Appendix 1

Review of Retention Literature

Randy McClanahan

Calls for accountability tied to funding have renewed interest in student retention strategies and research to help guide the development of those strategies at colleges and universities across the nation. "As budgets tighten, competition for students increases, resources shrink and regents, legislatures, taxpayers, and prospective students and their families take up the cry for institutional accountability, institutions that put students first will succeed, even excel, just as their students will" (Levitz, Noel, & Richter, 1999, p. 31).

Student Attrition and Retention Rates. Despite the fact that emphasis on retention strategies has increased over the past decades, attrition rates continue to be relatively high. Data collected by ACT over the past 20 years have indicated little change in five-year graduation rates for combined Bachelor's, Master's, and Ph.D. granting institutions (ranging from a high of 54.6% to a low of 50.9%) with a 2003 rate of 51.6%. For two-year institutions the three-year graduation rates have ranged from a high of 44.0% to a low and current rate of 34.3% (ACT, 2003).

> Even among the students most likely to succeed—those who begin their college careers as full-time freshmen in four-year colleges and universities—only six out of every ten of them, on average, get a B.A. within six years. This translates into over half a million collegians every year, …who fall short of acquiring the credentials, skills, and knowledge they seek (Carey, 2004, p.1).

Research has focused on first to second year retention as that is the time when the greatest number of students withdraw from postsecondary pursuits. Over half of all students who leave college do so before their second year (Consortium for Student Retention Data Exchange, 1999). The report contains data, based on responses from 269 colleges, that indicates an attrition rate of 20% for the first year, 11% for the second year, and 9% for the third and later years. Findings from ACT"s annual survey of 2,500 two-year and four-year postsecondary institutions indicate a freshman to sophomore mean institutional dropout rate of 47.2% at public 2-year colleges and rates of 31.8% for public Bachelor's level institutions, 25.7% for public Master's level institutions, and 22.7% for public Ph.D. level institutions. (ACT, 2003).

In recent years an emphasis has been placed on the cost to colleges of not meeting goals to provide the best social, academic, and other experiences for students. The costs to institutions of student attrition are several, including "…loss of future tuition and fees, loss of faculty lines, and increased recruitment costs" (Habley, 2004).

Benefits of Student Retention. The benefits that accrue to both society and the individual as a result of successively higher levels of education are well documented. In terms of lifetime earnings, "…high school graduates earn an average of $1.2 million; Associate's degree holders earn about $1.6 million; and Bachelor's degree holders earn about $2.1 million (Day and Newburger, 2002, as cited in Porter, 2002, p. 2).

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In a study to identify the individual and public benefits of higher education, the Institute for Higher Education Policy (1988) found that the following economic and social attributes accrued to the public and to individuals who achieved higher levels of education.

1. *Public economic* benefits: increased tax revenues, greater productivity, increased consumption, increased workforce flexibility, and decreased reliance on government financial support
2. *Individual economic* benefits: higher salaries and benefits, employment, higher savings levels, improved working conditions, and personal/professional mobility
3. *Public social* benefits: reduced crime rates, increased charitable giving/community service, increased quality of civic life, social cohesion/appreciation of diversity, and improved ability to adapt to and use technology
4. *Individual social* benefits: improved health/life expectancy; improved quality of life for offspring; better consumer decision making; increased personal status; more hobbies, leisure activities (p. 20)

A study by the Kentucky Long Term Policy Research Center (Watts, 2001) identified a number of social benefits, both individual and public, that accrue as a result of those who attain successively higher levels of education. These included, "…decreased reliance on public assistance, increased tax revenues, lower demands on the criminal justice system, greater civic participation, better health status through improved lifestyle choices, improved parenting skills, increased entrepreneurial activity, and increased access to and use of computers and the Internet" (p. 9).

Models and Theories

Student attrition, then, has led to studies of the reasons for, and the development of, models that can explain attrition and lead to institutional interventions that foster retention.

Spady. Spady (1970) was the first to propose a widely recognized model for college student dropout. Drawing from Durkheim's (1950) suicide model, Spady proposed a sociological model of the dropout process. Against a backdrop of family background, he proposed five variables—academic potential, normative congruence, grade performance, intellectual development, and friendship support—that contribute directly to social integration. These five variables were then linked indirectly to the dependent variable, dropout decision, through two intervening variables (satisfaction and institutional commitment). Subsequently, Spady (1971) designed and executed an empirical study, the findings of which resulted in his addition of structural relations to the model and "…a revision of the relationships among the components in the model "(Summers, 2003, p. 67). The results of the empirical study indicated, "Over a four-year period…formal academic performance is clearly the dominant factor in accounting for attrition among both sexes" (Spady, 1971, p. 38).

