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GRADUATE COLLEGE

THE APPARENT STRATEGIES OF UNIVERSITIES WITH EXEMPLARY RETENTION RATES: A SYNTHESIS OF ACADEMIC COCURRICULAR PROGRAMMING

A dissertation

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in partial fulfillment of the requirements for the

degree of

Doctor of Philosophy

By

KATHERINE GARLOUGH
Norman, Oklahoma
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WITH EXEMPLARY RETENTION RATES:
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A DISSERTATION APPROVED FOR THE
DEPARTMENT OF EDUCATIONAL LEADERSHIP AND POLICY STUDIES

BY

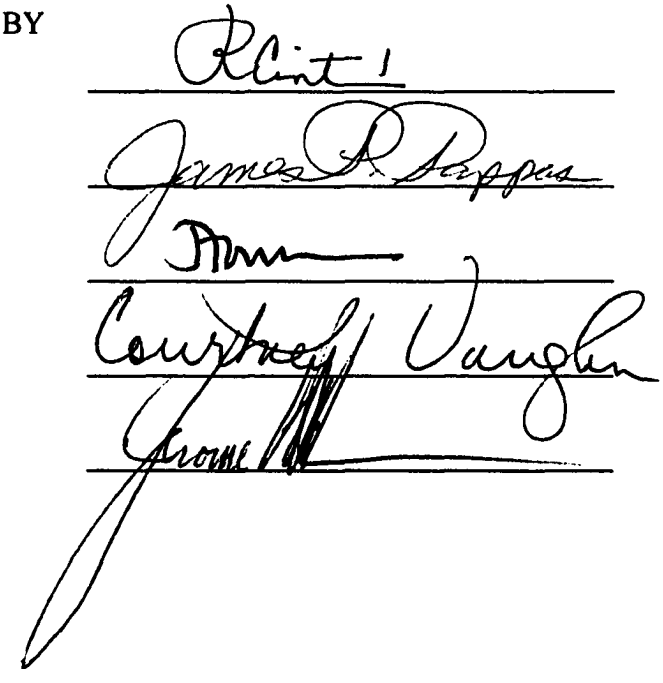

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TABLE OF CONTENTS

TABLE OF TABLES

TABLE

FIGURE

ABSTRACT

Many institutions of higher education offer cocurricular programming opportunities outside of the classroom to supplement learning and to impact retention. While many retention studies have focused on social programming fostering social integration, the present study explored academic programming at institutions whose retention rates were exemplary, between 92% and 97% for first-time freshmen. The purpose of the study was to portray the current programming opportunities and search for meaningful patterns. Programs included in the study were limited to those offered to first-year students and having institutional sponsorship and institutional staffing across divisional boundaries. Ninety-three specific academic cocurricular programs were found at seven public research universities. From the specific academic programs, domains of academic programming were formulated: learning, studying, research, service learning, residential learning, communications, and academic planning. Data were coalesced from the specific elements of the programs and the seven domains then redistributed into universal programming elements to allow an analysis from a perspective other than institutional distinctiveness. Viewing the universal programming elements through the lens of specific domains, revealed characteristics of apparent strategies as defined in the theoretical framework of competitive intelligence. Since the apparent strategies are shared by highly retentive institutions, the strategies can be defined as standards of excellence. Eight apparent strategies supported two apparent goals of the public research universities in terms of academic programming. The major goals of the exemplary universities were providing student-centered learning and creating communities of academic villages.

CHAPTER 1

KNOWLEDGE OF SPECIFICS

Vignette

The Dean glanced away from the young man before her, and gathered her thoughts. "It wasn't supposed to happen this way," she thought, looking out the window where snow was falling. "In the week before finals, the fifteenth week of the fall semester, we aren't supposed to lose them."

The young man's name is Ryan and he is a first-year student at a public research university, sitting before his Dean. He is far from home, a small rural town on the edge of the state. His parents have demanded his complete withdrawal from school and his return to the community. They will not support his continued enrollment with a D *in Chemistry and a* D *in Calculus, regardless of his other midterm grades.*

The Dean had read the file before her earlier. Ryan's name did not appear on the midterm grade reports; he was passing at midterm. He wasn't able to see an advisor in the succeeding weeks. Each advisor had 600 students. In his conversations with the two professors, they had been non-responsive to his spiraling demise. He never used the computer tutorial, although not many students ever did. Ryan's only campus club was of a religious nature and he had prayed often about his college performance. Even now Ryan was stoical. His smile was enigmatic, slightly unsettling the Dean as she signed his complete withdrawal form.

Ryan was in the top ten percent of his graduating class, he had an SAT of 27, and his high school GPA was 3.89. "Why are we failing Ryan? A white, middle-class, college student involved in cocurricular activities, he just doesn't fit with theory," she thought. "How will we staunch the flow of dropouts if we can't comprehend the basic elements of our problem?" Her thoughts digressed to the larger predicament, "Without models to adapt, how will we create the cocurricular programming to assist students' academic needs and meet the President's dictum of a seven-percent increase in our retention rates?"

Of the three thousand, five hundred first-time freshmen that year, seven hundred withdrew from the University; some asked the Dean formally, others simply faded away. The Dean only had time to meet with a dozen, including Ryan. Seven-hundred dropouts, seven hundred former undergraduates, are now a tragic twenty-percent attrition rate. However, the Dean realized at the next Dean's Council only a positive perspective would be acceptable and she would proudly tout her college's eighty-percent retention rate to the other deans.

Statement of the Problem

The national rate of student departure from colleges and universities has been a dilemma that has been studied by higher education scholars for the last seventy years (Braxton, 2000b). Research efforts to understand college student retention and graduation rates have increased during the last twenty years (Woodward, Mallory, & DeLuca, 2001; Allen, 1999; Anderson, 1982; Attinasi, 1989; Bank, Biddle & Slavings, 1992; Bean & Metzner, 1985; Creamer, 1980; DesJardins, Ahlburg & McCall, 1998; Gándara, 1995; Gold, 1995; Holmes, Ebbers, Robinson, & Mugenda, 2000; Larose, Robertson, Roy, & Legault, 1998; Lent, Brown, & Larkin, 1984; Lewallen, 1993; Li & Killian, 1999; McLaughlin, Brozovsky, & McLaughlin, 1998; Murtaugh, Burns, & Schuster, 1999; Neumann & Finaly-Neumann, 1989; Nichols, Orehovec, & Ingold, 1998; Noldon & Sedlacek, 1996; Okun, Benin, & Williams, 1996; Sandler; 1999; Spady, 1970; Tharp, 1998; Xiao, 1999; Ybarra, 2000). Many of these studies were inspired by declines in student enrollment; however more recent research has been driven by demands for institutional accountability by governmental and private funding sources (Woodward, Mallory, & De Luca, 2001). Mediocre and deficient student retention rates became critical to institutions considering financial retrenching since student departure was an added source of decreasing revenues (Lepple, 2002).

The magnitude of this problem is such that it has involved stakeholders other than the institutions. Students and their parents saw a college education as a means to greater career flexibility and an improved standard of living. At a national level student retention is a societal concern, given that for a democratic and free society to

continue, it must have an educated citizenry. Tierney (1992) argued that the research quest for retention rate improvement is justified for three reasons: the student gains the rewards of education, the university gains additional income while manifesting its purpose, and society gains productive and resourceful citizens. All of these concerns address the same basic question: Why do students drop out?

Classical retention research has been linear; most research has emanated from a single perspective that questioned students' decisions to depart (Woodward, Mallory, & De Luca, 2001). The question remained focused on student input and researchers focused their studies on the student social integration (Braxton, 2000a). While a lack of social integration is related to low retention (Rudra, 2000), academic performance is an integral factor in student retention. Several studies have confirmed that high levels of past and current academic performance increase retention (Rudra, 2000, Szafran, 2001). Cabrera, Nora, and Castañeda (1993) have shown that GPA contributes significantly to factors that indicate behavior leading to persistence. It has been shown that first-year students with higher cumulative GPAs are more likely to persist to the second year (Szafran, 2001). Remaining enrolled in college is mostly a factor of the quality of student effort and the amount of learning accomplished as reflect in the GPA (McLaughlin, 1998).

Terenzini (1987) proposed an alternative research question that sparked several studies. He suggested that student retention is more accurately explained by what happens to students once they have arrived on campus, rather than by what they were like prior to their arrival. How do the organizational behaviors of the institution influence students' departure? The organizational approach considers the role that the

institution plays in enhancing or hindering student retention (Berger & Braxton, 1998; Cabrera, Castañeda, Nora & Hengstler, 1992; Cabrera, Nora & Castañeda, 1993; Elkins, Braxton, & James, 2000; and Tinto, 1998). Other responsible factors that contributed to student departure have not been thoroughly considered. Until recently, other possible perspectives, i.e., institutional responsibility, faculty preparation, etc., were not researched (Tierney, 1992). "The preeminence of the institution, in terms of providing opportunities and a suitable environment", was implicit in the early studies while students shouldered the blamed for their failure to persist (Woodward, Mallory, & De Luca, 2001, p. 56). It is clear that much time and effort have been spent in attempting to solve the retention problem.

The present study takes a different approach and views retention from the perspective of success—not failure—asking why some institutions succeed in retaining their students. Historically, institutions have been limited in the changes made to academic courses of study, hence one of the most accommodating and innovative elements in higher education today are academic cocurricular experiences for students. Opportunities offered by the institution for the express purpose of improving students' scholarship and intellectual vigor have been linked recently to retention (Tinto, 1998). Kuh (1995, p. 124) stated that "most scholars who study the impact of college on students agree that what happens outside the classroom, the other curriculum, can contribute to valued outcomes of college." The approach of the present study uses a qualitative design to explore the elements of retention theory as represented in cocurricular academic opportunities.

Research Question

This exploratory study seeks to answer the following question: What patterns characterize the academic cocurricular programming opportunities for first-year students at public research universities with exemplary retention rates?

Research Terms

For the purpose of this study, the following definitions apply.

Best-in-class universities is a group of institutions with exemplary retention rates.

Cocurricular refers to student programs sponsored and staffed by the institution that are external to the classroom, not mandatory, and are academic. Programs, which appear to have a primary purpose of social integration, are excluded from the study. Programs specifically excluded from the study include academic clubs, honor societies, and Greek organizations.

Exemplary Retention Rates are those institutions with retention rates of first-year students greater than 92% considering the national average is 79.9% for the year 2000 (Hayes, 2002).

First-Year Students are students who have not attended college previously and include students with advance standing from their high school. First-year students may have begun classes in the summer.

Programs/Services are the offerings for students in the form of activities or structures intended to enhance out-of-class learning.

Public Universities are a category called Doctoral/Research Universities-Extensive (DRU) according to the Carnegie Classification. While these institutions offer many baccalaureate programs, their *raison d'etre* is graduate education, specifically at the doctoral level. To that goal, they awarded fifty or more doctoral degrees per year in at least fifteen disciplines (McCormick, 2001).

Retention refers to students returning the next year to the institution of their previous enrollment.

Retention Rate is the ratio of students who return in one year to the number of total students enrolled that year. Retention rates are the inverse of attrition rates.

Limitations of the Study

This study is limited to public documents as the source of data. Merriam (1998) examined the use of documents in qualitative research and found a consistent under-utilization of documents as a data source. Public documents used in the present study include college catalogues and web sites found in the public domain. Pubic documents have specific limitations that are different from those documents generated from observations and interviews. While public documents contain rich sources of evidence and indications for further exploration, unless purpose and source are aligned, the results from data collection may be partial, incomplete, or lacking portions of information (Merriam, 1998). This study has alignment in purpose and data source in discovering the patterns of academic cocurricular programming opportunities by examining the public offerings of exemplary institutions.

Documents can be noted as either primary or secondary sources. Primary sources are those where the creator of the document has firsthand experience with the topic and is not summarizing the work of others (Merriam, 1998). With secondary sources, limitations may also manifest as gaps between various secondary documents' conceptual models and constructs (Merriam, 1998). In this study, web pages and college catalogues are considered primary sources of data. While document authenticity is a possible limitation and must be annotated for most documents, web pages of institutions of higher education are assumed to be authentic. Public documents have certain advantages as a source of data, due to cost-free and trouble-free accessibility and the possibility of yielding a greater quality and quantity of data (Merriam, 1998). In addition, public documents can be copied and accessed for categorization and analysis later in the study. Lastly, as in this particular study, public documents may be the only way to address the research question.

Merriam (1998) considered web pages to be public documents that are merely accessed differently from paper copies and which should be treated as such in the research process. However, she cautions that web pages are artifacts with particular time contexts; web pages that have been cited may be replaced with an updated version without notice. Data collection must have time-specific parameters with controlled management to offset the potential instability of the data pool. Merriam (1998) advises researchers to recognize that the results of their studies are influenced by the data collected through the medium, and that in most qualitative research the researcher is the primary source of data and its analysis. One effect of the online medium of data gathering is that it replaces the human element in the search process

with search engines. However, the human element is not replaced in the choice of data, the categorization of data, or the analysis of data. Document authenticity in web pages is assumed for the institutions considering their vigilance in protecting uploading to their sites through firewalls, encryption, and passwords.

Conceptual Frameworks

This study utilizes two research frameworks originally conceptualized in business administration. *Competitive intelligence* is the process of monitoring the environment and institutions, to enable administrators to make informed decisions about tactics and strategies (Breacher, 1999). Intelligence is gathered via public information sources to establish standards of excellence or trends within the topic for the purpose of adaptation. This study gathers data about the institutional offerings from the public domain with sources including institutional publications and institutional web pages. *Benchmarking,* developed in the 1980s, is a type of case study that describes the procedures and practices of institutions that are the best. The use of benchmarking in higher education began in the 1990s, due to competitive and rapidly changing markets (Alstete, 1995). Due to their reliance on hard data and the prevalence of public information, benchmarking studies are especially suited for institutions of higher education.

While beginning to gain support in other sectors, the utilization of business methodology remains controversial in traditional higher education. The reactions of academics remain erratic at best. Some may be fascinated, if not impressed; others aloof, some covertly jealous, still others angered at the mere attempt (Ewell, 1999).

Beneficially, the utilization of business methodology may be one of the best ways to address a specific problem or it may compel an institution to self-study from fresh perspectives (Ewell, 1999). Business methods in higher education must employ "prismatic adoption mean[ing] that not all posed ideas can or should be applied literally" by isolating the elements that can be adapted and framing constructs for dialogue (Ewell, 1999, p. 15).

When applied to higher education, the business methodology is not used in its entirety. Both benchmarking and competitive intelligence methods stress adaptation in their philosophies and have elements adaptable to higher education. For example, this study borrows the element of purpose from benchmarking. The purpose of benchmarking in business management is to attain leadership by comparing current practices with the most effective practices in a selected industry, learning from excellence and adapting the data to improve business processes (Hagelund, 1997). Alstete (1995) cites four benchmarking processes used in higher education: internal analysis of departments conducting similar processes, peer institutions sharing parameters of similar data, members of various industries comparing processes with higher education institutions, and the best-in-class institutions.

The present study used best-in-class process as the type of benchmarking process. It should be noted that the best-in-class process has not been applied to colleges and universities; they have been peer institutions sharing parameters of similar data (Epper, 1999). A thorough computer search did not yield any study under the best-in-class descriptor. Nevertheless, the best-in-class practice is a common approach in business research and literature. Therefore, the present study may pioneer

this approach in the study of higher education. In an attempt to minimize pitfalls of innovative work, close adaptation to the parameters used in business research have been followed.

According to Kempner (1993), studies in process benchmarking commonly attempted to answer the following questions: How good do we want to be? Who is doing it best? How do they do it? How well are we doing in comparison? How can we adapt what they do at our institution? How can we be better than the best? Typically, the focus in benchmarking is on competitors' processes and procedures in which the means of data collection is shared information during reciprocal visits to the benchmarking partners (Kempner, 1993). Hagelund (1997, p. 4) compared benchmarking to the scholarly research process; "use the best of other people's ideas, add your own creativity, and your will be able to go far without having to repeat the experience of your predecessors."

This study differs from pure process benchmarking in the collection of data and in the dissemination of findings. In the business area, competitors do not routinely share statistical data measuring output so corporations must proceed blindly in the selection of their sample and must form partnerships to access data. Higher education, however, records a profusion of comparative data, enabling this study to utilize a purposeful sample inclusive of only the best institutions. In addition, higher education broadcasts its policies, procedures, and programs through a variety of media, making information easily accessible. Thus, the creation of partnerships to facilitate shared information is not warranted for this study. Although routine benchmarking studies include the adaptation of findings to the organization, this study does not apply

findings. While this study adapts the benchmarking questions, who are the best and how do they do it, it adopts data collection from competitive intelligence.

Competitive intelligence is the legal and ethical collection and analysis of information regarding the potential strengths, weaknesses, and strategies of competitors, conducted by using freely available sources (Miller & the Business Intelligence Brain Trust, 2000). According to Miller et al. (2000, p. 12), "intelligence is distilled information" to present unique insights regarding future issues within an institutional environment. When data are organized it becomes information, and when information is analyzed it becomes intelligence (Miller et al, 2000). Based on this model, competitive intelligence has a four-phase cycle: (1) identify the intelligence needs of the key decision-makers (2) collect information about the institutional internal and external environment, (3) analyze and synthesize the information, and (4) disseminate the results to key decision-makers (Miller et al., 2000). The present study adapts part of this cycle by collecting information about the competitive environment and analyzing and synthesizing the information. According to Kahaner (1996), intelligence is increasingly important due to the rapid pace of business growth, information overload, increased global competition from new competitors, more aggressive competition, and rapid technological changes.

