included the vision, mission, values, strategic directions, and strategic goals. As was customary on this campus, detailed operational plans were to be developed after the acceptance of the plan, not as a part of the approval process.

Oversight of progress on the Strategic Plan was then incorporated into the normal operational work of the President's Cabinet. The vice presidents reported progress on the various goals of the plan in regular Cabinet meetings and in semi-annual planning retreats. No new administrative structures were instigated to accomplish strategic goals; rather the expectation was that the Strategic Plan would guide and be implemented through departmental actions. Annually, departments reported accomplishments on their goals, making note where departmental goals linked and supported institutional strategic goals. The implementation component for the Strategic Plan would appear to be hierarchical, as in a rational model of planning. However, it actually functioned more in the collegial manner, in that traditionally, departments made choices about which institutional goals to support based on departmental initiatives. Here was an example of loose coupling at work.

Planning Issue. Experiential learning had long been a part of the curriculum for many of the academic programs at the College. Students visiting Career Services were

advised to include an internship as a part of undergraduate work. The study abroad program was growing. The teacher preparation program made extensive use of field experiences and student teaching. The growing nursing program relied on clinical experiences to supplement and cement classroom learning. Service learning had been incorporated by some faculty into their teaching practice. In short, students at the College had many opportunities to engage in experiential learning. The Planning Committee and the campus, in open meeting discussions, agreed that experiential learning was a strength for the College and that if expanded, could become a signature component of the undergraduate experience, adding to the attractiveness and competitiveness of the College for prospective students. For these reasons, a target of 100% of undergraduates with experiential learning was set as a goal in the Strategic Plan. The goal supported the Strategic Direction of building a Living and Learning Community.

Problem. A year after the adoption of the Strategic Plan, no progress had been made on achieving the Experiential Learning goal. Some progress had occurred for other parts of the Strategic Plan. For instance, the growth in student enrollment targets was on track with goals, college –neighborhood relationships had improved; college-city relationships had improved. However, the percentage of graduating seniors with experiential learning was unchanged at 71 percent. The first strategic direction of the plan focused on the academic aspects of the College community. A Living and Learning Community, Strategic Direction I: To produce graduates who are prepared for the challenges of life through academic programs grounded in the liberal arts and enhanced by experiential/active learning. Under that direction was the strategic goal: One hundred

percent of graduating seniors will have participated in an experiential learning program during their tenure at the College.

Certainly, academic leaders might have encouraged or administratively insisted upon attention to a particular goal. However, on a closer look, this issue is curriculum-related and decisions for curriculum rest with the faculty. Furthermore, each academic department made individual decisions about appropriate pedagogy for the discipline. The problem then, is what could be done to engage the key decision makers for planning for experiential learning at the College? The College's existing planning model had not been effective in producing change in experiential learning practices. Nor had the strategic planners specifically consulted the departmental decision makers to form the goal or set the target for the goal. What other model could support the strategic goal for the experiential learning?

Objective of this Study

The objective of the study was to identify a planning model to engage the key decision makers for planning for experiential learning at the College. Kezar (2002) reported that collaborative decision-making processes were characteristic of smaller institutions. She further noted that "some smaller colleges are able to obtain more synergy between efforts and balance centralized and decentralized activities" (p. 31). In combination with clear agreement by researchers as to the value of broad participation in planning (Cope, 1987; Hunt, et al., 1996; Keller, 1983; Norris & Poulton, 2008; Rowley & Sherman, 2001; Sevier, 2000), these findings provided support for the use of a Concept Mapping planning process to design implementation strategies for an unmet strategic goal at a small, private college. This study seeks to add to the literature of

planning through the investigation of an alternate planning model for small, private colleges.

Research Questions

1. What strategies/decision-making models were used by the College administration in the planning, implementation, and evaluation of experiential learning?

1a. How effective were the implemented strategies and why?

2. What ideas/strategies concerning the expansion of experiential learning at the College were generated by the administrative stakeholders?

2a. What is the degree of mean agreement among key leaders on the generated ideas for expanding experiential learning for relative importance and for relative extent of implementation? Note: "key leaders" refers to an invited group of faculty, staff, and administrators with a known interest in experiential learning.

2b. What is the degree of similarity among the generated ideas for expanding experiential learning?

2c. What strategic action areas are identified by key leaders to expand experiential learning at the College?

2d. What broad themes are identified as a conceptual model for the expansion of experiential learning at the College?

2e. How does the key leadership group prioritize the strategic action areas for expanding experiential learning at the College?

2f. What actions to expand experiential learning should be implemented first for each strategic area?

3. What are the perspectives of key leaders toward Concept Mapping as an effective model for planning at a small private institution?

3a. How did key leaders perceive the participatory component of the Concept Mapping planning process?

3b. How did the key leaders view the time spent on the Concept Mapping process to plan for the strategic goal of expanding experiential learning?

3c. How well did the key leaders perceive that the Concept Mapping results reflected the thinking of the group?

3d. How did key leaders perceive the Concept Mapping process as a planning tool for the College?

CHAPTER III

METHODS

Participatory Action Research

Table 4 summarized participatory action research with the Concept Mapping.

Table 4.

Participatory Action Research and Concept Mapping

Participatory Action Research	Stages of Concept Mapping
Plan	Concept Mapping identified as an improvement Mixed methodology research method within the action research Concept Mapping utilized both qualitative data (brainstormed ideas, sorting data from participants) and quantitative data (participants rated each brainstormed idea, multivariate analyses of the sorting data; descriptive analyses of the rating data)
Act & Observe	Participants first endorse Concept Mapping, then work through the stages of Preparation, Idea Generation, Representation (analysis)
Reflect	Interpretation of meaning of Concept Maps
Plan	Utilization of results for creation of action plans Plans begin a new spiral of plan, act & observe, reflect act and observe (action plans implemented) reflection (analysis of results) creation of new plans or adjustments to reach 100 percent of students with experiential learning
Reflect again	Effectiveness of Concept Mapping as a planning process

The steps begin with a question or situation for improvement (how to engage key leaders in planning for the expansion of experiential learning strategic goal). A plan to effect such improvement is identified (plan). Actions are taken and results observed (act & observe). Reflection on those results that typically leads to another question with another plan for improvement is designed to continue the cycle of plan, act and observe, and reflect.

The purpose of the study was to identify a planning tool to fill in the gap in the strategic planning model that resulted in no progress towards a strategic goal for the small private college. Concept Mapping (Trochim, 1989) was identified as one such tool. A Concept Mapping planning process was applied to the institutional goal that called for 100 percent of graduating seniors to participate in experiential learning. A task force for experiential learning had done preliminary work and successfully developed a service learning infrastructure. At that point, however, the umbrella group for experiential learning ceased activity. The situation was one of an unmet institutional goal, a leadership void, yet substantial pockets of interest and expertise among faculty and staff for this pedagogy. Experiential learning was defined as credit-bearing learning such as clinical courses, field experiences, internships, student teaching, service learning courses, student-faculty research, and study abroad. Transcript analysis indicated that by graduation, approximately 70 percent of seniors had participated in at least one credit-bearing experiential learning opportunity.

The researcher initiated the planning process, secured a project sponsor, organized the agendas for Leadership Team meetings, prepared materials for and conducted the large group sessions, completed the data analyses, and generally

facilitated the entire Concept Mapping project. Her role at the College was that of planning officer and this type of work was within normal expectations of the job. In preparation for this project, she had completed both a one-day workshop and a three day training session on the process and the proprietary Concept Mapping software from Concept Systems, Inc. However, the use of this project as a dissertation study was vetted by the institution's leadership, the project sponsor, the Leadership Team, and finally the participants of the project.

Procedures

In this chapter, some information that might normally belong in the Results chapter were included so that the steps taken to implement the Concept Mapping process would make sense to the reader. Each of the six Concept Mapping stages (Trochim, 1989) will be described: 1) preparation, 2) idea generation, 3) idea structuring by participants, 4) representation of the idea structuring results for group processing, 5) interpretation by the group of the results, and 6) utilization of those results to develop plans to expand experiential learning at the College. For each stage, the decisions made to customize the process to the campus will also be detailed. The chapter concludes with an explanation of the feedback survey administered to key leaders to investigate perspectives of Concept Mapping as a model for planning at the institution.

Preparation. The Vice President for Academic Affairs was the natural sponsor of the planning project because the context for the experiential learning strategic goal involved the undergraduate curriculum and credit-bearing activities. The first steps involved a clarification of the project purpose and an exploration of the suitability of Concept Mapping for the issue of the unmet strategic goal. The researcher arranged a

meeting to discuss a proposal to use Concept Mapping to develop strategies and tactical (operational) plans to achieve the strategic goal. The issue was the expansion of experiential learning to the point that all graduating seniors have completed some form of experiential learning. Concept Mapping was not an entirely new approach as the Vice President for Academic Affairs and the planning officer had considered it for another issue that subsequently did not have the complexities or the urgency to warrant the investment of money and time. However, this new discussion included an overview of Concept Mapping as it would be applied to the expansion of experiential learning along with the advantages and disadvantages of the use of Concept Mapping for this issue.

The advantages included a structured, focused planning process designed for groups, sophisticated data analysis, visual display of the group's ideas, collaboration, and full participation of selected individuals in idea generation, interpretation, and the design of solutions to the problem to fit local conditions (Kane & Trochim, 2007). Other advantages included the relatively short period of time required to complete the process, the availability of a trained facilitator and analyst, and the availability of planning funds to license the software and support the project. Finally, any recommendations for expanding experiential learning produced by the group would have the advantage of coming from a participatory planning process, rather than from administrative decree. The disadvantages of using Concept Mapping mainly fell on the investment of time by a Leadership Team, researcher, and by the invited participants to complete the steps of the planning process. The time factor was important, in that wide representation from multiple academic programs and support areas was needed, since the strategic goal targeted all undergraduate students. Discussion with the potential project sponsor

included a draft question or prompt as a starting point to focus the planning, “In order to assist faculty with the incorporation of experiential learning opportunities into the academic experience, we should ...”. At the end of the meeting with the Vice President for Academic Affairs, it was agreed to proceed to discussions of planning via Concept Mapping with potential Leadership Team members. The Vice President’s support was contingent upon a favorable review by this next level of leadership as to the likely success of a Concept Mapping process on the campus for the issue of experiential learning expansion.

The researcher met individually with each person in the Leadership Team to explain the Concept Mapping process, the current status of the strategic goal for experiential learning, and to allow for questions about the dual role of doctoral student completing a dissertation and of college planning officer. Next, we convened a full group meeting for the Leadership Team; the researcher presented the overview of Concept Mapping process, the Leadership Team responsibilities, and the anticipated time commitments. The group agreed to support the project and to serve as a Leadership Team, noting three other individuals who should be invited to join the Leadership Team, bringing the total to eight. At this point, the Vice President for Academic Affairs approved the project for implementation.

The primary role of the Leadership Team was to use their individual knowledge and experiences at the College and with experiential learning to shape the implementation of the Concept Mapping project in a way that fit the culture of the institution, but still solve the problem of deciding what to do to accomplish the strategic goal. The secondary role for the Leadership Team was to act as local champions for

experiential learning and the Concept Mapping planning process. Once knowledgeable about what we would do and how we would accomplish it, the Leadership Team served as advocates for the project and as information sources for others on campus.

Project decision-making was shared among the researcher, the Vice President for Academic Affairs, and the Leadership Team. The researcher chose what decisions to put before the Leadership Team. The Vice President for Academic Affairs typically relied on the advice of the Leadership Team, yet at times exerted his authority and influenced Leadership Team decisions, such as on the issue of who should be invited to participate. The shared decision-making, typical of how things worked at the College and the ease of adaptability of Concept Mapping to the local context is one of the reasons that the participatory action research methodology was chosen.

Once the Concept Mapping project was approved and the Leadership Team was in place, weekly meetings were scheduled to make decisions about the project implementation. The researcher planned for and facilitated these meetings. First, the Leadership Team created a list of people to be invited by the Vice President for Academic Affairs to participate in the Concept Mapping planning process. Quinlan and Petrucci (2007) connected the sampling strategy, as in the question of who participated in a Concept Mapping project, with the potential for bias in data collection. A key purpose of the Leadership Team was to ensure that the appropriate people were included for the issue; in other words, a purposeful sample of individuals interested and knowledgeable in experiential learning should be identified. The project data would come from the participating individuals, making the decision of the invitation list critical to the utility of the outcome of the project. The Leadership Team was charged the

consideration of their knowledge of “what works here” in terms of what’s expected and deemed acceptable to the campus.

The timing of the large group meetings relative to the normal progression of a semester was important. The six weeks before graduation were typically extremely busy for academic reasons and for the traditional end of year celebrations and award ceremonies. The Leadership Team decided that the large group meetings must be completed by the end of March in order to secure the support of the invited participants. They also decided that the idea generation activity should happen in a face-to-face meeting, which was feasible because those involved were located on a single campus. The Team recommended that brainstorming should be done in small groups for full participation and contribution of ideas from all invited participants. Even though some of the ideas produced by the small groups would likely be the same, the Leadership Team suspected that people would voice opinions more readily in a small group than in one large group.

The Leadership Team adjusted the initial wording of the question or prompt to be used for idea generation and chose three rating scales for pilot testing. The pilot test was conducted in two steps. First, the researcher sent an email to a selected group of faculty and staff academic leaders and requested four or five responses to the new version of the question, “In order to enhance or expand student experiential learning at the College, one action we should take is _____.” The pilot sample consisted of eleven individuals who were thought to have at least minimal knowledge of experiential learning at the College, but who were not on the invitation list for the project. The researcher compiled and edited the 31 ideas generated by those in the pilot sample.

The Leadership Team considered three sets of ratings in order to select two that would best serve the information needs of prioritizing the ideas in terms of what could be done to reach the strategic goal for experiential learning. The ratings for Concept Mapping were intended to be applied on a relative scale, meaning that people were instructed to consider each statement (idea) relative to the others proposed. The intent was to keep the focus on the practical aspect of the solution. The first rating considered was for relative importance: 1 = Relatively unimportant, 2 = Somewhat important, 3 = Moderately important, 4 = Very important, or 5 = Extremely important. A second rating considered was for relative extent of implementation: 1 = Not at all, 2 = A limited extent, 3 = A moderate extent, 4 = A great extent, or 5 = A very great extent. The third rating considered was relative feasibility: 1 = Not at all feasible, 2 = Not very feasible, 3 = Moderately feasible, 4 = Very feasible, or 5 = Extremely feasible.

Using these rating scales and the pilot responses, the researcher prepared rating forms. Each Leadership Team member's form had two of the three rating scales and instructions to complete the ratings. Through discussion, they decided to drop the feasibility rating. The sense of the group was that the information on importance and extent of implementation would be more helpful in prioritizing ideas than would that on feasibility. The Leadership Team also judged the wording of the question (prompt) to be adequate for producing useful ideas to achieve the strategic goal.

The review of the pilot responses without the edits provided a sense of the type of editing that would be needed following the brainstorming session with all participants. (It had been decided that the Leadership Team would assist the researcher in performing the edits.) Also, to preview the sorting exercise, the researcher prepared

statement cards with the pilot responses. However, we'd committed to ending our Leadership Team meetings on time, and time ran out. The pilot testing of the prompt, the ratings, and the review of the responses before editing gave the Leadership Team a chance to preview or practice the steps of Concept Mapping. The pilot tests were designed to support data quality and to ensure that the Leadership Team was knowledgeable about the Concept Mapping process so could fulfill its decision-making and information-sharing roles.

By the completion of the Preparation stage, the Leadership Team had accomplished several tasks. They identified key leaders for experiential learning at the College to be invited to participate in the planning project. They tested a focus prompt (a question) that succinctly described the experiential learning issue. They identified and piloted the ratings that would help reveal priorities of the group. And they made decisions about the logistics of the project, deciding that the four large group meetings should be held within a single month to complete the Concept Mapping planning project. See Appendix A. Leadership Team Activities.

Idea Generation – Large Group Session #1. Invited participants received a letter from the Vice President for Academic Affairs that provided a brief overview of the project along with the dates and times of the four large group sessions. The first large group session then, was devoted to a review of the background of experiential learning at the College, discussion of the definition and status of experiential learning in the strategic goal, an overview of the Concept Mapping process, dinner, and finally the generation of ideas in response to the issue of how to involve more students in experiential learning. The Vice President for Academic Affairs welcomed the group and

spoke to them about the dual role of researcher as a doctoral student and as a planner for the institution. He assured the group that the planning process or method was of primary focus of the dissertation, not a critique of the actual details of any recommendations for action the group would make to advance experiential learning. Therefore, he saw no conflict in the two roles. Next, the problem of a strategic goal with no progress toward the target of 100 percent of undergraduates with experiential learning was explained along with an overview of the Concept Mapping process. Participants signed consent forms at this meeting. Participants were also informed of the IRB approval from the University of North Carolina, Greensboro for the study. Discussion centered on the definition of experiential learning adopted by an earlier task force and from the Association for Experiential Learning as "Experiential education is a philosophy and methodology in which educators purposefully engage learners in direct experience and focused reflection in order to increase knowledge, develop skills and clarify values" (<http://www.aee.org/about/whatIsEE>). The context of the strategic goal for experiential learning that targeted curricular or credit-bearing experiences provided additional focus for the discussion. The locally developed continuum of experiential learning at the College reminded the group of the variety of options available to students (Appendix B). Labeled as an Engagement Continuum for Experiential Learning, the array of experiential learning opportunities was developed by the earlier task force and began with simple exploration where the student is the observer and progressed to experiences initiated by students where faculty serve as facilitators or even collaborators, as in undergraduate research. Participants noted that the student leadership development component, as managed by the student life division, was

missing from the continuum and could be threaded through the various levels to better reflect all the opportunities for experiential learning at the College. The purpose of the discussion was to provide a common understanding of the problem of expanding experiential learning prior to the brainstorming session. Typical rules for brainstorming were presented:

- Keep the focus on the question

- Any input addressing question is okay

- No criticism of others' input

- No editing, except for clarity and form consistency

- Listen to others

After the discussion, questions, and dinner, small breakout groups were formed. Leadership Team members served as facilitators. The specific question to be answered was phrased as a prompt for brainstorming, "In order to enhance or expand student experiential learning at the College, one action we should take is_____."

An important feature of brainstorming was that each idea was written in the words of the participants. Additional people had been invited to the session specifically to record ideas on flip charts. The breakout groups were formed around the facilitators (the Leadership Team members) as convenient; no attempt was made to rearrange the participants. Although everyone worked at the College, we'd provided name tags and done the round of introductions at the start. It was clear that not everyone knew everyone else. A typical facilitator's ploy is to break up intact groups in hopes that people will be more attentive in a group to new voices as compared to how well they might listen

to those with whom they are more familiar. Given the dynamics of the room, we decided that assigned groups were not necessary for productive brainstorming.

Once each small group had exhausted new ideas, the brainstorming was stopped and each group was invited to report out an idea or two. The session was concluded with thanks to participants and a reminder of the next large group session which would be devoted to sorting and rating of the generated ideas. Those who agreed to participate but who were unable to attend the first session due to scheduling conflicts, had been invited to a short briefing at an alternate time so that they could be prepared to fully participate in session two.

Following Session One and in preparation for Session Two, the brainstormed ideas were edited and the materials for rating and sorting prepared. We had decided that the Leadership Team would do the editing and had scheduled two meetings for the task. At the College, important documents, like accreditation reports, were often subjected to group editing to allow content experts and English language experts to work together to produce as clear a document as possible. Another choice could have been for the researcher to do all the editing, limiting the burden on the Leadership Team. However, the goal was for the Leadership Team to become the experts, so it made sense for them to take on this step and in the process, become familiar with the brainstormed ideas.

Following Session One, all the ideas from the flip charts had to be transcribed into an Excel file. Numbers were assigned to each statement sequentially as transcribed and added to each flip chart for easy checking later. At this point, the brainstormed ideas were referred to as statements.

