The following material has been excerpted from "The Big Picture," a column appearing in *Esource for College Transitions* (Electronic Newsletter), published by the National Resource Center for the First-Year Experience & Students in Transition, University of South Carolina.

# Student Success:
# Definition, Outcomes, Principles and Practices

*Joe Cuseo*
Marymount College

## *Defining* Student Success: The Critical First Step toward Promoting It

"Student success" is a term that appears frequently married in higher education discourse. The term leads logically to the following trio of questions:
1) What constitutes student success? (How should student success be defined or described?)
2) How do postsecondary institutions promote student success? (What specific types of educational processes contribute to, or increase the likelihood of student success?)
3) How can student success be measured or assessed? (What constitutes "evidence" that student success has been realized and that certain experiences during the first year are responsible for its realization?)

The answer to the first question in this three-step process provides the critical foundation for launching the quest for student success in an accurate direction. Webster's dictionary defines "success" as a "favorable or desired outcome." Thus, *student success* may be defined as a favorable or *desirable student outcome*. In my estimation, the following desirable outcomes have been the most frequently cited indicators of student success in higher education.

***Student Retention (Persistence)***: Entering college students remain, re-enroll, and continue their undergraduate education. (For example, first-year students return for their sophomore year.)

***Educational Attainment***: entering students persist to completion and attainment of their degree, program, or educational goal. (For example, 2-year college students persist to completion of the associate degree, and 4-year college students persist to completion of the baccalaureate degree).

***Academic Achievement***: students achieve satisfactory or superior levels of academic performance as they progress through and complete their college experience. (For example, students avoid academic probation or qualify for academic honors.)

***Student Advancement***: students proceed to and succeed at subsequent educational and occupational endeavors for which their college degree or program was designed to prepare them. (For example, 2-year college students continue their education at a 4-year

college, or 4-year college students are accepted at graduate schools or enter gainful careers after completing their baccalaureate degree.)

***Holistic Development***: students develop as "whole persons" as they progress through and complete their college experience. This outcome consists of multiple dimensions, which may be defined or described as follows:

- *Intellectual* Development: developing skills for acquiring and communicating knowledge, learning how to learn, and how to think deeply.

- *Emotional* Development: developing skills for understanding, controlling, and expressing emotions.

- *Social* Development: enhancing the quality and depth of interpersonal relationships, leadership skills, and civic engagement.

- *Ethical* Development: formulating a clear value system that guides life choices and demonstrates personal character.

- *Physical* Development: acquiring and applying knowledge about the human body to prevent disease, maintain wellness, and promote peak performance.

- *Spiritual* Development: appreciating the search for personal meaning, the purpose of human existence, and questions that transcend the material or physical world.

This holistic aspect of student success is consistent with recent research and interest in such concepts as multiple intelligences (Gardner, 1999), emotional intelligence or EQ (1995), and spiritual intelligence (Zohar & Marshall, 2000). It is also consistent with the vast majority of college mission statements and institutional goals, which include many outcomes that are not strictly academic or cognitive in nature (Astin, 1991; Kuh, Shedd, & Whitt, 1987).

The implications of this holistic definition of student success for one very desirable student outcome—student retention—is underscored by research which repeatedly demonstrates that the vast majority (75-85%) of students who withdraw from college do so for reasons other than poor academic performance; in fact most departing students are in good academic standing at the time of their departure (Noel, 1985; Tinto, 1993). More recently, these findings were reinforced by institutional research conducted at Indiana University, Bloomington, which launched a broad range of initiatives to enhance the quality of the first-year experience and to improve student retention. One conclusion drawn after implementation of these initiatives was that strict concentration on academic matters does not have a significant impact on student retention without equal concentration on non-academic elements of student life (Smith, 2003).

Thus, student success may be best defined as a holistic phenomenon that embraces the multiple dimensions of personal development and the multiple goals of higher education. The next step in the student success-promoting process is to identify the central principles

or critical features of learning experiences that are most likely to implement this comprehensive definition of student success and realize its intended outcomes.

