Integration, Motivation, Strengths and Optimism:
Retention Theories Past, Present and Future

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Abstract - **The earliest studies of undergraduate retention in the United States occurred in the 1930s and focused on what was referred to at the time as student mortality: the failure of students to graduate (Berger & Lyon, 2005). Historically higher education research has had an eye toward pathology with a focus on repairing students' problems (Shushok & Hulme, 2006). To this end, much research exists on why students fail to persist as opposed to why they succeed. Strength-based approaches to the study of undergraduate retention involve studying successful students. Studying what is right with students may illuminate new aspects of successful student experiences which can in turn be applied to supporting all students. This paper will provide a brief historical overview of undergraduate retention followed by factors commonly related to undergraduate retention. Finally, an overview of the recent application of motivational theories to understand undergraduate retention including attribution theory, expectancy theory, goal setting theory, self-efficacy beliefs, academic self-concept, motivational orientations and optimism will be provided. Considerations for the future of motivational theories in undergraduate retention will be discussed with particular emphasis on the value of strength-based approaches to study and practice.**

Introduction

Undergraduate retention is an institution of higher education's ability to retain a student from admission until graduation (Berger & Lyon, 2004). For the last one hundred years, the national undergraduate graduation rate has hovered around fifty percent meaning that only half of the high school graduates entering institutions of higher education in the United States graduate (Swail, 2004). The earliest studies of undergraduate retention in the United States occurred in the 1930s and focused on what was referred to at the time as student mortality: the failure of students to graduate (Berger & Lyon, 2005). The study of higher education as a whole and undergraduate retention as a subfield began developing between the 1930s and 1950s, but it was not until the 1960s when multiple publications such as Gekoski and Schwartz's (1961) "Student Mortality and Related Factors" in the *Journal of Educational Research*, Panos and Astin's (1968) article "Attrition Among College Students," and Feldman and Newcomb's (1969) book *The Impact of College on Students* that the study of undergraduate retention began to take shape.

The publication of Vincent Tinto's (1975) landmark student integration model demarks the start of the current, national dialogue on undergraduate retention. The model theorizes that students who socially integrate into the campus community increase their commitment to the institution and are more likely to graduate (Tinto, 1975). While Tinto's model has been supported, attacked and revised over the last 30 years, it has significantly influenced how researchers and practitioners view undergraduate retention and graduation (Swail, 2004). Tinto's seminal theory created a base from which thousands of

studies have proliferated in the ensuing years making undergraduate retention one of the most widely studied areas of higher education today (Berger & Lyon, 2005; Tinto, 2007).

Tinto's student integration model has changed over the course of the 35 years from when it was originally introduced. Most notably, its more recent versions have included motivational variables including goal commitment. Over the last decade, motivational theories from multiple fields of study, including educational psychology and social psychology, have been applied to practice, theoretical developments and the study of undergraduate retention. In particular, attribution theory of motivation has been notable in practice and in the retention literature. Additionally, expectancy theory, goal setting theory, self-efficacy beliefs, academic self-concept, motivational orientations and optimism have been used to gain understanding into college student persistence and retention.

This paper will provide a brief historical overview of undergraduate retention followed by factors commonly related to undergraduate retention. Finally, an overview of the recent application of motivational theories to understand undergraduate retention will be provided. Considerations for the future of motivational theories in undergraduate retention will be discussed with particular emphasis on the value of strength-based approaches to study and practice.

Historical Overview of Undergraduate Retention

Origins

From the 1600s to the mid 1800s, the earliest institutions of higher education in the United States catered to very select populations, student degree completion was rare, and universities focused more on institutional survival than student graduation (Berger & Lyon, 2005). Monumental changes in higher education came with the Morrill Land Grant Act of 1862 and the growth of cities and urban life in the late 1800s and early 1900s. These two events created more institutions of higher education and more individuals seeking access to higher education (Goldin & Katz, 1999). Emerging urban lifestyles created a greater need for postsecondary learning and degree attainment (Berger & Lyon, 2005). Additionally, the increased demand for university trained scientists to work in industrialized areas led to changes in the ways knowledge was organized and taught in institutions of higher education. These changes led to the development of more prescriptive curriculums and a greater desire for individuals to obtain a degree (Goldin & Katz, 1999). At this time, interest in undergraduate retention and graduation began to grow.