The resulting worksheet contained two columns, one with the statement number and one for the statement as recorded on the flip chart during the brainstorming session. Excel was selected because of the functions for sorting and for the capacity to assign random numbers to a list of statements. The researcher planned to randomize the order of brainstormed ideas (statements) before using the list with the large group.

After the ideas were transcribed, the researcher spot checked the transcribed list back to each flip chart for accuracy as a data quality effort. Once satisfied that the transcription was accurate, spelling errors were corrected. Next, the researcher added a third column to the Excel worksheet with the heading of “Key Words” and assigned a key word or phrase to each statement so that the list could be sorted with like ideas grouped together. The key words were intended to make it easy to group together similar brainstormed ideas. If the same idea was found in two statements, only one of the statements would remain on the list. The duplicate statement would be omitted as a part of the editing step. The key word coding was intended only to simplify the editing process, and was completed quickly. Finally, to prepare for the editing sessions with the Leadership Team, two more columns were added to the worksheet to track the editing decisions: a “Combine with” column to show the statements that offered the same idea, and a “New Statement” column for any revisions to the wording. See Appendix C. for the Statement Editing Worksheet: A Sample.

Leadership Team editing sessions were scheduled in a room equipped with a computer and projector. A printed list of the statements in numeric order was prepared for each Team member. Meeting supplies included highlighters and snacks. First, the group confirmed the desired results of the editing: each statement presented a single

idea, began with a verb, and expressed a different idea. Then we worked through one group of similar statements together, making decisions about which statements to combine and what wording revisions were needed so that each statement began with a verb. Next, we identified partners and used the key words to assign groups of statements to a pair of Leadership Team members to complete initial editing decisions. Finally, the group reconvened to view the initial editing decisions. At that point, the researcher typed the edits and decisions into the Excel worksheet that was projected on screen. Discussion continued until consensus was reached. To complete the editing, the group searched for any other statement with similar ideas that may have been missed by the key word coding. Once agreement was reached for each statement, the final decision was adjusted in the Excel worksheet. The master list of edited statements had to be completed before the rating and sorting materials could be prepared for Session Two with the large group.

The purpose of Session Two was for participants to evaluate each statement for its individual meaning in the rating and sorting exercises. One data quality effort involved the numbering of the edited statements. An advantage of brainstorming is that one idea may lead to another. However, the statements had been transcribed and assigned numbers in the order of idea generation by the small groups. After all statements were edited, a randomly generated number was assigned to each one in order to create new identification numbers for each statement. First, the randomization dispersed ideas generated by any one breakout group, and second, it separated sequentially generated ideas that may have been related through the benefits of brainstorming.

The Leadership Team spent approximately five and a half hours on the editing process and reduced the 100 ideas generated into 85 edited statements. They expressed concerns about rater fatigue during for Session Two when participants would be expected to sort and rate all 85 statements. Four strategies to enhance data quality were identified. First, we decided that we would get better rating data if participants were familiar with all the statements before completing the ratings. So, the sorting activity was placed before the rating activity on the agenda. Second, the 85 statements were divided into three sets of 30, 30, and 25 statements with different colored paper to distinguish among the sets. The purpose was to vary the order of the statements presented to the participants so that no one set of statements was always first, middle, or last. Participants were told why some people had a packet that began with statement number 1 on white paper, others had a packet that began with statement number 31 on blue paper, and still others had a packet that began with statement number 61 on orange paper. The researcher also inserted what was called change of pace items, or throw-away items, just to break up the pattern of the rating. One such item asked about the preference for the current College mascot or the proposed new version and another asked the person to write down their favorite adjective. A third throw-away item asked for the person think of the student of whom you are the most proud and write down the first name of that student. Finally, for sorting, each participant would have a set of 85 cards, one statement on each card. The sorting cards were shuffled prior to packaging to vary the order of presentation of statements. With these strategies, we attempted to protect data quality and have a little fun.

Idea Structuring, Large Group Session #2. Session Two was scheduled a little less than two weeks following the brainstorming session. It opened with a review of the problem of the unmet strategic goal for experiential learning, the Concept Mapping process, the prompt and the brainstorming, and then described the editing process completed by the Leadership Team. The primary purpose of Session Two was to collect data on the participants' views of the each brainstormed idea (now referred to as statements) through the steps of rating and sorting. Logistics for this session were important to the tasks. The room was set up with lots of table space so people could spread out the 85 statement cards for sorting. Also, since people would likely complete the tasks at different speeds, we planned for people to be able to work independently after the initial portion of the meeting. Following an overview of the assigned tasks for the day, all directions were provided in writing. People could leave the session once they had completed both the sorting and rating tasks.

Idea Structuring consisted of two steps: sorting the statements into stacks by similarity in meaning and rating each statement for relative importance and relative extent of implementation. As a part of project planning, the Leadership Team decided that all participants would perform the structuring of ideas. Jackson and Trochim (2002) recommended that for reliability purposes, the same people who generated the ideas should be the ones who do the sorting of the ideas to ensure consistency in the interpretation of the ideas. That advice fit with our inclusive approach. The Leadership Team already had deliberately selected the individuals with knowledge of experiential learning to participate in the process and saw no reason to exclude anyone from the sorting exercise. In fact, to get as much data as possible, the researcher individually

contacted those unable to attend Session Two and provided them with a packet and instructions so that they could also provide sorting and rating data. Quinlan and Petrucci (2007) noted that for Concept Mapping projects focused on planning, involving more people in the rating may have benefits for increased buy-in to the results.

For the sorting exercise, Trochim's review of 38 Concept Mapping projects (1993) showed stability in results by comparing the stress values of maps produced with half the number of sorters for the project. The majority of the projects were in the social science realm with the mean number of sorters approached Trochim's recommended number of 15 (Trochim, 1993). Quinlan and Petrucci (2007) advised that the decision for the number of sorters will vary and must fit both the purpose of the project and the availability of individuals who fit the purposeful sample criteria for the project. The Leadership Team selected participants because of each one's qualifications relative to the purpose of the Concept Mapping project. This inclusive approach for the sorting exercise served as a way to strengthen whatever results would be produced by the group.

All participants were given a set of cards, each numbered and printed with one of the statements. The task was to arrange the cards into stacks to show a natural grouping of ideas, according to what made sense to the participant. Each person devised his or her own approach to grouping the statements; also deciding how many stacks were necessary to group all of the statements. Any number of stacks was acceptable (Coxon, 1999; Weller & Romney, 1988). Additionally, as the statement numbers for each stack of ideas were recorded, the participant created and wrote a label

or phrase that described the general meaning of the statements in that stack (Appendix D. Sorting Instructions and Recording Sheets).

Also in Session Two, participants rated each statement. Knowing how the group viewed each brainstormed statement in terms of relative importance and extent of implementation would be helpful to prioritize actions to address the expansion of experiential learning. In Concept Mapping, this use of individual ratings of each statement allowed the full input of all group members and was a key feature of the participatory and democratic aspects of the process. See Appendix E for the Rating Sheets.

Representation and Analysis. In this stage, the researcher conducted the analyses that summarized and displayed the data, first for the Leadership Team's review, then for the entire group's interpretation in Session Three. The researcher entered all the data from the rating and sorting sheets into the Concept Systems, Inc. software (a proprietary software from Concept Systems, Inc). Multiple analyses from this data were generated.

The sorting results served as input for multidimensional scaling analysis (Rosenberg & Kim, 1975) and produced a visual display or map that showed each of the statements placed in two dimensional space. The sort data for each participant was converted into an N by N matrix where the rows and columns represent the statements. If the two statements were sorted together, a 1 was entered into the cell, otherwise a 0 is entered (Weller & Romney, 1988). Individual participant matrices were summed to produce a total similarity matrix where the cells indicated the number of times two statements were sorted together by the group. The total similarity matrix served as the

input for the multidimensional scaling analysis where each statement was assigned an ordered pair (x, y) and plotted in two dimensional space (Kruskal & Wish, 1978) to produce a point map where each statement is represented by a point. In general, the point map showed statements that the group sorted together as close together on the map. The non-metric multidimensional scaling analysis in two dimensions was considered practical when further cluster analysis is deemed useful (Kruskal & Wish, 1978). Also, Petrucci and Quinlan (2007) noted that the sorting data is not on the interval or ratio scale of measurement. Therefore, the non-metric approach to multidimensional scaling was appropriate.

The first display from the analyses was the Point Map. The Point Map showed the placement of points (statements) on the map with similar statements together.

The next step was to generate a Cluster Map. A visual summary of the statements was produced by clustering the individual points on the map into meaningful groups of statements or clusters. The advantage of cluster analysis was that the results were easier to work with than the individual data points; the disadvantage was that the various methods of clustering may well group the individual statements into different clusters (Trochim, 1989). Researcher judgment was required for both the selection of the clustering approach and the decision as to the number of clusters in the final result.

The x,y-coordinates for each statement produced by the multidimensional scaling analysis served as the input for a cluster analysis. In other words, the clustering was based on how participants collectively organized the statements by sorting and labeling each stack of ideas. According to Aldenderfer and Blashfield (1984), one of four common uses of cluster analysis is to investigate conceptual schemes for grouping

objects or entities. Others include development of a typology, generation of a hypothesis related to classification through data exploration and testing of a hypothesis related to classification of entities. The Concept Systems software employed Ward's method of agglomerative hierarchical cluster analysis. This method minimized the variation within each cluster (Aldenderfer & Blashfield, 1984; Hair, et al., 1998; Ward, 1963).

Agglomerative cluster analyses, as in Ward's method, began with as many groups as there are objects or entities. In this case, each statement was treated as a separate group. At stage one, N-1 clusters are formed by combining those statements that will produce a group with the least amount of variance. This was repeated until all statements were grouped into a single cluster. The task of the researcher was subjective; a judgment must be made about the appropriate number of clusters given the data, as there is no right or wrong solution (Kane & Trochim, 2007; Trochim, 1989). The Concept Systems software tracked the sequential merging of groups, so the researcher reviewed the statements that were combined at each merge to determine if the merge to a helped or hindered the interpretation or understanding of the meaning of the map.

Kane and Trochim (2007) wrote that an analyst might decide to adjust cluster boundaries based on bridging values. The Concept Systems software generated bridging values for statements and averaged those values for each cluster. Bridging values were based on the point placement and the multidimensional scaling results that depicted the group's sorting results into a two dimensional map (Kane & Trochim, 2007). A high bridging value for a statement indicated that the group sorted the statement with those appearing on other parts of the map (Gans, 2000; Kane & Trochim, 2007). In other words, the statement (or cluster) functioned as a connector or bridge from one part of

the map to another. Gans (2000) noted that smaller clusters will have lower bridging values and larger clusters will have higher bridging values. Low bridging values indicated a tight connection to adjacent points (statements) in that the multidimensional scaling analyses placed the point on the map because the group sorted it with the adjacent statements. In summary, however, Kane and Trochim (2007) reiterated the subjective nature of the decision for the number of clusters and strongly recommended that the decision-making be shared at least some of project leaders to ensure utility of the map for the group.

Cluster labels were generated by the Concept Systems software based on the labels created by participants in the sorting exercise. Gans (2000) explained how that for a group of statements, a centroid was identified. The centroid was the average of the x and y values (from the multidimensional scaling analysis) of the statements in that group. Data for the centroids of each individual's sorts (groups of statements) and the centroid for cluster were compared. The label for the individual's stack (statements sorted together) where the centroid was closest to the centroid of the cluster became the default label on the Cluster Map. The Concept Systems software also listed the nearby centroid labels as well as the closest one. The default label could be edited as needed to reflect the meaning of the group of statements.

Participants' rating data were displayed in several ways. First, a simple list of the 85 statements with the mean ratings for importance and for extent of implementation ordered by the importance rating to quickly showed the high priority statements. Another output to help the group understand the results was the Cluster List, a list of statements by cluster, showing the mean ratings for each statement and descriptive statistics for

each cluster. The Concept Systems software also produced both point maps and cluster maps with the rating data incorporated as a depth component on the map. Higher ratings were displayed with multiple levels for the points or clusters.

Two other displays, Pattern Match and Go Zones utilized the clusters and the participant ratings. The Pattern Match graphically compared the mean ratings of each cluster on the two rating scales. It provided an easy to read visual of the highest and lowest rated clusters for each of the two rating scales. The Pattern Match included a Pearson product moment correlation coefficient of the two scales, also useful for data interpretation. The Go Zone charts guided the action planning in the large group Session Four. Go Zones are two by two graphs, with statements plotted by Importance values on the x axis and Extent of Implementation values on the y axis. Go Zone charts were created for each cluster of statements and were used to identify “quick wins” as in statements that were high in importance, but low for current implementation. See Figure 5. On this graph, the plot area is divided by into four quadrants by lines for the mean rating of all statements in the cluster for Importance (2.96) and for Implementation (4.52). The numbered points represent the individual statements plotted by the mean rating on the Level of Importance (x axis) and for Level of Implementation (y axis). “Go Zone” statements are shown in larger font (31 and 35). These statements were rated high for Importance and lower for Implementation and are plotted in the lower right quadrant. The Go Zone statements should be considered for action for quick wins to address the issue.



Figure 5. Go Zone Example Two.

Where the cluster maps provided a big picture of the group's ideas, the Go Zone charts provided easily accessible detail for the group to begin action planning.

Interpretation- Large Group Session #3. The interpretation stage first involved the Concept Mapping researcher who conducted the analyses, then the Leadership Team who reviewed the initial results, and finally, all the key leaders. The first task was for the researcher to form an initial interpretation of the output, then to share that interpretation with the Leadership Team to tap their expertise with experiential learning at the College and their expertise as campus community members. The overall purpose was for the large group to reach agreement as to the meaning of the output, such that it

could be used for action planning to expand experiential learning. The interpretation stage activities must be focused on that objective. The analysis plan followed the advice from Trochim (1989) and began with a review of the statements for content, then an examination of the maps, and finally consideration of the maps with the rating data.

Interpretation steps included a review of the complete statement list followed by a review of the statements organized by cluster. The cluster list presented the statements grouped together by cluster with a tentative label for the cluster. Next, the Point Map (visual display of the sort data after analysis with multidimensional scaling) was explored by examining the content of statements placed in various positions on the map. The researcher expected to visually confirm that the points placed close together on the map did in fact, represent statements with similar meanings. Once satisfied that the Point Map functioned as intended, the Cluster Map was examined. Here, the researcher looked to confirm the reasonableness of the Cluster Map in terms of the question: "In order to enhance or expand student experiential learning at the College, one action we should take is _____." The strategy to test reasonableness was to go back to the list of statements organized by cluster and re-examine the label for the cluster. The cluster labels were intended to convey the rationale for grouping the statements together (as in the directions for sorting form Session Two). If the label misrepresented the content of the statements, the map would appear to not reflect the participants' views. The label checking was a step to ensure data quality and accuracy that could be repeated by the Leadership Team and the participants as a way to confirm that the Cluster Map represented the group's thinking. Finally, the rating data were considered. The Concept Systems software produced a Point Map that added a height component to

each point to show its average rating; levels to each cluster were displayed on the Cluster Map with ratings to show the average rating of all statements in the cluster. The comparison of the summarized ratings by cluster would add to the understanding of the Map and would be subjected to the “does this make sense” test of reasonableness by the researcher, Leadership Team, and the large group of participants.

Bridging values were calculated for statements and summarized for clusters by the Concept Systems software. They reflect the extent to which a statement was sorted with adjacent statements. High bridging values indicated that the statement functioned as a link to other areas of the map (was sorted with statements plotted further away). Bridging values were useful for the researcher in the understanding the map. Kane and Trochim (2007) discussed bridging values, but did not include them as part of the output to be shared in the large group setting during the interpretation stage. The researcher decided not to use the bridging values with the large group unless they would be helpful in responding to questions.

The researcher then prepared the materials to guide the Leadership Team through an interpretation of the maps and other output of the analyses. The task was to confirm a cluster solution and judge the suitability of the initial cluster labels for the Concept Map showing clusters. The researcher planned to identify two different cluster solutions and present both to the Leadership Team in order to share the decision about the number of clusters to show on the Cluster Map.

Even though the Leadership Team had been very involved with the Concept Mapping process, the researcher still began each meeting with an overview of the purpose of the project, what had been accomplished to date, and the tasks for the day.

The interpretation portion of the meeting began with the presentation of the point map, first with the points only, then with the statement numbers next to the points, then with the text of a few of the statements on the map to reveal the placement of similar statements close together and dissimilar statements shown further apart. The point map was the output of the multidimensional scaling analysis that analyzed the sorting data from Session Two. It was important to connect the analyses back to the participant input.

Because the Leadership Team would have completed the editing of the brainstormed ideas into statements prior to the rating and sorting, they would be very familiar with the content of the all the statements. The researcher designed the interpretation meeting for the large group, Session Three, so that all participants would have the opportunity to familiarize themselves with the statement content as a foundation for understanding the meaning of the Concept Maps.

The results of the analyses would be presented sequentially to the large group in the same order as was done for the Leadership Team, reminding participants of the earlier steps of the problem of experiential learning and what they had done to date. In the training from the Concept Systems, the researcher had been cautioned to allow sufficient time for the group to understand and “own” the map in the interpretation stage. Also it had been noted that groups do not react in the same way and that the facilitation skills were important to the meeting’s success. This was a higher education setting and working with words tended to be an enjoyable activity for most people. The activity for the Interpretation session was to write an expanded label, a sentence that captured the essence of the meaning of each of the six clusters. This was a variation of recommendations by Trochim (1989) and Kane and Trochim (2007) for participants to

create the cluster labels. The room was set up with tables that seated eight people, so each table became a breakout group. The first handout was a list of the statements in each cluster with a short label. Groups were asked to discuss the meaning of the group of statements in the cluster and draft an expanded label in a complete sentence. Given time to discuss and complete the task, the labels would be shared with whole group. One person at each table recorded the expanded labels on a worksheet. Next, participants were given a handout with the statement ratings by cluster, for importance and extent of implementation. The next task was to revise (if they wished) the expanded label, given this additional information. After small group discussion, the information sharing would be repeated. The intent was to familiarize participants with the content of the maps and the meaning behind each cluster of statements. The final large group session was scheduled four days later, so this material would still be relatively fresh when the group began to design action plans.

Utilization- Large Group Session #4. The purpose of Session Four was to identify areas for action to achieve the strategic goal of 100 percent of students participating in experiential learning. In this session, participants reviewed and discussed the Pattern Match graph for a sense of the ratings by cluster for importance and implementation. They also examined the Go Zone charts for each cluster. Initially, overall discussion focused on the top three clusters in importance and the bottom three for implementation. Next, with the Go Zone displays for each cluster as a guide, participants worked in small groups to identify what they thought was the most important topic to first address with action plans. Each group completed Action Planning Sheets, shown in Appendix F. The session concluded with a summary of the ideas conveyed in

the Concept Maps and the key areas for action identified by the participants. The planning sheets were collected and participants were thanked for their service and contribution. Participants completed a Feedback Survey to gather perceptions of the Concept Mapping planning process. The Leadership Team had decided that no identifying information should be collected on the survey.

Key Leaders' Perceptions. The Feedback Survey (Appendix G) was designed to capture participant views of the planning process to determine its utility for the campus. Specifically, items addressed key leaders' views of the effectiveness of the Concept Mapping process, the appropriateness of the selection of people involved in process for the topic, the use of time, the degree to which individuals could contribute ideas, the willingness to participate in another Concept Mapping project, and the willingness to recommend Concept Mapping to others as a planning process, and the likelihood that the ideas generated by the group would be implemented. The survey data supplemented other data to gauge the acceptance of Concept Mapping as a planning process for the College and in particular, as a means to address the weaknesses of the institutional strategic planning process. Data included: identification a project sponsor at the Vice President level, formation of a Leadership Team as in the percent of those invited who accept, campus interest as in the percent of invited individuals who agreed to participate in four planning sessions to complete the Concept Mapping project, participant attendance, and completion rates for rating and sorting tasks.

The Leadership Team, of which the Vice President for Academic Affairs was an active member, held a final wrap up meeting some weeks later to review the action

plans, the results of the feedback survey, and to generally de-brief. For the purposes of the dissertation, the project was concluded at that point.