Data collection is limited to public documents as organizations generate documents. The "direct interrogation of competitors has never been easy and can only increase in difficulty as awareness of competitive intelligence spreads" (West, 2001, p. 108). Information from interviews and observations are not as reliable in competitive

intelligence as documents found in the public domain. Therefore, this study is limited to primary documents gathered from the public domain.

In competitive intelligence, analysis and data collection should run concurrently, until a satisfactory result is reached or no further progress can be made (West, 2001). Analysis in competitive intelligence has two purposes. It fills in the "gaps in the data yielded by the intelligence gathering and it draws conclusions from the data that extend the understanding of competitor's action and plans" (West, 2001, p. 115). Common methods of analyzing competitive information are competitor profiles, financial analysis, SWOT (strengths, weaknesses, opportunities, and threats) analysis, scenario development, win/loss analysis, war gaming, and simulation modeling (Miller, 2000). Professionals tend to see SWOT analysis and competitor profiles as extremely effective tools (Miller, 2000). The present study employs adapted forms of both analyses by creating a competitor profile to examine organizational strengths.

West (2001) noted the difference between various time frames in the analysis of competitive intelligence. Analyzing the past time frame gives insights into the competitive evolution of an organization. It uses such visible sources as observations and records to study action, processes, acquisitions, or resources (West, 2001). The present study does not analyze the past time frame, but the future time frame. Analyzing the future time frame gives insights into an organization's future strategy and competitive advantage. Sources for future analysis may or may not be tangible or readily visible and insights must be extrapolated from data (West, 2001). Future analysis extrapolates strategic intent from programming or marketing initiatives

(West, 2001). The present study examines programs and analyzes the data for latent indications of apparent strategy.

Competitive intelligence is a field with detailed procedures developed during World War II and continuing to evolve (Walle, 2001). The procedures of competitive intelligence mimic an academic design with a substantial difference in the utilization of analysis. The process begins with questions about the future and determining the administrators who are ultimately responsible and key to the implementation of a strategic plan (Hussey & Jenster, 2001). The elements influencing the success of the industry, such as general environment, socioeconomic trends, or interest rates, are determined. Industry characteristics normally have common sets of dimensions or dynamic factors and these must be noted. The organization's internal structure, strengths, and weakness are examined. The competitive forces of competitors, suppliers and customers, quality standards, products, and cost controls are investigated (Hussey & Jenster, 2001).

Administrators use competitor profiling, a subset of the detailed procedures used to gather data, to create strategy for the organization (Hussey & Jenster, 2001). Data to create competitor profiles are gathered in terms of strengths and weaknesses, key decision makers, and availability of financial and human resources. Data that describes the organization, its competitors, and its environment are analyzed (Hussey & Jenster, 2001). While competitor profiling is one small step of a process, the determination of apparent strategy of competitors is the "heart of the profile" (Hussey & Jenster, 1999, p. 102).

The organization uses the intelligence to create a strategic plan that must address the mission statement, the external threats and opportunities, and an evaluation. Critical success factors must reflect the defined strategy, represent the foundation of the strategy, be able to motivate and align the staff, and be specific and or measurable. Critical success factors can be used to locate short-term objectives that are operational, acceptable to staff, reliable, timely, and simple. Short-term objectives allow progress to be monitored and staff motivated. From intelligence, developers create a strategic plan and plans for installation (Walle, 2001; Hussey & Jenster, 1999). The last stage of the process of competitive intelligence is the development and implementation of evaluations of internal circumstances (Hussey & Jenster, 2001).

"Although competitive intelligence professionals may analyze data that has been gathered in a scientific manner or evidence that depends upon the application of modern technology, the actual analytic process is not scientific" (Walle, 2001, p. 74). The process of drawing suppositions from diverse scraps of information and weaving them into a recognizable and useable pattern is a key contribution of the field (Walle, 2001). A key niche for competitive intelligence is research based on induction and inference, bringing an alternative to quantitative research (Walle, 2001).

Emergent Interpretive Frameworks

In qualitative studies, the research design often emerges as the data are collected, since it is often impossible to design a study without knowing *a priori* the many realities that become evident (Lincoln & Guba, 1985). For example, during the course of the current study, a tentative outline with traditional quantitative chapter

sequence became unsuitable, when data collection and analysis results did not correspond to the planned discussion. Use of the 1956 edition of *Taxonomy of educational objectives: The classification of education goals: Handbook I: Cognitive Domain,* edited by B. S. Bloom (known as *Bloom's Taxonomy*) proved to be invaluable to organizing the data. The major purpose of the *Taxonomy* was to facilitate communication among scholars, creating a common language to discuss scholarship and scholars (Bloom, 1956). The text describes a hierarchy of increasing "abstract levels of student performance which represented the intended outcomes of the educational process" (Bloom, 1956, p. 12). The abstract levels of student performance describe cognitive behaviors students should be able to achieve after formal instruction.

Bloom's Taxonomy was appropriate to adapt for the organizational outline of this qualitative study, due to the techniques it presents organizing information to increasingly abstract levels. To that end, the succeeding chapters of this study follow the organization of the condensed version of *Bloom's Taxonomy*. It is divided into knowledge, interpretation of the data, analysis, synthesis, and conclusion (Bloom, 1956, p. 201-207).

The introduction, literature review, and methodology chapters of this study reflect the cognitive domain identified by Bloom as knowledge. Knowledge is defined as the student's ability to recall and recite facts, methodology, and theoretical frameworks specific to a topic (Bloom, 1956). In *Bloom's Taxonomy*, knowledge is subdivided into parts paralleling the discussion of the first three chapters of this study: knowledge of specifics, knowledge of terminology, knowledge of specific facts,

knowledge of conventions, knowledge of trends, knowledge of criteria, knowledge of methodology, knowledge of universals and abstractions in the field, knowledge of principles and generalization in the field, and knowledge of theories and structures (Bloom, 1956).

Comprehension is the ability to interpret and translate terms with specific definitions according to *Bloom's Taxonomy*. Translation is being able to state a case in one's own words, to condense into more abstract terms, to summarize, or to move from visual form to written prose (Bloom, 1956). Interpretation is the explanation of a summarization; the part-for-part reordering and rearranging of information for new understandings (Bloom, 1956). According to Bloom (1956), analysis is the breakdown of the subject into its constituent parts, or categories, such that a hierarchy of ideas becomes clearer and the relationship between ideas becomes more explicit. Analysis clarifies the interpretation, indicates how it is organized to convey its effects, as well as illustrates its core and arrangement (Bloom, 1956). The analysis of the elements identifies the categories. According to Bloom (1956), synthesis is the merging of elements to form a whole, with an emphasis on uniqueness and originality. This involves the process of working with pieces, parts, and elements; arranging them and combining them in such a way as to make a pattern not formerly evident. The product of synthesis can be a set of abstract related themes, not explicit or obvious, and discovered from a detailed analysis (Bloom, 1956). Additionally, the product of synthesis may be an application in the form of an operational plan or an abstraction to explain the data, factoring particular considerations and reflections (Bloom, 1956). According to Bloom (1956), conclusions are judgements about the value in light of

existing works in the field. Judgement includes the comparisons of the subject to the literature and major theories. This method of ordering cognitive phenomena, while moving the examination of material from the simple to complex, reveals significant relationships (Bloom, 1956), particularly insightful for qualitative research designs. Therefore, the chapters in this study are Knowledge of Specifics, Knowledge of Theories, Knowledge of Methodology, Interpretation of the Data, Analysis, Synthesis, and Conclusion.

Significance of the Study

The goal of the research is to discover which, if any, elements from the literature to be reviewed are represented in the academic cocurricular offerings of universities with exemplary retention rates. The research examines the ways in which an institution can adapt and thereby respond to its student clientele. Such a perspective of retention provides a framework that calls for and encourages change at various institutional levels in response to low retention rates. If there is no gap in the correspondence between cocurricular opportunities and retention theory, then universities could evaluate their academic support opportunities in terms of the patterns offered in this study. Administrators may find the hidden gaps in their efforts to retain freshmen.

CHAPTER 2

KNOWLEDGE OF THEORIES

Introduction

Retention is one of the most extensively studied topics in the field of postsecondary education (Braxton, 2000); thus the literature review is limited to the studies relevant to the focus of the present study. The review of literature begins with an overview of the most prominent theory in college student retention, Tinto's interactionalist theory (Tinto, 1975, 1993). This is followed by additional retention research that addresses organizational factors including academic integration factors, and excluding social integration factors. The research studies are generally quantitative in design, often seeking to identify correlation among multiple variables with an institutional perspective. The retention studies often studied or extended Tinto's theory (Berger & Braxton, 1998; Cabrera et al., 1992; Cabrera et al, 1993; Elkins, Braxton, & James, 2000; Kuh, 1995; Tierney, 1992; and Tinto, 1998). The third body of literature reviewed pertains to cocurricular programming and taxonomies of programming.

Classical Theory

Research on student retention has centered on Tinto's interactionalist theory, now considered paradigmatic (Braxton, 2000). Tinto (1975, 1993) developed a comprehensive sociologically based theory of departure, based on Durkheim's study of social communities and individual suicide and Van Gennap's theory of rites of passage in tribal societies (Tierney, 1992). In Tinto's model, student departure results

from the interaction between the student and the educational environment of his or her institution. Student dropout decisions are longitudinal in nature and are shaped by such characteristics as family background, individual characteristics, and secondary school experiences. The model defines family background characteristics as family socioeconomic status, parental educational level, and parental expectations. Individual characteristics are defined as academic ability, race, and gender. Secondary school experiences were defined as secondary school type and secondary school achievement. Tinto's model suggested that institutions of higher education are very much like other human communities. The process of persistence, staying in college, and by extension, that of departure, is much like processes within communities that influence the establishing of community memberships. Such variables are thought to directly influence initial commitments to higher education and to a particular institution, then through subsequent institutional and goal commitments, to directly affect student departure decisions.

The classical theory hypothesized that persistence is a function of the correspondence between an individual's precollege characteristics and the institutional academic and social characteristics. If all other factors are equal, the match between an individual's characteristics and those of the institution contribute to fundamental individual commitments. Basic commitments are defined as the commitment to completing college (goal commitment) and the subsequent commitment to the respective institution (institutional commitment). Accordingly, the stronger the fundamental individual commitment, the greater the probability of persistence.

Review of Related Literature

Robust and empirically based research has yielded two sources of influences on college student departure: social integration and subsequent student commitment to the institution (Braxton & McClendon, 2001). Additional research suggests an approach toward student retention that is more accurately explained by what happens to students once they have arrived on campus, rather than by what they were like prior to arrival. These studies found that precollege characteristics were not significant factors in explaining students' enrollment behaviors. In other words, retention could not be predicted solely on the basis of precollege traits. Other approaches consider the role that the institution plays in enhancing or hindering student retention (Berger & Braxton, 1998; Cabrera et al., 1992; Cabrera et al., 1993; Elkins, Braxton, & James, 2000; Kuh, 1995; Tierney, 1992; and Tinto, 1998) and examine ways in which an institution responds to its student clientele.

Institutional Perspectives

Astin (1975) conducted longitudinal research using national data from the Cooperative Institutional Research Program (CIRP). The longitudinal design of his study allowed Astin to identify a category of students called "stop out" which he operationally defined as students who depart their institutions for a short while, but later return to graduate. Astin's findings tended to support the propositions of Tinto's (1975) interactionalist theory, particularly as they related to student commitment to completing college (goal commitment). According to Astin's (1993) research, institutions should focus retention efforts in the areas of academic advising, career

counseling, individual support services, financial aid services, and job placement services. The student's persistence is a factor of the student's perception of and satisfaction with the college environment rather than such characteristics of entering students as ACT/SAT scores, high school rank, or GPA.

Bean (1980) used studies of turnover in work organizations to provide the theoretical framework for his study of student retention. The model suggested that as a student interacts with the institution, the higher the level of satisfaction with the interaction, the greater the commitment to the institution, and therefore the lower the likelihood of departure. Bean found commitment to the institution to be the most important variable in explaining drop out. However, a difference was found between males and females in the sample studied. Men were often satisfied with their interactions, but were not committed to the institution, and as a result they were more likely to leave. Women were often satisfied with their interactions, were more committed to the institution, and consequently were less likely to leave.

Terenzini (1987) suggested an approach toward student retention is more accurately explained by what happens to students once they have arrived on campus, rather than by what they were like prior to their arrival. Pascarella and Terenzini (1980, 1983) found institution environmental variables maximize freshmen retention and graduation rates. These variables included cohesive peer relationships, frequent participation in college-sponsored activities, and a perception of institutional concern for the individual student evidenced in personal involvement. Consistent with these findings was evidence suggesting that a strong institutional support for such student services as advising, orientation, and the development of academic survival skills in

individualized general education courses, was linked positively with institutional retention rates.

Cabrera, Nora, & Castañeda (1993) merged the respective explanations of student retention by Tinto (1975) and Bean (1980). Their study, based on a sample of traditional age students, confirmed most of the hypothesis of Tinto's student integration model, and found Bean's student attrition model essential to account for environment factors (Cabrera, Nora, & Castañeda, 1993). "The results indicate that when these two theories were merged into one integrated model, a more comprehensive understanding of the complex interplay among individual, institutional, and environmental variables" was achieved (Cabrera, Nora, & Castañeda, 1993, p. 136). Cabrera, Nora, & Castañeda created a model of student persistence decisions (Figure 1.). They found reciprocal effect between Institutional and Goal commitments was found not to be statistically significant while the effect of social Integration on Goal Commitment remained nonsignificant. The largest total effect was Intent to Persist and GPA. Intent to Persist was variable comprised of Institutional Commitment (student's commitment to the institution) and Goal Commitment (student's commitment to their goal).

Figure 1.

Student Persistence Decisions

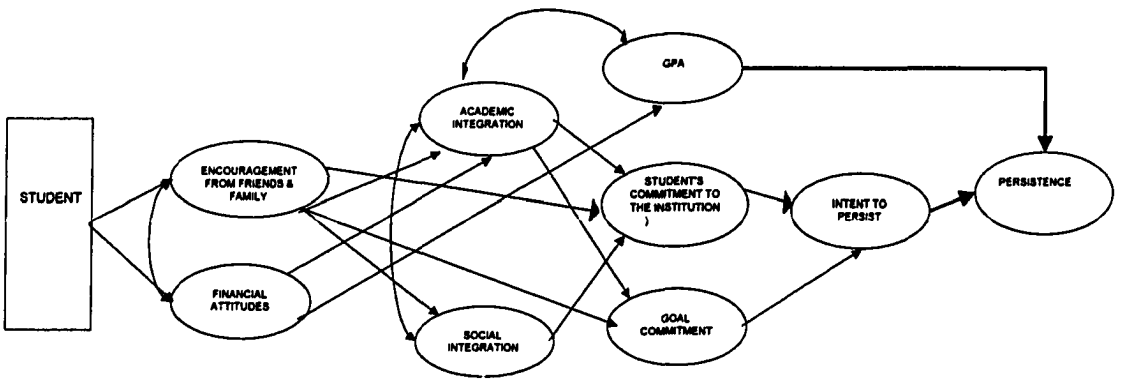


Figure 1. The arrows represent influences and impacts, while double ended arrows indicate reciprocal influences. The model is a representation of retention without the effect coefficients and the nonsignificant paths.

Note. From Cabrera, A. F., Nora, A., & Castañeda, M. B. (1993). "College persistence: Structural equations modeling test of an integrated model of student retention." *Journal of Higher Education 64*(2), p. 134. Adapted with permission of the author.

Rather than "focusing on past behavior (actual withdrawal decisions) which is futile," they believe administrators should concentrate on the variables that are highly predictive of the student's intention to re-enroll (Cabrera, Nora, & Castañeda, 1993, p. 136). The individual efforts of such units as financial aid, academic advising, counseling and other support services are not likely to increase retention rates (Cabrera, Nora, & Castañeda, 1993). To improve retention, a collaborative effort between various divisions and units will be required on the part of institution.

Tinto (1998) discussed the implications of retention research for the institution in terms of organizational reform. Freshmen are at the greatest risk of departure, with

nearly half leaving before their sophomore year. Therefore the greatest possibility of impact for persistence occurs early in the freshman year, perhaps as early as during the first ten weeks. He believed the research has prompted a deluge of retention programs such as freshmen seminars, mentoring programs, and learning communities. These efforts to increase institutional retention rates contrasted with a lack of change on the academic administration or in the organizational structure of institutions. He recommended two organizational reforms. First, institutions could implement a community model of academic structure, often called FIGS for Freshmen Interest Groups. In such a structure, students take two to three courses as a group. The goal is to facilitate learning in naturally formed study groups. Secondly, colleges could organize freshmen as a separate unit with programming, services, and structure distinct from that of upperclassmen, due to distinct androgological differences. Unlike university colleges of the previous decade, these units would have cross-disciplinary boundaries with specialized faculty. The research dictated that academic organizations must require students to become partners with others in learning and that the construction of educational settings to promote shared, connected learning should be high on the agenda to increase retention rates.

Kuh (1995, p. 145) stated that many difference cocurricular programs "have the potential to contribute to valued outcomes of college." The purpose of Kuh's research was an exploratory study aimed at identifying out-of-class experiences that seniors associate with their learning and personal development. Fourteen outcomes from the data were categorized by factor analysis into five domains: interpersonal competence, cognitive complexity, knowledge and academic skills, practical

competence, and humanitarianism. Cognitive complexity and knowledge and academic skills are academic experiences composed of the following outcomes: reflective judgement, application of knowledge, knowledge, and academic skills. In the study, cognitive complexity was most frequently associated with academic activities, miscellaneous activities, institutional culture, and association with peers. The study concluded that cocurricular experiences created added value by demanding that students become more competent in critical thinking, relational skills, and organizational skills. These benefits appear to accrue with the input of increased time and energy. Key to enhancing student learning outside the classroom is a holistic approach to learning, embedded in the institutional culture and values.