Tinto. The next widely recognized work in attrition modeling was Tinto's (1975) student integration model. He linked this multivariate model to Durkheim's (1950) suicide model. Primary to Tinto's original model were the students' academic integration and social integration, both formal and informal. The degree to which students are successful in their pursuits determines the degree to which they are committed to their career and educational goals as well as to the institution. Pascarella, Terenzini, and Wolfe (1986) referred to "…person-environment fit [as] the model's conceptual core" (p. 156).

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Tinto's (1987) revised theory and, ultimately, model incorporated Van Gennep's (1960) rites of passage, "…separation, transition, and incorporation" (p. 11), the stages that mark an individual's path in the process of moving from "…youthful participation to full adult membership in society" (p. 92). (See Tinto, 1988, for a more detailed examination of the application of Van Gennep's theory to student retention.) "Tinto extends these stages to the process through which college students establish membership in the communities of a college or university in general, and to the case of early student departure from college in particular" (Elkins, Braxton, & James, 2000, p. 252). According to Braxton & Mundy (2001-2002), the primary principles of Tinto's model included the following description of institutions with effective retention programs.

1. …committed to the students they serve
2. …first and foremost committed to the education of all, not just some, of their students
3. …committed to the development of supportive social and educational communities in which all students are integrated as competent members (p. 94)

Further work by Tinto (1993) led to the development of a longitudinal, explanatory model of departure. This expanded work added "…adjustment, difficulty, incongruence, isolation, finances, learning, and external obligations or commitments (p. 112)" to his original model. In sum, he proposed that "…the stronger the individual's level of social and academic integration, the greater his or her subsequent commitment to the institution and to the goal of college graduation" (Pascarella, Terenzini, & Wolfe, 1986, pp. 155-156).

In this later work, Tinto (1993) recognized that different groups of students (i.e., at-risk, adult, honors, and transfer) had distinctly different circumstances requiring group-specific retention policies and programs. In addition, he reasoned that different types of postsecondary institutions (i.e., nonresidential, two-year, urban, and large public) also required different types of retention policies and programs.

Bean. Bean (1980) developed the Model of Student Departure, a psychological processes model, to explain the factors contributing to student attrition. The model was an adaptation of an organizational turnover model, which was developed to explain employee turnover in work organizations. Bean's (1980) causal model posited…

> …the background characteristics of students must be taken into account in order to understand their interactions within the environment of the IHE [institutions of higher education] …The student interacts with the institution, perceiving objective measures, such as grade point average or belonging to campus organizations, as well as subjective measures, such as the practical value of the education and the quality of the institution. These variables are in turn expected to influence the degree to which the student is satisfied with the IHE. The level of satisfaction is expected to increase the level of institutional commitment. Institutional commitment is seen as leading to a degree in the likelihood that a student will drop out of school (Bean, 1980, pp. 158-160).

Findings from an empirical test of the model (Bean, 1980) indicated that, "Institutional quality and opportunity for men and, excluding satisfaction, for women were the two most important variables influencing commitment. Whereas, "…men left the university even though they were satisfied, … women who were satisfied were more committed to the institution and were less likely to leave (p. 178)." He proposed further research to determine intervening variables not identified in the model.

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In a subsequent study, Bean (1985) proposed a revised model and found, in the empirical study of the model, that…

1. a student's peers are more important agents of socialization than is informal faculty contact;
2. students may play a more active role in their socialization than previously thought; and
3. college grades seem more the product of selection than socialization (p.35).

Astin. Astin's (1984) developmental theory of student involvement was constructed as a "…link between the variables emphasized in [traditional pedagogical theories] (subject matter, resources, and individualization of approach) and the learning outcomes desired by the student and the professor " (p. 300). This theory was based on the findings of Astin's early work and was designed "…to identify factors in the college environment that significantly affect the student's persistence in college" (Astin, 1984, p.302).

Astin's (1993) later work was an empirical study of the model. Using longitudinal data collected by the Higher Education Research Institute (HERI) at the University of California, Los Angeles in its annual survey of freshmen, he found that the three most important forms of student involvement were academic involvement, involvement with faculty, and involvement with student peer groups. A comparison of faculty, curriculum, institutional type, and peer group effects led to a primary finding of the study: "…the student's peer group is the single most potent source of influence on growth and development during the undergraduate years" (p. 398).

Astin (1993) posited that the implications for practice should be overarching, rather than singular in nature.