CHAPTER IV

RESULTS

The results are organized in two ways, first by the research questions to explore the effectiveness of the planning model for the College and secondly, by the six stages of Concept Mapping described in the methods chapter.

Research Question 1. What strategies/decision making models were used by the College administration in the planning, implementation and evaluation of experiential learning?

The College employed Concept Mapping as a planning process to engage experiential learning practitioners and administrators in devising strategy and actions to achieve the institutional strategic goal for experiential learning. With a six stage process, a designated group generated ideas, assigned ratings to each idea, then sorted those ideas into groups by meaning. Of particular importance was that each idea produced by the group was included in the process and each participant's input was considered in the same way. This democratic component allowed the group to fully benefit from the knowledge and experience of all who participated.

A dashboard of the experiential learning activities for graduating seniors tracked the evaluation of goal accomplishment. The College target was 100% participation in credit-bearing experiential learning for undergraduates.

Table 5.

Dashboard of Graduating Seniors with Experiential Learning

Experiential Learning	No. of Seniors (count)	Percent of Class
Internships	138	37.9
Study Abroad	73	20.1
Student Teaching	29	8.0
Field Experiences	62	17.0
Clinicals (Nursing, Athletic Training)	25	6.9
Service Learning, Student-faculty research	No data	
Unduplicated count of Senior Class	259	71.0

Preparation. The Vice President of Academic Affairs sponsored the planning process and appointed a Leadership Team to assist the researcher with the implementation. All seven of those invited to serve on the Leadership Team accepted the invitation. The Team included two faculty, three people with faculty status and administrative responsibilities, one staff member, as well as the Vice President for Academic Affairs. All but one had 15 or more years experience working in higher education; they averaged 7.5 years at this institution. All were active proponents of experiential learning. The researcher served as facilitator for the project. Leadership Team activities are detailed in Appendix A.

The Leadership Team discussed the issue and approved the final prompt to focus the activities of the project: “In order to enhance or expand student experiential learning at the College, one action we should take is_____”. The Team selected and tested ratings (Table 6) designed to help the group prioritize ideas for action to expand experiential learning.

Table 6.

Ratings for Relative Importance and Relative Extent of Implementation

Importance	Extent of Implementation
1 = Relatively unimportant	1 = Not at all
2 = Somewhat important	2 = A limited extent
3 = Moderately important	3 = A moderate extent
4 = Very important	4 = A great extent
5 = Extremely important	5 = A very great extent

Research Question 1a. How effective were the implemented strategies and why? Several indicators of effectiveness of the Concept Mapping process emerged that match the literature on successful planning. However, the primary indicator of effectiveness was in the generation of a conceptual model for support of experiential learning with action plans. Other indicators included actual participation rates and participants' feedback as to the effectiveness of the process. Also, the conceptual model and the action plans created a foundation to determine both institutional and departmental actions needed to expand experiential learning.

The Leadership Team recommended a list of people to be invited to participate in the planning process. Of the 50 people invited to participate, 36 (72 percent) accepted the invitation for a total of 43 individuals, including the Leadership Team. The Leadership Team's intent was to assemble a group that first was interested or involved with experiential learning, but secondly was at least somewhat representative of the six schools within the College. The characteristics of the participants: 42 percent staff or

administrators and 58 percent faculty, 58 percent female and 42 percent male, and 72 percent had served as advisors within three years. All six schools of the College were represented as well as Student Life, Academic & Career Services, and the Honors program. The majority of participants (72 percent) had been employed for 10 or fewer years at the College. Of the 36 who completed the sorting and rating exercises, 47 percent had 16 years of work in higher education. And, 83 percent were actively involved with students for experiential learning.

The Leadership Team determined that this group was the “right” group to address the issue of expanding experiential learning within the curriculum so that the College could achieve the strategic goal. Multiple characteristics reflecting the lessons learned for planning in the literature were present. The problem of an unmet strategic goal was framed in a way to elicit solutions at both a strategic and tactical level.

A group of 43 people were identified as willing to take leadership or participate in a focused planning exercise to expand experiential learning for students. People from different departments collaborated on an issue of common interest and achieved consensus in a relatively short period of time. A Leadership Team assisted with the customization of a planning model to fit the expectations and common practices on a campus. Within a two and a half hour meeting, discussion followed by brainstorming generated 85 ideas for what the College should do to expand experiential learning for students. Through multivariate analyses and the Concept Systems Inc. software, the participants’ ideas (plus the rating and sorting data) was represented visually as a Concept Map with ideas grouped together in clusters. Through group discussion and review, endorsement of the Map as representative of the group’s thinking emerged.

Group data for importance and the extent of implementation ratings for each of the ideas and clusters allowed prioritization of the ideas represented in the Concept Map. The Pattern Match and Go Zone charts displayed rating data for use by the group.

Generation of a total of 24 action plans addressing the 6 areas: Program Costs, Students & Curriculum, Time, Faculty Support (Besides \$), Awareness, and Community.

Strategic level conceptualization of what was needed to accomplish the strategic goal for experiential learning emerged from the Concept Mapping process: education and infrastructure.

Based on how the Concept Mapping process was conducted, the College gained experience with one cycle of action research: 1) identify a focus and plan, 2) collect data (literature review), 3) act and observe (pilot Concept Mapping planning process and collect participant feedback), 4) reflect (analysis of Concept Mapping results and participant feedback) , and 5) recommend modifications.

Research Question 2. What ideas/strategies concerning the expansion of experiential learning at the College were generated by the administrative stakeholders?

Idea Generation. The first large group session included brainstorming to the prompt: “In order to enhance or expand student experiential learning at the College, one action we should take is_____.”

The Leadership Team and the researcher edited the original list of 100 ideas down to 85 statements expressed in parallel form with each one generally representing a single idea. Table 7 presents a list of the first ten brainstormed statements.

Table 7.

A Partial List of Brainstormed Statements

No.	Statement
1	Compensate faculty/staff who participate in experiential education activities with time (leave, workload relief)
2	Provide opportunities for students to exercise choice between alternatives in experiential learning and between levels of involvement in experiential learning
3	Address cost issues for students (grants, scholarships) - especially for the summer
4	Discount summer tuition and room & board for experiential education (internships, Study Abroad, Bonner, etc.)
5	Recognize and take more avenues to demonstrate experiential learning (e.g. film festivals, poetry slams, internship presentations, music concerts)
6	Provide ongoing faculty development
7	Help students realize the value of having an experiential learning plan
8	Provide Bonner Leaders with secretarial support and transportation
9	Facilitate cross-disciplinary exploration for faculty
10	Define experiential learning terms

See Appendix H for the full list of brainstormed statements in numerical order.

Research Question 2a. What is the degree of mean agreement among key leaders on the generated ideas for expanding experiential learning for relative importance and for relative extent of implementation? Note: "key leaders" refers to an invited group of faculty, staff, and administrators with a known interest in experiential learning.

Idea Structuring and Representation Stage. In Session 2, participants completed the rating sheets, marking each idea with a 1 to 5 rating for relative importance, and for relative extent of implementation. The degree of agreement among key leaders was indicated through the statement ratings. Statements with the highest average importance ratings are shown in Table 8 with the statement number in parentheses.

Table 8.

Statements with Highest Mean Ratings for Relative Importance

Mean Importance	Statement
4.71	Identify resources needed to support experiential learning (34)
4.60	Have highly-visible upper-level administrative support and commitment (40)
4.57	Address cost issues for students (grants, scholarships) – especially in the summer (3)
4.53	Create infrastructure to support experiential education initiatives (37)
4.49	Educate students, faculty, and administrators about experiential education, including the benefits of it (30)
4.44	Clarifying the experiential learning terms (10)

Note. Statements were rated on a 1 to 5 scale for relative importance by 35 key leaders. The rating scale for relative importance is as follows: 1 = Relatively unimportant, 2 = Somewhat important, 3 = Moderately important, 4 = Very important, and 5 = Extremely important.

The full statement list with ratings for Importance and Extent of Implementation is shown in Appendix I.

Research Question 2b. What is the degree of similarity among the generated ideas for expanding experiential learning? Individually, the 36 participants sorted a set of the 85 statement cards into stacks by grouping the ideas together in a way that made sense to them. Six stacks was the fewest number of stacks and 17 was the largest number of stacks. The mode was six and the mean was 8.5 stacks. The sorting activity was a part of the Idea Structuring stage. The sort results were analyzed using the non-metric multidimensional scaling analysis within the Concept Systems software (proprietary software of Concept Systems, Inc.) to produce a two-dimensional or point map, shown in Figure 5.

The relative placement of the points (statements) or distance apart is the relevant attribute on the Point Map, Figure 6. Statements that the 36 participants often sorted together appear close together. North, south, east or west is not meaningful in that the rotation of the map does not change the distance between points which is the underlying structure of the map.

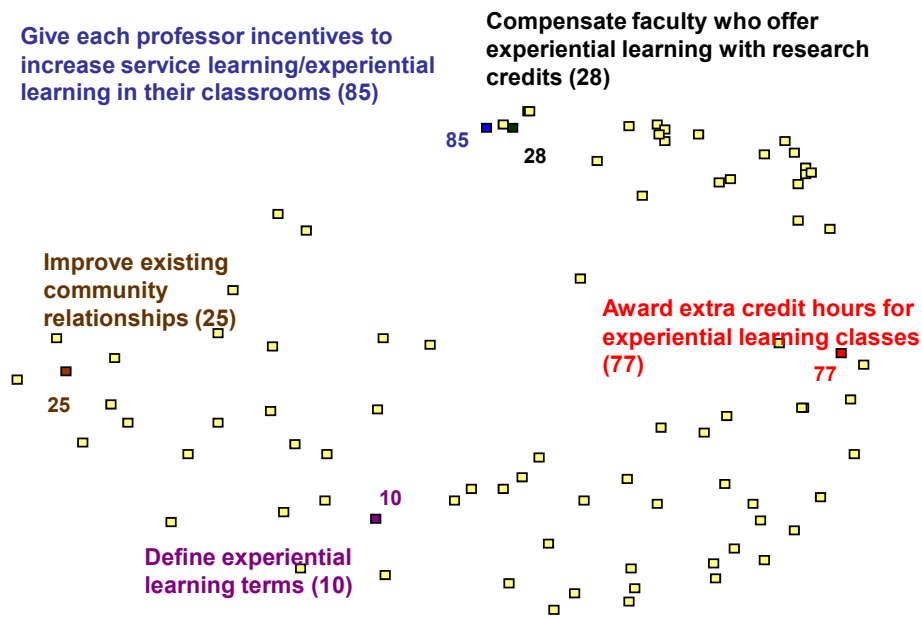


Figure 6. Point Map with Selected Statements. Each point represents one statement.

The Point Map (Figure 6) allows a quick sense of how the multidimensional scaling analysis displayed like statements close together and unlike statements further apart. The stress value is an indication of fit of the matrix of sort data and the distance matrix represented by the map generated by the multidimensional scaling analysis. The stress value for the map was .208 which compares favorably with the average stress value of 0.285 with a standard deviation of .004 found by Trochim (1993) in a review of 38 Concept Mapping projects. The stress value reflected the fit between the total N by N matrix and the multidimensional scaling results in the form of the two dimensional map (Kruskal & Wish, 1978). Higher stress values indicated less concordance between the total N by N matrix (sorting results) and the statement coordinates on the map produced through the multidimensional scaling analysis. Factors that influenced the stress value

included the number of dimensions (more dimensions tend to fit complex data better), the number of sorters (more people sorting tends to stabilize the results), the extent to which participants viewed the data in the same way, and the degree to which the data confirmed to a simple structure (Hair, Anderson, Tatham, & Black, 1998; Kruskal & Wish, 1978; Trochim & Kane, 2005). In a meta-analysis of 38 concept mapping projects, Trochim (1993) found stress values averaged 0.285 with a standard deviation of 0.04.

A total of 35 participants contributed ratings data. The average rating per statement is shown by the number of layers stacked on each point in Figure 7. Relative Importance was rated by participants according to a five to one scale, where 5=Extremely Important and 1 = Relatively Unimportant.

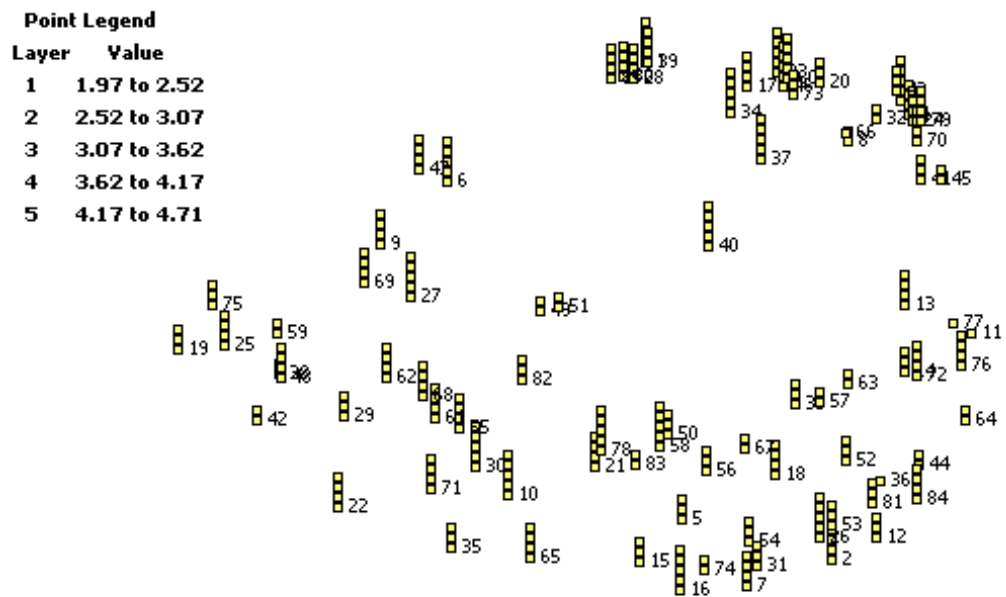


Figure 7. Point Map with Average Ratings for Importance.

Each number on the Point Map corresponded to a statement. The number of layers per statement represented the mean statement value for Importance; more layers indicated greater importance.

Reliability of the ratings was evaluated by the examination of internal consistency using Cronbach's alpha. For the Level of Importance, the reliability as measured by Cronbach's alpha was .93 for all 85 statements. For the Extent of Implementation, the reliability as measured by Cronbach's alpha was .97 for all 85 statements. These high values for reliability may reflect the homogenous nature of the participants in that they functioned on the provider side of experiential learning. Another interesting step would be to expand the ratings of statements to include students and community partner representatives.

Research Question 2c. What strategic action areas are identified by key leaders to expand experiential learning at the College?

Interpretation. Hierarchical cluster analysis "clusters" the individual statements together into groups. These clusters are labeled and later verified by Concept Mapping participants as appropriate, given the statements that comprise the cluster. Displayed on a Cluster Map, the clusters represent the areas for action according the participant's sorting or organization of the brainstormed ideas. These action areas or clusters begin to identify the strategic thinking of the group.

The facilitator presented an eight and six cluster solution to the Leadership Team. The Team judged the eight cluster solution as too complex and preferred the six cluster solution. Despite relatively high bridging values (see Table 9) for four of the clusters, the Leadership Team felt strongly that the six cluster solution (Figure 8), "made

more sense” to them and was the best solution to present to the others involved in the project. A cluster is a group of statements with similar meaning as determined through hierarchical cluster analysis of the x,y coordinates of each point on the point map. The researcher and the Leadership Team made a judgment as to the number of clusters useful for the experiential learning issue. The labels were confirmed by participants as representative of the statements in each cluster.

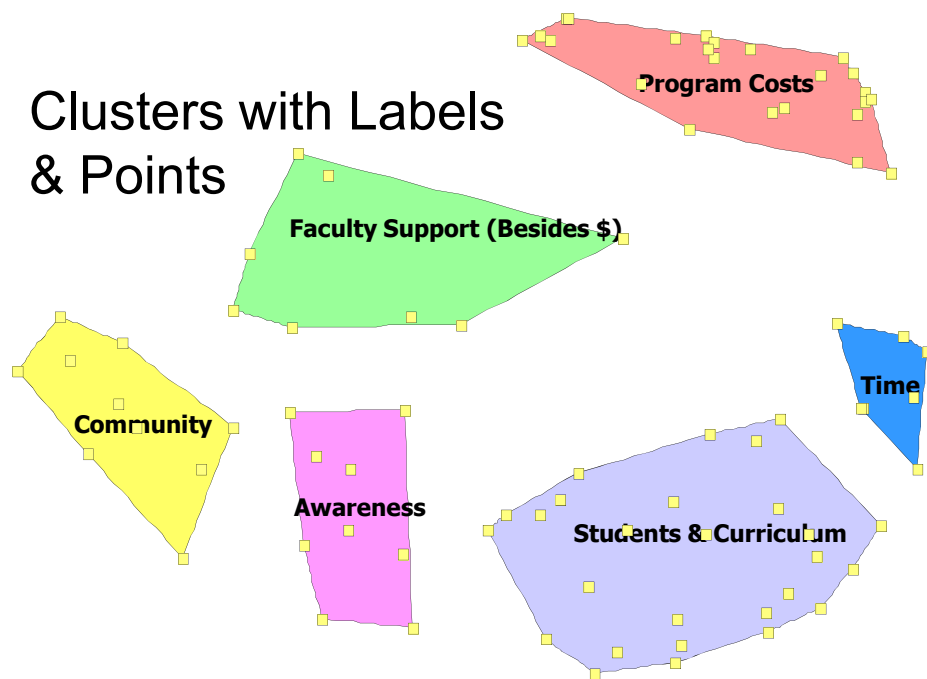


Figure 8. Cluster Map with Labels and Statement Points.

The labels on the Cluster Map in Figure 8 were thoroughly reviewed in Session 3. To clarify the meaning represented by the clusters, participants created “expanded labels” or sentences to capture the sense of the statements in the cluster. This exercise was completed in small groups, so statements within each cluster are detailed in Appendix I.

Two examples of expanded labels for the Students & Curriculum cluster: 1) tie experiential learning into the College living and learning environment, and 2) help students recognize and value experiential learning by integrating it broadly into the living and learning community. The complete results of the expanded label exercise are found in Appendix J.

Cluster bridging values are the averages of the bridging values for the statements within the cluster. A low bridging value for a statement indicates that the statement was often sorted with those close to it. Such a statement may be considered an anchor or central statement for a cluster. Conversely, a high bridging value indicates that at least some participants sorted the statement with statements not appearing close together on the map.

Table 9

Bridging Values per Cluster

Cluster Label	Bridging Values
Program Costs	0.18
Students & Curriculum	0.50
Awareness	0.72
Community	0.73
Time	0.76
Faculty Support (Besides \$)	0.87

Note. Clusters are listed in ascending order by bridging value.

The bridging value displayed represents the mean value of the bridging value of all statements in that cluster. Higher values “bridge” or function as connectors to other areas of the map. High bridging values indicated that the statement acted as a “bridge”

or link to statements (or clusters) located further away on the map. This assisted in the interpretation of the broader issues or regions represented in the map.

Research Question 2d. What broad themes are identified as a conceptual model for the expansion of experiential learning at the College? Time constraints for the group sessions prevented the exploration of the Concept Map for “regions” or broad themes. However, two high level themes, education and infrastructure, emerged from a later review of the group’s work, Figure 9. The data sources used to determine the common themes included the cluster labels on the Concept Map, the expanded summary labels written to session three (Appendix J.), and the issues later identified as critical for each cluster during the action plan creation exercise (Table 12) .

The first theme, education about experiential learning, permeated the clusters through statements that called for clarification of the definition, the value, benefits, and the pedagogical implications of experiential learning for the various audiences. It appeared in the critical issues for action described for three of the clusters: Students & Curriculum, Awareness, and Community.

The second theme of a strong infrastructure encompassed both the ideas in the Program Costs cluster as well as issues like scheduling in the Time and the Students & Curriculum clusters. For the Faculty Support cluster, infrastructure included the creation of a “safety net” to experiment with experiential learning. In the Students & Curriculum cluster, infrastructure included the idea of experiential learning as a part of each major. The Program Costs cluster addressed infrastructure of financial support. Aspects of infrastructure were also seen in many of the action plans produced by the group.