Programming Taxonomies

Ambler (1989) stressed the need for a comprehensive taxonomy in student services programs. The content of student programs within an institution most often is controlled by the institution's organizational needs, rather than by the determination of professional parameters. Invariably, structure and scope are not formulated due to the efforts of student services administrators, but due to political strategy with the individual institution. He believed that understanding and considering taxonomies promotes administrative effectiveness in evaluating the potential realignment or clustering of units, in addition to planning, strategizing, and evaluating the division.

Ayers, Tripp, and Russell (1966) developed a taxonomy of four basic student services based on functional attributes: welfare, control, activities, and teaching. Welfare functions consist of such services as counseling, testing, health services,

financial aid, placement, and alumni relations. Control functions comprise admissions, records, discipline, and living arrangement services. Activity functions include cocurricular and extracurricular programs, student government, student publications, student newspaper, student union, and cultural programs. Teaching functions are composed of orientation programs, foreign student programs, remedial clinics, and residence hall workshops.

Hershenson (1970) designed a taxonomy categorizing student services into four domains: internal coordination, orientation, support, and education. This categorization does little to improve on the Ayers, Tripp, and Russell model. A parallel can be traced between these two taxonomies: internal coordination equals control, orientation equals activities, support equals welfare, and education equals teaching. Additionally, these two taxonomies may be limiting considering the scope of student services today (i.e., learning communities could be categorized in several functions).

Myers and Topping (1974) developed a program classification structure that categorizes the functions of student services into eight domains: student services administration, social and cultural development, counseling and career guidance, financial aid administration, student auxiliary services, student recruitment, admissions and records, and intercollegiate athletics. Ambler (1989) observed that this taxonomy is the most widely used for comparative studies due to its broad, yet explicit delineations.

CHAPTER 3

KNOWLEDGE OF METHODOLOGY

Introduction

The use of qualitative research in higher education has produced a robust literature (Bogdan, & Biklen, 1992; Caple, 1991; Cresswell, 1998; Crowson, 1987; Denzin and Lincoln, 1994; Denzin and Lincoln, 1998; Denzin and Lincoln, 2000a; Denzin and Lincoln, 2000b; Lincoln & Guba, 2000). The fundamental principles of qualitative research include a search for meaning, holistic interpretations, inductive analysis, human instruments for data analysis, and thick descriptive nature, all of which suit higher education inquiry (Whitt, 1991). Qualitative research may be especially useful when considerable numbers of quantitative studies have not touched the core solution, while the question persists and continues to be mathematically factored.

Awareness of qualitative research is growing within higher education as researchers seek to give meaningful understanding to the complexities of institutional processes and programs and find that other methods may not be apt (Whitt, 1991). Qualitative methods are considered to be superior for achieving in-depth understanding of complex organizations (Whitt, 1991), such as colleges and universities, and complex issues such as retention and cocurricular learning. In fact, Braxton (2000) proposes a reconsideration of the retention question that would use inductive research using organizational theoretical perspective to explain student departure. The present study represents both types of studies considered relevant for higher education; the study of processes and the study of quality (Whitt, 1991).

Research Design

Since qualitative studies invariably allow for creativity of organization and composition independent of the situation (Langenbach, Vaughn, and Aagaard, 1994), the research question of this study prescribes an exploratory research design with data sources from multiple sites. The study seeks answers the following questions: What patterns characterize the cocurricular programming opportunities at public research universities with exemplary retention rates? The study is a qualitative analysis of a circumscribed system composed of a process or issue bounded by time and space occurring at multiple sites; a system usually complex with layers of interrelated parts that form the whole (Stark, 1995). The use of multiple sites allows for the identification of patterns across institutions. Analysis consists of a search for patterns in programming that emphasizes retention efforts and reflects strategic intent.

Exploratory designs attempt to resolve the issue in the sense of accumulating sufficient knowledge to lead to understanding or explanation, "a kind of dialectic process that play off thetical and anitithetical propositions that form the problem into some kind of synthesis" (Lincoln & Guba, 1985, p. 227).

Sample

Purposeful sampling is a conventional technique in qualitative methods. However, the strategies of selection must be clearly rationalized and defended. This was a multi-site study considering seven public research universities. The purpose of the sampling of this study was based on benchmarking properties, which entails the selection of the best in class for examination and analysis. The purpose of

benchmarking is to gain excellence by comparing current operational processes and practices with the most effective practices in a selected function to learn from the finest. This study used previously published statistical data from the Consortium for Student Retention Data Exchange (CSRDE), a database funded by the National Science Foundation (NSF) and published by the Center for Institutional Data Exchange and Analysis (C-IDEA) at the University of Oklahoma. Selection of the seven best-in-class institutions is based on 2000 freshmen retention data. The best-in-class sample was chosen from the CSRDE population of public research institutions with the highest first-year freshmen retention rates.

The sample is small and should not be considered representative of all institutions with the selected retention rates. However, it is also important to emphasize that qualitative research does not seek to generalize findings. Qualitative research aims for understanding, and it is up to the reader, not the researcher, to determine the transferability of the results (Peshkin, 1993; Rosman & Rallis, 1998).

The Carnegie Classification for institutions of higher education was used to define the type of institution included in the study. This classification was developed by the Carnegie Institute and categorized types of institutions for researchers and administrator in higher education. The classification used in this study is the Doctoral/Research Universities-Extensive (DRE). While these universities usually offer a broad array of undergraduate programs, they are dedicated to graduate education, specifically the doctorate. The DRE institutions have awarded at least 50 doctoral degrees a year in at least 15 various disciplines (McCormick, 2001).

Institutions selected for this study were ranked according to retention rates greater than 92%. The national average retention rate is 79.9% for 2002 first-time freshmen, according to the Consortium for Student Retention Data Exchange (Hayes, 2002). The selected institutions were chosen from public DRE institutions based on the 2000 freshmen retention data of 360 institutions participating in the Consortium for Student Retention Data Exchange (CSRDE) longitudinal study (Hayes, 2002).

Seven institutions were selected for the study from the group of twelve in Table 1; the remaining were eliminated. The elimination of certain institutions was necessary to balance the geographical locations and the sizes of the institution as represented by the freshmen cohort. This need arose due to the repetition of institutions within the same state system and repetition of geographical location. In the first round of elimination, all but one of the institutions from the west were eliminated due to the imbalance of the sample toward institutions from the same state system. One entry from the system was chosen to represent the system and insure the depth of the selection of institutions. Universities in the sample from that system were separately ranked and the university with the highest retention rate within the system was chosen for the study. In the second phase of elimination, there were three institutions remaining with 92% retention. Of these, two were from the south and one was from the central corridor of the United States. In order to represent most of the U.S. regions, the institution in the central state was selected. The two remaining institutions were both from southern states. The institution with highest head count of first-year students was selected to increase the range of institutional size. Table 1

shows the institutions selected for this study, their retention rates, and the labels *A* through *G* for future reference in this study.

Table 1.

Institutions Selected for the Study

Geographical Location	2000 Headcount	2000 Retention Rate	Label
~~South~~	~~6908~~	~~92~~	
~~West~~	~~3636~~	~~92~~	
~~West~~	~~4307~~	~~92~~	
South	7559	92	A
Central	6174	92	B
North	5623	93	C
East	3408	95	D
North	5403	95	E
East	2927	96	F
~~West~~	~~3119~~	~~96~~	
~~West~~	~~3734~~	~~96~~	
West	4189	97	G

Data Collection

This study is extensively descriptive, with data from the universities consisting of descriptions of their academic support opportunities, academic cocurricular activities, supporting organizational structures, and academically-linked programming contributing to exemplary retention rates. For the purpose of this study, institutions with exemplary retention rates are those institutions with more than 92% first-time freshmen returning for their sophomore year. The primary data illustrating the efforts

of each of these universities are assembled from institutional web pages, college catalogues, non-referred news articles, dissertations, and journal articles. The data for this study was collected within a one-month period (February, 2003) and collection was confined to web pages updated within the last year and institutional catalogues from the current year, 2002-2003. The present study is limited to the opportunities offered to first-year students. First-year students are at the greatest risk of departure, with nearly half leaving before their sophomore year (Hayes, 2002). As mentioned earlier, the greatest possibility of impact for persistence occurs early in the first-year students' year, perhaps as early as during the first ten weeks (Tinto, 1998).

One of the most problematic issues is often referred to as the determination of the right combination of description and analysis (Palmquist, 2002). Stating the facts about the site as documented is often termed a narrative description (Cresswell, 1998). The researcher provides thick description, addressing each step of the research process and providing sufficient context for decisions made in the research design and for the conclusions drawn. In describing a site, the researcher may provide background information that includes historical, demographic, political, or narrow constructs such as time and place. Palmquist (2002) believed that qualitative studies are convincing and accurate when they provided a multidimensional profile of activities in a particular environment and are based on several information sources following a corroborating mode.

It is important to note that in qualitative studies, while researchers begin their studies with questions that drive the inquiry and influence the key factors sought during data collection, new key factors may emerge during data collection.

Unexpected patterns, categories, or linguistic features may become evident only during the course of the research. While not bearing directly on the researcher's guiding questions, these factors may become the basis for new questions asked at the end of the report, thus linking to the possibility of further research. As the information is collected, researchers asynchronistically search for the significance of their data. The data for this study were collected within a one-month period and confined collection to web pages updated within the last year and institutional catalogues from the current year, 2002-2003. Merriam (1998) suggested continuously scrutinizing, verifying, and questioning to strengthen the collected data. She argues that this process follows a cone-shaped design, resulting in less data gathering in later phases of the study.

Trustworthiness, according to Lincoln and Guba (1985), is comprised of four concepts: credibility, transferability, dependability, and confirmability. Credibility results when findings and analysis are produced through prolonged engagement to gain understanding, persistent observation to prevent distortions, or by triangulation to view from several perspectives. Triangulation is a method that views and analyzes data from several perspectives utilizing different sources, methods, investigators, or theories and includes different sources of the same data. Transferability is achieved by providing thick description and a substantial depiction of the time and context of the data to make the transfer to another context a possibility. Dependability of the process can be achieved by triangulation, the overlap of sources, or by creating an audit trail. Confirmability of the findings and analysis are also achieved through triangulation or audit trail. The audit trail, "the residue of records stemming from the inquiry" (Lincoln

& Guba, 1985, p. 319), is comprised of six categories: raw data, data reduction, data analysis, process notes, preliminary notes, and pilot development. At each of these points in the audit trail, four components are noted: credibility, transferability, dependability, and confirmability (Lincoln and Guba 1985).

Triangulation of data are crucially important in naturalistic studies. As the study unfolds and pieces of information are collected, steps should be taken to validate each against another source. "No single item of information, unless coming from an elite and unimpeachable source should ever be given serious consideration unless it can be triangulated" (Lincoln & Guba, 1985, p. 283). However, the question of this study asks what the institutions offer students, and the source of the data are from the institution. Thus, the data in this study are elite and unimpeachable. The items of information in this study conform to Lincoln and Guba's caveat in terms of triangulation.

Interpretation of Data

Narrative descriptions of each university are sorted first by cocurricular opportunities for each institution and are summarized by institution and by type of program. Institutional characteristics are noted and summarized for background information (Appendix A.). This study does not utilize institutional characteristics as the main focus, but merely as additional information about the institution. Appendix A includes data on Carnegie Classification, first-year retention, number of freshmen admitted, admission test scores, selectivity, first-term GPA, percent of underrepresented minorities, percent of non-traditional students, and percent of

students living on campus (Smith, Garlough, Tu, & Yang, 2000). The format for categorization of data, suggested by Merriam (1985), delineates seven suggestions for the organization and presentation of categorical aggregation:

1. Construct condensed interpretations for groupings
2. Articulate narratives with headings
3. Summarize and introduce each section
4. Encapsulate ideas in global titles
5. Support with appendixes
6. Present graphically

Generally, researchers categorize their data in one of two ways: holistically or through coding. Holistic analysis does not attempt to fracture the evidence into parts, but rather to draw conclusions based on the text as a whole (Cresswell, 1998). Data are commonly interpreted by systematically searching the information base to identify or categorize specific observable characteristics. These observable factors then become the key elements in the study (Palmquist, 2002). In this study, the researcher analyzed the data, assembled information into large clusters of ideas, and provided details that support themes. From the elements, categorical aggregation was produced and themes across universities were sought to discern ideas common to all. Patterns were ascertained in addition to correspondences across categories. The examination and compilation of common elements produced the factors for construction of an analysis (Cresswell, 1998). Delimiting occurred as the raw data were summarized, becoming better conceptualized and better articulated, so that categories were reduced while options diminished (Lincoln & Guba, 1985). "At the same time the categories become

saturated, that is so well defined that there is no point in further exemplars," redundancy occurs, and pattern or categories are anchored (Lincoln & Guba, 1985, p. 344). In other words, saturation brings closing to that part of the investigation and the researcher can continue to establish additional patterns or analyze the data.

Data Analysis and Synthesis

The next step is analysis and synthesis, where the researcher made an interpretation of patterns. The Cresswell (1998) terms the analysis process as pulling apart and putting it back together in more meaningful ways. Trustworthiness becomes a key concern at the analysis stage, and many researchers go to great lengths to ensure that their interpretations of the data will be credible and dependable (Lincoln and Guba, 1985). Conclusions are couched in terms of theories and constructs (Cresswell, 1998) and the researcher may note several theories that apply to the results of the findings. "Perspective seekers" are not interested in making generalizations from a sample to the general population (Langenbach, Vaughn, & Aagaard, 1994). Since "perspective seekers" follow inductive inquiry, they gather findings and then look for theory to explain what they have found. It is possible for "perspective-seekers" to relate the results of their study to theory and this researcher discusses retention theory that applies to the results of the findings. This usually involves further abstraction on the part of the researcher, whose generalizations are made by implication, often in the form of a global title (Langenbach, Vaughn, & Aargaard, 1994). In the interpretation of the study, a researcher may make directive or naturalistic generalization. In directive interpretation, according to Cresswell (1998), the researcher looks at a single

illustration and concludes meaning. Naturalistic generalizations are what the reader gleams from the study. Because qualitative studies tend to be exploratory, most end with implications that emerged during the research for further study. The next chapter proceeds to an interpretation of the data collected from the investigation of those institutions with exemplary retention rates.

CHAPTER 4

INTERPRETATION

Introduction

The intent of this exploratory study was to discover the patterns that characterize cocurricular opportunities for first-year students at public research universities with exemplary retention rates. The intent of this chapter is the interpretation of the data, the explanation of a summarization for new understanding (Bloom, 1956). The researcher had the following guiding questions in mind while examining the public records. (1) Does this cocurricular opportunity have an academic intention? (2) Is it sponsored and staffed by the institution? (3) Could it influence retention directly or indirectly? (4) Is the programming publicly posted on the institution's web site or in its catalogue? (5) Has the institutions' site been searched from the main page until redundancy occurs and saturation is achieved? The academic cocurricular programming summaries of the public documents were then interpreted by "part-for-part rendering," reordering, and rearranging of information (Bloom, 1956, p. 205). Since opportunities were collected and added to the raw data as they occurred in the public record, a program or type of program may exist in reality but may not be mentioned in the public documents examined. In such a case, the program was not considered to fit within the guiding questions and was not included in the study. After the raw data were collected, narrative descriptions of each university's cocurricular opportunities were summarized and interpreted. Description follows of the academic cocurricular opportunities at institutions A through G follow.

University A

The Office of Student Affairs sponsors several programs. The Freshmen Interest Group (FIG) program is an opportunity for students to take classes and study with a small cluster of first-year students. Organized by field of study, each cluster has two courses, mentors, tutors, and seminars in common. The Volunteer Center supports service learning on campus and strives to educate students on becoming advocates for service while improving cognitive development. The Office of New Student Services coordinates spring, summer, and fall orientations.

Retention Services strives to supports students through academic challenges. Student Support Services is a federally-funded program to promote student retention and which features student peer advisors. The Gateway Program offers smaller classes, personal assistance, academic advising, collaborative learning, peer advising, and tutoring to selected students. The Faculty/Staff Mentoring Program offers learning opportunities through the cultivation of personal relationships and individualized services. Achieving College Excellence (ACE) offers services to students including tutoring, academic workshops, peer advising, and graduate school advice.

Within the Division of Housing and Food Service, the residential First-year students Interest Group (FIG) program offers an opportunity for students to live and take classes with a small cluster of first-year students. Organized by field of study, each cluster shares two courses, mentors, tutors, and a seminar. Collaborating with the College of Engineering Peer Mentor Program, Housing offers engineering students academic support in the residence hall through peer mentors, programming, and referrals.

Bridging Disciplines is an interdisciplinary program that includes not only the area requirements and electives, but internships and research experiences called "Connecting Experiences." First-year Students' Seminars are small courses limited to first-year students and taught by outstanding professors. Seminars may aid in the transition from high school to college-level thinking and writing, while assisting in making careering choices. Academic Skills Program is a state-legislated program requiring all first-time first-year students to be tested in basic skills. If students do not pass, they are required to take the appropriate developmental courses each semester until requirements are completed.

The College of Arts and Sciences is an example of academic advising at the college level. The dean's office advises students who are undeclared or on probation, while department advisors advise declared students. The dean's office and the department assist students with degree plans.

Undergraduate Research Programs promotes undergraduate research opportunities on campus through workshops, student organizations, and web communication. SURGE (Science Undergraduate Research Group) is a network of undergraduate students who meet to discuss and promote involvement in scientific research on campus. EUREKA (Enhancing Undergraduate Research, Experience, Knowledge and Access) is a web site central to undergraduate research information resources with topics, including strategies for getting involved in research.