**Seven Central Principles of Student Success: Key *Processes* Associated with Positive Student Outcomes**

The critical first step toward promoting student success is to *define* it, i.e., to identify positive student outcomes that represent concrete indicators of student success. Step two is to identify the key, research-based *principles or processes* that are most likely to promote student success and lead to positive student outcomes. Serendipitously, the same success-promoting principles serve to promote three key student outcomes simultaneously: (a) student retention (persistence), (b) student learning (academic achievement), and (c) personal development (holistic outcomes). This serendipity supports the long-held contention among student retention scholars that "successful retention is nothing more than successful education" (Noel, 1985; Tinto, 1993).

The following seven processes are offered as the most potent principles of student success because they are well supported by higher education scholarship and are firmly grounded in research and theory:
(1) personal validation
(2) self-efficacy
(3) sense of purpose
(4) active involvement
(5) reflective thinking
(6) social integration, and
(7) self-awareness.

What follows is an attempt to clearly define these key principles and to highlight the empirical evidence supporting their positive impact on student success.

**1. *Personal Validation***

Student success is more likely to be realized when students feel personally *significant*—i.e., when they feel *welcomed*, recognized as *individuals*, and that they *matter* to the institution. In contrast, student success is sabotaged by college practices or policies that depersonalize or marginalize students (Schlossberg, Lynch, & Chickering, 1989). In one of his seminal works on the "freshman year experience," John Gardner (1986) argued that the defining feature of all bona fide freshman-year experience programs is that "they all represent a deliberately designed attempt to provide a rite of passage in which students are supported, welcomed, celebrated, and ultimately assimilated" (p. 266).

The importance of personal validation for student *retention* is highlighted by an extensive national survey of 947 colleges and universities, both two-year and four-year, in which retention officials on these campuses were asked: "What makes students stay?" Ranking first in response to this question was "a caring faculty and staff" (Beal and Noel, 1980). Vince Tinto eloquently captures the importance of personal validation in his book, *Leaving College: Rethinking the Causes and Cures of Student Attrition*, "Students are more likely to become committed to the institution and, therefore stay, when they come to understand that the institution is committed to them. There is no ready programmatic substitute for this sort of commitment. Programs cannot replace the absence of high

quality, caring and concerned faculty and staff" (1987, p.176). A similar conclusion was reached by Terenzini, Rendon, Upcraft, et al. (1994), stemming from their national research on students' transition to college: "The formal and informal mechanisms by which an institution sends subtle signals to students about how valued they are should be reviewed and revised . . . to provide more early feedback and early validation for students" (1993, p. 9).

**2. *Self-Efficacy***

Student success is more likely to take place when students believe that their *individual effort* matters, i.e., when they believe they can exert significant influence or control over their academic and personal success (Bandura, 1997). Conversely, the likelihood of student success is reduced when students feel hopeless or helpless.

Research involving nearly 4,000 college freshmen revealed that the level of students' optimism or hope for success during their first semester on campus is a more accurate predictor of their college grades than are their SAT scores or high school grade-point average (Snyder, et al., 1991). Meta-analysis research indicates that academic self-efficacy is the best predictor for student retention and academic achievement (GPA) (Robbins, et al., 2004), and personal traits such as self-efficacy, self-esteem, and internal locus of control are among the best predictors of job performance and job satisfaction (Judge & Bono, 2001).

**3. *Personal Meaning***

Student success is more probable when students find *meaning* or *purpose* in their college experience—i.e., when they perceive *relevant connections* between what they're learning in college and their current life or future goals. In contrast, lack of personal goals for the college experience and perceived irrelevance of the college curriculum are major causes of student attrition (Noel, 1985; Levitz & Noel, 1989).

Academic skills research indicates that such skills are most effectively learned in a meaningful context—for example, when they are applied to the learning of specific subject matter (Levin & Levin, 1991; Means, Chelemer, & Knapp, 1991). When students are provided with a personally relevant context for a new concept, they continue to think about that concept longer than if they learn it without reference to a personally relevant context (Bransford, Sherwood, & Rieser, 1986), and the more relevant the academic content is to students, the more likely they are to engage in higher-level thinking with respect to it (Roueche & Comstock, 1981).

**4. *Active Involvement***

The probability of student success increases commensurately with the degree or depth of student *engagement* in the learning process, i.e., the amount of *time* and *energy* that students invest in the college experience—both *inside* and *outside* the classroom (Astin, 1984). In contrast, student persistence and academic achievement is sabotaged by student passivity and disengagement.