Two clusters, Faculty Support (besides \$) and Students and Curriculum, fall into both the Education region and the Infrastructure region of the map. High bridging values for clusters can also be understood through the view of these two foundational themes that connect the clusters of the Concept Map.

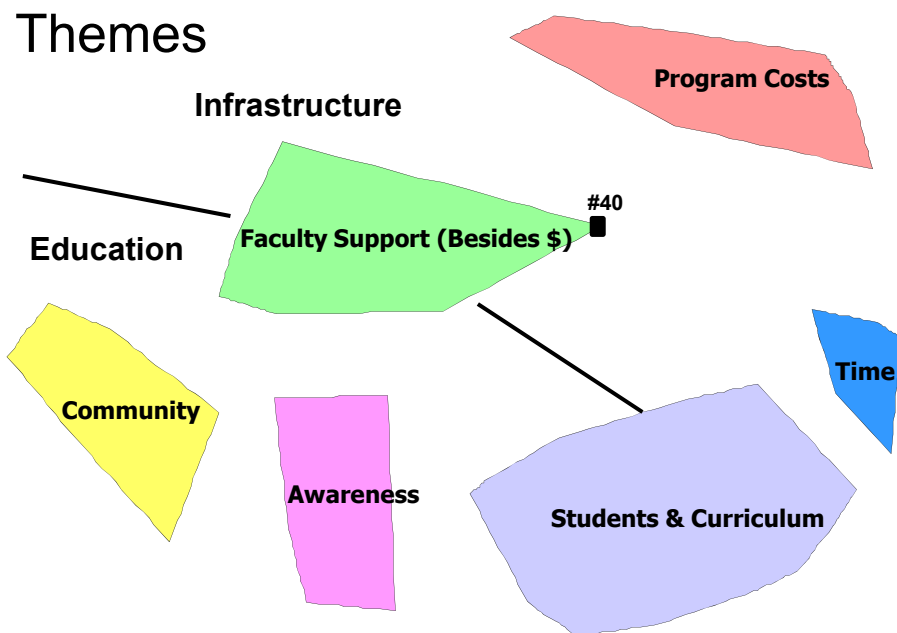


Figure 9. Concept Map Themes. Education and Infrastructure as themes or regions of the Concept Map for the expansion of experiential learning.

Another useful view of the map highlighted the prime constituents for each part of the map. Community, an external group, was on the left side of the Map. The central area was devoted to faculty, and the right side of the Map targeted students. The very centermost statement, number 40, reflected the group's critical view of visible and

tangible high level administrative support for experiential learning. This central statement could be interpreted as another of the constituencies. It's not a surprise that the participants identified leadership support as central to the expansion of experiential learning. Many planning researchers considered high level leadership support as critical to the planning success (Keller, 2004; Lisenksy, 1988; Sevier, 2000; Swain, 1988; Tromp & Ruben, 2004; Winn & Cameron, 1998).

Research Question 2e. How does the key leadership group prioritize the strategic action areas for expanding experiential learning at the College?

Utilization. Several visual displays allowed the group to discuss and confirm priority areas for action. The strategic action areas were identified as the labels on the Cluster Map, figures 8 and 9. Ratings were averaged for the statements in each cluster to produce mean ratings for each Cluster, Table 10. The ratings for relative importance were displayed through added levels or depth on the Cluster Map with Ratings of Importance, Figure 10.

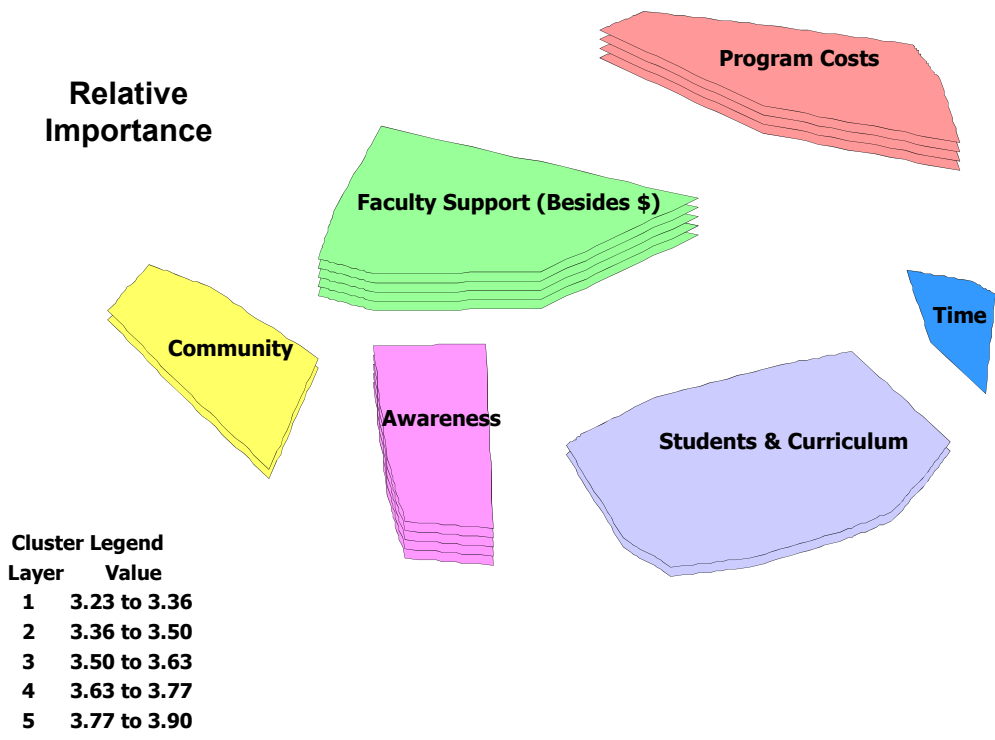


Figure 10. Cluster Map with Ratings of Importance.

A display of the ratings for each cluster assisted participants in the Concept Map interpretation, Table 4. The mean Importance values are higher than the mean Extent of Implementation values for each cluster. See Appendix I for a complete list of the statements with ratings for each cluster.

Table 10.

Mean Ratings with Standard Deviation for each Cluster

Relative Importance		Cluster Label	Relative Extent of Implementation	
Mean	SD		Mean	SD
3.90	0.37	Awareness	2.26	0.37
3.90	0.62	Faculty Support (Besides \$)	2.36	0.29
3.74	0.66	Program Costs	1.77	0.42
3.47	0.45	Community	2.22	0.55
3.45	0.54	Students & Curriculum	2.04	0.42
3.23	0.68	Time	1.69	0.36

Note. The mean rating value for the cluster represents the average of all mean ratings for the statements assigned to the cluster. The rating scale for relative importance is as follows: 1 = Relatively unimportant, 2 = Somewhat important, 3 = Moderately important, 4 = Very important, and 5 = Extremely important. The rating scale for relative extent of implementation was: 1 = Not at all, 2 = A limited extent, 3 = A moderate extent, 4 = A great extent, and 5 = A very great extent.

The ladder graph or Pattern Match in Figure 11 showed the relationship between two sets of ratings (importance and extent of implementation) by cluster. The Pattern Match graphically depicted the same rating data displayed in Table 10. The Pattern Match showed participants' collective view of the relative importance and relative extent of implementation by cluster, based on the means the ratings for each cluster of statements. First, each vertical line represents a 5 (high) to 1 (low) rating scale. On the left is importance; on the right is implementation. The cluster names are listed to the outside of each vertical line and shown in order of mean rating. Here, we see that

Faculty Support (Besides \$) cluster had the highest mean rating on each scale and that the Time cluster had the lowest mean rating on each scale. The Pearson product moment correlation coefficient between the two sets of ratings was .61.

Comparison of Mean Ratings by Cluster for Importance and Implementation

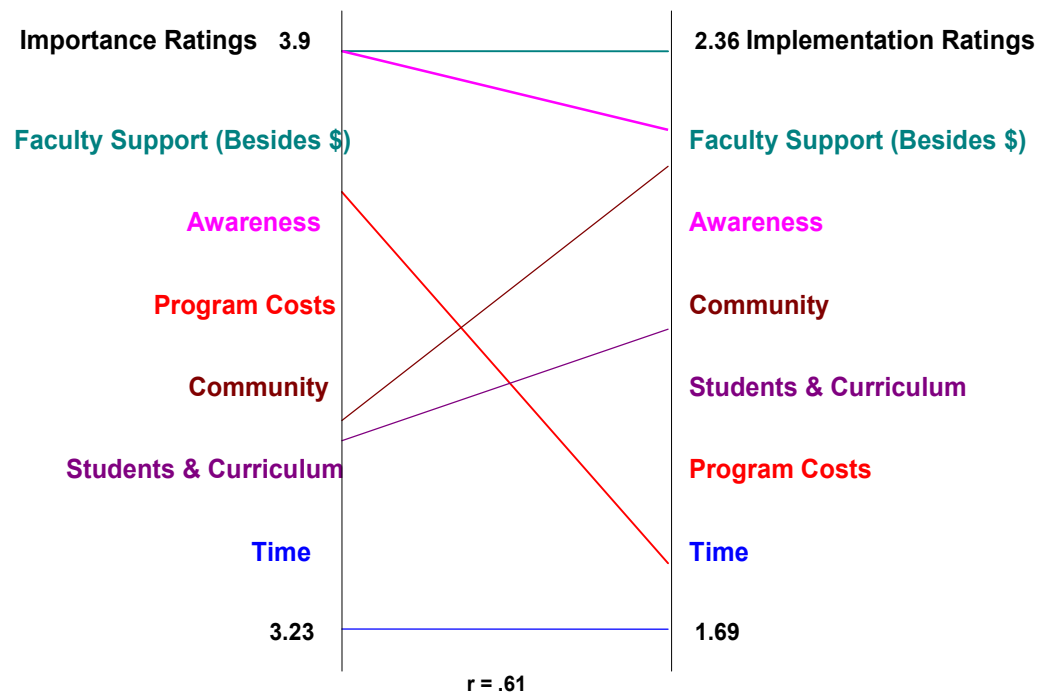


Figure 11. Pattern Match.

The Program Costs mean rating was third from the top for Importance, but fifth for Implementation. The correlation coefficient shown on the pattern match (.61) was the Pearson product moment correlation coefficient, appropriate for metric data with an assumption of normal distribution. It indicated the extent to which the rating scores on the two variables (importance and extent of implementation) occupied the same relative position. From the Pattern Match, we see that three of the clusters (Program Costs,

Community, and Students & Curriculum) occupied a different place on each vertical line of the graph.

However, what was interesting was that a simple comparison of the mean ratings revealed that the group believed that not enough was being done (Implementation). For each of the six clusters, the extent of implementation average rating was lower than the companion mean importance rating.

Research Question 2f. What actions to expand experiential learning should be implemented first for each strategic area? The highest rated statements for Importance in each of the six strategic action areas (clusters) were shown in Table 11.

Table 11.

Highest Rated Statements for Importance from Each Cluster

Cluster Label	Importance - Highest Rated Statements
Program Costs	Identify resources needed to support experiential learning
Students & Curriculum	Have all academic programs identify any existing experiential learning opportunities within their program
Time	Support opportunities for students to participate in discipline-specific conferences
Faculty Support (Besides \$)	Have highly-visible upper-level administrative support and commitment
Awareness	Educate students, faculty, and administrators about experiential education, including the benefits of it
Community	Educate Board of Trustees

Another set of visual displays for each strategic action area or cluster compared the statement ratings on importance and on extent of implementation. The Go Zone Charts shown in Figure 12 and in Appendix K visually identified the statements with means high on importance and low for implementation. These statements were the starting point to identify actions. An example Go Zone for the Program Costs cluster is shown in Figure 12. All six Go Zone charts are presented in Appendix K.

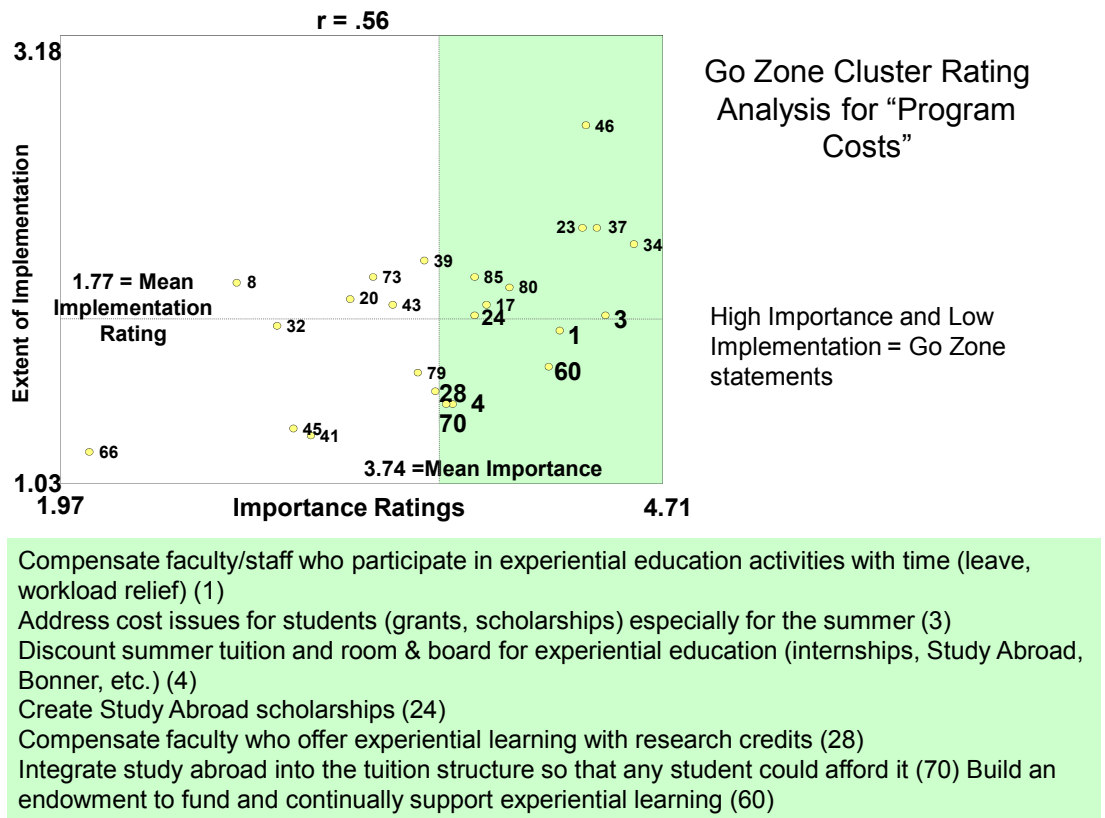


Figure 12. Program Costs Go Zone.

The mean Importance value for statements in this cluster was 3.74 and is labeled on the graph. Mean Extent of Implementation is 1.77 for the statements in the cluster, and is

also marked on the graph. Lines representing the two means created four quadrants. Go Zone statements (in bold) fall above the mean for Importance and below the mean for Implementation. They can be considered “quick wins” and are targets for action. The Pearson correlation for the ratings on Importance and Implementation is a moderate .56 for the statements in this cluster.

Results of the participants’ work in Session Four are displayed in Table 12 Action Plans. In small groups, participants selected clusters and in most cases, specified a critical issue, then designed actions to address the issue. One of the most interesting strategies expanded on one of the statements and designed actions that described the infrastructure of a safety net for faculty experimentation with experiential learning.

Table 12.

Action Plans

Cluster (Strategic Action Area)	Actions
Program Costs	<ol style="list-style-type: none"> 1. Discount summer tuition, room & board. 2. Look into study abroad revenue feedback model for other experiential learning opportunities 3. Program directors survey their students to see if they would take courses & internship if cost wasn’t prohibitive 4. Integrate study abroad into the tuition structure 5. With the initial scholarship award, earmark a certain percentage for Experiential Learning credit-bearing and outside of standard fall and spring semesters. 6. Identify resources needed, then go after grants, etc. Discount summer tuition.

Cluster (Strategic Action Area)	Actions
Faculty Support (besides \$)	1. Put some language in tenure and promotion guidelines that reward this effort (even if it fails).
Issue: Faculty need a safety net	<p>2. Don't just use 1 or even 2 semesters of student evaluations to judge the experiment</p> <p>3. Create a teaching and learning center staffed by someone who can advise faculty on how to identify and mitigate risks; as well as how to turn the experiment into research and articles.</p> <p>4. Create a committee who signs off on the proposal and helps identify the risks.</p> <p>5. Have the Dean sponsor a series of symposia on experiential learning in which faculty and outside experts would share best practices.</p>
Time	1. Make January or May term more realistic.
Issue: Giving time to students for experiential learning	2. Look into Mon-Wed and Tuesday-Thursday classes. All are 1 hour and 15 minutes so that Fridays are open for these activities.
Issue: Research adequate time resources	3. Have a committee look at best practices in scheduling for experiential learning at other institutions that excel at broad-based experiential education
Students and Curriculum	<p>1. Curriculum review</p> <p>2. Course faculty should address objectives in annual report</p> <p>3. Look for opportunities to include experiential learning in the program</p> <p>4. Program should review requirements associated with experiential learning.</p> <p>5. Programs should determine appropriate number of courses in experiential learning.</p>
Issue: Ensure that the experiential learning relates to the course and objectives	

Cluster (Strategic Action Area)	Actions
	6. Service Learning and Experiential Learning (SL / EL) designation of classes. Experiential Education codified 7. Experiential Education goes toward tenure and promotion
Awareness Issue: Define Experiential Learning	1. Do research and collect multiple definitions and examples at peer institutions and analyze what they include and how the definitions function for each institution. 2. Launch internal awareness campaign
Community Issue: Extend education at Experiential Learning to greater community and seek build and promote meaningful purposeful, relevant relationships and continually nurture, develop, and measure those relationships	1. Marketing plan

In summary, 24 specific actions were identified to address the question posed to the group, “In order to enhance or expand student experiential learning at the College, one action we should take is_____”. In conclusion, the Concept Mapping planning process produced tangible results for the College in terms of what should be done to achieve the strategic goal. The additional benefit of the project was experience with an applied research approach that incorporated theory and practice and resulted in an improved plan to expand experiential learning at the College.

Research Question 3. What are the perspectives of key leaders toward Concept Mapping as an effective model for planning at a small private institution?

Key Leaders' Perceptions. Sponsoring of the project indicated that leadership judged the process as an acceptable risk. Pre-planning included the determination that the problem and the method of Concept Mapping were a fit. Inherent in that determination was the consideration by the chief sponsor of the project, the Vice President for Academic Affairs, and the Leadership Team of “how things are done here” and whether the process itself would be seen as acceptable to other campus opinion leaders. All seven of the people invited by the Vice President for Academic Affairs to serve on the Leadership Team accepted the invitation (100 percent acceptance). Of the 50 additional faculty and staff members invited to participate in the experiential learning Concept Mapping project, 36 or 72 percent accepted the invitation. Participants' attendance at the four large group sessions provided an indicator of support for the process as displayed in Table 13. “Participants” in Table 13 refers to the 43 people who accepted either the role of participant or as a Leadership Team member.

Table 13.

Session Attendance in Concept Mapping Project

	Attendance	% of Participants
Session 1 (intro and brainstorming)	36	84%
Session 2 (sorting and rating)	35	81%
Session 3 (interpretation)	28	65%
Session 4 (utility)	28	65%

The attendance records in Table 13 indicated strong support for the commitment to participate in the process. Make up sessions or individual meetings were held following Sessions One and Two in order to accommodate those unable to attend the large group sessions. No alternate dates were scheduled to repeat the sessions 3 and 4. The Leadership Team judged the participation rates to be very favorable for this size of a group.

The Feedback Survey, Appendix G., was completed by the participants who attended Session 4; 27 of the 28 participants completed the survey. Twelve of the 27 respondents added comments. The Leadership Team decided that the survey would be anonymous, so no identifying information was collected.