The Learning Center offers services to individuals or groups and includes supplemental instruction, tutoring, diagnostic testing, academic counseling, handouts, classes, and workshops. This office supports a staff of eighteen, including directors, public relations officer, and coordinators.

University B

The office of the Vice Chancellor for Student Affairs offers several programs. Orientation is the primary purpose of New Student Programs. Summer orientation is mandatory for first-time first-year students entering in the fall, whereas parents have an optional program to attend. Minority students are offered an opportunity to attend special orientation services. The purpose of the Office of Volunteer Programs is to promote service learning to enhance the academic curriculum by fostering collaborative relationships within the community.

University Housing requires first-year students to live in residence halls or other certified facilities. Residence halls have academic resources, including eight libraries, drop-in tutoring by department area, and classes in the halls. Living-Learning Communities are residential halls in which students' academic experience is supported through on-site classes, advising, tutors, and special opportunities to interact with faculty. Students have a choice from six different housing themes: leadership, international languages, self-directed programming, career choices, women in science, and first-year students.

Learning in Community (LINC) offers interdisciplinary courses for students to work on real-world problems that provide interdisciplinary team learning. LINC formally integrates problem-based learning and service learning into the curriculum.

The College of Liberal Arts supports several programs. The Reading and Study Skills Program at Counseling Center helps students read faster, study effectively, and manage their time more efficiently. Learning Communities are groups of 18 first-year students who attend three classes together during the fall semester. Two of the classes fulfill general education requirements. The third class, LAS 100, is a one-

credit-hour course led by a Learning Leader, a junior or senior honors student. The class meets weekly to cover topics relevant to incoming students. The undergraduate 199 courses are open seminars involving topics of current interest, for which students are encouraged to suggest topics. They may be started any time through the fifth week of classes and carry one to five hours of credit.

Collaborating with the Office of Minority Student Affairs, the College of Liberal Arts Academic Assistance Program offers selected directed advising and counseling, tutoring, developmental assistance, and monitors the student participants' academic progress. The Transition Program is a campus-sponsored academic support program designed to provide developmental and academic assistance to a selected group of first-year students in the form of a summer bridge component and an academic year component. Both components provide students with intensive academic and career counseling, developmental skills enhancement, personal support services, and opportunities to enroll in selected support-based sections of existing courses. The Writers' Workshop is part of the Center for Writing Studies, and provides writing assistance to students in individual consulting sessions.

Undergraduate advising and research opportunities are not centralized. Students are advised within their own colleges or departments, rather than at the campus level. Most colleges assign students to a specific adviser and a peer advising office has been established. Advising is also available in residence halls. Undergraduate research opportunities are offered on a departmental basis.

University C

The following University Learning Centers provide opportunities for students to learn in partnership through peer tutoring: the Center for Public Speaking and Civic Engagement, the Language Center, the Math Center, Supplemental Instruction, Technology Tutors, the Tutoring Center, and the Undergraduate Writing Center. Note taking, time management, test preparation, test taking, and test anxiety are some of the areas that are covered at five locations with several satellites.

The Division of Undergraduate Studies (DUS) is an enrollment program for students who are undecided and have not selected a major. DUS provides academic advising and educational planning before the first semester. First-Year Testing, Counseling, and Advising evaluates entering first-year students in terms of academic abilities, interest, and educational plans and begins the orientation process. The Center for Excellence in Learning and Teaching has a Take Your Professor to Lunch program giving instructors and students in large class sections a chance to become acquainted and discuss how the course is progressing at mid-semester.

The Office of Undergraduate Communications is a central clearinghouse providing students with information regarding academic opportunities. Research Opportunities for Undergraduates coordinates opportunities for undergraduates to work with researchers on specific projects. First-Year Seminars are one-credit required courses that introduce students to the intellectual community, university standards, and strong academic habits in small class environments. The Learning Edge Academic Program (LEAP) allows students to take linked courses, live together, and work as a study team. Discover House is a living-learning opportunity that enables undecided

students to explore career and major options through programming and special advising.

The Office of Academic Advancement Programs supports the College Assistance Migrant Program which offers support to students from migrant and seasonal framework families, in the form of academic counseling, peer and faculty support, and orientations. The Educational Opportunities Program offers low-income, first-generation students assistance in enrollment, academic advising, and locating academic assistance. The Comprehensive Studies Program is designed for students in Educational Opportunities Programs and offers student developmental courses, tutoring, faculty advising, and intensive individual advising. Student Support Services Program collaborates with academic units and student services programs to offer low-income, first-generation students academic support and out-of-class learning opportunities.

Students who have declared a major are advised within their own colleges or departments, rather than at the campus level. Most colleges assign students to a specific adviser and a peer advising office has been established. Advising is also available in residence halls that are special living options. The First-Year Discovery Program is an interactive course intended for first-year students only, enabling faculty to share their research in a particular area with students in small classes. Discovery sections cover a wide range of disciplines, with enrollment is limited to a maximum of twenty students per section.

Special living options are residential halls in which students' academic experience is supported through on-site classes, advising, tutors, and special opportunities to interact with faculty. Seventeen different themes include the arts and

architecture, business and society, engineering and applied sciences, earth and mineral sciences, service learning, undecided majors, international, information science and technology, women in science, science and technology, health education and awareness, environmentalism, debate, substance-free environments, and engineering.

University D

The Learning Communities program allows groups of 18 first-year students to attend three classes together in the fall semester. Two courses are from the College of Liberal Arts and the third course is one-credit hour taught by an honors student on topics relevant to incoming students. Comprehensive Studies Program offers students of color the opportunity to take intensive sections of standard courses with advising, tutoring, and mentoring services.

First Year Seminars are interactive courses that enable faculty to share their research with students. Sections cover a wide range of disciplines and enrollment is limited to a maximum of twenty students per section. Each semester, the program sponsors courses from various departments and divisions in which some or all of the course content is in a language other than English, in a program called Language Across the Curriculum.

Undergraduate Research Opportunities Program (UROP) creates research opportunities for first- and second-year students with faculty; approximately 900 students and 600 faculty participate. Open to both minority and majority students, the program has an emphasis on underrepresented minorities and women.

Multi-ethnic Student Affairs coordinates and provides academic support services for first-year students from multi-ethnic backgrounds. New Student Programs

provides orientation programs that are mandatory for all new students during the summer, winter, or early in the fall for testing and placement, academic advising, and course registration. The University Mentorship Program matches incoming students with a faculty member by academic interest.

Students who have declared a major are advised within their colleges or departments, rather than at the campus level. Most colleges assign students to a specific adviser and a peer advising office has been established. Advising is also available in residence halls that are special living options. Tutoring is available by department.

The Writing Center offers the Writing Workshop, where students may schedule appointments with faculty for help with writing assignments. Peer tutors are also available on a walk-in basis. OWL is a tutoring program that offers online service. The Science Learning Center provides computer labs, graduate student instructors, study carrels, and reference desk. The Math Lab is a walk-in tutoring service with peer tutors, who are advanced undergraduate students, or graduate students. Faculty volunteers also participate.

The Counseling and Psychological Service provides drop-in workshops focusing on strategies for effective studying, test preparation, tests-taking strategies, management of test anxiety, and procrastination or time management. The purpose of the Center for Community Service and Learning is to promote service learning to enhance the academic curriculum by fostering collaborative relationships within the community.

Residence halls collaborate with Academic Affairs to hold regular hours for academic advising and academic peer advising. A collaborative effort between

Multicultural and Diversity Programs provide and train minority peer advisors. Twelve residence hall libraries offer many services and study environments. The Residence Hall Repertory Theater group performs for the residents. Food for Thought allows students to invite faculty to meet for lunch.

The Residential College (RC) is a four-year liberal arts unit (within the College of Literature, Science and the Arts) with more than 50 faculty, about 900 students, and an interdisciplinary curriculum. It offers a unique living-learning experience in which students benefit from being members of a small college community with full access to the offerings and resources of a world-class, research-oriented university. Living-Learning Communities are residential halls in which students' academic experience is supported through on-site classes, advising, tutors, and special opportunities to interact with faculty. Four different themes include the health science professions; a focus on writing and communication skills; a commitment to community service, social justice, and academic study; and a Germanic languages and literature immersion. Undergraduate Research Opportunities Program in Residence (UROP) and Women in Science and Engineering (WISE) participants live in residence hall communities.

University E

The Office of Academic Affairs supports APPLES, which promotes service learning to enhance the academic curriculum, by fostering collaborative relationships within the community. The Computing Initiative is a program that requires all incoming students to own a laptop computer.

The Black Cultural Center has several academic programs, including the African Diaspora Lecture Series, the Memorial Lecture, and the Cross-Cultural

Communications Institute committed to improving race relations and racial understanding on campus and throughout the community. Hekima, Swahili for knowledge, provides students with an opportunity to make connections between their coursework and the literature of their own culture.

The Learning Centers provide several services, including academic counseling to create strategies for improved performance on a one-to-one basis. The Reading and Learning Lab is a program for students to learn effective reading and learning strategies. Supplemental Instruction is a program of guided study groups teaching how and what to learn. Peer Tutoring is a program of students tutoring students on an individual basis. The Math Help Center offers students additional help in math from qualified undergraduates, graduate students, and faculty on a walk-in basis. E-Help is a tutoring service where students can get help through e-mail. At the Writing Center, students may schedule appointments for help with writing assignments.

Academic advising assists students with all aspects of educational and career planning. In the College of Liberal Arts, advising is centralized and managed by eight teams of advisors. Students are assigned to a specific advisor from a team, based on their major. The First Year Seminar Program, an interactive course, allows faculty to share their current research in a particular area with students in small classes. Sections cover a wide range of disciplines and enrollment is limited to a maximum of twenty students per section.

Undergraduate Research at the Center for Academic Excellence offers help to students with research projects, finding a mentor, and searching for available projects. Summer Reading Program, required for all first-year and transfer students, is designed to prepare incoming students for some of their first-year courses and to stimulate

conversation inside and outside the classroom about social issues in the new millennium. First-Year Initiative Program (FYI) is a unique experience designed to assist first-year students in exploring academic and career interests and confronting the challenges away from home. Students interact extensively with faculty, attending performing arts events and participating in community service. Counseling & Psychological Service provides academic counseling, including assessments and interventions for academic difficulties. Orientation Programs are mandatory for all new students during the summer, for testing and placement, academic advising, and course registration.

The Division of Housing and Residential Education collaborates with academic departments to sponsor theme housing, where course credit is given for activities completed in residence. Nine housing themes include diversity, French, German, Spanish, health sciences, global business, first-year initiative, women's perspectives, and academic enhancement.

University F

Math Tutoring Center offers students additional help in math from qualified students, on a walk-in basis, in three different locations. At the Writing Center of the English Department, students may schedule appointments for help with writing assignments. In addition, dissertation workshops are offered to students from all disciplines to discuss the process and receive feedback.

The Office of African-American Affairs has a Peer Advisor Program to help first-year students with their transition to university life, encouraging academic excellence and matching them with upper-class peer advisors. Faculty-Student

Mentoring Program pairs each student with a faculty or administrator mentor to provide intellectual stimulation, academic support, career guidance, and friendship.

Orientation Programs are mandatory for all new students during the summer or fall, for academic advising and course registration. Grounds for Discussion is a theatrical production followed by small group discussions that address student life concerns. First-Year Seminar is a second-semester series of discussions that focuses on community, personal accountability and identity, finding a niche, and relationships with faculty.

First-Year Experience (FYE) Program is an additional advising resource for first-year students providing a graduate-student advisor, who serves as liaison between first-year students and academic deans. Graduate student advisors help students with classes and career planning. They plan interesting programs that provide opportunities for first-year students to connect with faculty to gain information about graduate and professional schools, and generally help the student navigate a new environment. Advisors help create an intellectual community through programs within the residence hall. University Seminars are small classes over a wide range of disciplines, that enable faculty to share their research in a particular area.

The Office of Peer Advising and Mentoring coordinates several programs to connect new students with upperclass mentors or advisors, including Asian/Pacific American Peer Advising and Family Network Program and Hispanic/Latino Peer Mentoring Program. The Office of Community Service promotes service learning to enhance the academic curriculum by fostering collaborative relationships within the community.

The University requires all first-year students to live in housing specifically designated for them to provide opportunities for learning outside the classroom. The Residence Life Office includes the student resident staff, three deans of students, and four area coordinators, totaling over 240 staff members. First-year students are advised through the deans' offices.

The Center for Undergraduate Excellence is a university collaborative effort to advise students regarding undergraduate research opportunities and to create interdisciplinary majors. The Undergraduate Research Network is a University collaborative effort supporting the undergraduate research community, helping students to begin projects, creating resources and guidelines, offering mentorship, and providing a venue to show their results.

University G

E-Campus is an online program that lists each department in the College of Letters and Science. Each department heading links to a complete list of courses. Each course links to a syllabus, the registrar's course detail, registrar's schedule of classes, textbook purchasing, library reserves, and email to the professor and teaching assistants.

The university has two undergraduate research centers, one for students in the humanities and social sciences and one for students in life and physical sciences. The centers coordinate several programs: the Student Research Program (SRP) is designed for entry-level research experiences aimed at lower division students and providing workshops, counseling, and mentors. This programs offers one unit of course credit for every five hours of research activity. Research stipends for undergraduates are

offered to financially eligible students in projects lasting two quarters. Celebrate Achievements in Undergraduate Research sponsors annual events to showcase students' efforts. Communication about Undergraduate Research maintains a web site, collects and archives data, and publishes two undergraduate journals. Center for Academic and Research Excellence (CARE) offers a variety of research opportunities in the form of hands-on apprenticeships and provides stipends. Counselors offer academic support.

The General Education Cluster Program allows first-year students to take general education courses within such thematic units as social justice, diversity, history of modern thought, world economy, the cosmos, and biotechnology. Fiat Lux Seminars are interactive, one-credit hour courses that enable faculty to share research in particular areas with students in small classes. Sections cover a wide range of disciplines and enrollment is limited to a maximum of twenty students per section. The Center for Experiential Education and Service Learning (CEESL) is responsible for fostering and promoting service learning, academic internships, participatory research, and other forms of experience-based education.

Colleges provide academic advising after orientation. The ASK Program is a peer counseling program that provides service in five drop-by locations and have the authority to sign off on some requests. Orientation Programs are recommended for all new students and are offered during the summer and winter. Sessions provide introduction to university life and academic advising.

The Academic Advancement Program (AAP) is a multiracial program that promotes academic achievement by providing students with tutoring; academic programs; academic, personal, and career counseling; and research and service

learning opportunities to participate in innovative programs. The Leading to Undergraduate Success (PLUS) Program is a multiracial program that also promotes academic achievement, providing students with academic planning and advisement, tutoring for every course, workshops and seminars, and preferential course enrollment. The Pre-graduate/Pre-professional Undergraduate Mentoring Program (PUMP) serves first-generation low-income students, encouraging post-graduate education by facilitating mentoring with faculty, faculty roundtable discussions, information sessions, and workshops.

At the Composition Tutoring Lab, students can schedule appointments or drop in for help from qualified peers with writing assignments. The Math/Science Tutoring Lab offers students additional help in math in small peer groups scheduled early in the quarter. The Student Retention Center provides services to all students, but targets students in academic difficulty or facing dismissal. Services include peer counseling in academic skills, time management and effective use of resources. Other services include exam files, study hall, study groups, mentorship, and professor evaluation files. The Academics in the Commons program offers a wide variety of workshops to improve study skills and academic success: time management, effective note taking, mid-term preparation, and coping with academic stress.

Housing and Hospitality Services offers special living options in residential halls, including theme housing, in which students' academic experience is supported through on-site classes, advising, tutors, and special opportunities to interact with faculty. Nine different themes include academic enhancement, diversity, service learning, fine arts, social justice, health, women's issues, transfer students, and environmental issues. The Office of Residential Life (ORL) and the College of Letters

and Science provide year-round afternoon academic counseling in the residence halls. The College also provides study skills workshops. Orientation Programs are recommended for all new students and are offered summer and winter. Sessions provide introduction to university life and academic procedures.

Interpretation of the Data

This chapter is a summarization of academic cocurricular programming of public documents and interpretation through part-for-part reordering and rearranging of information. Narrative description provided thick descriptive details. From the previous narration, each program was reviewed and from the narration, condensed into short labels, and reordered alphabetically in Table 3. Institutions sharing specific labels were noted and marked on the grid by the use of an *x*. Ninety-three specific cocurricular opportunities were found at public research universities with exemplary retention rates (Table 2).

Table 2.