The 1930s-1960s

The first studies of undergraduate retention appeared in the 1930s. In particular, a 1938 study lead by John McNeely and published by the U.S. Department of Interior and the Office of Education collected data from 60 institutions and examined demographic characteristics, social engagement and reasons for departure. This groundbreaking study is considered a precursor for many studies that would occur during the 1960s when undergraduate retention began to form into a well-researched subfield of higher education (Berger & Lyon, 2005). The next great growth in higher education developed after World War II. The GI Bill had a dramatic influence on college student enrollment. By 1950, more than two million veterans enrolled in institutions of higher education using the GI Bill and, throughout the decade, institutions began to regularly monitor their student enrollment (Thelin, 2004). By the beginning of the 1960s, the strain of rapid enrollment growth became evident on campuses across the country. The increase in enrollment resulted in greater access to higher education for middle and low-income students, diverse student bodies that institutions were unprepared to serve, and stress on campus facilities. During the 1960s, the Civil Rights Movement, the War on Poverty and the general student unrest on college campuses in response to war, politics and social revolutions raised questions about who had access to college, who was succeeding in college and who were the college graduates in American society (Berger & Lyon, 2005). The Higher Education Act of 1965 increased access to higher education by providing students with financial support to enroll in colleges and universities and created on campus support services to help students succeed academically (McDonough & Fann, 2007). By the end of the 1960s, retention was a common concern discussed on college and university campuses. A few large scale studies

in the second half of the decade, by researchers such as student development theorist Alexander Astin and Alan Bayer from the American Council on Education, encouraged comprehensive and systematic examination of student attrition (Berger & Lyon, 2005). Subsequently, institutions of higher education began to develop research and activities designed specifically to understand and support retention.

The 1970s

The 1970s was the dawn of theory in the study of college student retention (Berger & Lyon, 2005). Spady's (1970) sociological model of student dropout in higher education, based in part on Durkeim's suicide model, was the first widely recognized model in retention study. Spady proposed five variables (academic potential, normative congruence, grade performance, intellectual development and friendship support) contributed to social integration and could be indirectly linked to the decision to drop out of school through the intervening variables of satisfaction and commitment. In 1971, Spady published an empirical study finding that formal academic performance was the dominant factor for student attrition (Spady, 1971). Tinto's (1975) model of student integration was also based in part on Durkheim's suicide model, but posited that student attrition was linked to both formal and informal academic experiences as well as social integration. Tinto's model proposes that the degree of success a student has in his or her pursuit of higher education influences the level of commitment a student has to an institution, academic goals and career goals. Tinto has revised and added to his model over the three decades since the initial publication of his student integration theory. In theory expansions, Tinto has described the decision making process concerning student goal commitment and dropout, the need to match student expectations to institutional mission, and the transitions of students moving through the college process (Swail, 2004).