Research Question 3a. How did key leaders perceive the participatory component of the Concept Mapping planning process? Three feedback survey items addressed the participatory component of Concept Mapping and the decisions made about what people were included in the planning process. Item one and two were designed to collect data on how well the key leaders felt the democratic component of the Concept Mapping process worked. Response options for items one and two: 1= Poor, 2=Fair, 3=Satisfactory, 4=Good, and 5=Excellent. Item one: "Rate the Concept Mapping planning process for ensuring that all who attended the meetings were equally involved," scored a mean of 4.0 (.75 sd). Item two: "Rate the process for allowing you to contribute your ideas," scored a mean of 4.22 (.80 sd). The third item directly addressed the appropriateness of the people included in the planning: "The appropriate people were included in the meetings to develop ideas to support student engagement." Response options for item three and the remaining survey items: 1=Strongly Disagree,

2=Disagree, 3=Neutral, 4=Agree, and 5=Strongly Agree. The group's mean rating for item three was 3.63 (.84 sd). Comments were positive, "This is good for getting a read on what the participants value, but not necessarily a vision of leadership" and "This process involves many people. We should consider this process for future projects," and "Item 3-appropriate people included: in these meetings, yes, but not prior to (re: task force)." Some concerns about the mix of people involved: "No students involved," and "Item 3-appropriate people included: not enough representation from all schools and programs." Overall, the key leaders were very positive about the participatory component of the Concept Mapping process.

Research Question 3b. How did the key leaders view the time spent on the Concept Mapping process to plan for the strategic goal of expanding experiential learning? Feedback Survey item four stated: "I think that my time on the Concept Mapping planning process was well-spent," and also had the 5 point Likert-type scale of 1=Strongly Disagree through 5=Strongly Agree response options. The group mean for the time well-spent item was 3.59 (1.0 sd). One negative comment related to time and or efficiency of process: "Way too much time required or way too many people - doesn't meet the test of efficiency &/or respect for people's time and other's priorities." In general, however, and especially when considered with the high percentage of key leaders who attended each session, these are very positive ratings for the time well spent.

Research Question 3c. How well did the key leaders perceive that the Concept Mapping results reflected the thinking of the group? Feedback Survey item five stated: "The priorities identified in the Concept Mapping planning process

reflect the general thinking of the group,” and offered the the 5 point Likert-type scale of 1=Strongly Disagree through 5=Strongly Agree response options. The group’s mean rating and standard deviation for this item were 3.96 (.71 sd)

Research Question 3d. How did key leaders perceive the Concept Mapping process as a planning tool for the College? Descriptive statistics for the feedback survey results are summarized in Table 14.

Table 14.

Descriptive Statistics for Feedback Survey Results

Item	Minimum	Maximum	Mean	Std. Deviation
1. All Involved	3	5	4.00	.75
2. Contribute Ideas	3	5	4.22	.80
3. Right People	2	5	3.63	.84
4. Time Well Spent	1	5	3.59	1.01
5. Reflects Group Thinking	3	5	3.96	.71
6. Likely Implement	1	4	2.93	.62
7. Would Recommend CM	1	5	3.41	1.01
8. Would Participate Again	1	5	3.65	.97

Item six, “The action plans we developed are likely to be implemented,” was outside of this study, but still provided a sense of the perceived utility of the concepts and actions created through Concept Mapping. With the same 1=Strongly Disagree through 5=Strongly Agree response options, the mean rating from key leaders on this item was 2.93 (.62 sd). Comments included, “Information sharing is essential. Must follow through to the end: Budget allocation and reallocation,” and “This seems to be really successful as a process, but what the impact will be generates a lot of my "not sure" answers. If the project goes through as recommended by this group, no one can say it was a "top down"

decision,” and finally, “A good process- first time with such, so will need time to observe how it "shakes down" to determine its merits.”

Item seven: “The Concept Mapping planning process is something I would recommend to others at the College,” had a mean rating of 3.41 (1.0 sd) and item eight: “I would participate willingly in another Concept Mapping planning project,” had a mean rating of 3.65 (.98 sd). Positive comments included: “Engaging and dynamic process,” and “I did enjoy the group energy.” Again, very positive ratings for the Concept Mapping process.

Table 15 was another display of the results intended to prompt discussion with the Leadership Team and others as to the efficacy of the Concept Mapping planning process. A simpler approach was taken for data display with the use of response option counts and the categorical treatment of the response options rather than as interval level data. Here, for items one and two, “ensuring that all who attended the meetings were equally involved” and “rate the process for allowing you to contribute your ideas”, all participants rated the items at satisfactory, good or excellent. For item five, “The priorities identified in the Concept Mapping planning process reflect the general thinking of the group” again, the results were overwhelmingly positive. Strongly Agree or Agree was selected by 20 (74 percent) of the respondents with only 7 (26 percent) selecting Not Sure.

Table 15.

Feedback Responses for the Concept Mapping Planning Process

Item	Excellent / Good	Satisfactory	Fair / Poor
1. Rate the Concept Mapping planning process for ensuring that all who attended the meetings were equally involved.	19 73%	7 27%	0
2. Rate the process for allowing you to contribute your ideas.	21 78%	6 22	0
	Strongly Agree / Agree	Not Sure	Disagree / Strongly Disagree
3. The appropriate people were included in the meetings to develop ideas to support student engagement.	15 56%	10 37%	2 7%
4. I think that my time on the Concept Mapping planning process was well-spent.	17 63%	6 22%	4 15%
5. The priorities identified in the Concept Mapping planning process reflect the general thinking of the group.	20 74%	7 26%	0
6. The action plans we developed are likely to be implemented.	3 11%	20 74%	4 15%
7. The Concept Mapping planning process is something I would recommend to others at the College.	15 56%	8 30%	4 14%
8. I would participate willingly in another Concept Mapping planning project.	17 65%	6 23%	3 12%

Outside of the scope of this study, the lowest group ratings appeared for item 6, “action plans... likely to be implemented.” The item mean with standard deviation was 2.9 (.62) and from Table 14, the vast majority of respondents (20 or 74 percent) marked “Not Sure” for this question. Only four or 15 percent indicated outright disagreement, while three people marked agreement with it. This response indicated that the group perceived a potential gap between the identification of what to do and the actual implementation of those plans. They were positive that the process had captured their ideas and recommendations about what to do, but were uncertain as to whether follow-up would occur. In fact, this is another confirmation of the high level themes of education and infrastructure strategies needed to support experiential learning on the Concept Map.

Results for items seven and eight revealed the key leaders’ perceptions of Concept Mapping as a process. Overall, both items earned positive ratings from the majority of respondents. In conclusion a, the perceptions of the participants were positive in their endorsement of the Concept Mapping planning process, although that support was not unanimous.

CHAPTER V

DISCUSSION

Each research question will be discussed below, followed by sections on limitations of the study, implications for practitioners, and future research. Four main ideas summarized the results. First, this institution required more than one planning approach to completely develop its strategic plan. Second, the structured group process of the Concept Mapping model worked well, according to the participant feedback results. It produced what the overall strategic planning model did not; an agreed-to a conceptual view with practical action plans to expand experiential learning at the College. Third, the Leadership Team adapted the Concept Mapping planning process to the nuances and expectations of the campus. And fourth, as a result of the customization, the quality of the data produced through Concept Mapping was very good.

Research Question 1. What strategies/decision making models were used by the College administration in the planning, implementation and evaluation of experiential learning?

The institutional strategic planning process selected by the College began with the hiring of a consultant. The general planning model was similar to that advocated by Sevier (2000): establish the foundation, clarify core values, assess the internal and external environments, identify the strategic issues, develop strategies, and

Implementation of the plan. The campus customizations concerned what groups and what leaders were the prime actors for each of the general strategic planning stages.

The foundation of the planning process was motivated both by the need to grow enrollment (and thus increase operating funds for improvements) and the opportunity for the new President to establish his leadership. The campus had recently completed a revision of the mission and vision, so the next step was to gather data on the internal workings of the institution as well as external data on the trends (social, political, economic, technological, and environmental). The consultant visited campus and talked with the President and a few key groups, including senior faculty leaders, to gather his own information.

A planning committee was formed to begin identifying planning issues, and in particular, to collect a sense of the College's strengths and challenges from campus members. The new Vice President for Academic Affairs was charged with leading the planning committee. This stage of the process and the next, identification of strategic issues, extended into a second academic year, through several issue-based task forces, and multiple open meetings for campus comment and discussion. Experiential learning was identified as one of the cornerstones of the undergraduate experience. The goal to expand experiential learning to all undergraduates was not controversial, although questions as to just what was included in the definition were raised. Finally, two years after the announcement of the beginning of the planning process, a strategic plan was approved by the Board of Trustees.

Implementation of the experiential learning goal followed that of the entire Strategic Plan and relied upon the existing organizational structure and leadership at the

divisional and departmental levels. Once the plan was adopted, divisions and departments were expected to integrate the priorities of the Strategic Plan into their own priorities and actions. No institutional structures or support accompanied the launch of the new goal for experiential learning. Instead, the plan relied on management endorsement of the goal and the assumption of support for the goal because of broad participation in the formation of the plan.

The evaluation of progress on the strategic plan was determined through a review of the annual reports. Each department identified the activities that supported the Strategic Plan. Evaluation of the goal was also tracked through the registrar's student information data base. A summary chart, or dashboard, was created for the counts of internships, study abroad, and other types of experiential learning completed by graduating seniors. The dashboard for experiential learning quickly revealed the progress needed to achieve the 100 percent participation goal.

Research Question 1a. How effective were the implemented strategies and why? The Strategic Plan, with the goal for experiential learning, was approved and endorsed by the College. Comments during the planning process indicated less than universal agreement as to the definition of experiential learning. However, these comments were not perceived as being serious enough to amend the goal. The disagreement was not with the anticipated benefits to students, but rather what approaches might be considered and counted as "experiential" learning. At the point of approval, the planning model appeared to be effective and seemed to have met the extensive participation expectations of the campus.

From the literature review, several characteristics of successful planning were identified, specifically leadership, participation, measurable goals, integration, and links to action. In terms of the experiential learning goal, leadership and the measurable characteristic of the goal were effective. The participation of those involved in the planning was only partially effective. The integration of institutional level and departmental level plans and the links to action were not effective.

In terms of leadership, the right people were involved for the issue of the experiential learning goal. The Vice President for Academic Affairs led one of the major planning committees, and the School Deans served as members on that committee. These are the leaders for the division that would implement the experiential learning goal. Also effective was the measurability of the experiential goal. It was clearly measurable with a 100 percent target for undergraduates. The college was able to track students' experiences to determine the percent of the senior class with experiential learning.

Less effective was the participation component of the planning for the experiential learning goal. Although there was broad participation, the College did not target directly the key leaders for experiential learning. The planning focus stayed on the bigger picture. In other words, a focused conversation, specifically with those delivering the experiential learning at the College, was not part of the plan design process. The participation component was not effective for the goal because the people who would implement the goal were not sufficiently involved in the planning.

Ineffective were the integration of departmental plans with the 100 percent participation rate goal in experiential learning as well as the links to action. The

integration of institutional level planning with divisional and departmental level planning and action was problematic. In hindsight, that integration consisted of the expectations that divisions and departments would re-arrange priorities to align with the institutional plan. However, an increase in experiential learning for students did not happen. The levels of experiential learning remained the same. Possible reasons for the lack of increase reflect the nature of the topic, in that curricular decisions are reserved for faculty based on the shared governance tradition. Experiential learning and its place in a curriculum, in this case, was a departmental decision. There was a disconnect in that the source of guidance came from the institution but the action would have to be implemented in an area belonging strictly to faculty. More planning at the division level was needed to expand experiential learning. Why more planning did not occur was not clear. Results showed that experiential learning did not increase, providing that the link to action was not effective as well.

What if the Concept Mapping process had been integrated into or replaced the institution's strategic planning process to develop these strategies earlier? While the earlier planning model including participation, the question became one of the type of participation necessary for buy-in. Clearly the opportunity to attend a campus meeting or to send comments to a Planning Committee did not produce the buy-in necessary to prompt action in terms of expanded experiential learning opportunities. The study ended successfully with the utilization of the key leaders' ideas to produce the action plans and conceptual model of what should be done. This foundation for action was completed.

Research Question 2. What ideas/strategies concerning the expansion of experiential learning at the College were generated by the administrative stakeholders?

The list of 85 unique ideas generated by key leaders created a valuable resource for the current project, but also as a benchmark for the status of experiential learning at the College prior to any implementation of additional support to expand opportunities for students.

Research Question 2a. What is the degree of mean agreement among key leaders on the generated ideas for expanding experiential learning for relative importance and for relative extent of implementation? (Note: "key leaders" refers to an invited group of faculty, staff, and administrators with a known interest in experiential learning.)

Mean statement ratings for importance and for the extent of implementation summarized key leaders' agreement on the brainstormed ideas to expand experiential learning. Repeating some form of the rating process at a later date (after implementation the strategic actions identified) could provide a measure of progress of the effectiveness of the support to experiential learning.

Research Question 2b. What is the degree of similarity among the generated ideas for expanding experiential learning?

The Point Map displayed the analysis of the sorting data showing ideas grouped together (by the key leaders) as close together on the Point Map. Ideas less often sorted together appeared further apart on the Map. Another value of the Point Map came from the individual exercise of sorting the ideas into groups. Although time-consuming, the

organization of the ideas by the individuals paved the way for the group to think strategically about the ideas generated.

Research Question 2c. What strategic action areas are identified by key leaders to expand experiential learning at the College?

The Cluster Map displayed six action areas with the labels or action area names confirmed by the key leaders: Awareness, Faculty Support-Besides \$, Program Costs, Community, Students & Curriculum, and Time. The group agreed that these labels (supplemented by the expanded labels designed during Session Three, Appendix J.) represented the thinking of the group for what to do to expand experiential learning at the College. These action areas served as the beginning of a strategic plan to expand experiential learning. Also, through the design of the expanded labels for each action area, the key leaders both confirmed the Concept Map as a representation of the group's thinking and further defined the framework for the expansion of experiential learning.

Research Question 2d. What broad themes are identified as a conceptual model for the expansion of experiential learning at the College?

Review of the Concept Map and Cluster List (of statements within each cluster) revealed, not surprisingly, that themes of Education and Infrastructure connected the action areas and the statements within those areas. Here again, a strategic view of what was needed provided specific and helpful information to decision-makers that could be used in a variety of ways. Additionally, three constituency groups were referenced throughout the statements and were the prime audiences for action in three areas (left, center, and right sides) of the Cluster Map. Community as represented by the

Community action area; faculty as represented by the action areas for Faculty Support-Besides \$, Awareness, Program Costs; and students as represented in the action areas of Students & Curriculum, Time, and shared Program Costs. These broad themes add to the conceptual model, and have incredible value for thinking about the choices that must be made as implementation begins. The themes could serve as the starting point in a conversation about customizing support for a single type of experiential learning.

Research Question 2e. How does the key leadership group prioritize the strategic action areas for expanding experiential learning at the College?

The top action areas for Importance were Faculty Support-Besides \$, Awareness, and Program Costs. The action areas rated with lowest for Extent of Implementation were Time, Program Costs and Students & Curriculum. The flip side to the interpretation of these results was to consider these high action priorities as the barriers that required attention in order for the College to go to the next level of experiential learning opportunities. Such an interpretation might begin to explain why departments didn't initiate expansion on their own. These action areas point to institutional level intervention and support needed beyond typical departmental-type activity. Note: many departments are relatively small at this college.

Research Question 2f. What actions to expand experiential learning should be implemented first for each strategic area?

Key leaders collaboratively designed initial actions within each strategic action area (cluster) to expand experiential learning. The issues and actions proposed clearly related to an institutional infrastructure and increased education of the benefits and the pedagogies surrounding experiential learning, for both students and faculty. Program

costs were viewed as a barrier for students; six actions were proposed to address this concern. The group endorsed the creation of a “safety net” for faculty experimentation with experiential learning and an alignment of faculty promotion guidelines with the pedagogical use of experiential learning. Scheduling changes and research were recommended to address the time constraint issue for experiential learning. Under the Students & Curriculum strategic area, the action plans dealt with ways experiential learning opportunities could contribute to course and curricular effectiveness. Actions for both the Awareness and Community areas related to the need for further education as to the definition and benefits of experiential learning. Again, many of these actions were outside of the scope of what an individual department could accomplish alone to expand experiential learning. The key leaders identified institutional level support actions necessary for the College to achieve the strategic goal.

Research Question 3. What are the perspectives of key leaders toward Concept Mapping as an effective model for planning at a small private institution?

The discussion of all parts of Research Question 3 will be summarized together.

Research Question 3a. How did key leaders perceive the participatory component of the Concept Mapping planning process?

Research Question 3b. How did the key leaders view the time spent on the Concept Mapping process to plan for the strategic goal of expanding experiential learning?

Research Question 3c. How well did the key leaders perceive that the Concept Mapping results reflected the thinking of the group?

Research Question 3d. How did key leaders perceive the Concept Mapping process as a planning tool for the College?

Descriptive statistics for the Feedback Survey results were reported in Table 7. Overall, the key leaders rated the Concept Mapping process highly, confirming the participatory nature of the process (item 1), the opportunity individuals to contribute to the results (item 2), Item means with SD in parentheses were 4.0 (.75) and 4.2 (.80) respectively out of a 5 point scale (5= excellent and 1=poor). Additionally, the group agreed that the priorities identified reflected the group's thinking (item 5) with an item mean of 3.96 (.71). The democratic component of Concept Mapping was attractive to the Leadership Team, in that each person could contribute ideas, rating data, and sorting data that then became part of the Concept Map. The "time well spent" item also received high marks from the key leaders, although the range of responses included all values (lowest to highest).

The Leadership Team in conjunction with the VP for Academic Affairs in effect conducted a purposeful sampling in the selection of individuals to participate. Those known to be opinion leaders or with an active interest in experiential learning on campus were targeted. Item three, "The appropriate people were included in the meetings to develop ideas to support student engagement" called for the participants' judgment of that sampling approach. The term "engagement" had been used in the planning project and other local discussions to mean student involvement with enriching educational activities such as experiential learning. The response choices shifted here to a five point Strongly Agree (5) through Strongly Disagree (1) scale. The mean rating for item 3 was 3.6 with a standard deviation of .84 on the five (high) to 1 (low) scale.

Although few in number, the comments related to the “appropriate people involved” item revealed attitudes about expectations for how things are done on the campus. One person commented that the participants were not sufficiently representative of all the programs and the six schools. Some campus committees and task forces are strictly comprised of representatives from designated departments or schools; this project was not organized that way. Another person noted that students were not included. The Leadership Team had struggled with that issue, but decided against it so that frank discussions could occur around faculty issues. Another third individual noted agreement that the appropriate people had been assembled for this project, but that earlier efforts as in the Task Force, had not included the appropriate people. Awareness of the history and frustration with previous attempts to support experiential learning were expected from long term practitioners of experiential learning. Given that context, it was not surprising to see on Table 8 that a substantial percentage (38 percent or 10 individuals) of the group expressed uncertainty as to the appropriate people involved in the process, while just over half (15 or 56 percent) expressed agreement with the statement.

Behind Items seven and eight was a value judgment of Concept Mapping as a planning process. For item 7 and “...would recommend to others at the College”, the mean and standard deviation was 3.4 (1.0). For item 8, “I would participate willingly in another Concept Mapping planning project,” the mean and standard deviation was 3.65 (.98). Overall, both items earned positive ratings from the majority of respondents, 56 percent and 65 percent respectively. In summary, the key leaders responded very favorably to the Concept Mapping process.

Limitations of the Study

The strategies and actions designed for experiential learning reflected local conditions, however the application of the Concept Mapping planning process for a strategic goal serves as example for planners in higher education, particularly those from private institutions of small to moderate size. Another possible limitation is the sampling strategy used to identify participants for the Concept Mapping process. Participants were invited based on their particular expertise or role and interest in experiential learning. In a small college, it was a reasonable strong assumption to think that the Leadership Team was aware of such individuals. (By a small margin, the majority of participants agreed that the appropriate people were involved in the planning project, according to the Feedback Results.) In a different setting, a systematic approach to participant selection might be necessary. For instance, retrieving data from the course section data base could be used to identify all instructors who teach an experiential learning type section such as an internship, field experience, study abroad, clinical experience, or service learning, etc.