Specific Academic Co-Curricular Program Offerings

Program Offerings	Institution						
	A	B	C	D	E	F	G
Academic Advising by college-assigned advisor	x	x	x	x	x	x	x
Academic Advising by college in teams					x		
Academic Advising by dean or department	x						
Academic Advising by department		x					
Academic Advising by Peers	x	x		x	x	x	x
Academic Advising by Undergraduate Division-assigned advisor			x				
Academic Advising Quick Questions	x		x		x		x
Academic Counseling	x		x	x	x	x	x
Academic Counseling Workshops				x			
Academic Testing and Counseling	x		x	x		x	
African-American Center Lectures					x		
African-American Center Mentoring					x	x	
African-American relating courses to culture					x		
African-American Tutoring						x	
Asian Center Mentoring						x	
Asian Center Tutoring						x	
Communication Center for Undergraduates			x				
Communication Center Syllabi Online							x
Computer Learning Center			x				
First Generation/Low Income Academic Counseling	x	x	x				x
First Generation/Low Income Center Advising	x	x	x				x
First Generation/Low Income Supplemental Instruction	x	x	x				x
First Generation/Low Income Center Tutoring	x	x	x				x
Freshmen Interest Groups	x	x	x	x			
First-Year Cluster Scheduling in Themes							x
First-Year Course		x					
First-Year Seminars	x		x	x	x	x	x
Hispanic Center Mentoring						x	
Languages Across the Curriculum				x			
Languages Tutoring			x	x	x		
Laptop mandatory ownership program					x		
Learning Center Academic Counseling	x				x		
Learning Center Online	x						
Learning Center Peer tutoring			x		x		x
Learning Center Satellites			x				
Learning Center Study Groups							x
Learning Center Supplemental Instruction	x						
Learning Center Tutoring	x		x		x		x
Learning Center Workshops	x						x

Specific Program Offerings (continued)	Institution						
	A	B	C	D	E	F	G
Math Center Tutoring			x	x	x	x	x
Mentoring from Faculty	x						
Migrant Workers Center Advising			x				
Migrant Workers Center Mentoring			x				
Minority Advising		x					
Minority Intensive Courses with Advising, Mentoring, and Tutoring				x			x
Minority Orientation		x					x
Minority Tutoring		x		x		x	x
On-line Advice about Professors				x			x
Orientation Advising	x	x		x	x	x	x
Orientation Program Mandatory		x		x	x	x	
Orientation Online			x		x		x
Orientation Registration				x	x	x	
Problem-Based Experiential Learning course		x					x
Public Speaking and Civic Engagement Center Tutoring			x				
Reading Lab		x			x		
Recommended Reading Program						x	
Residence Hall Academic Counseling						x	x
Residence Hall Academic Dean						x	
Residence Hall Advising		x	x	x	x	x	x
Residence Hall Courses		x					
Residence Hall for First-Year Students		x	x		x	x	
Residence Hall Graduate Advisors				x			
Residence Hall Libraries		x	x	x		x	
Residence Hall Mandatory		x				x	
Residence Hall Themes	x	x	x	x	x		x
Residence Hall Tutoring		x	x	x			x
Residential Clusters/Living-Learning Communities	x	x	x	x	x		x
Residential Colleges				x	x	x	
Residential Theatrical Group on Issues						x	
Science Learning Center Study Groups				x			
Science Learning Center Tutor				x			
Service Learning Centers	x	x		x	x		
Service Learning Credit							x
Summer Reading Program					x		
Supplemental Instruction			x	x	x		
Take a Faculty Member to Lunch Program			x	x			
Technology Tutoring			x				
Tutoring at the Department Level		x		x			
Undergraduate Division			x			x	
Undergraduate Research Academic Counseling							x

Specific Program Offerings (continued)	Institution						
	A	B	C	D	E	F	G
Undergraduate Research Center	x		x	x	x	x	x
Undergraduate Research Credit							x
Undergraduate Research Fellowships							x
Undergraduate Research Journal							x
Undergraduate Research Network	x		x	x	x	x	x
Undergraduate Research Residence Hall				x			
Undergraduate Research Workshops	x			x			
Women's Center Mentoring						x	
Women's Center Tutoring						x	
Writing Center Advising				x			
Writing Center Online Tutoring			x	x			
Writing Center Tutoring		x	x	x	x	x	
Writing Center Workshops		x		x		x	x

Summary

As recommended by Lincoln and Guba (1985), trustworthiness was addressed by creating an audit trail to consider credibility, transferability, dependability, and confirmability. Credibility resulted through protracted interaction with the raw data during summarization and condensation into labels. Transferability was achieved by providing thick description and a substantial depiction of the time and context of the data to make the transfer to another context a possibility. Dependability and confirmability were achieved through the audit trail. Analysis and identification of domains of the data are presented in next chapter.

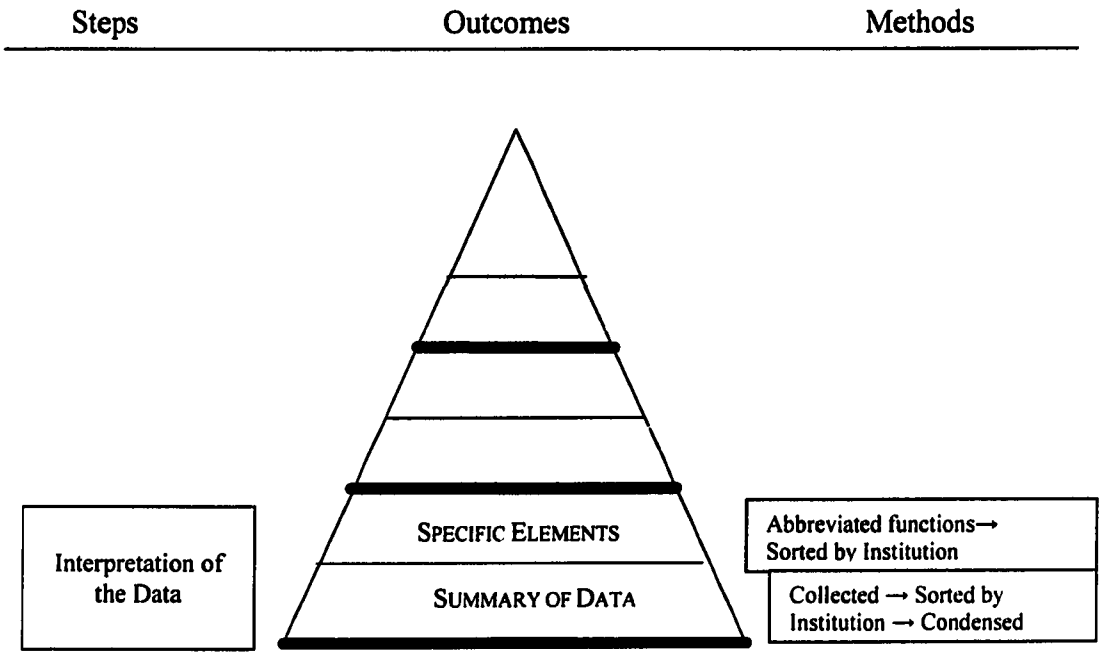
Although competitive intelligence professionals may not have an analytic process that is scientific (Walle, 2001), the attempt has been made in the present study to construct a logical process (Figure 2.). In this chapter, the raw data was collected by institution until material redundant and collection saturated. The data was

interpreted, summarized, condensed, and presented by institution. Then the data was abbreviated, collapsed into global titles, and presented by specific element and institution.

Figure 2, *Audit Trail for Interpretation of the Data*, diagrams the flow of the analysis. Note that in Figure 1, the data from Table 2, *Specific Academic Cocurricular Program Offerings* are simply titled Specific Elements. The audit trail includes germane observations regarding influences on the process (Lincoln & Guba, 1985). While checking the raw data to confirm the analysis of next chapter, Chapter 5, Table 2 was adjusted. At that point, while no additional offerings were added, three *x* markings were added to improve accuracy. The traces of potential categories began to emerge from the rearrangement of the information, but no significant findings were evident. The audit trail was designed based on a cone-shaped design resulting in greater condensation of data as the study progresses. As the analysis and synthesis continued, the audit trail figure is repeated in Chapters 5 and 6, continuing to diagram the process.

Figure 2.

Audit Trail for Interpretation of the Data Chapter



CHAPTER 5

ANALYSIS

Introduction

This chapter analyzes and identifies categories of academic cocurricular programs at institutions with exemplary retention. According to Bloom (1956), analysis is the breakdown of an explanation into its constituent parts or domains, such that a hierarchy of ideas becomes clearer and the relationship between ideas becomes more explicit. Analysis clarifies the interpretation and indicates how it is organized to convey its effects, as well as illustrating its core and arrangement. In order to arrive at the universal elements, the researcher had the following guiding question in mind for each domain, while examining specific elements, data summary, and checking against raw data. What is true about this domain that applies to all or most of the schools? Bloom (1956) argues that identification of the organizational structure and the connections between the parts constitute analysis. This chapter first analyzes the data, and then identifies the implicit connections between the elements of the categories. In words related specifically to this study, this chapter identifies domains of academic cocurricular activities and the elements that are universal to the institutions.

Identification of Domains

The breakdown of the parts of academic cocurricular opportunities into categories consisted of sorting, coding, and reordering (Table 4). Categories were not in the first sorting, but were derived from the third sorting. Reasoning for the grouping follows. From the specific academic cocurricular programming, all of the ninety-three

cocurricular offerings were initially broken down into categories that were later amended. To improve the categorization, raw data was sorted. Five groupings or domains emerged; learning, research, service learning, residential learning, and communicating.

At that point in the categorization two concerns appeared. The first concern was that the learning group was large and unspecified, containing cocurricular offerings for individuals, groups, or general audiences. However, that observation was not the core of the divergence in the groupings. The most concise differences in the grouping were (1) programs designed to gain mastery of new skills or material, and (2) programs that assisted in the mastery of a given course. It appeared that differences were between learning new material and studying for a course. The groupings were split and renamed Learning Opportunities and Studying Opportunities.

An additional concern regarding the first sorting was in the communication grouping. After the second sorting of the raw data, the communication grouping was broad and not definable by all of its parts. It included all programs that gave students academic information in every medium; before, during, and after the first year. The grouping also included interactive communication with others and one-way communication online. However, the greatest distinction was seen to be in academic counseling and academic advising. That is, it was the difference between (1) communication about academic problems and issues related to specific courses, in order to obtain advice, and (2) communication about academic planning and registering for courses in order to maintain enrollment. The communication grouping was split and the groupings were named Communications and Academic Planning.

The second grouping was not named Advising specifically because that is a staff job, rather than a student opportunity.

Surprisingly, orientation did not have robust raw data and appeared to straddle two domains, Communications and Academic Planning. Orientation at a few of the institutions was merely an optional opportunity to communicate about the first year experience. Orientation at most of the universities was a mandatory opportunity for information, academic planning, and registration for courses.

It should be noted that if the residential domain had represented limited raw data during the collection process, it would have been regulated into the other groups. In fact, Residential Learning is a very robust grouping with numerous academic programs that substantiate its singular inclusion. This was also the same case for the Research grouping.

Service Learning and Research domains are not as robust in data and substance, yet warrants a separate categories since they cannot be assimilated well into any other category. Service Learning is similar to the Research domain in that they both represent unique programs that combine many of the programming elements from across the range of possibilities, such as networking, tutoring, and residential opportunities.

Categories were clustered until they were saturated and could not fit one within another, or reduced into another domain. From the academic cocurricular programming, the final categorization contains seven domains: Learning, Studying, Research, Service Learning, Residential Learning, Communication, and Academic

Planning. Each domain is listed and characterized in Table 4. Discussions of the categories follow the table.

Table 3.

Domains of Academic Programming

Programming	Description
Learning	Learning to how to learn
Studying	Assistance with specific assignments or courses
Research	Centralized network to find and participate in faculty research project
Service Learning	Centralized network to find and participate in volunteerism
Residential Learning	Academic services and intellectual life in the home
Communications	Centralized centers provide general academic information
Academic Planning	Advice and implementation of specific academic goals

The categories reflect implicit patterns in the data organization. To clarify the categories and identify the elements of the categories, the following general descriptions apply. Learning programs exist outside the class room to assist first-year students in knowing more about their learning process, learning how to learn, learning to study, and learning the intellectual culture of the academy. Learning opportunities include workshops, courses for credit, and special course scheduling programs. Workshops attempt to give students new information and new study skills to internalize, in order to bring new perspectives to their structured courses. Faculty mentoring is categorized in this study as a learning opportunity, whereas mentoring from peer is a communication function.

Study programs are provided by the institutions and help students with academic problems in specific courses. First-year students may need assistance in

writing papers, with math problems, or with science labs. These study opportunities may include supplemental instruction, non-credit courses taught by graduate students that parallel a math or science course for credit. Study offerings include individual sessions with a graduate student or faculty member to work on specific assignments, provided at a central location on campus, usually in a learning center.

Undergraduate Research programs are large-scale endeavors at most of the universities; one institution indicated that over 900 students were involved the undergraduate research programs with 500 faculty members. Centers have staff who counsel students to find a field of interest and connect to faculty with similar research interests, in order to participate in faculty research projects. The centers are centralized on campus; students do not approach each department to locate a suitable research project. Research program services include learning, studying, residential learning, communications and educational planning. They may appear in the form of fellowships, workshops, lecture series, or a journal providing publishing opportunities for undergraduate students' research.

Service Learning programs combine classroom learning with service projects designed to improve the community. Centers have staff who assist students in connecting to community agencies with expressed needs. Students may be offered course credit for participation. Service learning programs provide students with learning, studying, residential learning, and communication opportunities.

Residential Learning programs appear to replicate all of the academic cocurricular opportunities offered on campus within the student's home environment. Every type of programming, from learning, studying, research, service learning, and

communication, to academic planning, can be found in the residence halls. At two of the institutions, it is mandatory for first-year students to live in the residence halls.

Communication programs provide opportunities for students to receive information, discuss problems and issues, and receive advice about general academic issues. Academic communication appears to be vital at some institutions in the sample. For example, one institution has an office of undergraduate communications, and another institution has a centralized online site for all university courses. For the students' convenience each syllabus is posted in a central location, not by department. The syllabi sites have links to purchase required books or view the registrar's description. The institutions also emphasize communications on a personal level. Academic counseling gives first-year students an opportunity to have a personal conversation with an experienced peer or qualified staff member. Academic counseling differs from academic advising in that educational plans may be discussed however, no changes are made in academic plans or courses. Students' problems with course material, course load, or professors are considered and discussed in academic counseling.

The Academic Planning programming is a concept from the student's point of view. One of the primary staff functions of this category is student advising. However, this study is not concerned with opportunities for staff to serve, but with opportunities the institutions offer students. Students have the opportunity to receive valuable and professional assistance with their academic plans and with the bureaucratic implementation of those plans.

Bloom, (1956) maintained that the congruence of the theoretical framework for the evaluation of patterns is an essential consideration. The domains were derived from the retention programming patterns of the institutions. They are discussed in terms of the taxonomy framework presented earlier. Learning, study, research opportunities, service learning, residential learning, communication, and academic planning make up the cocurricular domains of the present study. Since the data was gathered without the confines of organizational units, they are not categories reserved for a particular division such as student affairs. The taxonomy developed by Ayers, Tripp, and Russell (1966) and Hershenson (1970) is based on the functional attributes of student affairs: welfare, control, activities, and education. The functional attributes of this taxonomy do not relate well to the academic cocurricular opportunities of freshmen at exemplary institutions. By using such a classification, institutions would fail to build community, miss the service-learning and research-opportunities components, and de-emphasize the amount of communication necessary to enhance student learning.

The eight functions of student services developed by Myers and Topping (1974) are student services administration, social and cultural development, counseling and career guidance, financial aid administration, student auxiliary services, student recruitment, and admissions and records, and intercollegiate athletics. While the taxonomy has explicit delineations, with stringent boundaries between units and divisions, collaborative efforts become problematical.

Ambler (1989) stresses the need for a comprehensive taxonomy in student services programs. The institution's organizational and human resources needs often

control the content of student programs rather than a determination of professional parameters. Understanding and considering taxonomies promotes administrative effectiveness in evaluating the possible realignment or clustering of units, in addition to planning, strategizing, and evaluating the division (Ambler, 1989). The configuration of the domains of the present study may create an institutional emphasis that may encourage first-year students to experience and integrate the mission of the university and teaching, service, and research; missions that are often attendant to first year students.

Domains and Universal Elements

These universal elements are academic cocurricular opportunities most frequently offered by the institutions in the study. The elements are opportunities, from the analysis, that have been modified and condensed in order to be inclusive and reflect common features. Each category has universal elements. Next to the universal elements is an indication of the institutions holding that element in common. Elements included were those held in common by four or more institutions. Where institutions were fewer than four, an attempt was made to modify or condense the phrasing of the element. If rewording did not increase the universality, then the element may have been combined with another element. If that was not possible, the element had not gained universality and was deleted from universal elements. For example, advising queries that could be easily answered by e-mail were added to advising queries easily answered by peer advisors and online.

The tables are Learning Opportunities in Table 5; then Studying Opportunities, Table 6; Service Learning Opportunities, Table 7; Research Opportunities, Table 8; Residential Learning Opportunities, Table 9; Communication Learning Opportunities, Table 10; and Academic Planning Opportunities, Table 11. This analysis is not a conclusion, but a means to achieve a level of understanding, needed to build a foundation for synthesis, the topic of the next chapter. The following descriptions characterize the universal elements within each category.

Table 4.

Learning Opportunities

Universal Element	Institution						
	A	B	C	D	E	F	G
Learning communities are course-scheduling programs where groups of first-year students take 2-3 courses together creating innate opportunities for study, sometimes called Freshmen Interest Groups (FIGS).	x	x	x	x	x	x	x
Learning centers offer students a combination of opportunities to improve their learning abiltiy through workshops, and academic counseling.	x	x	x	x	x	x	x
Learning centers are centralized and have satellites or additional centers for specific disciplines.		x	x	x	x	x	x
Special learning centers serve special populations including the following: Asian, African-American, minorities, low income/first generation, Hispanic, migrant workers, honor students, and women.	x	x	x	x	x	x	x
First-year seminars are courses, over a wide range of disciplines, limited to freshmen, faculty members share their research in a particular area with students in small classes.							x
Collaborative efforts between academic affairs and student affairs divisions produce learning programs.	x	x	x	x	x	x	x
Special populations, such as minorities and women, are offered special faculty mentoring opportunities for possible out-of-the-classroom learning experiences.			x	x	x	x	

NOTE: Special populations may include such diverse groups as Asians, African-Americans, minorit low income/first generation, Hispanics, migrant workers, honor students, or women.

Table 5.