> Institutions need not look far afield to find the key to enhanced student retention. It is achievable within the confines of existing institutional resources. It springs from the ongoing commitment of an institution, of its faculty and staff, to the education of its students.
>
> But such commitment requires institutional change. It requires that institutions rethink traditional ways of structuring collegiate learning environments and find new ways of actively involving students, as well as faculty, in their intellectual life. It requires a deeper understanding of the importance of educational community to the goals of higher education (p. 212).

Pascarella. Pascarella (1985) developed a general causal model. In presenting the model he noted, "…causal modeling is an important methodological approach which should find increased use by those interested in the cognitive and other outcomes of college" (p. 49). He suggested that causal modeling could be used to "…understand the pattern of influences involved in the impact of postsecondary education on learning and cognitive development" (p. 49). In this model, student background/pre-college traits and structural/organizational characteristics of institutions directly impact the college environment. Quality of student effort, student background/precollege traits, and interactions with agents of socialization directly influence learning and cognitive development. All other variables in the model indirectly affect learning and cognitive development. Findings from the empirical study indicated that residential facilities and the dominant peer group were strong influences on academic achievement. Less strong, but nonetheless noticeable, was the effect of informal student/faculty interaction outside of the classroom.

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Bean and Eaton. Bean and Eaton (2001-2002) detailed a psychological model of college student retention. The foundations of the model were the psychological processes at the base of academic and social integration. They presented four psychological theories to underlie their model.

1. attitude-behavior theory, which provided the overall structure of their model
2. coping behavioral theory, the ability to assess and adapt to a new environment
3. self-efficacy theory, an individual's self-perception as capable of dealing with specific tasks or situations
4. attribution theory, wherein an individual has a strong sense of internal locus of control (pp. 74-75)

They stressed the importance of institution provisions for service-learning, freshman interest groups and other learning communities, freshman orientation seminars, and mentoring programs to support student success.

Current Practices and Theories

Since the early 1970s, when retention activities and research became more prominent, postsecondary institutions have placed increasing emphasis on the search for programs, policies, and strategies that would increase retention rates. This review of literature indicated that such retention practices have evolved over the years. Early interventions designed to diminish attrition were concentrated on singular programs or services, chiefly in the domain of academic services. That approach was followed by an integration of several programs and services – combining academic services with those of student affairs. More recently, holistic approaches encompassing academic affairs, student affairs, and administration (Borland, 2001-2002) have become the norm.

Berger (2001-2002) noted, "There has been a growing recognition in recent years that our understanding of how colleges work is enhanced when different theories or models of organization behavior are integrated into a coherent whole rather than viewing each theoretical perspective as either 'right' or 'wrong'" (p.4).

Freshman Seminar. Strong emphasis has been placed on the need to provide students, as they enter and proceed through their collegiate experience, with the support they need to succeed. As Levitz, Noel, & Richter (1999) explained,

> Getting students started right on the path through the institution to graduation begins with anticipating and meeting their transition and adjustment needs when they enter. Freshmen need a prevention plan. Intrusive, proactive strategies must be used to reach freshmen before the students have an opportunity to experience feelings of failure, disappointment, and confusion" (p. 39).

One of the first widely recognized and emulated efforts designed primarily for freshmen was the University of South Carolina's University 101, introduced in 1972, to help quell student unrest. "The essential goal of University 101…is to maximize the student's potential to achieve academic success and to adjust responsibly to the individual and interpersonal challenges presented by collegiate life…" (University of South Carolina, *Program Overview*, p.1).

In 1989, Jewler provided a description of the evolving nature of University 101.

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> As a young discipline, it has borrowed a great deal from the more traditional areas of academic study. What distinguishes it from the rest, however, is its need to stay abreast of current trends in freshman behavior and to be able to respond to those trends from one year to the next, one decade to the next, one generation to the next (p. 215).

Perhaps the most interesting finding from research conducted over a 12 year period for the University 101 program at South Carolina University was that "…students with a lower predicted potential for survival are surviving at a higher rate than students who did not take the courses even though the students who did not take the University 101 course had an initially higher predicted grade point ratio as a group" (Gardner, 1986, p. 271). In addition, research has found that high risk students (e.g., those students who are undecided or pursuing an Associate degree) who participate in the University 101 program had higher retention rates than students who were not high risk (Gardner, 1986).

Called by many different names, the seminar for first time students, whether entering freshmen or transfer students, are offered by "…approximately 70% of American colleges and universities" (University of South Carolina, *Program Overview*, p.2). For the majority of those who do offer such seminars, the emphasis is placed on those interventions that will maximize academic and social integration and, thus, enhance the likelihood of persistence to the sophomore year and beyond.