The 1980s

By the end of the 1970s, the number of students enrolling in higher education began to decline. With this decline came the emergence of enrollment management. The hallmark of retention in the 1980s was the development of enrollment management as a practice and a field of study within colleges and universities (Berger & Lyon, 2005). Enrollment management takes a university-wide approach to student marketing and recruitment, including admissions and financial aid, as well as to student retention and graduation (Hossler, 1984). Enrollment management administrators, departments or committees work to facilitate collaboration across academic and student affairs divisions to encourage institutional recruitment, admissions and retention. Throughout the 1980s, the literature on retention theories grew as many institutions made retention a focal point of their strategic planning. Notable theorists of the 1980s include Bean and Astin. Bean (1980) stressed the importance of background characteristics, such as prior academic performance, distance from home and socioeconomic status, as well as student satisfaction in determining student departure from the college or university. Bean's 1980 study also found that men and women depart from higher education for different reasons. In the mid-1980s, Bean revised his model to give attention to the influence of peers on determining student retention and departure (Berger & Lyon, 2005). Astin's model of student involvement describes how students develop during the college experience. The model involves three elements which influence a student's continued involvement in higher education: 1) student demographics and prior experiences; 2) environment including the experiences a student encounters during college; 3) student characteristics including knowledge, attitudes and beliefs post-college (Pascarella & Terenzini, 2005).

The 1990s

Much of the retention literature of the 1990s focuses on encouraging retention for students of color, underrepresented populations and individuals from disadvantaged backgrounds. Many studies focused on how institutions can embrace diversity and promote multiculturalism within campus cultures to encourage student retention (Swail, 2004). During the 1990s, Tinto continued to publish and revise his student integration model. Tinto (1993) identified different student groups, such as African American students, students from low-income families, adult students and transfer students, with unique experiences requiring group-specific interventions and policies. During the second half of the decade, understanding

student transition periods, especially the first-year experience, and providing quality support services became a significant focus. To meet the needs of students in transition, research and best practice stressed collaboration across campus departments. Swail's 1995 framework for student retention suggested strategic collaboration among recruitment and admissions, academic services, curriculum and instruction, student services and financial aid as well as the use of an efficient student monitoring system (Swail, 2004). Wyckoff (1998) proposed that the interactions a student has with all university members (peers, faculty, staff, and administrators) influence a student's intent to remain at the university. The need for effective counseling and advising programs was stressed for all students. Anderson (1997) argued that academic advising is imperative to undergraduate retention because it keeps students motivated, stimulated and working towards a meaningful goal. Tinto (1999) stressed academic advising should be an integral part of a student's first-year experience and should promote student development.

2000-present

Holistic approaches to undergraduate retention that include all members of the campus community carried over from the late1990s into the early 2000s. Retention literature from this time stresses cross-departmental institutional responsibility for retention via wide-range programming (Kadar, 2001; Keels, 2004; Lehr, 2004; Salinitri, 2005; Thayer, 2000; Tinto, 2000; Walters, 2004; White, 2005). Programs and initiatives designed to support undergraduate retention should address both formal and informal student experiences inside and outside of the classroom. Habley (2004) found that the interactions students have with concerned individuals on campus (faculty, staff, advisors, peers, administrators) directly influence undergraduate retention. To this end, Tinto (2004) suggested that to improve undergraduate retention all institutions of higher education must offer easily accessible academic, personal and social support services. The interactions students have on campus with individuals in academic, personal and support service centers can influence a students' sense of connection to the college or university as well as their ability to navigate the campus culture, meet expectations and graduate. A university that holds high expectations and actively involves students in their learning creates an environment where students are more likely to succeed.

Factors Related to Student Retention

More than 30 years of research has identified many variables found to influence undergraduate retention. This section of the paper will summarize several of the most often cited variables including academic preparation, academic engagement, social engagement, financing college, and demographic characteristics. Each of these variables has been found to directly or indirectly influence students' ability or desire to graduate.

Academic Preparation

Bean (1980) stressed the importance of background characteristics including academic preparation prior to attending college or university. The quality of a student's prior instruction and his or her preparedness for college-level work can significantly influence whether or not a student will succeed at an institution of higher education. Many students entering college today are unprepared for college-level reading, writing and math requiring them to begin their postsecondary studies by enrolling in remedial coursework (Swail, 2004). Completion of a strong high school curriculum is an important predictor of undergraduate success and retention (Retention Study Group, 2004). Additionally, high school academic achievement indicators including grade point averages and class rank are positively related to undergraduate retention (Adelman, 1999).