Studying Opportunities

Universal Element	Institution						
	A	B	C	D	E	F	G
Centralized services are provided by institutions to help students with specific academic problems in specific courses.	x	x	x	x	x	x	x
Supplemental instruction are non-credit courses taught by graduate students or adjuncts that parallel a math or science course.	x	x	x	x	x		x
Tutoring for writing is usually by appointment, while tutoring for math and sciences is on a walk-in basis.	x	x	x	x	x	x	x
Tutoring is available online or through email.	x		x	x	x		x
Specialized tutoring is offered to special populations.	x	x	x	x		x	x
Peer tutors are advanced juniors, seniors, or graduate students.	x	x	x	x	x	x	x
Certain disciplines such as public speaking, technology, women's studies, or certain foreign languages have labs that offered special tutoring opportunities.		x	x	x	x	x	

NOTE: Special populations may include such diverse groups as Asians, African-Americans, minorities, low income/first generation, Hispanics, migrant workers, honor students, or women.

Table 6.

Service Learning Opportunities

Universal Element	Institution						
	A	B	C	D	E	F	G
Service learning centers connect with community agencies in order to combine classroom learning with service projects designed to improve the community.	x	x	x	x	x	x	x
Service learning centers provide a network or databank of opportunities for students.	x	x		x	x	x	x
Students earn academic credit for courses for community service.							x
Service learning centers counsel students by providing information and referrals in the selection process and offering advice for the completion of projects.	x	x		x	x		x
Service learning is the theme of a residence hall where diverse students with similar interests live and work together.		x	x	x	x		x

Table 7.

Research Opportunities

Universal Element	Institution						
	A	B	C	D	E	F	G
Undergraduate research opportunities are centrally organized, large-scale endeavors, open to all first-year students.	x		x	x	x	x	x
Undergraduate research centers provide a centralized network online for listing current opportunities to work with faculty.	x		x	x	x	x	x
Research centers provide workshops or counseling services on research opportunities.	x	x		x	x	x	x
Research centers provide opportunities for faculty, library staff, or graduate students assistance on projects.	x			x	x	x	x
Research centers for undergraduate sponsor an annual forum, conference, or publish an undergraduate research journal to inform new students and provide a means to display students' projects.	x	x		x	x	x	x

Table 8.

Residential Learning Opportunities

Universal Element	Institution						
	A	B	C	D	E	F	G
First-year resident programs provide a variety of services tailored to the students' experience of acclimatization.	x	x	x	x	x	x	x
Residential cluster scheduling allows students to live together and take 2-3 courses together.	x	x	x	x	x		x
Residences are learning communities with educational services including the services of a learning center.			x	x	x		x
Residence halls have as many as 12 libraries.		x	x	x		x	
Residence halls provide academic courses and workshops on topics relevant to the community and academic life of first-year students.		x	x	x	x		x
Theme housing allows students to select an academic emphasis in the type of community where they live and study. Institutions offer first-year students 5 to 17 choices of distinct living-learning communities.	x	x	x	x	x		x
Residential colleges create small liberal arts college experiences within a large research university where a student may reside for four years.				x	x	x	
Students are advised in residence-hall advising offices.		x	x	x	x	x	x

Table 9.

Communicating Learning Opportunities

Universal Element	Institution						
	A	B	C	D	E	F	G
Academic counseling gives students an opportunity to talk about their academic problems, usually with a trained peer counselor.	x	x	x	x	x	x	x
Special populations have special counselors who can communicate about academic issues and refer services.	x	x	x	x	x	x	x
Special populations have peer mentors who can share experiences and advise.	x	x	x	x	x	x	x
Orientation communicates university policy and procedure.	x	x	x	x	x	x	x
Orientation programs feature peer counselors who are specially trained to answer questions about the institution.	x	x		x	x	x	x
First-year students can access material presented at orientation online making orientaion continuous and seamless.	x		x		x		x
Online information is about academic co-curricular offerings is easily accessible, often duplicated across sites. Programs are offered at several online locations with varied descriptions and total over 100 printable pages.	x	x	x	x	x	x	x

NOTE: Special populations may include such diverse groups as Asians, African-Americans, minoriti low income/first generation, Hispanics, migrant workers, honor students, or women.

Table 10.

Academic Planning Opportunities

Universal Element	Institution						
	A	B	C	D	E	F	G
First-year students are assigned to the same academic advisor for the entire year.	x	x	x	x	x	x	x
Special populations, such as minorities and low-income/first-generation students, have special advising opportunities.	x	x	x	x			
Some advising queries can be quickly answered by peer advisors, online presentations, or email.	x		x		x		x
Upper classmen undergo special training to advise first-year students, but do not replace staff advisors.	x	x		x	x	x	x
Before the fall semester, orientation of first-year students is mandatory.						x	
Orientation allows students to create a preliminary course strategy.	x	x		x	x	x	
Students register for courses during or before orientation.	x	x		x	x		

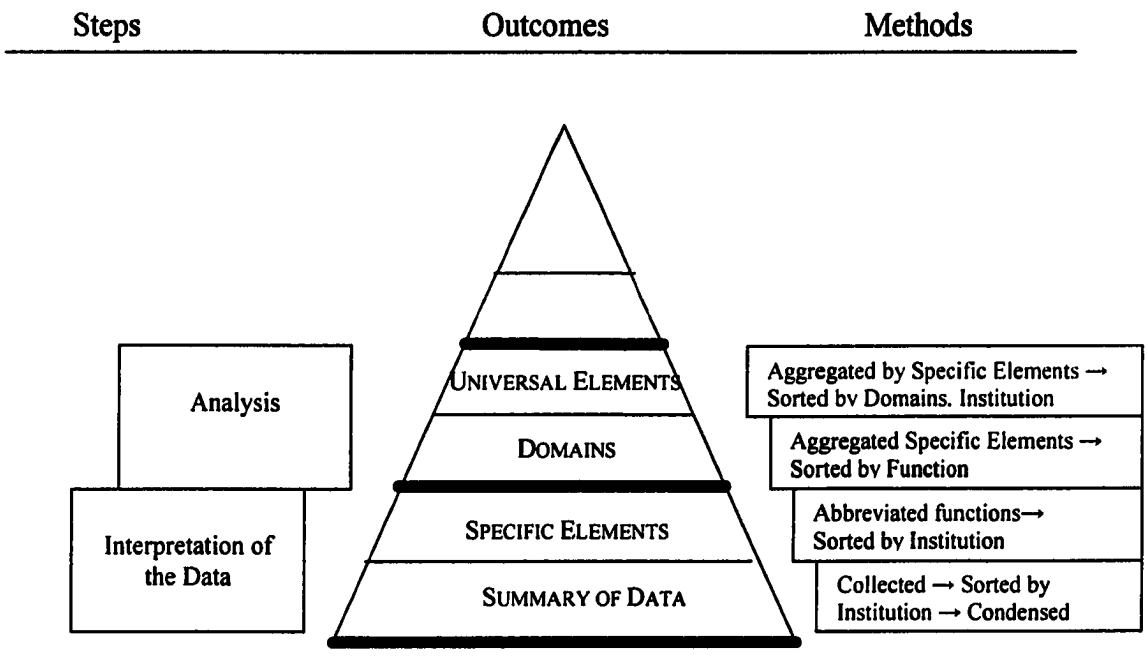
NOTE: Special populations may include such diverse groups as Asians, African-Americans, minorit low income/first generation, Hispanics, migrant workers, honor students, or women.

Summary

This chapter created domains of academic cocurricular programs at institutions with exemplary retention rates. Domains were discussed in terms of previously discussed taxonomies. Tables of each domain illustrated the direct affiliation of the domain's universal elements to individual institutions. The audit trail was conducted through the observations regarding the process of categorization and the logic of grouping in the identification of the domains. Figure 3 *Audit Trail for Analysis* diagrams the funnel-like flow of analysis reveals the current stage of process of the study (Lincoln & Guba, 1985). The domains were created by condensing and abbreviating the specific elements sorting by grouping similar functions. Functions were conceived in the form of global titles. The content of the domains was checked against the summary of data and the raw data for gaps. Aggregated specific elements. Sorted by institution and domain. As the process of synthesis continues, the audit trail figure is completed in Chapters 6.

Figure 3.

Audit Trail for the Analysis Chapter



CHAPTER 6

SYNTHESIS

Introduction

According to Bloom (1956), synthesis is the putting together of elements to form a whole with an emphasis on uniqueness and originality. This involves the process of working with pieces, parts, and elements and arranging them and combining them in such a way as to make a pattern not clearly seen before (Bloom, 1956). The product of synthesis can be a set of abstract related ideas, not explicit or obvious, and discovered from a detailed analysis (Bloom, 1956). The following themes are derived from the patterns of the universal elements of cocurricular offerings for first-year students.

Themes were discerned after examining the universal elements of the analysis by domain, looking for broad statements that summarized the perceived objectives of the offerings. The domains did not dictate the themes, but provided a tool to perceive the data from perspectives other than institutional distinctiveness in order to identify the themes. Each domain was examined individually, then across categories, to aggregate themes. The themes are the results of abstractions on the part of the researcher, with generalizations in the form of statements. Eight themes emerged and. were organized under two distinct headings.

Apparent Strategies of Exemplary Institutions

Qualitative language proved insufficient to represent the synthesis for developing a conclusion for the study. Therefore, at this juncture it was replaced with

the language of competitive intelligence. Competitive intelligence utilizes the constructs of business with explicit relationships between analytical terminology (Wheelen & Hunger, 2000). Those constructs, when translated into an academic vernacular, provided a means for the synthesis.

For the purpose of this study, a mission is the institution's raison d'être and includes the triad of teaching, research, and service in an equilibrium distinctive to the particular institution. A distinction between objectives and goals lies in measurable outcomes. An objective is the end result of quantifiable programs, whereas an institutional goal is an unrestricted statement of the intended accomplishment in alignment with the mission (Wheelen & Hunger, 2000). A strategy forms a comprehensive master plan for how the mission and the goals will be achieved. Strategies are put into action through the development and implementation of programs, policies, and procedures (Wheelen & Hunger, 2000). When translating the business construct, a policy becomes a broad guideline for decision making that links the formation of strategy to its implementation. A program is the process by which strategies and policies are put into action (Wheelen & Hunger, 2000). Programs are statements of the activities or steps needed to accomplish a single-use plan. Since an institutional goal is an unrestricted statement of the intended accomplishment in alignment with the mission, it was determined that the two distinct headings of the strategies were apparent goals. Furthermore, since strategies are long-term plans to meet a specified goal in the form of programs, the eight themes were determined to be "apparent strategies" of the institutions studied (Hussey & Jensten, 1999).

"Apparent strategies" are formulated when the researcher attempts to construe what the institutions are trying to accomplish (Hussey & Jensten, 1999). The word "apparent" was used to modify strategies and goals because the institutions do not divulge their strategies and goals in public documents. Apparent strategies and goals, in the present study, were the strictly from my analysis. I wanted to qualify this use of strategic intent since the descriptions are my inferences. According to Hussey and Jensten (1999), apparent strategies have limitations. That is, "although a useful picture can be developed, it should never be forgotten that there is uncertainty, both in whether the deductions are correct and for how long they will remain correct" (Hussey & Jensten, 1999, p. 102). The apparent goals and the apparent strategies are arranged in Table 12 and discussed in the following section in terms of the related literature of retention research.

Table 11.

Apparent Goals and Strategies of Exemplary Institutions

Apparent Goals	Apparent Strategies
Student-centered learning prevails.	Over-facilitation of academic programs ensures access to academic excellence.
	Academic programs are andragogically customized for diverse populations.
	Institutional divisions collaborate or duplicate where institutional goals overlap.
	Communications saturate with asynchronous, continuous, seamless information.
	Trained peers are valued volunteers and staff members.
Research universities are clusters of academic communities.	Research universities have the ambience of small, private colleges.
	Diversified communities of learners co-exist.
	Residence halls are centers of learning.

The apparent strategies discussed in terms of explanations and relationships to theory. Following the discussion, the apparent strategies are illustrated and linked with universal elements (Tables 13 and 14). The two apparent goals created from a synthesis of the data are discussed in Chapter 7.

Over-facilitation of academic programs ensures access to academic excellence.

▲ Explanation. The same type of academic services may be found in several locations for various populations. It appears that repetition is not avoided, as the repetition of services may insure student access. For example at University G, learning centers are centralized and have satellites or additional centers for specific disciplines. Certain disciplines, such as public speaking, technology, women's studies, or certain foreign languages, have labs that offer special tutoring opportunities. Another type of over-facilitation is supplemental instructions that are non-credit courses taught by graduate students or adjuncts and parallel a math or science course. The additional course gives students an opportunity to grasp the information from a different teaching style. Learning center's centralized services offer students a combination of opportunities to improve their learning ability through workshops and academic counseling. Centralized services are provided by institutions to help students with specific academic problems in specific disciplines and in specific courses. In addition to centers for disciplines, there are service learning centers that connect students with community agencies for service projects and undergraduate research centers to connect first-year students with research opportunities.

▲ Theory. Positive institution environments maximize first-year students' persistence and, ultimately, educational attainment of a degree (Pascarella & Terenzini, 1980, 1993). These variables include cohesive peer relationships, frequent participation in college-sponsored activities, and a perception that the institution has a high level of personal involvement with and concern for the individual student.

Academic programs are andragogically customized for diverse populations.

▲ Explanation. For the institutions included in the study, special populations appeared to constitute a separate andragogy. Whereas pedagogy is the philosophy of teaching children, andragogy is the philosophy of teaching adults (Knowles, 1978). This special populations' andragogy, detected in special advising, tutoring, peer mentoring, faculty mentoring, and academic counseling opportunities, appeared to enable students to communicate and solve their academic challenges. The term "special populations" in the present study extended beyond race to include honor students, migrant workers, minorities, low income/first generation, and women as well as Asian, African American, and Hispanic. For example University C has centers of academic counseling, tutoring and mentoring for low-income students and first-generation students, centers of mentoring and academic planning for students of migrant workers, and centers for tutoring and orientation of minority students.

▲ Theory. The strategy is not related to diversity programming or diversity education to address multiculturalism and promote diversity. In other words, it is not about race since the diverse populations in this study included women, migrant workers, and first-generation students. While the strategy has been discussed in multicultural literature, (Stage & Manning, 1992; Surtado, Milem, Clayton-Pedersen, & Allen, 1999) as an intervention designed to assist students of diverse populations, the strategy of customizing academic support to match the andragological needs of diverse student populations had not been discussed in general retention literature.

Institutional divisions collaborate or duplicate where institutional goals overlap.

▲ Explanation. Various units, offices, and divisions within the university appear to be are partners in programming. Since the study was not designed to examine a particular division such as student affairs, programs were present from several divisions all contributing to student cocurricular learning: student affairs, academic affairs, and administrative affairs. Creative programming is often organized outside the rigid boundaries of departments, and is organized not for the convenience of staff, but for the convenience of students. Collaborative efforts between academic affairs and student affairs divisions produce learning programs for credit. For example at University F, advising offices, libraries, theater productions, and Academic Deans are located within the residence halls.

▲ Theory. Cabrera, Nora, & Castañeda (1993) stress the need for college administrators to focus on variables that are highly predictive of a student's intent to re-enroll as the target variables to address intervention strategies. Independently financial aid, academic advising, counseling and other support services are not likely to improve retention efforts (Cabrera, Nora, & Castañeda, 1993). To improve retention, a concerted effort on the part of institutions to collaborate various student support services is required to address student attrition (Cabrera, Nora, & Castañeda, 1993).

Communications saturate with asynchronous, continuous, seamless information.

▲ Explanation. Asynchronous is computer terminology meaning not in real time. Electronic information, email or web sites can be accessed anytime, anywhere there is technology making it asynchronous. Students do not have to operate within business hours, but can solve problems, get information, and reply when the need arises if the information is online. When online information about academic cocurricular offerings is easily accessible, students can get answers anytime and return to the task. Some academic services offered online are interactive such as tutoring online or through email. For example at University G, first-year students can access orientation material online, making student orientation continuous and seamless. Some advising queries can be quickly answered by peer online presentations or email. To introduce them to intellectual life, students are provided special seminars where professors discuss their ongoing research. There are opportunities to participate in research and service opportunities that encourage intellectual involvement. In addition to personal contact, there is abundant online information.

▲ Theory. Bean (1980) used studies of turnover in the workplace to provide the theoretical framework for his study of student retention. The model suggested that as a student interacts with the institution, the higher the level of satisfaction with those interactions, the greater the commitment to the institution, and therefore decreasing the likelihood of departure.

Trained peers are valued volunteers and staff members.

▲ Explanation. Upperclassmen undergo training to advise first-year students, but do not replace staff advisors. Peer counselors provide academic counseling to give first-year students opportunities to talk about their academic progress and issues. Peer tutors are advanced juniors and seniors who provide tutoring to individuals or group. Orientation programs feature peer counselors who are specifically trained to answer questions about the institution. For example at University A, peer advisors provide answers to some of the basic advising questions and are located in areas convenient to students such as residence halls, unions, or other heavy traffic areas.

▲ Theory. Pascarella and Terenzini (1980, 1993) found institution environmental variables maximize first-year students' persistence and, ultimately, educational attainment of a degree. These variables include cohesive peer relationships and a perception that the institution has a high level of personal involvement and concern for the individual student. Consistent with these findings is evidence suggesting that a strong institutional emphasis on supportive student personnel services is also linked positively with institutional retention rates. The apparent strategies illustrated and linked with universal elements follow. The strategies of the goal *Student-centered learning prevails* are in Table 13 and strategies of the goal *Research universities are academic communities* are in Table 14.

Table 12.