"Freshman Seminar" has become the most common label for these multi-faceted programs that address the academic, social, and personal needs of students as they make the transition to collegiate life. The results of an empirical study, conducted by Davig and Spain (2003-2004) to identify those topics/activities in a freshman seminar that were most effective, found…

> …support [for] the Tinto stage model of persistence since the elements of the orientation course most highly correlated to persistence were topics and activities dedicated to: 1) the development of strong social networks (with both faculty and students) and 2) integration into the institution. Results also suggest that certain topics/activities should be included in orientation courses in order to help students become more effective in dealing with their external relationships as specified in the Astin attrition model. Specifically, results indicate that if a student did not have exposure to study skills, advising information, curriculum planning, group activities, and campus tours, they were less likely to re-enroll (p. 305).

A study of the long-term effects of the freshman seminar (Schnell & Doetkott, 2003) found significantly higher retention rates for those students who participated in a freshman seminar than those for students who did not. Significant differences were observed at the end of each year across four years.

Organizational Theory. Organizational theory, which encompasses an array of organizational features and behaviors that influence student experiences and outcomes, has been used as a framework for studying the impact of the college environment on student outcomes, including student retention. Berger & Milem (2000) delineated organizational behavior, organizational culture, and organizational climate as primary to understanding the effect of the campus organization on the student.

> Organizational culture represents patterns of organizational behavior that have become institutionalized as structures. …organizational climate represents current perceptions

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> about organizational behavior that are less permanent and more transitory than the patterns of behavior that have already become enculturated on campus (p. 275).

Thinking about retention has evolved from the identification and implementation of isolated programs and services designed to improve retention to a view of the organization as a whole and its effect on retention. Berger (2001-2002) proposed "… that colleges and universities are organizations and subsequently that organizational perspective is an appropriate framework for gaining useful insights into how undergraduate retention can be improved" (p. 3). Organizational theory, in the context of student retention, posits dynamic, interactive processes affect student involvement and persistence.

> Just as no single experience has a profound impact on student development, the introduction of individual programs or policies will not by themselves change a campus culture and students' perceptions of whether the institution is supportive and affirming. Only a web of interlocking initiatives can over time shape an institutional culture that promotes student success (Kuh, 2001-2002, pp. 30-31).

Berger's (2001-2002) review of organizational studies of undergraduate persistence led to the following recommendations for organizational practice that can lead to student success.

1. Provide students with information and clear lines of communication about campus goals, values, policies, and procedures.
2. Provide opportunities for students to participate in organizational decision-making.
3. Provide a campus environment characterized by fairness toward students.
4. Provide balance between structure and responsiveness.
5. Actively engage students in political activity on campus.
6. Provide students with advocates.
7. Build shared meaning through authentic symbols that are used with integrity.
8. Pay attention to structural and symbolic connections with the external environments.
9. Understand the nature of the organizational environment on campus.
10. Assess student perceptions of organizational behavior on campus. (pp. 15-19)

Kuh (2001-2002) proposed the following organizational practices as necessary for cultivating student success.

1. Clarify institutional values and expectations early and often to prospective and matriculating students.
2. Conduct a comprehensive examination of the student experience inside and outside the classroom
3. Consistently use good practices in teaching, learning, and retention programs.
4. Intentionally tie the curriculum to students' lives outside the classroom to bring students into ongoing contact with one another and with campus resources, especially after the first year of study.
5. Remove obstacles to student success associated with disciplinary cultures.
6. Determine the effects of proximal peer groups on persistence decisions. (pp. 32-36)

The evolution of student retention theory and practice over the past 40 years has been an ever-expanding process. From a programmatic approach, the movement has evolved to a more integrative network of initiatives guided by organizational strategies that position each student for success. From the original sociological and psychological models and theories to explain student

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retention, the movement has evolved to include organizational models and theories that identify and explain the many facets of student retention and success. Future research and practice will undoubtedly add new insights. In the end, however, as Tinto (1990) noted,

…the secret of successful retention programs is no secret at all, but a reaffirmation of some of the important foundations of higher education. There is no great secret to successful retention programs, no mystery which requires unraveling. Though successful retention programming does require some skill and not an inconsiderable amount of effort, it does not require sophisticated machinery. It is within the reach of all institutions if they only give serious attention to the character of their educational mission and the obligation it entails. In short, successful retention is no more than, but certainly no less than, successful education (p. 47)

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