A third potential limitation is linked to the decision to limit participation to faculty and staff. The Leadership Team decided that neither students nor community partners could address one of the central issues, which was how to encourage more faculty members to incorporate experiential learning into their teaching practice. In the next iteration, the conceptual view of how to expand experiential learning may benefit from an expansion to incorporate ideas from students and community partners. Given time for institutional actions to be implemented and improvements to occur, a follow-up Concept

Mapping process could be designed that incorporated a broader range of constituents. Baseline and new results could be compared as a means to examine progress.

Implications for Practitioners

For planners charged with the design of a planning process, the Concept Mapping process enabled meaningful, efficient and democratic participation in planning by non-planners. The steps in the process allowed people who may (or may not) normally work together, function as a group to generate both a conceptual overview and specific solutions to an issue of interest. This resulted in time savings for group work. Consider the benefits to decision-making and action if for example, instead of holding discussion meetings, a president's advisory group systematically generated a conceptual model that reflects the local nuances of a critical issue facing the institution. The potential planning-focused applications of the Concept Mapping process in higher education are numerous.

Next, the use of a conceptual view of experiential learning support produced can guide both action and evaluation. It also assisted decision-makers in forming a strategic view of the issue rather than a simple to do list of tasks. Repeating the ratings of the ideas periodically for implementation and importance can evaluate progress on the infrastructure. The extension of the Concept Map project with a broader group with more diverse viewpoints offers further possibilities for refinement. Also, the conceptual areas identified in the Map as clusters could easily serve as the foundation for key functions of a new office assigned to support experiential learning.

For the College in the study, because the Leadership Team appropriately identified (according the Feedback Survey results) the "right" people for the planning the

expansion of experiential learning, the data was very good. Leaders can have confidence using the conceptual view of education and infrastructure building to guide actions, plus the six clusters or areas for actions are spelled out and secured consensus from the planning group.

The Concept Mapping project and the generally positive perceptions from participants also provided a model to implement an institutional commitment to participatory planning and openness. It was a planning process that clearly identified a focus, and participants' ideas were retained in their own words and utilized throughout the process. The end product reflected the totality of input, not only that of the loudest or most persuasive participant.

On the practical side, the institution now had a strategic framework to guide the implementation of actions to expand experiential learning at the conclusion of the Concept Mapping process. That framework consisted of the broad themes of education and infrastructure, six areas for action (or clusters), key issues for each area, and initial action plans. Even an incremental approach or a pilot approach to implementation could now be coordinated and linked to the larger strategic view of what needed to be done. Based on the success of the project and the participants' view of Concept Mapping, the process could be applied to other issues at the College.

Concept Mapping served as a means to promote strategic thinking about an issue important to the key leaders. Although the process began in a very concrete manner with the prompt requesting specific actions to be taken, through the sophisticated analyses and the structured group process, strategic level results were generated.

Institutional planners who have the capability to use Concept Mapping can contribute a valuable service to the institution. This is especially important when resources are tight and funds are limited or non-existent for external consultants who might be hired to assist with planning processes. Or, as in this case, the initial planning model doesn't lead to sufficient buy-in or action at the departmental level to generate change.

The Concept Mapping planning process has definite potential for planners and leaders who need to develop a campus or community response to important issues of interest over a short period of time. Busy faculty and staff members found time to attend four long sessions (two to three hours each) within a single month. Others have streamlined the Concept Mapping timeframe into an even faster turnaround for results. The natural expansion of this study is to utilize Concept Mapping for other planning projects at the College, and also to develop the capacity to assist community and regional groups in planning where wide participation is warranted and diverse viewpoints exist.

The larger issue embedded in the Concept Mapping process is one of decision-making and the use of appropriate data. An important data source comes from the relevant constituents for the particular issue. Participatory planning was noted as good planning practice as defined by researchers' findings on successful planning (Betit, 2004; Bryson, 1995; Burby, 2003; Chaffee, 1984; Hunt, et al., 1996; Kaufman, et al., 2002; Keller, 1983; Rose & Kirk, 2001; Schuster, et al., 1994; Sevier, 2000; Swain, 1988; J. Taylor & Machado, 2006; Trainer, 2004; Tromp & Ruben, 2004). Concept Mapping developed this institution's capacity for effective participatory planning.

And finally, the participatory action research model demonstrated through this study represented a means to examine existing practices or to investigate new techniques of planning to guide the evolution an institution's processes. Dooris (2002-03) described how planning changed at Penn State to adapt to the changing external demands and internal needs. A planner with the expertise to incorporate the reflective practice model of action research would be in a position to answer the call of continuous improvement.

Future Research

Concept Mapping was well-received as a means to plan for a strategic goal. For this college, institutional leaders now have evidence to consider the Concept Mapping planning model for the next revision of institution's strategic plan. Further local research to expand the conceptual model of how to support experiential learning into implementation and measurement is another natural next step.

Results of this study also prompt questions for planning research. This study was one example of how to successfully engage key leaders at a small private college in planning for an institutional strategic goal. Further applications of Concept Mapping by small colleges and others in higher education are needed to explore effectiveness of the model for an entire strategic plan as well as for selected strategic goals.

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APPENDIX A. LEADERSHIP TEAM ACTIVITIES

LDR meeting #1 Introduction to Concept Mapping. July 7 **Completed**
Miles, Whitman, Normyle, DeClair, Driscoll. Whitaker invited to join group.

Participant Intro Pre-project warm up to test topic for interest and support
Completed August retreat at Claytor Nature Study Center

A Dozen Tasks to be completed prior to Session 1 - Brainstorming Session

Meeting Agendas

LDR meeting #2 1. Discuss and define project purpose (experiential learning expansion) **Completed** Feb 1
2. Clarify expectations for use of project results
3. Establish communication plan
4. Identify Leadership Team help for administrative support chores like meeting notices and rsvp's, room & food arrangements
5. Explore benefits, risks, & potential unintended impact of project

LDR meeting #3 6. Generate a focus prompt **Completed** Feb 12th
DD 7. Test the focus prompt **Completed** Feb 16th

Westover Resource Room 11:30 – 12:30 **Completed** Feb 20th
LDR meeting #4 8. Review results of focus prompt test; decide to amend or to accept
9. Determine the ratings (relative importance, current levels of implementation)
10. Finalize participant list for brainstorming.
11. Discuss demographic or position variables to be collected to understand subgroups
12. Finalize meeting dates.

Wed 3/1 4 pm – 7 pm Session 1 Brainstorming (large group) **Completed**
Mon 3/6 1:00 – 3:00 pm Leadership Team edits statements for form, content clarity, understanding **Completed**
Tue 3/7 10:00 – noon Editing to synthesize redundant statements **Completed**

Westover Lunch Room* **Completed*
Mon 3/13 Noon – 1 pm Catch up session for those who missed Brainstorming

Brewer Townhome* **Completed*
Tues 3/14 3 pm – 5 pm Session 2 Idea Structuring (sorting & rating) for large group
Tues 3/21 9:30 to 11:30 Cent 109 Leadership Team reviews results **Completed**

Alumni Lounge		Completed
Tues 3/28 6 pm– 8:30 pm	<u>Session 3</u>	Data Interpretation and Drafting of Plans-
	(large group)	
Wed 3/29 11:30 -12:30 pm	Cent 109	Leadership Team de-briefs Completed
 Brewer Townhome		Completed
Fri 3/31 2:00 pm– 4 pm	<u>Session 4</u>	Data Interpretation and Drafting of Plans-
	(large group)	
Tues 4/18	Leadership Team meets for wrap up, process debrief, and to set date for follow up	Completed

APPENDIX B. CONTINUUM OF ENGAGEMENT FOR EXPERIENTIAL LEARNING

A Conceptual Framework

Definition of Experiential Learning: "Experiential education is a philosophy and methodology in which educators purposefully engage learners in direct experience and focused reflection in order to increase knowledge, develop skills and clarify values."

Association for Experiential Learning

<http://www.aee.org/about/whatIsEE>

NOTE: Levels represent different entry points for experiential learning and examples only; depending on the student involvement, the same activity may fall under several categories.

Level	Focus / Opportunities	Faculty Role	Student Role	Community
Exploration	<ul style="list-style-type: none"> -Academic success -Student activities (i.e., clubs, organizations, campus involvement) -SERVE -(volunteer activities) -Leadership development* -Introduction to the Four Year Plan and College resources/opportunities (both academic and co-curricular) -Attend Scholar Showcase 	Limited faculty involvement, mostly advisory role	Emphasis is on laying a solid foundation for the future and development of personal identity	Focus on other students as community; often social
Experiential Learning- Level I	<ul style="list-style-type: none"> -Program based experiential learning: nursing, education, athletic training, labs, field trips -Agora/Prism editorial work -Class assignment directs activity in Student Scholar showcase 	Faculty define activities and involve students through directed assignments	<ul style="list-style-type: none"> -Focus is on "applied" learning with only limited reflective component -Limited reflective component usually in response to direction 	Involves increased collaboration with others as directed (by faculty/other)

Level	Focus / Opportunities	Faculty Role	Student Role	Community
Experiential Learning- Level II	<ul style="list-style-type: none"> -Practica in disciplines -Internships (for academic credit) -Service learning in courses -Study abroad -Undergraduate research (needs further definition) -Presents as part of group at Student Scholar Showcase Model UN, EU, Ethics Bowl 	Faculty involvement is through guiding, with more student initiative	<ul style="list-style-type: none"> -Increasing student responsibility -Significant reflective component; focused in areas identified as important by student -Evidence of personal and professional student growth 	Collaboration outside of common comfort group; increasingly acting as partner, acting rather than reacting
Experiential Learning- Level III	<ul style="list-style-type: none"> "Flagship" internships: Kauffman, Alumni sponsored Service Leadership: Bonner Leaders Study abroad with service learning component Advanced undergraduate research, i.e., summer fellowships, paper/conference presentations, community based research Individual Presentation /assistance organizing Student Scholar Showcase 	Students and faculty are partners in contributions to scholarship, leadership, and/or community	<ul style="list-style-type: none"> Students self initiate activities /learning High level reflection often leading to initiation of further activities 	Partners with others equally, assuming leadership role and followership role as appropriate

* Leadership development -- to be developed, add "track" across continuum

MKN/NW July 2005 Updated Feb 2006

APPENDIX C. STATEMENT EDITING WORKSHEET: A SAMPLE				
<u>Keyword</u>	<u>#</u>	<u>Statement</u>	Combine w/	New Statement
schedule	1	Address fluidity of scheduling (allowing more time for community engagement)	ok	
definition	2	Define experiential education	76	use 76
faculty development	3	Address faculty development	82	
transcript	4	Develop service transcript	ok	
student comments	5	Get student comments regarding the value of experiential education	ok	
money	6	Add more resources for experiential education to the College budget	100 -69	
tuition	7	Discount summer tuition and room & board for experiential education (internships, Study Abroad, Bonner, etc.)	ok	
benefits	8	Educate students, faculty, and administrators about experiential education, including the benefits of it		
compensation time	9	Compensate faculty/staff who participate in experiential education activities with time (leave, workload relief)	79	use 9
compensation money	10	Compensate faculty/staff who participate in experiential education coursework with money	78	keep 10
reward promotion	11	Reward faculty in the promotion and tenure process for participating in experiential learning	ok	
prior experience credit	12	Consider giving academic credit to Access students for prior life and professional experiences	ok	
new community relationships	13	Improve existing community relationships.	ok	other one New
existing community relationships	14	Build new improve existing community relationships.	13	check and single verb
staffing infrastructure	15	Create infrastructure to support experiential education initiatives	ok	
schudule	16	Create a schedule that allows for blocks of time for experiential learning	ok	
study abroad scholarships	17	Create Study Abroad scholarships	ok	

APPENDIX D. SORTING INSTRUCTIONS AND RECORDING SHEETS

Step 1 - Sorting the Statement Cards. Enclosed in your package is a set of cards. Each card has a statement and an ID number. ***Group the statements into stacks in a way that makes sense to you,*** following these guidelines:

- Group the statements for ***similarity in meaning***. **Do not** group the statements according to how important they are, etc.
- After similarity, there is no right or wrong way to group the statements. You will probably find that you could group the statements in several sensible ways. Pick the arrangement that feels best to you.
- You cannot put one statement into two stacks at the same time. Each statement must be put into only one stack.
- People differ on how many stacks they create; we suggest at least 5.
- A statement should be put alone in its own stack if you think it is unrelated to the other statements or it stands alone as a unique idea.
- **Do not** create stacks that mix unrelated ideas, such as stacks called "Miscellaneous," "Other," or the like.

Step 2 - Recording the Results. Find the **Sort Recording Sheet** in the packet and follow the directions listed below. An example of how to record a stack of statements is found in the first box on the Sort Recording Sheet.

- Pick up any one of your stacks of statements. It does not matter what order the stacks are recorded in.
- Quickly scan the statements in this stack, and write down a short phrase or title that describes the contents of the stack on the line provided after ***Stack Title or Main Topic*** in the first available box on the Sort Recording Sheet.
- In the space provided under the stack name, write the statement ID number of each card in that stack. Separate the numbers with commas. When you finish with the stack, put it aside so you don't mistakenly record it twice.
- Move on to your next stack and repeat the three actions above, recording the statement numbers in the next available box on the Sort Recording Sheet. Continue in this way until all your stacks have been named and recorded.
- **Please write legibly and clearly.**

See reverse for more space – Thank you!

Source: Concept Systems, Inc.

Experiential Learning Project

Sort Recording Sheet

YOUR NAME: _____

This sheet is to be used for **Recording the Results**. Specific directions are included in the Instructions for Sorting and Recording.

Remember that you do not have to have as many groups as there are boxes on this sheet. The space is provided to allow for variability among participants in the way they group the items. The first box (Example Stack) is filled out to serve as a guide for you.

Example Stack Title or Main Topic: Program Management

Record here the identifying number of each item in this stack, separating the ID numbers with commas.

1, 4, 29, 43, 12

Stack Title or Main Topic: _____

Record here the identifying number of each item in this stack, separating the ID numbers with commas.

Stack Title or Main Topic: _____

Record here the identifying number of each item in this stack, separating the ID numbers with commas.

Stack Title or Main Topic: _____

Record here the identifying number of each item in this stack, separating the ID numbers with commas.

Stack Title or Main Topic: _____

Record here the identifying number of each item in this stack, separating the ID numbers with commas.

Stack Title or Main Topic: _____

Record here the identifying number of each item in this stack, separating the ID numbers with commas.

Stack Title or Main Topic: _____

Record here the identifying number of each item in this stack, separating the ID numbers with commas.

See reverse for more space – Thank you!

Source: Concept Systems, Inc.

Sort Recording Sheet (continued)

Stack Title or Main Topic: _____
Record here the identifying number of each item in this stack, separating the ID numbers with commas.

Stack Title or Main Topic: _____
Record here the identifying number of each item in this stack, separating the ID numbers with commas.

Stack Title or Main Topic: _____
Record here the identifying number of each item in this stack, separating the ID numbers with commas.

Stack Title or Main Topic: _____
Record here the identifying number of each item in this stack, separating the ID numbers with commas.

Stack Title or Main Topic: _____
Record here the identifying number of each item in this stack, separating the ID numbers with commas.

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Record here the identifying number of each item in this stack, separating the ID numbers with commas.

Stack Title or Main Topic: _____
Record here the identifying number of each item in this stack, separating the ID numbers with commas.

Stack Title or Main Topic: _____
Record here the identifying number of each item in this stack, separating the ID numbers with commas.

See reverse for more space – Thank you!

Source: Concept Systems, Inc.

APPENDIX E. RATING SHEETS

Your Name _____

Directions: Please select the number between 1 and 5 for each idea in terms of (a) how important you think it is and (b) the extent to which you think the idea is currently being implemented.

We are looking for **relative** Importance and Implementation; use **all** the values in the following rating scales to make distinctions:

Importance Rating

- 1 = Relatively unimportant
- 2 = Somewhat important
- 3 = Moderately important
- 4 = Very important
- 5 = Extremely important

Implementation Rating

- 1 = Not at all
- 2 = A limited extent
- 3 = A moderate extent
- 4 = A great extent
- 5 = A very great extent

Importance Rating	#	Ideas from Brainstorming	Implementation Rating
1 2 3 4 5	1	Compensate faculty/staff who participate in experiential education activities with time (leave, workload relief)	1 2 3 4 5
1 2 3 4 5	2	Provide opportunities for students to exercise choice between alternatives in experiential learning and between levels of involvement in experiential learning	1 2 3 4 5
1 2 3 4 5	3	Address cost issues for students (grants, scholarships) - especially for the summer	1 2 3 4 5
1 2 3 4 5	4	Discount summer tuition and room & board for experiential education (internships, Study Abroad, Bonner, etc.)	1 2 3 4 5
1 2 3 4 5	5	Recognize and take more avenues to demonstrate experiential learning (e.g. film festivals, poetry slams, internship presentations, music concerts)	1 2 3 4 5
1 2 3 4 5	6	Provide ongoing faculty development	1 2 3 4 5
1 2 3 4 5	7	Help students realize the value of having an experiential learning plan	1 2 3 4 5
1 2 3 4 5	8	Provide Bonner Learners with secretarial support and transportation	1 2 3 4 5
1 2 3 4 5	9	Facilitate cross-disciplinary exploration for faculty	1 2 3 4 5
1 2 3 4 5	10	Define experiential learning terms	1 2 3 4 5

Importance Rating

- 1 = Relatively unimportant
 2 = Somewhat important
 3 = Moderately important
 4 = Very important
 5 = Extremely important

Implementation Rating

- 1 = Not at all
 2 = A limited extent
 3 = A moderate extent
 4 = A great extent
 5 = A very great extent

Importance Rating	#	Ideas from Brainstorming	Implementation Rating
1 2 3 4 5	11	Consider giving academic credit to Access students for prior life and professional experiences	1 2 3 4 5
1 2 3 4 5	12	Help students make an experiential learning plan as a part of GS100	1 2 3 4 5
1 2 3 4 5	13	Support opportunities for students to participate in discipline-specific conferences	1 2 3 4 5
1 2 3 4 5	14	Address fluidity of scheduling (allowing more time for community engagement)	1 2 3 4 5
1 2 3 4 5	15	Have an "Experiential Learning" Day/Fair/Week that includes poster sessions, panels, and participant presentations	1 2 3 4 5
1 2 3 4 5	16	Help students realize the value of experiential learning	1 2 3 4 5
1 2 3 4 5	17	Develop fundraising through planned giving for experiential learning opportunities	1 2 3 4 5
1 2 3 4 5	18	Have every major require some form of experiential learning	1 2 3 4 5
1 2 3 4 5	19	Assess the impact of experiential learning activities on community partners	1 2 3 4 5
1 2 3 4 5	20	Provide additional resources (personnel and budget) to SERVE office	1 2 3 4 5
1 2 3 4 5	21	Provide discipline-specific models for experiential education	1 2 3 4 5
1 2 3 4 5	22	Assess levels of quality for experiential initiatives	1 2 3 4 5
1 2 3 4 5	23	Provide resources (like budget, faculty/staff, and / or computers) to adequately support experiential learning	1 2 3 4 5
1 2 3 4 5	24	Create Study Abroad scholarships	1 2 3 4 5
1 2 3 4 5	25	Improve existing community relationships	1 2 3 4 5
1 2 3 4 5	26	Identify clearly where experiential learning for students occurs in courses at registration	1 2 3 4 5

Importance Rating

- 1 = Relatively unimportant
- 2 = Somewhat important
- 3 = Moderately important
- 4 = Very important
- 5 = Extremely important

Implementation Rating

- 1 = Not at all
- 2 = A limited extent
- 3 = A moderate extent
- 4 = A great extent
- 5 = A very great extent

Importance Rating	#	Ideas from Brainstorming	Implementation Rating
1 2 3 4 5	27	Provide opportunities for faculty to discuss experiential learning and how to incorporate experiential learning, including reflection	1 2 3 4 5
1 2 3 4 5	28	Compensate faculty who offer experiential learning with research credits	1 2 3 4 5
1 2 3 4 5	29	Visit campuses where best practices exist - spend some time to be immersed	1 2 3 4 5
1 2 3 4 5	30	Educate students, faculty, and administrators about experiential education, including the benefits of it	1 2 3 4 5

Change of Pace Item:

Consider only the past 3 years, think of the student of whom you are the most proud.