Strategies for Student-Centered Learning

Strategy	Universal Elements
Over-facilitation of academic programs ensures access to academic excellence.	Learning center's centralized services offer students a combination of opportunities to improve their learning ability through workshops and academic counseling.
	Centralized services are provided by institutions to help students with specific academic problems in specific courses.
	Learning centers are centralized and have satellites or additional centers for specific disciplines.
	Certain disciplines, such as public speaking, technology, women's studies, or certain foreign languages, have labs that offer special tutoring opportunities.
	Supplemental instruction are non-credit courses taught by graduate students or adjuncts that parallel a math or science course.
	Tutoring for writing is usually by appointment, while tutoring for math and sciences is on a walk-in basis.
	Service learning centers connect with community agencies in order to combine classroom learning with service projects designed to improve the community.
	Undergraduate research opportunities are centrally organized, large-scale endeavors, and open to all first-year students.
	Special learning centers serve special populations.
Academic programs are andragogically customized for diverse populations.	Special populations, such as minorities and women, are offered special faculty mentoring opportunities for possible out-of -the-classroom learning experiences.
	Special populations, such as minorities and low-income/first-generation students, have special advising opportunities.
	Specialized tutoring is offered to special populations.
	Special populations have peer mentors that can share experiences and advise.
	Special populations have special counselors that can communicate about academic issues and refer services.

NOTE: Diverse populations include Asian, African American, minorities, low income/first generation, Hispanic, migrant workers, honor students, and women.

Table 12. (continued)

Strategies for Student-Centered Learning

Strategy	Universal Elements
Communications saturate with asynchronous, continuous, and seamless information.	Online information about academic co-curricular offerings is easily accessible, often duplicated across sites.
	Tutoring is available online or through email.
	First-year students can access material presented at orientation online, making orientation continuous and seamless.
	Some advising queries can be quickly answered by peer online presentations or email.
	Programs are offered at several online sites and have detailed descriptions in more than 100 printable pages.
	Service learning centers provide a network or databank of opportunities for students.
	Undergraduate research centers provide a centralized network online for listing current opportunities to work with faculty.
	Research centers for undergraduates sponsor an annual forum, conference, or publish an undergraduate research journal to inform new students and provide a means to display students' projects.

Table 12. (continued)

Strategies for Student-Centered Learning	
Strategy	Universal Elements
Trained peers are valued counselors and staff members.	Academic counseling gives students an opportunity to talk about their academic problems, usually with a trained peer counselor.
	Peer tutors are advanced juniors and seniors or graduate students.
	Orientation programs feature peer counselors that are specially trained to answer questions about the institution.
	Some advising queries can be quickly answered by peer advisors.
	Upper classmen go through special training to advise first year students, but do not replace staff advisors.
Institutional divisions collaborate or duplicate where programming goals overlap.	Collaborative efforts between academic affairs and student affairs divisions produce learning programs.
	Academic credit is given for courses for community service within various disciplines.
	Service-learning and research opportunities are interdisciplinary, operating outside of departmental or college boundaries.
	Research centers provide workshops or counseling services on getting started in research.
	Research centers provide opportunities for faculty, library staff, or graduate student assistance on projects.
	Students are advised in residence-hall advising offices.

The next set of apparent strategies relates to the second goal: Research universities are clusters of academical communities. Following a description of the apparent strategies is a graphic illustration showing the relationship of elements of the analysis to apparent strategies (Table 14). The following section discusses strategic application and the strategies in terms of the literature previously presented.

Research universities have the ambience of small private colleges.

▲ Explanation. Residential colleges create small liberal arts college experiences within a large research university where students may reside for four years. Learning communities are programs where first-year students are grouped to take several courses together, as in a small college. For example at University B, students may live together and take several courses together living in residential clusters. Institutions assign first-year students one academic advisor for the entire year. Learning centers offer individual counseling providing information and offering advice for the completion of projects.

▲ Theory. This is in accord with Astin's (1993) research indicating that a student's persistence is a factor of the student's perception of and satisfaction with the college environment, rather than characteristics of entering students.

Diversified communities of learners co-exist.

▲ Explanation. Students live, learn, and study in intentional groupings of first-year students. Student may choose to live in theme housing and have an immersed educational experience. Institutions offer first-year students between five and seventeen distinct choices in living-learning environments. At University D, students may reside in the same residential college for four years yet experience the benefits of a large research university. Undergraduate research centers create communities of learners across populations and disciplines. Special learning centers serve special populations.

▲ Theory. While this strategy is not referenced in retention theory, the strategy is mentioned in student affairs literature in terms of influencing retention (Sorochty, 1989; Watson & Terrell, 1999). Additionally, the Boyer Commission on Educating Undergraduates (1998) recommended "cultivating a sense of community" through the establishment of small groups of students to create an intellectual climate.

Residence halls are centers of learning.

▲ Explanation. The residence halls have most of the academic services offered elsewhere in the institution, including tutoring, a learning center, and as many as twelve residential libraries. Residence halls provide academic courses and workshops on topics relevant to the community life of first-year students. Residential cluster scheduling allows students to live and take courses together, allowing for study opportunities. At University E, nine different residence hall themes give students educational opportunities with an academic emphasis.

▲ This strategy is not discussed in retention theory. The strategy is discussed in residence hall literature as an important resource for out-of-class learning (Kuh, Douglas, Lund, Ramin-Gyurnek, 1994; Schroeder, Mable, & Associates, 1994). Table 13 follows and illustrates apparent strategies in terms of universal elements. The section following the table discusses the pitfalls of strategic application.

Table 13.

Strategies for Academical Community Clusters

Strategy	Universal Elements
Research universities have the ambience of small private colleges.	Learning communities are course-scheduling programs where groups of first-year students take 2-3 courses together, creating innate opportunities for study.
	Service learning centers counsel students by providing information and referrals in the selection process and offering advice for the completion of projects.
	Residential cluster scheduling allows students to live together and take 2-3 courses together.
	First-year students are assigned one academic advisor for the entire year in the student's area of interest.
	Residential colleges create small liberal arts college experiences within a large research university where student may reside for four years.
Diversified communities of learners co-exist.	Theme housing allows students to select an academic emphasis in the type of community to live and study. Institutions offer first-year students 5 to 12 choices of distinct living-learning communities.
	Residential cluster scheduling allows students to live together and take 2-3 courses together.
	Service learning is the theme of a residence hall where diverse students with similar interests live and work together.
	Residential colleges create small liberal arts college experiences within a large research university where student may reside for four years.
	Undergraduate research opportunities are centrally organized, large-scale endeavors and open to all first-year students.
	Special learning centers serve special populations.

NOTE: Diverse populations include Asian, African American, minorities, low income/first generation, Hispanic, migrant workers, honor students, and women.

Table 13. (continued)

Strategies for Academical Community Clusters

Strategy	Universal Elements
Residence halls are communities of learning.	Residences are learning communities with educational services including the services of a learning center.
	Residence halls have as many as 12 libraries.
	Residence halls provide academic courses and workshops on topic relevant to the community life of first-year students.
	Residential cluster scheduling allows students to live together and take 2-3 courses together.
	Theme housing allows students to select an academic emphasis in the type of community to live and study. Institutions offer first-year students 5 to 17 choices of distinct living-learning communities
	Residential colleges create small liberal arts college experiences within a large research university where student may reside for four years.

Application of Apparent Strategies

Although the design of the study is based on some of the aspects of competitor profiling as defined in competitive intelligence, it is not a competitive intelligence report. This is an academic study to more fully understand retention theory; is not a study of applied knowledge for practical information to improve an institution. Application of the synthesis is premature and suggests a lack of understanding of competitive intelligence procedures and the process of competitor profiling. The aim of competitive intelligence is not to reproduce, but adapt (Hussey & Jenster, 2001). "Prismatic adoption" must be applied; not all ideas can or should be applied literally, but through the isolation of elements some ideas can be adapted (Ewell, 1999, p. 15). From the explanation of the process of competitive intelligence it is evident that the present study includes but a small aspect of competitor profiling. The present study has utilized competitor profiling to determine apparent strategies of successful competitors in order to gain a better understanding of retention theory.

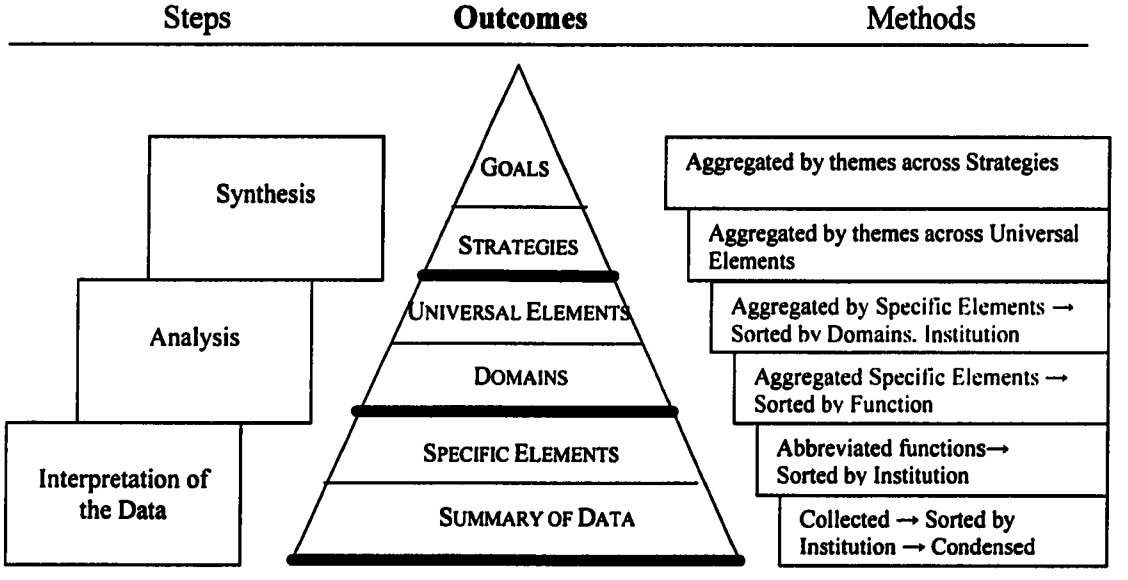
Summary

This chapter synthesized the universal elements and discovered the apparent strategies and goals of the exemplary institutions. Tables of each strategy illustrated the direct affiliation to the universal elements of the individual institutions. The audit trail was conducted through the observations regarding the process of aggregating themes in order to identify the strategies. Figure 4 *Audit Trail for Synthesis* diagramed the funnel-like flow of analysis revealed the compilation of the stages of process (Lincoln & Guba, 1985). The audit trail shows that themes were derived by examining

Universal Elements in a search for commonalities. This search was done without the stricture of institutions and domains. Goals were themes that emerged from a search for commonalities across strategies. As the synthesis completed the process of the examination of the data, the audit trail figure was concluded, and conclusions were discussed in Chapter 7.

Figure 4.

Audit Trail for the Synthesis Chapter



CHAPTER 7

CONCLUSION

Introduction

According to Bloom (1956), although the conclusion is placed last in the cognitive domain because it requires the substance of the other domains, it may not be last step in thinking. The evaluative process involved in reaching a conclusion may lead to the acquisition of new knowledge, a new attempt at comprehension, application, analysis, or synthesis and the cycle begins again (Bloom, 1956). Alternatively, if this were a competitive intelligence report, it would be a small step in a lengthy process, as the patterns discerned in the study would be developed into a strategic plan. However, this study concludes with an evaluation that compares the product of the synthesis to the literature, specifically retention theory and competitive intelligence. The chapter proceeds with potential departures from the present study in the form of recommendations for additional studies. The chapter concludes with reflections on the cognitive process of qualitative research.

Integration of Theory and Conceptual Frameworks

The product of the synthesis has been the formulation of apparent institutional goals. Each of the apparent institutional goals are discussed and judged against classical retention theory in a search for greater meaning. Following that discussion, the apparent institutional goals are discussed in terms of the conceptual framework of competitive intelligence.

Student-centered learning prevails is an apparent goal of academic cocurricular offerings at the exemplary institutions in the study. Taken from the analysis, the goal dictates that academic opportunities are organized for the student's convenience, from the student's perspective. Organizational efforts conform to serve student needs. Academic success is addressed through the profuse opportunities of academic support service. Academic support services are central in the students' environment thereby ensuring student contact. Institutions with exemplary retention rates employ several apparent strategies to achieve the goal of student-centered learning.

One of the overarching themes of academic cocurricular offerings at exemplary institutions is that *Research universities are clusters of academic communities*. Taken from the analysis, the theme indicates that research universities are clusters of academic villages characterized by the coexistence of diversified communities of learners and researchers. Research on student retention has centered on Tinto's interactionalist theory (Tinto, 1975) suggesting that institutions of higher education are much like other human communities. The process of persistence, staying in college, and by extension, that of departure, is much like those community processes that influence the establishing of community memberships. Such variables are thought to directly influence initial commitments to higher education and to a particular institution. Then, through subsequent institutional and goal commitments, they directly affect student departure decisions. The institutions included in the present study are clusters of academic communities. That is, the universities are clusters of academic villages represented by diversified, coexistent communities of learners and

researchers co-existing with an ambience of a small private college. Students live, learn, and study in diversified coexistent communities of learners. Institutions with exemplary retention rates have community organization fundamental to their institutional goals while providing abundant opportunities for community membership.

In 1998, Tinto discussed the implications of retention research for the institution in terms of organizational reform. He stated that first-year students are at the greatest risk of departure, with nearly half leaving before their sophomore year commences. Therefore the greatest possibility of impact for persistence occurs early in the first year, perhaps as early as during the first ten weeks (Tinto, 1998). He considers the creation of many such recent retention programs as first-year student seminars, mentoring programs, and learning communities, as the outcome of recent research with an aim to increase institutional retention rates. Tinto contrasts this with a lack of change on the academic side or in the organizational structure of institutions. The present study includes first-year seminars, mentoring programs, and learning communities in academic programs and looks beyond the divisional boundaries to include institutional efforts holistically. As seen in the present study, organizational efforts occurring in the form of collaborations contribute to student-centered learning.

Tinto recommends two further organizational reforms. First, colleges and universities could adopt a community model of academic organization, such as FIGS (First-year Students Interest Groups). Secondly, colleges could organize first-year students into a separate unit with programming, services, and structure distinct from those for upperclassmen to accommodate distinct andragological differences. The

conclusions of the present study coincide with these program recommendations, except perhaps on a broader scale. It has been shown that the goal of the community model of academic organization has at least five strategies composed of many elements, of which FIGS is one. Student-centered learning, a goal that relates to Tinto's second recommendation of programming for first-year student organization, has seven strategies and many elements. Tinto's recommendations, while congruent with the present study, remain in the province of programming, and do not address the overarching matter of strategy or institutional goals.

Kuh (1995) stated that there is agreement among most scholars who study the impact of the college experience on students that what happens outside the classroom contributes to student leaning. The purpose of Kuh's research was an exploratory study aimed at identifying out-of-class experiences that seniors associate with their learning. Fourteen outcomes from the data were categorized by factor analysis into five domains: interpersonal competence, cognitive complexity, knowledge and academic skills, practical competence, and humanitarianism. Some have termed these goals (Liddell, Hubbard, & Werner, 2000), yet the domains relate more closely to the categorization portion of this study. By stating the results in terms of categories, the study ends in the analysis portion without synthesis, leaving categories without strategies or goals. The present study is consistent with Kuh's conclusion that a holistic approach to learning is a key to enhancing student learning outside the classroom (Kuh, 1995).

Tinto's theory (1975) hypothesizes that persistence is a function of the correspondence between an individual's precollege characteristics and the institutional

academic and social characteristics. The match between an individual's characteristics and those of the institution contributes to fundamental individual commitments of the students. Accordingly, the stronger the fundamental individual commitment is, the greater the probability of persistence. Tinto's theory could be written as, the greater the student goals, the greater the probability of student commitment, the greater the probability of retention.

The present study diverges from Tinto's theory in that there is not a match between an individual's characteristics and those of the institution. In fact, the academic services in the institutions far exceed the needs of the caliber of students admitted. Institutions with exemplary retention rates exemplify commitment to their students by providing abundant opportunities for academic support. Half of the equation may be missing from Tinto's theory; the institution' commitment to the student. In the new scenario, those basic commitments defined by Tinto as the commitment to completing college are renamed *student goal commitment* and the subsequent commitment to the respective institution is renamed *student commitment to the institution.* The institution's commitment to the student's completion could be effectively measured in graduation rates and called *institutional goal commitment.* Following the pattern of Tinto's formula, the subsequent commitment of the institution is to the individual student, constituting an individual commitment called *institution commitment to the student.* In the present study, the commitment of the institutions to students is exemplified in the goal that student-centered learning prevails and is supported by the strategies.

It would be easy to miss the institutional component of the retention equation, as it is independent of the student component. The institutional goals and commitment affect retention. As student goals and student commitment to the institution combine with institutional goals and institutional commitment to the student, the probability of retention increases. The components of the equation are parallel; students' goals do not increase students' commitment to the institution, nor are they sequenced. Students can be committed to the institution and have no goals. Institutions' can have goals and not be committed to students; therefore Tinto's equation works without the institutional component. Institutional goals and institutional commitment to the student are not missed, except in application and in fulfillment of the promise of higher retention.

Cabrera, Nora, & Castañeda (1993) merged the theories of Tinto (1975) and Bean (1980. While Cabrera, Nora, & Castañeda (1993) discuss the institution's role in improving retention, they do not include the institutional factors in their model. In their recommendations to improve retention, they state that a concerted effort on the part of institutions is needed in bringing together the various divisions. When the Cabrera, Nora, & Castañeda model for students is merged with a model for the contribution of the institution detected in the present study, a more integrated model of retention is created (Figure 5). In Figure 5 *An Integral Model for Retention,* two parallel forces factor in retention.