Academic Engagement

Students' connection to the academic life of an institution has been related to undergraduate retention (Retention Study Group, 2004). Positive faculty-student interactions and taking advantage of resources that promote academic success such as learning centers, tutorials and office hours have been

demonstrated to positively influence retention (Wyckoff, 1998; Habley, 2004). Furthermore, when academic support services are linked to everyday learning in the classroom of credit bearing courses, the more likely students are to engage the services and to succeed (Tinto, 2004). Programs that encourage faculty-student interaction as well as engagement with academic pursuits such as research encourage students to integrate into the university or college community.

The rate at which students make progress to a degree by earning credit hours and passing grades is related to overall degree completion (Retention Study Group, 2004). Part-time students are less likely than full-time students to complete their undergraduate degrees. Students who take time off from their undergraduate studies are less likely to graduate than students who enroll continuously (Adelman, 1999). Degree completion is further influenced by changing majors, ending up on academic probation or receiving other types of academic progress warnings, and retaking courses to fulfill degree requirements. Failing to make satisfactory academic progress is one of the strongest predictors of failure to graduate (Retention Working Group, 2004).

Social Engagement

If students simply go to class and then go home without engaging in campus activities, they are less likely to be retained. For over 30 years, researchers and practitioners have been stressing the importance of successful social integration for student success. The establishment of friendships with peers, the development of mentors and connections to faculty members have been identified as important factors for student integration (Swail, 2004). For students from underrepresented populations, it is important to remove cultural barriers so that students can connect to the campus community (Tinto, 2004). The act of socially integrating into a campus community has been shown to be a cumulative process (Swail, 2004) so it is essential for students to connect to the campus culture early on in their academic experience. Participating in student organizations and engaging in campus social traditions can also positively influence institutional commitment and retention.

Financing College

Working while attending college, paying tuition through loans or grants, and being financially dependent or independent are all factors related to undergraduate retention. Often, students with high financial need also have other characteristics, such as being a first generation college student or having less rigorous high school preparation, putting them at high risk for being retained (Retention Study Group, 2004). Minority students and students from low-income families are generally more likely to be retained if their financial aid package consists of grants as opposed to loans (Swail, 2004). When students have unmet need (a balance remaining after institutional and family contributions) they tend to register for part-time studies, work excessively or live off-campus which has a negative influence on retention (Tinto, 2004).

Demographic Characteristics

Parent's level of education, gender, ethnicity, family income and distance of hometown from the institution are all factors in the retention puzzle. Several studies have identified differences in retention as related to gender and ethnicity (Retention Study Group, 2004). The distance from one's hometown, both physically and culturally, is also an important factor in retention. Ethnicity is a factor related to retention particularly at institutions lacking diversity in student body, faculty and institutional leadership (Swail, 2004). Many minority students are also first generation students. The obstacles for first generation students, or students who are first in their family to attend college, are impressive. First generation students and students from low-income families are among the least likely to graduate (Thayer, 2000). First generation students attending four year colleges and universities are twice as likely to depart from the institution before the start of the second year (Choy, 2001). Often parents of first generation students are unfamiliar with the processes, such as completing applications and financial aid forms, associated with successfully negotiating higher education (Retention Study Group, 2004). Additionally, first generation students are often students from low-income families. Students from low-income families are

more likely to have lived in areas where the schools were under-resourced (Retention Study Group, 2004). As indicated in the previous section, students from low-income families are also more likely to work many hours making it more challenging for them to integrate into the social and academic life of an institution and thus persist to graduation.