Write their first name here _____.

Importance Rating

- 1 = Relatively unimportant
- 2 = Somewhat important
- 3 = Moderately important
- 4 = Very important
- 5 = Extremely important

Implementation Rating

- 1 = Not at all
- 2 = A limited extent
- 3 = A moderate extent
- 4 = A great extent
- 5 = A very great extent

Importance Rating	#	Ideas from Brainstorming	Implementation Rating
1 2 3 4 5	31	Link experiential learning to the students' personal values	1 2 3 4 5
1 2 3 4 5	32	Provide transportation, boxed lunches for those engaging in experiential learning	1 2 3 4 5

Importance Rating	#	Ideas from Brainstorming	Implementation Rating
1 2 3 4 5	33	Create Study Abroad with a service learning component	1 2 3 4 5
1 2 3 4 5	34	Identify resources needed to support experiential learning	1 2 3 4 5
1 2 3 4 5	35	Survey current students and alumni about their perceptions of value of experiential learning experiences	1 2 3 4 5
1 2 3 4 5	36	Require service for all students in sophomore year	1 2 3 4 5
1 2 3 4 5	37	Create infrastructure to support experiential education initiatives	1 2 3 4 5
1 2 3 4 5	38	Encourage more collaborative projects between and among programs in different K-12 schools	1 2 3 4 5
1 2 3 4 5	39	Compensate faculty/staff who participate in experiential education coursework with money	1 2 3 4 5
1 2 3 4 5	40	Have highly-visible upper-level administrative support and commitment	1 2 3 4 5
1 2 3 4 5	41	Institute internship specials (no tuition)	1 2 3 4 5
1 2 3 4 5	42	Find out what role the campus community feels the greater community plays in experiential education	1 2 3 4 5
1 2 3 4 5	43	Create service scholarships	1 2 3 4 5
1 2 3 4 5	44	Set up an E-Portfolio to acknowledge student participation in experiential learning	1 2 3 4 5
1 2 3 4 5	45	Allow students involved in intensive service, community based research, and social entrepreneur internships to live on campus for free during summer terms	1 2 3 4 5
1 2 3 4 5	46	Seek granting possibilities	1 2 3 4 5
1 2 3 4 5	47	Provide faculty with a safety net for experimentation	1 2 3 4 5
1 2 3 4 5	48	Educate faculty and students about how to engage in community partnerships	1 2 3 4 5
1 2 3 4 5	49	Look into joining the National Coalition for Undergraduate Research	1 2 3 4 5
1 2 3 4 5	50	Include experiential education as one element in a balance of diverse pedagogies	1 2 3 4 5

Importance Rating	#	Ideas from Brainstorming	Implementation Rating
1 2 3 4 5	51	Value and utilize the expertise of New Horizons staff regarding experiential education	1 2 3 4 5
1 2 3 4 5	52	Recognize "out of class" experiential learning in a structured format	1 2 3 4 5
1 2 3 4 5	53	Place more emphasis on 4-year plan (the brochure with a "4" on it that is intended to help students maximize opportunities in both the curricular and the co-curricular aspects	1 2 3 4 5
1 2 3 4 5	54	Create criteria for students to participate in levels 2 and 3 to ensure readiness for more independence expected of students in experiential learning	1 2 3 4 5
1 2 3 4 5	55	Identify best practices on campus	1 2 3 4 5
1 2 3 4 5	56	Tie experiential learning into the college living and learning environment	1 2 3 4 5
1 2 3 4 5	57	Institutionalization of experiences throughout the academic calendar year	1 2 3 4 5
1 2 3 4 5	58	Ensure that the experiential learning relates to the course and objectives	1 2 3 4 5
1 2 3 4 5	59	Entice potential experiential learning sites to become a part of the master plan for Village just outside of campus	1 2 3 4 5
1 2 3 4 5	60	Build an endowment to fund and continually support experiential learning	1 2 3 4 5

Change of Pace Item:

Mark your favorite Hornet:

Importance Rating

- 1 = Relatively unimportant
- 2 = Somewhat important
- 3 = Moderately important
- 4 = Very important
- 5 = Extremely important

Implementation Rating

- 1 = Not at all
- 2 = A limited extent
- 3 = A moderate extent
- 4 = A great extent
- 5 = A very great extent

Importance Rating	#	Ideas from Brainstorming	Implementation Rating
1 2 3 4 5	61	Identify the best experiential education programs at other institutions and implement their ideas	1 2 3 4 5

Importance Rating	#	Ideas from Brainstorming	Implementation Rating
1 2 3 4 5	62	Educate Board of Trustees	1 2 3 4 5
1 2 3 4 5	63	Re-think 50-90 minute class schedule	1 2 3 4 5
1 2 3 4 5	64	Develop service transcript	1 2 3 4 5
1 2 3 4 5	65	Get student comments regarding the value of experiential education	1 2 3 4 5
1 2 3 4 5	66	Charge all students a \$10/year experiential learning fee	1 2 3 4 5
1 2 3 4 5	67	Create a campus-wide experience every year that includes all disciplines in a common experience	1 2 3 4 5
1 2 3 4 5	68	Develop more internship sites	1 2 3 4 5
1 2 3 4 5	69	Expose faculty to good examples or ideas to try	1 2 3 4 5
1 2 3 4 5	70	Integrate study abroad into the tuition structure so that any student could afford it	1 2 3 4 5
1 2 3 4 5	71	Help people recognize experiential learning when they see it	1 2 3 4 5
1 2 3 4 5	72	Create a schedule that allows for blocks of time for experiential learning	1 2 3 4 5
1 2 3 4 5	73	Provide support staff for experiential education programs	1 2 3 4 5
1 2 3 4 5	74	Address the problems students encounter with assigning values to differing experiences they may encounter in the course of experiential learning	1 2 3 4 5
1 2 3 4 5	75	Build new community relationships	1 2 3 4 5
1 2 3 4 5	76	Ensure that students have time for experiential learning	1 2 3 4 5
1 2 3 4 5	77	Award extra credit hours for experiential learning classes	1 2 3 4 5
1 2 3 4 5	78	Have all academic programs identify any existing experiential learning opportunities within their program	1 2 3 4 5
1 2 3 4 5	79	Provide student incentives like scholarships for experiential learning	1 2 3 4 5
1 2 3 4 5	80	Reward faculty in the promotion and tenure process for participating in experiential learning	1 2 3 4 5

Importance Rating	#	Ideas from Brainstorming	Implementation Rating
1 2 3 4 5	81	Structure experiential learning within the 4-year plan (the brochure with a "4" on it that is intended to help students maximize opportunities in both the curricular and co-curricular aspects of college)	1 2 3 4 5
1 2 3 4 5	82	Encourage more collaborative projects between and among programs in the different Schools	1 2 3 4 5
1 2 3 4 5	83	Consider whether criteria needs to be universal for student participation in experiential learning	1 2 3 4 5
1 2 3 4 5	84	Identify clearly for students where service learning occurs in courses at registration	1 2 3 4 5
1 2 3 4 5	85	Give each professor incentives to increase service learning/experiential learning in their classrooms	1 2 3 4 5

Change of Pace Item:

Write one of your favorite adjectives here _____.

APPENDIX F. ACTION PLANNING SHEET

What is a **priority issue** in this cluster?—either a specific important **statement or a key idea** represented by more than one statement?

Issue or statement:

What is a **specific action** that, if implemented, would lead to progress on this issue or idea?

Statement #s:
Action Recommendation:

What other issues need to be considered?
What office /committee should do this? **Who else** should be engaged / involved?

Other considerations:

Where does this action fit in our organization?

Experiential Learning Action Planning

Timeframe recommended – if we were to develop a three year project, where would this action fit best?

___ Year 1 ___ Year 2 ___ Year 3 ___ Any time

Rationale for timing:

Ideas on how to measure progress on this issue:

Where possible, address measurement in terms of student learning.

APPENDIX G. FEEDBACK SURVEY

Please provide your thoughts about the Concept Mapping planning process. Names are not requested; just your feedback so that we may improve the process.

Directions: Think about the way we conducted the brainstorming, sorting, and rating, and analysis steps of the concept mapping process over the four large group meetings. Then please circle the response to each statement that most closely reflects your opinion.

1. Rate the Concept Mapping planning process for ensuring that all who attended the meetings were equally involved.

5	4	3	2	1
Excellent	Good	Satisfactory	Fair	Poor

2. Rate the process for allowing you to contribute your ideas.

5	4	3	2	1
Excellent	Good	Satisfactory	Fair	Poor

3. The appropriate people were included in the meetings to develop ideas to support student engagement.

5	4	3	2	1
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

4. I think that my time on the Concept Mapping planning process was well-spent.

5	4	3	2	1
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

5. The priorities identified in the Concept Mapping planning process reflect the general thinking of the group.

5	4	3	2	1
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

6. The action plans we developed are likely to be implemented.

5	4	3	2	1
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

7. The Concept Mapping planning process is something I would recommend to others at the College.

5	4	3	2	1
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

8. I would participate willingly in another Concept Mapping planning project.

5	4	3	2	1
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

Comments?

Thank you.

APPENDIX H. EDITED BRAINSTORMED STATEMENTS IN NUMERICAL ORDER

- | # | <u>Statement</u> |
|----------|--|
| 1 | Compensate faculty/staff who participate in experiential education activities with time (leave, workload relief) |
| 2 | Provide opportunities for students to exercise choice between alternatives in experiential learning and between levels of involvement in experiential learning |
| 3 | Address cost issues for students (grants, scholarships) - especially for the summer |
| 4 | Discount summer tuition and room & board for experiential education (internships, Study Abroad, Bonner, etc.) |
| 5 | Recognize and take more avenues to demonstrate experiential learning (e.g. film festivals, poetry slams, internship presentations, music concerts) |
| 6 | Provide ongoing faculty development |
| 7 | Help students realize the value of having an experiential learning plan |
| 8 | Provide Bonner Leaders with secretarial support and transportation |
| 9 | Facilitate cross-disciplinary exploration for faculty |
| 10 | Define experiential learning terms |
| 11 | Consider giving academic credit to Access students for prior life and professional experiences |
| 12 | Help students make an experiential learning plan as a part of GS100 |
| 13 | Support opportunities for students to participate in discipline-specific conferences |
| 14 | Address fluidity of scheduling (allowing more time for community engagement) |
| 15 | Have an "Experiential Learning" Day/Fair/Week that includes poster sessions, panels, and participant presentations |
| 16 | Help students realize the value of experiential learning |
| 17 | Develop fundraising through planned giving for experiential learning opportunities |
| 18 | Have every major require some form of experiential learning |
| 19 | Assess the impact of experiential learning activities on community partners |
| 20 | Provide additional resources (personnel and budget) to SERVE office |
| 21 | Provide discipline-specific models for experiential education |
| 22 | Assess levels of quality for experiential initiatives |
| 23 | Provide resources (like budget, faculty/staff, and / or computers) to adequately support experiential learning |
| 24 | Create Study Abroad scholarships |
| 25 | Improve existing community relationships |
| 26 | Identify clearly for students where experiential learning occurs in courses at registration |
| 27 | Provide opportunities for faculty to discuss experiential learning and how to incorporate experiential learning, including reflection |
| 28 | Compensate faculty who offer experiential learning with research credits |
| 29 | Visit campuses where best practices exist - spend some time to be immersed |

- 30 Educate students, faculty, and administrators about experiential education, including the benefits of it
- 31 Link experiential learning to the students' personal values
- 32 Provide transportation, boxed lunches for those engaging in experiential learning
- 33 Create Study Abroad with a service learning component
- 34 Identify resources needed to support experiential learning
- 35 Survey current students and alumni about their perceptions of value of experiential learning experiences
- 36 Require service for all students in sophomore year
- 37 Create infrastructure to support experiential education initiatives
- 38 Encourage more collaborative projects between and among programs in different K-12 schools
- 39 Compensate faculty/staff who participate in experiential education coursework with money
- 40 Have highly-visible upper-level administrative support and commitment
- 41 Institute internship specials (no tuition)
- 42 Find out what role the campus community feels the greater community plays in experiential education
- 43 Create service scholarships
- 44 Set up an E-Portfolio to acknowledge student participation in experiential learning
- 45 Allow students involved in intensive service, community based research, and social entrepreneur internships to live on campus for free during summer terms
- 46 Seek granting possibilities
- 47 Provide faculty with a safety net for experimentation
- 48 Educate faculty and students about how to engage in community partnerships
- 49 Look into joining the National Coalition for Undergraduate Research
- 50 Include experiential education as one element in a balance of diverse pedagogies
- 51 Value and utilize the expertise of New Horizons staff regarding experiential education
- 52 Recognize "out of class" experiential learning in a structured format
- 53 Place more emphasis on 4-year plan (the brochure with a "4" on it that is intended to help students maximize opportunities in both the curricular and co-curricular aspects of LC)
- 54 Create criteria for students to participate in levels 2 and 3 to ensure readiness for more independence expected of students in experiential learning
- 55 Identify best practices on campus
- 56 Tie experiential learning into the LC living and learning environment
- 57 Institutionalization of experiences throughout the academic calendar year
- 58 Ensure that the experiential learning relates to the course and objectives
- 59 Entice potential experiential learning sites to become a part of the master plan for Village just outside of campus
- 60 Build an endowment to fund and continually support experiential learning

- 61 Identify the best experiential education programs at other institutions and implement their ideas
- 62 Educate Board of Trustees
- 63 Re-think 50-90 minute class schedule
- 64 Develop service transcript
- 65 Get student comments regarding the value of experiential education
- 66 Charge all students a \$10/year experiential learning fee
- 67 Create a campus-wide experience every year that includes all disciplines in a common experience
- 68 Develop more internship sites
- 69 Expose faculty to good examples or ideas to try
- 70 Integrate study abroad into the tuition structure so that any student could afford it
- 71 Help people recognize experiential learning when they see it
- 72 Create a schedule that allows for blocks of time for experiential learning
- 73 Provide support staff for experiential education programs
- 74 Address the problems students encounter with assigning values to differing experiences they may encounter in the course of experiential learning
- 75 Build new community relationships
- 76 Ensure that students have time for experiential learning
- 77 Award extra credit hours for experiential learning classes
- 78 Have all academic programs identify any existing experiential learning opportunities within their program
- 79 Provide student incentives like scholarships for experiential learning
- 80 Reward faculty in the promotion and tenure process for participating in experiential learning
- 81 Structure experiential learning within the 4-year plan (the brochure with a "4" on it that is intended to help students maximize opportunities in both the curricular and co-curricular aspects of LC)
- 82 Encourage more collaborative projects between and among programs in different LC Schools
- 83 Consider whether criteria needs to be universal for student participation in experiential learning
- 84 Identify clearly for students where service learning occurs in courses at registration
- 85 Give each professor incentives to increase service learning/experiential learning in their classrooms

APPENDIX I. CLUSTER LIST WITH STATEMENT RATINGS

Ordered by Importance Rating

#	Program Costs	Mean Importance	Mean Implementation
34	Identify resources needed to support experiential learning	4.71	2.18
3	Address cost issues for students (grants, scholarships) - especially for the summer	4.57	1.79
37	Create infrastructure to support experiential education initiatives	4.53	2.27
46	Seek granting possibilities	4.47	2.85
23	Provide resources (like budget, faculty/staff, and / or computers) to adequately support experiential learning	4.46	2.27
1	Compensate faculty/staff who participate in experiential education activities with time (leave, workload relief)	4.34	1.71
60	Build an endowment to fund and continually support experiential learning	4.29	1.50
80	Reward faculty in the promotion and tenure process for participating in experiential learning	4.09	1.94
17	Develop fundraising through planned giving for experiential learning opportunities	3.97	1.85
85	Give each professor incentives to increase service learning/experiential learning in their classrooms	3.91	2.00
24	Create Study Abroad scholarships	3.91	1.79
4	Discount summer tuition and room & board for experiential education (internships, Study Abroad, Bonner, etc.)	3.80	1.29
70	Integrate study abroad into the tuition structure so that any student could afford it	3.77	1.29
28	Compensate faculty who offer experiential learning with research credits	3.71	1.36
39	Compensate faculty/staff who participate in experiential education coursework with money	3.66	2.09
79	Provide student incentives like scholarships for experiential learning	3.63	1.47
43	Create service scholarships	3.50	1.84
73	Provide support staff for experiential education programs	3.40	2.00

20	Provide additional resources (personnel and budget) to SERVE office	3.29	1.88
41	Institute internship specials (no tuition)	3.09	1.12
45	Allow students involved in intensive service, community based research, and social entrepreneur internships to live on campus for free during summer terms	3.00	1.16
32	Provide transportation, boxed lunches for those engaging in experiential learning	2.91	1.73
8	Provide Bonner Learners with secretarial support and transportation	2.71	1.97
66	Charge all students a \$10/year experiential learning fee	1.97	1.03
	Count: 24	Average:	
		3.74	1.77

#	Students & Curriculum	Mean Importance	Mean Implementation
78	Have all academic programs identify any existing experiential learning opportunities within their program	4.37	2.09
16	Help students realize the value of experiential learning	4.34	2.55
58	Ensure that the experiential learning relates to the course and objectives	4.31	2.91
26	Identify clearly for students where experiential learning occurs in courses at registration	4.29	2.06
7	Help students realize the value of having an experiential learning plan	3.97	2.15
2	Provide opportunities for students to exercise choice between alternatives in experiential learning and between levels of involvement in experiential learning	3.91	2.35
84	Identify clearly for students where service learning occurs in courses at registration	3.89	2.00
21	Provide discipline-specific models for experiential education	3.86	2.06
18	Have every major require some form of experiential learning	3.74	1.85
56	Tie experiential learning into the College living and learning environment	3.60	2.38
50	Include experiential education as one element in a balance of diverse pedagogies	3.54	2.81

81	Structure experiential learning within the 4-year plan (the brochure with a "4" on it that is intended to help students maximize opportunities in both the curricular and co-curricular aspects	3.49	2.38
5	Recognize and take more avenues to demonstrate experiential learning (e.g. film festivals, poetry slams, internship presentations, music concerts)	3.40	2.32
31	Link experiential learning to the students' personal values	3.40	2.15
12	Help students make an experiential learning plan as a part of GS100	3.37	1.82
33	Create Study Abroad with a service learning component	3.31	2.00
54	Create criteria for students to participate in levels 2 and 3 to ensure readiness for more independence expected of students in experiential learning	3.26	1.84
15	Have an "Experiential Learning" Day/Fair/Week that includes poster sessions, panels, and participant presentations	3.23	1.74
52	Recognize "out of class" experiential learning in a structured format	3.17	2.00
53	Place more emphasis on 4-year plan (the brochure with a "4" on it that is intended to help students maximize opportunities in both the curricular and co-curricular aspects)	3.17	2.59
74	Address the problems students encounter with assigning values to differing experiences they may encounter in the course of experiential learning	3.00	1.74
57	Institutionalization of experiences throughout the academic calendar year	2.97	2.16
67	Create a campus-wide experience every year that includes all disciplines in a common experience	2.97	1.44
83	Consider whether criteria needs to be universal for student participation in experiential learning	2.80	1.65
63	Re-think 50-90 minute class schedule	2.71	1.24
44	Set up an E-Portfolio to acknowledge student participation in experiential learning	2.69	1.52
36	Require service for all students in sophomore year	2.29	1.18
	Count: 27	Average:	3.45 2.04

#	Time	Mean Importance	Mean Implementation
13	Support opportunities for students to participate in discipline-specific conferences	4.09	2.29
76	Ensure that students have time for experiential learning	3.83	2.15
72	Create a schedule that allows for blocks of time for experiential learning	3.69	1.65
14	Address fluidity of scheduling (allowing more time for community engagement)	3.60	1.59
64	Develop service transcript	2.57	1.52
77	Award extra credit hours for experiential learning classes	2.51	1.32
11	Consider giving academic credit to Access students for prior life and professional experiences	2.31	1.32
	Count: 7	Average: 3.23	1.69

#	Faculty Support (Besides \$)	Mean Importance	Mean Implementation
40	Have highly-visible upper-level administrative support and commitment	4.60	2.76
27	Provide opportunities for faculty to discuss experiential learning and how to incorporate experiential learning, including reflection	4.40	2.52
6	Provide ongoing faculty development	4.40	2.65
69	Expose faculty to good examples or ideas to try	4.14	2.56
47	Provide faculty with a safety net for experimentation	4.11	2.06
9	Facilitate cross-disciplinary exploration for faculty	3.69	2.18
51	Value and utilize the expertise of New Horizons staff regarding experiential education	3.06	2.22
49	Look into joining the National Coalition for Undergraduate Research	2.80	1.91
	Count: 8	Average: 3.90	2.36

#	Awareness	Mean Importance	Mean Implementation
30	Educate students, faculty, and administrators about experiential education, including the benefits of it	4.49	2.36
10	Define experiential learning terms	4.44	2.79
71	Help people recognize experiential learning when they see it	4.11	2.35
68	Develop more internship sites	4.00	2.88
55	Identify best practices on campus	3.86	2.06
61	Identify the best experiential education programs at other institutions and implement their ideas	3.63	1.94
65	Get student comments regarding the value of experiential education	3.63	2.09
82	Encourage more collaborative projects between and among programs in different Schools	3.57	2.26
35	Survey current students and alumni about their perceptions of value of experiential learning experiences	3.37	1.64
	Count: 9	Average: 3.90	2.26
#	Community	Mean Importance	Mean Implementation
62	Educate Board of Trustees	3.97	2.18
48	Educate faculty and students about how to engage in community partnerships	3.91	2.52
25	Improve existing community relationships	3.88	3.03
22	Assess levels of quality for experiential initiatives	3.80	2.03
75	Build new community relationships	3.60	3.18
19	Assess the impact of experiential learning activities on community partners	3.54	2.38
29	Visit campuses where best practices exist - spend some time to be immersed	3.49	1.64
42	Find out what role the campus community feels the greater community plays in experiential education	2.97	1.76
59	Entice potential experiential learning sites to become a part of the master plan for Village just outside of campus	2.89	1.34
38	Encourage more collaborative projects between and among programs in different K-12 schools	2.66	2.18
	Count: 10	Average: 3.47	2.22

APPENDIX J. EXPANDED CLUSTER LABELS

Small group exercise for Session 3 – Data Interpretation

28 people (5 tables)

Directions: Write 1 – 2 sentences that describe the key ideas in each of the 6 clusters.