Figure 5.

An Integral Model for Retention

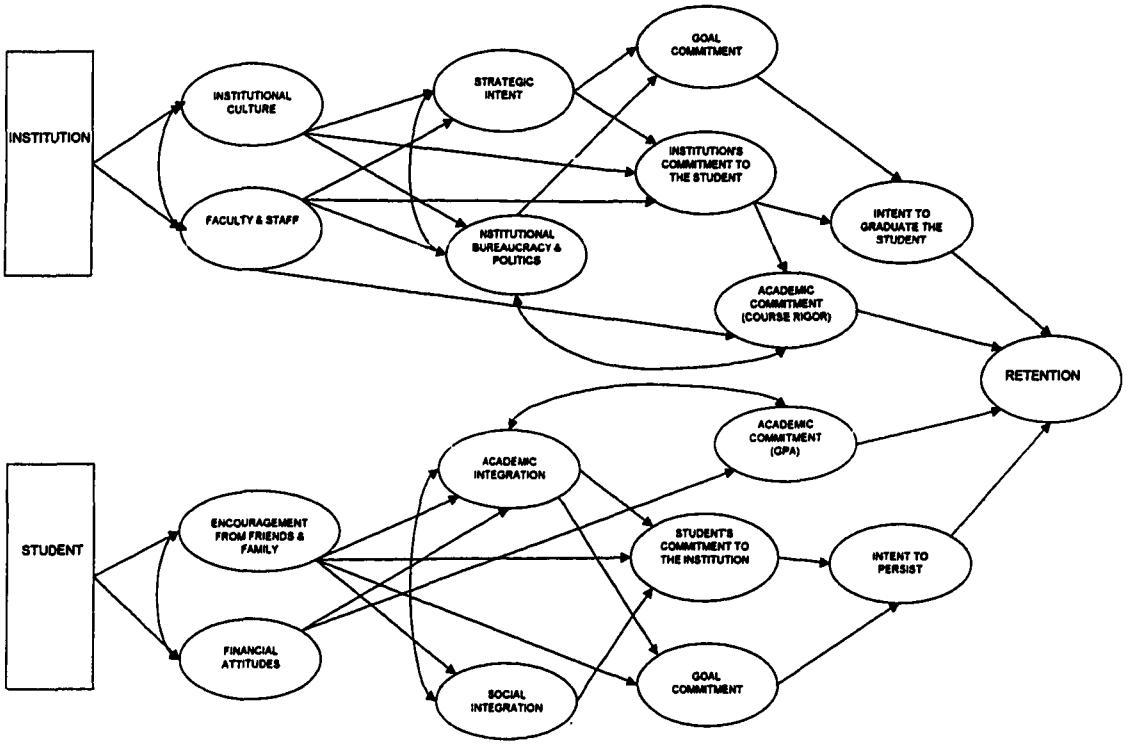


Figure 5. The arrows represent influences and impacts, while double ended arrows indicate reciprocal influences.

Note. The institutional path is based on the work of the present study.
The student path of the model is adapted from Cabrera, A. F., Nora, A., & Castañeda, M B. (1993). "College persistence: Structural equations modeling test of an integrated model of student retention." *Journal of Higher Education 64*(2), p. 134. Adapted with permission of the author.

An Integral Model for Retention conveys that retention is the outcome of the aspirations, attitudes, and activities of both the institution and the student in tandem. The assumption that the institution provides adequate services for the consequence of retention is no longer implicit. Students can not shoulder the blamed for their failure to

persist; it is a shared outcome of an intricate process. When retention is considered without factoring the institutional contribution to the equation, the actual focus is student persistence and not retention. While the idea can be applied to other models, this model was created by modifying the student aspect of persistence as modeled by Cabrera, Nora, & Castañeda and mirroring the student portion to give structure to the creation of an institutional portion. The contents of the institutional portion were taken from the synthesis of the present study.

Several concepts from the institutional side of the model were adapted to complete the model but are not germane to the present study. *GPA*, in the *Integral Model for Retention*, is seen as a reflection of the student's *Academic Commitment*. The mirror image of that concept is the *Academic Commitment* of the institution to the student as reflected in *Course Rigor*. This concept is not pursued in the present study. The concept of the student's *Encouragement from Family and Friends* and *Financial Attitude* are sources of the student's values and human resources of support. The mirror image of that concept for the institution is *Faculty and Staff* and *Institutional Culture*. Faculty and staff have been alluded to in the present study, but not a significant focus.

The remaining concepts on the institutional side of the model were created from the context of the present study. The next part of the thought process was to insert the focus of the present study, *Strategic Intent*, into the next tier. The logic consisted of asking, what is to *Strategic Intent* for institutions that *Academic Integration* is to *Social Integration* for students. The answer should form a partnership with *Strategic Intent*, but could also negate strategic intent: *Institutional Bureaucracy*

and Politics. Since the student's *Intent to Persist* comprised the variables of *Students' Commitment to the Institution* and *Goal Commitment*, it was examined next. The student's intent to persist to next year short ranged and short sighted. The institutions should be compelled to graduate students constituting long-term goals. Hence, the institution portion of retention is the *Intent to Graduate the Student.* The *Students' Commitment to the Institution* and *Goal Commitment* are mirrored in the institution's *Goal Commitment* and the *Institution's Commitment to the Student*; both of these concepts are the essence of the current study.

The intention of the model is to change the perception of administrators of higher education and enable them to see themselves as partners with students in the actualization of improved retention rates. Beyond, partnering with students, the model suggests that institutions have a responsibility in the matter of student retention and shows where institutions can exert administrative influence and intention. Finally, the model represents retention as internal and external to the student's locus of control, limiting the blame that students can be given for their own persistence.

In terms of the conceptual framework of competitive intelligence, there are concluding remarks. According to Walle (2001), the field of strategy development has been seen as moving from a management-oriented paradigm to a marketing-oriented paradigm. An examination of this contention, discussed in institutional terms, may enlarge the concept of the apparent goals and present an argument for the importance of strategic intent to academic decision makers. In the present study, the institutional goal stating that *Research universities are clusters of academic communities* relates to Walle's administration-oriented paradigm. In administrative-oriented paradigms, the

administration dominates the organization, establishing the strategies that satisfy the needs of the organization; institutions have needs that the institution must meet and those devising strategies must take institutional needs and vulnerabilities into account (Walle, 2001). *Student-centered learning prevails* is an institutional goal relating to a marketing-oriented paradigm. In student-oriented paradigms, those who are most familiar with students provide the basic leadership and establish strategic positions to satisfy students' needs by providing distinctive services; students have needs that the institution must meet (Walle, 2001). The institution only meets its goals if it successfully serves students. Therefore the organization has a primary strategic need to vigorously respond to student needs.

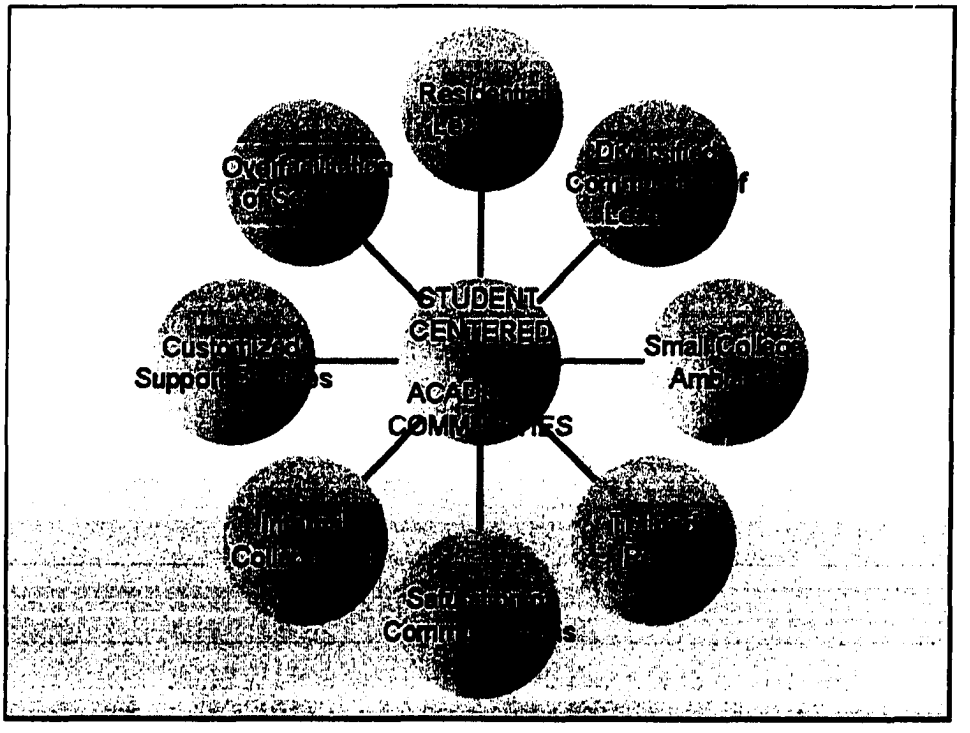
In the forthcoming trend, Walle (2001) perceives the management-orientation paradigm demoted to tactical (short-term) status in the administration of the institution. At the same time, marketing orientation elevated to strategic (long-term) prevalence. In other words, the needs of the students are the basis for long-range planning and strategy, while the needs of the institution are issues of short-range planning. Such a trend in public research universities of higher education appears to be controversial due to the historical inflexibility of their bureaucracy. However, the trend of long term planning based on student needs seems to be confirmed by the apparent strategies of institutions with exemplary retention rates.

In terms of benchmarking, the commonality of the intentions as evidenced by the goals and strategies of the best-in-class institutions creates an impression of standards and values. While the goals and strategies developed from the present study may be conscious or unconscious aspirations is a question for another study. However,

due to the exemplary levels of retention of the institutions, the goals and strategies could be termed *standards of excellence* in retention (Figure 6). Standards of excellence are often vague and elusive statements suggesting lofty aspirations without the assistance of substance. However, the present study has developed a method for detecting and has discovered concretized standards of excellence based upon measurable and desirable values, that is, retention. The benchmarked institutions exemplify a standard of excellence that some may envy and others seek to emulate. If we can specify excellence; we can model excellence; we can achieve excellence. The knowledge generated in the present study is expected to contribute to a more thorough understanding of the elements of excellence in retention with an aim to improve freshman persistence at research universities.

Figure 6.

Standards of Excellence in Retention



Implications for Future Studies

The implications for future studies have arisen continuously since conception of the project. Due to the limitations of the study, removing any one of them creates another study in another research design. Dominant in these considerations is the removal of the limitation of program offerings, changing to program realities based on site visits. While prohibitive in cost for this study, site visits would confer size and scope of the programs considered in terms of number of students participating, the number of staff, or the amount of space allocated to the programs. These variables could provide the basis for the analysis of a quantitative study. Other limitations that could be included in another study would be to include Greek organizations, academic clubs, and other programs offered off-campus for students. Another limitation that could be removed to form a different study is to change the Carnegie Classification of institutions selected from public research universities to any of the other classifications or combination thereof.

The present study was designed to be holistic and provide a broad overview. A single category, strategy or goal established in the present study could be studied in greater depth in another study. This study did not examine social integration, a factor mentioned in retention literature. A potential study could examine social integration in a qualitative study of institutions with high retention rates to look for patterns to compare to this study. Comparing institutions with superior retention rates to institutions with mediocre and poor retention rates is another thesis. A related study could be longitudinal to discover trends in academic programming. In fact, comparing

the pilot of this study to the present study evidenced substantial differences in the raw data in the space of three years; items that had been unique to one institution had since become the norm among an entire group.

The same research design could look at meaningful administrative structural differences. It appeared that a consistent pattern in the seven exemplary institutions is a permeable boundary between student affairs and academic affairs. Institutional divisions are often partners in programming. Since the study was not positioned to examine a particular division such as student affairs, programs from several divisions contributing to student cocurricular learning were evidenced: student affairs, academic affairs, and administrative affairs. One of the interesting facts that emerged from the data was the preponderance of exemplary institutions in one system. While there are assumptions in the literature that may explain this phenomenon, there are no studies that ask the question specifically of that system. Since studies in the field tend to be quantitative, and exemplary retention is not explained to the point of replication, additional qualitative data diverging from previous assumptions to provide additional knowledge.

Reflections

A qualitative dissertation uses the mind of the researcher as technology to filter the data. In this process, the knower is inseparable from the knowing (Palmer, 1998). Therefore a few words are apropos to personalize the qualitative process of the present study.

I was following a standard format for chapters, Introduction, Literature Review, Methodology, Findings, and Conclusion when I got stuck. It was during the writing of the Findings chapters, that the project began to peel away like a banana on automatic mode. Various strips of ideas had to be followed, but unfortunately, they were not linear. I had to have a way to capture the ideas without boxing them up; I had to have a way to express the smoothness of expanding ideas without creating knobby exceptions. One day after Chapter 3 was drafted, while working as a graduate research assistant, I was rearranging my professor's bookshelves. Suddenly, I spied another taxonomy to add to my short list. It was old, almost 50 years, slightly brittle; however my professor generously loaned me her copy. It was exciting; it was synchronicity. I opened it and discovered Bloom's Taxonomy. Although I may have a vague recollection of the title, I had no idea what it contained. In fact, I thought the "Cognitive Domain" could add something to my domain section. The outline of student learning outcome slipped over the structure of my dissertation easily; fitting the dissertation like it was made for me. Not only did Bloom's Taxonomy fit what I had written, but it allowed for greater flexibility and creativity for what remained to be written.

Moving through a qualitative study is not a linear journey; it is more like a matrix. Once the new constructs were revealed past the Methodology chapter, the first three chapters had to be revisited so the new ideas could be inserted. This was a continuous process. Since the analysis and the synthesis exposed ideas not previously hinted in the knowledge of abstracts chapter, I had to find a way to incorporate them in earlier chapters. The study seemed to expose a perspective during the synthesis that

complied profoundly. A conceptual framework was born in the Synthesis that had to be researched, adapted, and implemented. With only a sentence in the original first chapter, four pages were added to Chapter 1 fulfilling all of the aspects needing discussion.

So many people have asked me, are you done yet? There is no answer for this question; it is an enigma. I prepared the *final copy,* gave it to my editor, and it would come back with wonderful little red marks on every page. After those revisions, I prepared the *final copy* and gave it to my major professor. It would come back with red marks and "explain this" on every page. However, waiting for those critiques was like waiting to open Christmas presents; I was so excited to see what they had thought about my work. Yet, the entire process of submitting a final copy was a loop; I submitted many final copies. Most people have little conception of the number of hours it takes to produce a dissertation. I understood the challenge enough to pare my working hours down ten per week, give up my house, and ask my parents to co-parent with me. I worked 11-15 hours per day 6 days a week for 60 days, then just 40 hour weeks for 60 days. After the intensity of those first 60 days, I was totally immersed into the topic and that the total immersion submerged me into more scientific thinking. Everything I came into contact with was viewed as potentially within the scope of my dissertation and evaluated for possible application.

The most challenging aspect of the study has been the adjustment in my cognitive process to fill in the gaps to create a more logical progression of thought. I normally do not think a+b+c+d = e; I am a global thinker and global thinkers tend to get the big picture initially and intact. The difficult part is to construct the

recapitulation of a process that never occurred as it does for sequential thinkers. So then, it tends to be a wrenching experience of recalling the less significant steps from a vantage point far beyond the memory of what happened. Moreover, the big picture tends to come to me in detailed graphic representations without prose. It seems that as long as the graphic thought remained in the present moment, descriptive language could be grouped around it. As swift as the thoughts flowed, was the speed at which I learned to type. It seems that one must be compatible to matrix of non-sequential, multi-tasking qualities of qualitative study and be able to think globally, spatially, and intuitively. Notwithstanding the circumvented path to completion, I believe the qualitative study is an exhilarating expedition holistically utilizing the human instrument.

Closing Vignette

As the Dean closed the report before her, she considered her options. "At least I have some," she thought. She could reassess her college in terms of strengths and weaknesses. She might evaluate categories of academic cocurricular programs looking for gaps. She could consider various strategies and goals for first-year students for a possible fit.

With a better understanding of the specific elements of the solutions to the problem, it would be possible to adapt the cocurricular programming necessary to assist her students' academic needs. Armed with the information of the importance of learning and studying, communication and collaboration, it might be possible to meet the President's dictum of a seven-percent increase in the retention rates. But most importantly, the Dean realized that at the next Dean's Council she might have something new to bring to the table.

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APPENDIX

Appendix A

Background Information of the Institutions

Institution	Carnegie Classification	First Year Retention	Number of Freshmen Admitted	Admission Test Scores ACT/SAT	Selectivity of the Institution	% First-Term GPA < 2.0	% Under-Represented Minorities	% Non-Traditional Students	% Students Living on Campus
A	DRU	92	7,959	1211	High	na	17	0	na
B	DRU	92	6, 174	26.8	High	7	14	0	100
C	DRU	93	5, 623	1187	High	10	9	0	na
D	DRU	95	3, 408	1251	High	8	15	0	75
E	DRU	95	5,403	1270	High	5	15	0	98
F	DRU	96	2,927	1304	High	6	13	0	100
G	DRU	97	4,189	1276	High	6	17	0	na

Note. From "2001 - 02 CSRDE Report: The retention and graduation rates of 1994 - 2000 entering freshmen cohorts in 360 colleges and universities." By R. Q. Hayes, 2002, Norman, OK: University of Oklahoma, Center for Institutional Data Exchange and Analysis. Reprinted with permission of the author.

NA means data not available.

Institutions with 98-100% students living on campus have mandatory on-campus living rules.

Highly selective institutions have a Composite ACT > 24 or SAT Composite > 1100.