The Application of Motivational Theories to Undergraduate Retention

In recent years, motivational theories have been applied to the study of undergraduate retention. These motivational theories come from many different disciplines including managerial sciences, educational psychology, and social psychology. Attribution theory is the most widely applied motivation theory in the undergraduate retention literature. This may be because practitioners, especially academic advisors, are most interested in understanding what students attribute their failure to persist to. Since attribution theory is the most widely applied theory, a significant portion of the following section is devoted to this theory. Additionally, expectancy theory, goal setting theory, self-efficacy beliefs, academic self-concept, motivational orientations and optimism have been used in efforts to enhance our understanding of undergraduate retention. Brief overviews of these motivational theories in recent retention study and practice are provided.

Attribution Theory

A theory of attribution was first proposed by psychologist Fritz Heider (1958). This theory focused on the events ordinary people encounter in their lives and whether people attribute the outcomes of these events to internal or external factors. Julian Rotter's (1966) theory of locus of control examined individual perceptions of control over events. Influenced by both Heider's and Rotter's work, Bernard Weiner completed a series of studies in the 1970s and 1980s that became the foundation of the attribution theory of achievement (Schunk & Zimmerman, 2006). Weiner's theory describes how individuals interpret events and how their interpretation influences motivation for learning as well as future learning behaviors. The perceived causes of event outcomes are called attributions; individuals create attributions for the causes of their own actions as well as the actions of others.

There are numerous attributions for success and failure ranging from mood to instructional bias to illness (Weiner, 1979). Most often, individual successes and failures in academic achievement are attributed to four casual factors: ability, effort, task difficulty and luck (Schunk & Zimmerman, 2006). There are motivational consequences to attributions. Understanding motivational consequences of attributions are important to understanding learning behaviors. For example, students are likely to persist in their efforts at learning when they feel they are in control. Students are likely to feel in control when the factors attributed to their outcomes are seen as internal, stable and controllable (Schunk & Zimmerman, 2006). Emotions are an important part of understanding attribution. Emotions may serve as motivations for future behaviors. The attributions individuals make about events affect their emotional responses to learning situations. In particular, the casual dimensions of locus and controllability can produce strong emotional reactions. A student who feels he or she cannot control a casual factor may convey great frustration to his or her academic advisor. Locus influences feelings of pride and self-esteem (Weiner, 2000). A student ascribing effort with an internal locus as a casual factor of a positive performance, may experience pride in his or her accomplishment. On the other hand, if a student attributes failure to low-ability and low-ability is perceived to be internal, stable and uncontrollable, the student may experience shame and feel hopeless (Anderman & Wolters, 2006). This student's self-esteem may lower and he or she may no longer attend to or put forth effort in achievement-related situations. Emotions experienced in prior learning experiences have an influence on choice of future activities. A student who experienced shame or feelings of hopelessness in a math course is likely to avoid future math courses (Anderman & Wolters, 2006). Understanding this process may help faculty or staff working with students to make informed curriculum choices and persist in college.

Weiner (1990) found that to understand motivation for learning, the social context must be examined. Within attribution theory, individuals use situational cues from their social context to form

attributions. For example, the ease and speed with which an individual completes a task can influence the individual's attribution. Additionally, how others in the environment are performing can influence individual attributions (Schunk & Zimmerman, 2006). Weiner (2000) has also developed a theory of motivation based on the attributions of individuals within a social context. This theory, called an interpersonal theory of motivation, focuses on the reactions- individuals such as peers, advisors, professors and parents- have to the performance of others in a social context. After a performance, there is a causal search not just by the student but also by the observer (peer, advisor, professor or parent). The observer finds a causal factor that may or may not match the student's causal factor. This causal factor is then ascribed causal dimensions (locus, stability and controllability). From there, the peer, teacher or parent makes an inference about the student. This inference often leads to an emotional response and a behavior. For example, a parent who identified effort as a causal factor with a controllable dimension may ultimately be angry and reprimand the student.