Further Explanation of the Meaning Represented by Each Cluster

Program Costs

- Secure the resources to implement the program: show us the money
- Secure and / or provide resources for faculty, staff, and students
- Develop a financial and administrative infrastructure that will allow for cost effective programs and services
- Identify all financial considerations: allocate resources for providers of experiential learning and for students who participate in it
- Define resource needs throughout experiential learning and develop a system for allocating resources fairly

Students & Curriculum

- Tie experiential learning into the College living and learning environment
- Helping students recognize and value experiential learning by integrating it broadly into the living and learning community
- Educate the entire student body about the value of experiential learning.
- Institutionalize experiential learning at the program level
- Recognize the difference is how programs will integrate experiential learning into program objectives

Time

- Facilitate time management to promote student engagement in experiential learning endeavors
- Create structures that facilitate experiential learning
- Recording, setting aside time, and giving credit for engaging in experiential learning opportunities
- Create the infrastructure so that students have the time and receive the credit for experiential learning
- Research and build in adequate time resources

Faculty Support (Besides \$)

- Encourage, enable, and support faculty to participate in this initiative
- Cultivate and sustain experiential learning in the entire academic community
- Encourage faculty development through trainings, conferences, and exploration through an expressed commitment from senior level administration

- Cultivate experiential learning in the entire teaching community, with highly visible support from the administration and opportunities for development, experimentation, and sharing
- For faculty to buy-in and want to collaborate and develop their pedagogy, they need to have first-hand experience with upper level administration support. They need to talk with administrators to feel the love. You don't want to feel you're being assigned more work.

Awareness

- Awareness creation on and off campus of existing and potential experiential learning opportunities
- Explain and promote experiential learning so as to increase awareness among the entire academic community
- Research definitions, best practices, and disseminating information to faculty, staff, and students in order to encourage participation in experiential learning
- Gathering and disseminating information about experiential learning to the college community
- Define, identify and publicize experiential learning as pedagogy, skills set, and kick-ass T-shirt

Community

- Educate and involve the campus & general community about experiential learning
- Educate the publics of the College of the values of experiential learning through community partnerships
- Identifying and assessing the needs of community members to enhance quality of partnerships
- Assess the impact of experiential learning in order to strengthen the investment of community stakeholders
- Understand stakeholders and strengthen viable networks

APPENDIX K. Go Zone Charts (Figures 13-18)

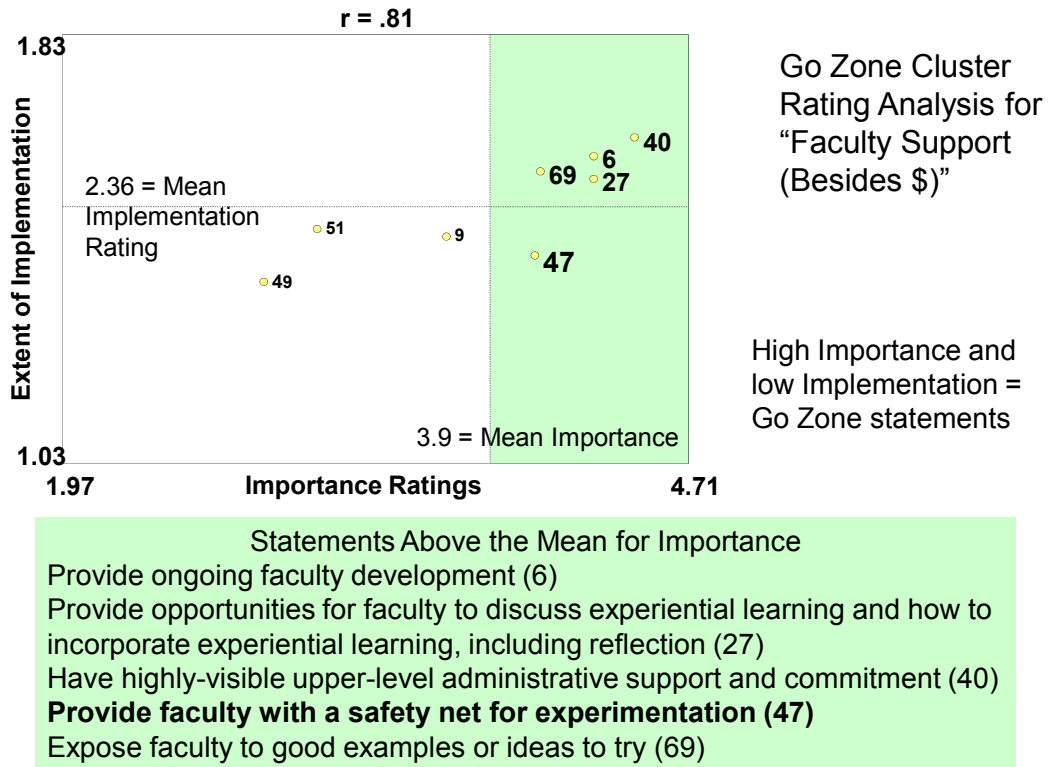


Figure 13. Go Zone for Faculty Support (Besides \$) Cluster.

The Go Zone visually displayed the statements within a cluster that seem to be likely targets for action. If two sets of rating data are collected, the results can be displayed in a 2 x 2 graph. For example, if participants rated each statement for importance and also for the extent of current implementation, each of these categories would be assigned an axis on a 2 by 2, or Go Zone, graph. To delineate high and low, a line on the graph marks the mean rating for each category, creating four quadrants. Points (statements) falling into the High Importance and Low Implementation are readily

identified visually and are considered to be in the “Go Zone”. Go Zone statements can be evaluated for action to achieve immediate results.

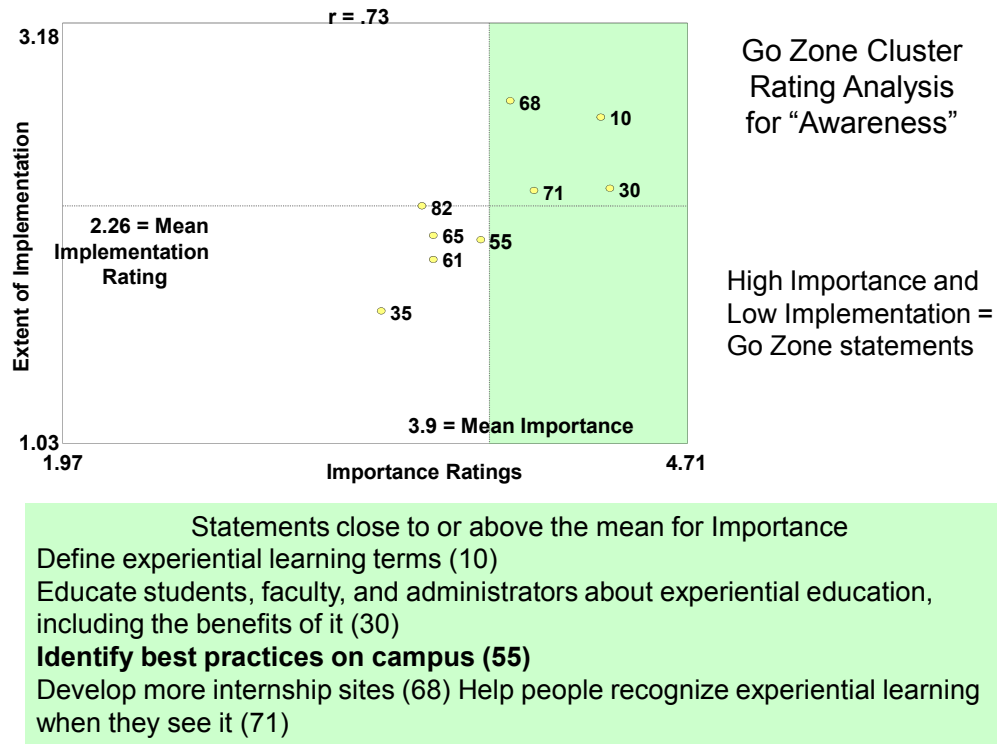
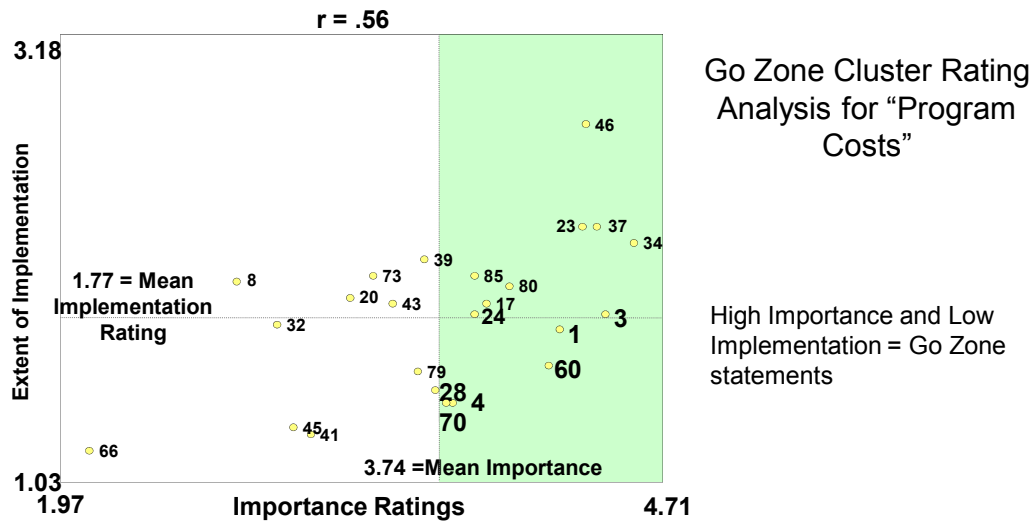


Figure 14. Go Zone for Awareness Cluster.



- Compensate faculty/staff who participate in experiential education activities with time (leave, workload relief) (1)
- Address cost issues for students (grants, scholarships) especially for the summer (3)
- Discount summer tuition and room & board for experiential education (internships, Study Abroad, Bonner, etc.) (4)
- Create Study Abroad scholarships (24)
- Compensate faculty who offer experiential learning with research credits (28)
- Integrate study abroad into the tuition structure so that any student could afford it (70) Build an endowment to fund and continually support experiential learning (60)

Figure 15. Go Zone for Program Costs Cluster.

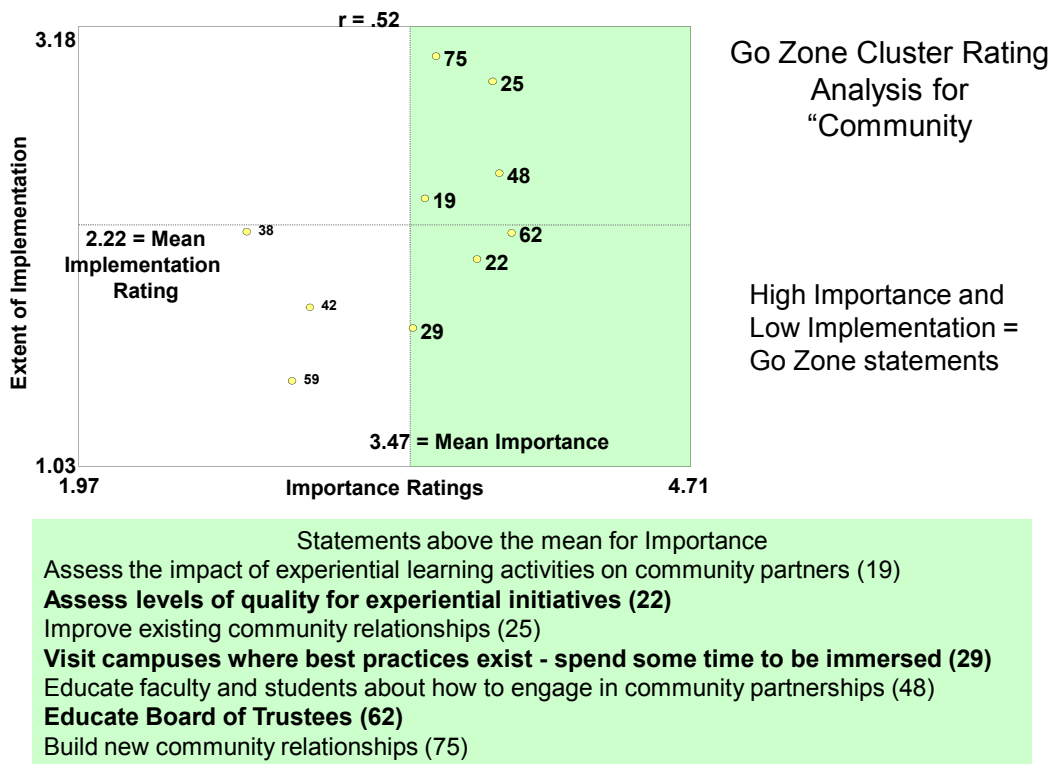
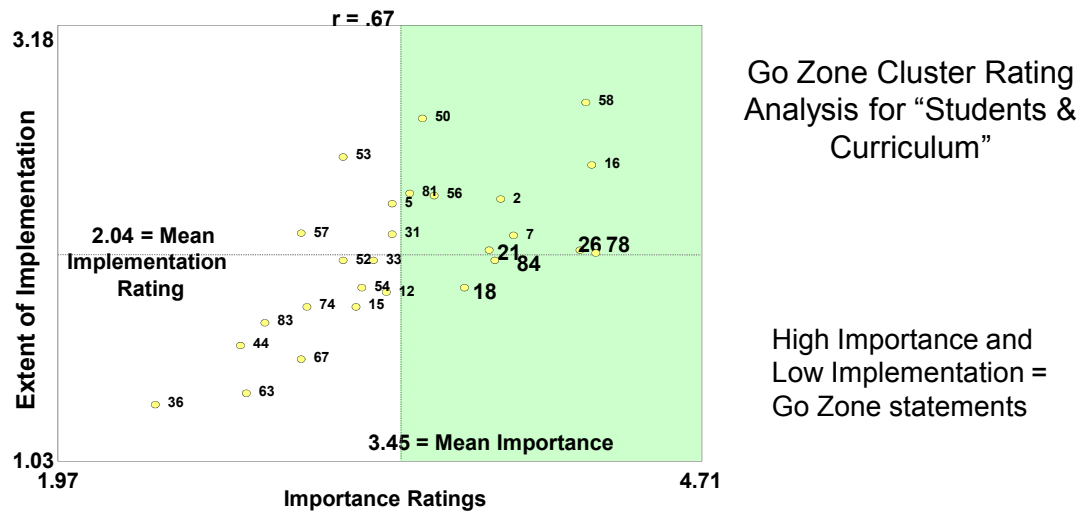


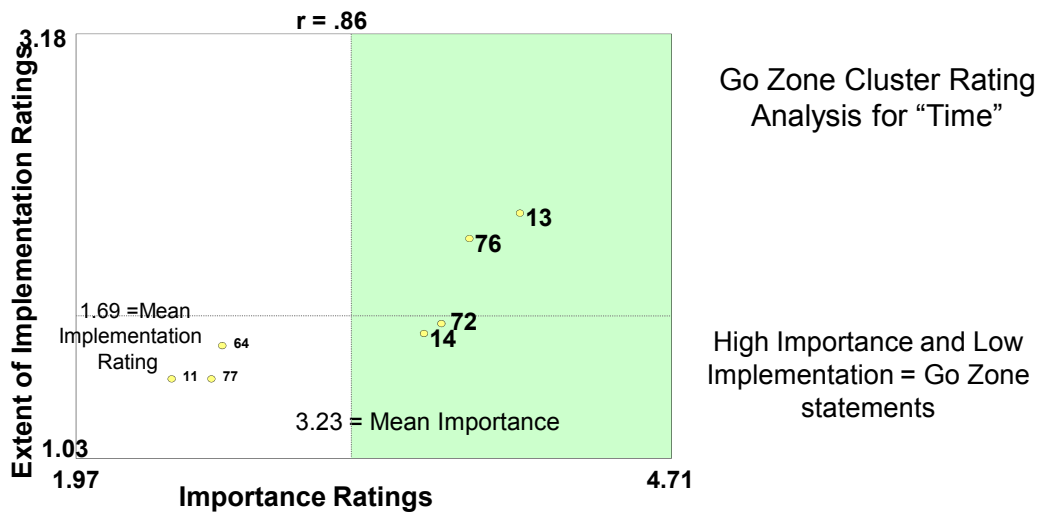
Figure 16. Go Zone for Community Cluster.



Go Zone Statements

- Have every major require some form of experiential learning (18)
- Provide discipline-specific models for experiential education (21)
- Identify clearly for students where experiential learning occurs in courses at registration (26)
- Have all academic programs identify any existing experiential learning opportunities within their program (78)
- Identify clearly for students where service learning occurs in courses at registration (84)

Figure 17. Go Zone for Students & Curriculum Cluster.



Statements Above the Mean for Importance
 Support opportunities for students to participate in discipline-specific conferences (13)
Address fluidity of scheduling (allow more time for community engagement) (14)
Create a schedule that allows for blocks of time for experiential learning (72)
 Ensure that students have time for experiential learning (76)

Figure 18. Go Zone for Time Cluster.