Research support for active involvement (engagement) is so formidable that it has been referred to as the "grand meta-principle" of student learning (Cross, 1993). After completing their voluminous and meticulous review of the higher education research literature, Pascarella and Terenzini (1991) reached the following conclusion: "Perhaps

the strongest conclusion that can be made is the least surprising. Simply put, the greater the student's involvement or engagement in academic work or in the academic experience of college, the greater his or her level of knowledge acquisition and general cognitive development" (p. 616). This conclusion is consistent with findings reported by the Policy Center on the First Year of College, based on survey data collected from more than 60 postsecondary institutions and over 30,000 students. This national survey revealed that use of "engaging pedagogy" was positively associated with student satisfaction and self-reported learning outcomes in first year seminars (Swing, 2002). Similar findings emerge from research conducted by the Higher Education Research Institute on first-year courses in general. Based on data gathered from almost 25,000 students at 110 institutions, it was found that the pedagogical practices most strongly associated with first-year student satisfaction with the overall quality of instruction were those that emphasized involvement (Keup & Sax, 2002).

Research also indicates that student involvement outside the classroom is potent predictor of student retention. For instance, students who utilize such support services, and interact with the professionals involved with the provision of such services, are more likely to persist to college completion (Pascarella & Terenzini, 1991, 2005).

**5. *Social Integration***

Student success is enhanced by *human interaction, collaboration,* and formation of *interpersonal connections* between the student and other members of the college community—peers, faculty, staff, and administrators (Astin, 1993; Bruffee, 1993; Johnson, Johnson, & Smith, 1998). In contrast, feelings of isolation or alienation are likely to contribute to student attrition (Tinto, 1993).

Studies repeatedly show that students who have become "socially integrated" or "connected" with other members of the college community are much more likely to complete their first-year of college and continue on to complete their college degree (Pascarella & Terenzini, 2005; Tinto, 1993). The importance of social integration and interpersonal interaction for learning is also supported by the epistemological theory of social constructivism According to this theory, human thinking is shaped by social interaction and conversation; an individual's thought process is largely an internalization of these external dialogues (Vygotsky, 1978). Thus, conversing and thinking are held to be causally related, with thought being an artifact or product of verbal interaction.

**6. *Personal Reflection***

Students are more likely to experience success when they make engage in reflective thinking about what they are learning and elaborate on it, transforming it into a form that relates to what they *already know* or have *previously experienced* (Ewell, 1997; Flavell, 1985).

Successful learning requires not only *action*, but also *reflection*. Such reflection or thoughtful review is the flip side of active involvement. Brain research also shows that active involvement and reflective thinking involve two distinct mental states of consciousness, the former characterized by faster, low-amplitude brain waves and the latter by slower, higher-amplitude brain waves (Bradshaw, 1995). Both mental processes are needed for learning to be complete. Active involvement is necessary for engaging student *attention*—which enables learners to initially get information into the brain, and

reflection is necessary for *consolidation*—keeping that information in the brain, by locking it into long-term memory (Bligh, 2000).

***7. Self-Awareness***

Among the man goals of a liberal arts education, the one that has the longest history and most frequent emphasis is self-awareness, i.e., "know thyself" (Cross, 1982). Student success is promoted when students gain greater awareness of their own thinking, learning styles, and learning habits, i.e., when they engage in meta-cognition—when they think about their thinking, when they self-monitor or check their comprehension, and when they self-regulate or accommodate their learning strategies to meet the demands of the learning task at hand (Pintrick, 1995; Weinstein & Meyer, 1991).

Research demonstrates that high-achieving college students tend to reflect on their thought processes during learning and are aware of the cognitive strategies they use, i.e., they engage in "meta-cognition" or think about their own thinking (Weinstein & Underwood, 1985). Successful college students also "self-monitor" their academic performance, that is, they maintain awareness of whether or not they are actually learning what they are attempting to learn (Weinstein, 1994), and they self-regulate or adjust their learning strategies in a way that best meets the specific demands of the subject matter they are trying to learn (Pintrich, 1995). Lastly, self-awareness or "mindfulness" has been found to be a critical element of any effective self-management and self-improvement plan (Langer, 1989, 1997), whether it is the management of time, money, or health.