Interrelated to the interpersonal theory of motivation is Weiner's (2000) intrapersonal theory of motivation. This theory assumes that individuals "are scientists, trying to understand themselves and their environment and then acting on the basis of this knowledge" (Weiner, 2000, p.2). After a learning performance or outcome, the student has an affective reaction. For example, a student may be disappointed after failing an exam. The student will then begin to search for a causal factor for the performance on the exam. This search may involve considering prior experiences of success or failure, the performance of peers and classroom social norms. During this process, information from others may influence the student's search for a casual factor. For example, if a peer expresses disappointment or frustration because he or she did not perform well, this can influence another student's ascription of a casual factor for his or her own performance. Once the casual factor is elected, the student determines locus, stability and controllability of the factor. There are psychological consequences to this ascription. The student will make judgments about expectancy and value. These judgments along with emotional reactions will motivate future behavior (Weiner, 2000).

A learning practice based on attribution theory is attributional retraining. Attributional retraining attempts to restructure a student's explanations for academic performance from unhelpful attributions to attributions that can sustain motivation (Kallenbach & Zafft, 2004). A goal of attribution theory research has been to determine the principles governing attributions and how attributions can be changed. Researchers have found that changing attributions can change learning behaviors (Schunk & Zimmerman, 2006). Kallenback and Zaft (2004) have identified four suggestions for attributional retraining with college students. The first component, modeling, involves a faculty member or an advisor sharing with students how his or her thinking and ability level has changed over time. Providing an appropriate, personal anecdote from the faculty member's or advisor's educational career may accomplish this. The second component utlizes student modeling. Here, students leaders, such as peer advisors, would share how their thinking and attributions have changed over time. The third component involves analyzing successes. Often advisors and students focus on what went wrong in an academic task. Focusing instead on the strategies and causes of success can help students leverage their strengths against their weaknesses. Finally, advisors should employ techniques that promote self-control. This involves providing students some control over the content and method of their learning.

Students on academic probation are at-risk for not being retained. An understanding of attribution theory may help academic advisors and faculty, as well as student support services, working with students who are on academic probation or students who are struggling to maintain their academic eligibility. Often students on academic probation feel they have lost control over their academic situation. Additionally, some students on academic probation fail to take responsibility for their academic performance. Often students attribute their academic performance to external, uncontrollable factors such biased instruction, academic advising or university policies. Taking an attributional approach to working with these students may help students develop a sense of responsibility for their academic performance and a sense of control over their current situation. College students who feel in control of their academics are more likely to bounce back from setbacks such as academic probation (Kallenback & Zafft, 2004).

As mentioned earlier, perhaps the most well-known theorist on college student retention is Vincent Tinto. Tinto's student integration model theorizes that students who academically and socially integrate into the campus community increase their commitment to the institution and are more likely to graduate (Tinto, 2007). Positive faculty-student interactions and taking advantage of resources that promote academic success such as academic advising, learning centers, tutorials and office hours have been demonstrated to positively influence retention by academically and socially integrating students into the university community (Wyckoff, 1998; Habley, 2004). Students on academic probation or struggling to persist are strongly encouraged to utilize faculty office hours and university resources. Attributional retraining models may help faculty, advisors, counselors and mentors working with students in support service departments across campus.

The attribution theory of learning is further applicable to the study of and best practices in undergraduate retention especially upon considering the role of academic advising in the undergraduate experience. Academic advising is critical to successful student retention initiatives (Anderson, 1997). To support retention efforts, it is imperative for advisors to understand student attributions for their learning and their failure to succeed. Academic advisors to remember to help students identify what they attribute poor performance too as well as to identify attributions for their success. Advisors can help students identify strategies they employed and highlight successes they had in their learning. This process of examining both successes and failures will encourage students to identify their individual strengths. Helping students on academic probation or at-risk for being retained must involve not just understanding student attributions for failure but also attributions for success. To support a learning environment promoting retention and resiliency, it is necessary to understand student attributions for failures as well as successes.

Expectancy Theory

Within the field of managerial sciences, Vroom (1964) developed an expectancy theory of motivation which posits that motivation stems from the perceived probability that effort will result in performance and that performance will result in valued outcomes. In this theory, past experiences, including successes and failures, influence current perceptions and decisions. Valence, expectancy and instrumentality are three beliefs which influence motivation. Valence involves an individual's value of an expected outcome. Expectancy is one's belief in the likelihood that effort will lead to performance. Instrumentality is the belief that performance will lead to desired rewards. Friedman and Mandel (2010) applied Vroom's theory in an attempt to predict student motivation to succeed and stay in college. Their work found that student academic performance expectancies predicted cumulative GPA at the end of the first year of college. Additionally, perceived grade attractiveness and effort to obtain good grades predicted retention beyond the first year. These results have implications for practice. For example, many institutions utilize predictive models with measures such as SAT scores and high school GPA to determine undergraduate retention and, subsequently, plan intervention efforts. Friedman and Mandel's work suggests that it may be beneficial to include psychological variables such as academic motivation and expectancy to succeed in predictive models.

Expectancy-Value Theory

Building on an expectancy-value theory first proposed by Atkins in 1954, educational psychologists Eccles and Wigfield's theory of achievement motivation explains how expectancies and values influence achievement task choices, persistence and performance (Wigfield & Eccles, 2000). Expectancies and values are influenced by beliefs about specific tasks. These beliefs include ability beliefs, perceived difficulty of task, individual goals and affective memories. Perceptions of prior experiences and social influences also play an important role. Bong (2001) applied Eccles and Wigfield's theory to a predictive model of college student course performance and intent to enroll in future courses. Bong found that task value significantly influenced intent to enroll in future courses. This is meaningful to retention research and practice in that the value students assign to their coursework influences their continued enrollment. A study of retention at the end of the first and second years of college by Bruinsma

(2004) also found that expectancy and values were positively associated with the total number of earned academic hours. This is a significant finding for retention work as earned hours are important indicators of persistence and progress towards graduation.

Goal Setting Theory

Goal setting theory is premised on the idea that individuals who set goals are more likely to perform at higher levels than individuals who do not set goals. Performance is influenced by goal specificity, challenge, commitment, feedback and task complexity (Locke & Latham, 1990). According to this theory, individuals perform best when goals are challenging and specific. Additionally, performance is influenced by the individuals commit to the goal, belief that they can accomplish the goal, and possessing the requisite skills to complete the task at hand. Goal setting activities have been utilized in retention intervention programs and have been demonstrated to aid college students in identifying and overcoming obstacles to academic success (Sorrentino, 2007). In particular, goal setting activities have been found to be especially helpful to retaining students on academic probation (Kamphoff et al., 2007).

Self-Efficacy Beliefs

Self-efficacy beliefs refer to an individual's beliefs concerning whether or not he or she can perform a course of action resulting in a desired outcome (Bandura, 1977). Self-efficacy beliefs play a major role in Bean and Eaton's (2000) psychological model of college student retention. The model proposes that when students believe they are efficacious and competent, they will persist on tasks and develop higher goals for tasks. The model also posits that as academic social self-efficacy increases, academic and social integration into university life will also increase leading to student persistence. Bean and Eaton (2001) have identified several successful retention practices (i.e., learning communities, freshman interest groups, tutoring and orientation) and described the underlying psychological processes, including self-efficacy beliefs, which encourage student persistence through these practices. For example, learning communities provide students with structured opportunities to become more socially adapt and develop social self-efficacy. As social self-efficacy develops, students become more confident and are more likely to integrate into the campus community.

In an attempt to better understand practices which could support student retention, DeWitz, Woolsey and Walsh (2009) investigated the relationship between self-efficacy beliefs and purpose in life among college students. All variables of self-efficacy were significantly and positively correlated with purpose in life variables. The most significant predictor of purpose in life scores was general self-efficacy. The authors proposed that developing self-efficacy interventions could improve student behaviors associated with purpose in life. This could, in turn, encourage more positive and meaningful experiences for college students. Such experiences would likely improve student retention.

Academic Self-Concept

Academic self-concept encompasses a student's perception of his or her ability or competence in an academic realm (Marsh & Shavelson, 1985). Academic self-concept can be both global and domain-specific. Komarraju, Musulkin and Bhattacharya (2010) examined the role of student-faculty interactions on the development of academic self-concept in college students. Student-faculty interaction has long been thought to positively influence student development (Chickering, 1969) and undergraduate retention (Tinto, 1975); however, not all types of student-faculty interaction are equally beneficial (Eli & Bowen, 2002). Komarraju and colleagues (2010) found that student-faculty interaction supports the development of academic self-concept when students perceive faculty as respectful, approachable and available outside of the classroom. Students who perceive faculty as respectful, approachable and available outside of the classroom are more likely to feel confident about their academic skills and to be academically motivated. Students who engage in informal conversations with faculty members are more likely to enjoy learning.

Motivational Orientations

Motivational orientations can influence college student performance as well as ability and desire to stay in college. Using Deci and Ryan's theory of motivational orientations, Baker (2004) examined the relationship between instrinsic, extrinsic and amotivation to college student adjustment, stress, well-being and academic performance. Intrinsically motivated behaviors were associated with lower stress levels. Amotivated behaviors were associated with poor psychological adjustment to college, higher levels of perceived stress and psychological distress while studying. Lin and McKeachie (1999) found that students with a balance of both extrinsic and intrinsic motivation tend to perform best in college-level coursework. In their study of college students in multiple academic domains, students who combined high intrinsic motivation with a medium-level of extrinsic motivation were most likely to achieve academically. Allen (1999) examined whether a strong desire for achievement influences student persistence in college. Allen found that background variables including precollege characteristics and desire to finish college influenced persistence. Especially for minority students, desire to finish college was among the top ranked items by students as having a perceived influence on their persistence.

Optimism

Optimistic individuals perceive positive outcomes as possible and are motivated to invest effort to achieve goals (Peterson, 2000). Optimism has cognitive, emotional and motivational components. Adjusting to stressful and challenging situations is an important factor in undergraduate retention. College persistence is influenced by a student's ability to adjust to new situations and to manage stress. Optimism has been associated with psychological adjustment to stressors (Scheier & Carber, 1992). Aspinwall and Taylor (1992) found that optimism directly affects college student adjustment for students transitioning from high school to their first year of college. Nes, Evans and Segerstrom (2009) investigated the association of optimistic expectancies with college retention. Academic and dispositional optimism were associated with higher levels of motivation and judgment as well as with a lower rate of college dropout. Academic optimism was also associated with academic achievement. Both academic and dispositional optimism were predictive of student retention.

Conclusion

A historical look at undergraduate retention reveals that empirical study of undergraduate retention has grown considerably over the last fifty years. Researchers are concerned with variables related to student persistence in college as well as identifying best practices to encourage degree attainment. Tinto's theory of student retention remains a seminal theory important to the field; however, applications of motivational theories to undergraduate retention over the last decade have brought many new and interesting perspectives to retention study and practice. In particular, practitioners, especially academic advisors, have been interested in attribution theory. Additionally, recent retention research has utilized theories of expectancy, goal setting, self-efficacy, academic self-concept, motivational orientations and optimism. Research on optimism and individual strengths, a focus of the positive psychology movement, have been a notable addition to the study of student success in college. These applications may hold great promise for the future of retention research. Historically higher education research has had an eye toward pathology with a focus on repairing students' problems (Shushok & Hulme, 2006). To this end, much research exists on why students fail to persist as opposed to why they succeed. Strength-based approaches to the study of undergraduate retention involve studying successful students. Studying what is right with students may illuminate new aspects of successful student experiences which can in turn be applied to supporting all students.

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