*Conclusion*

In sum, student success is more likely to be experienced and evidenced when students: (1) feel personally validated and they matter to the college, (2) believe that their effort matters and that they can influence or control the prospects for success, (3) develop a sense of purpose and perceive the college experience as being personally relevant, (4) become actively or engaged in the learning process and in the use of campus resources, (5) become socially integrated or connected with other members of the college community, (6) think reflectively about what they are learning and connect it to what they already know or have previously experienced, and (7) are self-aware and remain mindful of their learning styles, learning habits, and thinking patterns.

The next step in the student success-promoting process is to identify how these seven central principles of student success may be implemented most effectively during the undergraduate experiences.

## ***Implementing*** **the Central Principles of Student Success: Key First-Year Programs and Practices**

This represents the third and final segment in the proposed student success-promoting sequence proposed in this article. In the first segment, it was argued that all effective programmatic efforts to promote student success should begin with an attempt to *define* success clearly in terms of specific, positive student outcomes, such as: student retention (persistence), academic achievement, holistic development, educational attainment, and student advancement. In the second segment, seven research-based *principles or processes* were identified as playing a key role in promoting the aforementioned student outcomes. In this third segment, the seven key principles are briefly reiterated and first-

year programs or practices are identified that effectively implement these central principles of student success.

**1. *Personal Validation***: student success is promoted when students feel personally *significant*—i.e., when they feel welcomed by the college, recognized as individuals, and that they matter to the institution.

This principle is implemented by:
(a) First-year convocation ceremonies in which members of the college community assemble to *officially welcome* and *celebrate* new students' entry into higher education.
(b) When advisors and instructors know their students by name, refer to them by name, and know about them (e.g., their educational plans and personal interests).
(c) When members of the college communicate with students in a personalized manner, acknowledging their individual achievements inside and outside the classroom (e.g., personal e-mail messages congratulating students for their co-curricular contributions, attaining academic excellence, and regaining good academic standing following academic probation).

**2. *Self-Efficacy*:** student success is more likely to be experienced when students believe that their *individual effort* matters, i.e., when they believe they can exert significant influence or control over their academic and personal success.

This principle is exemplified by practices that balance support with challenge so that students are neither overwhelmed nor under-challenged. Such practices include:
(a) *College-entry assessment* for initial student placement in skill-building courses, and careful attention to course pre-requisites in the college curriculum.
(b) *Summer bridge* programs for student who are academically under-prepared or at-risk at college entry.
(c) *First-year seminars* that extend support to students beyond new-student orientation, providing timely student support for college-adjustment issues the encounter during their critical first term in college.
(d) *Supplemental instruction* in first-year courses that have disproportionately high failure and withdrawal rates.
(e) *Honors courses* and programs that provide optimal challenge for high-achieving students.

**3. *Personal Meaning***: student success is enhanced when students find *meaning* and *purpose* in their college experience—i.e., when they perceive *relevant connections* between what they're learning in college and their current or future life.

This principle is implemented by:
(a) *Developmental academic advising* programs that help students see the "connection" between their present academic experience and their future life plans, and which broaden students' perspectives with respect to their personal life choices.
(b) First-year seminars that actively engage students in the process of *long-range planning* that helps students connect their current college experience with their future

educational and life goals (e.g., via assignments in which students to develop an *undergraduate* educational plan for general education, exploration or confirmation of an academic major, and tentative career plans).
(c) Reality-based learning experiences, such as cases, problem-based or project-based learning, role plays, and simulations.
(d) *Experiential learning* opportunities for first-year students that allow students to learn through direct, first-hand personal experience and self-discovery (e.g., by participating in service-learning programs that are relevant to their intended or potential vocational plans).

**4. *Active Involvement***: the likelihood of student success increases proportionately with the degree of student *engagement* in the learning process, i.e., with the amount of *time* and *energy* that students invest in the college experience—both *inside* and *outside* the classroom.

This principle is most effectively implemented inside the classroom through the use of engaging, *student-centered* pedagogy, which complements and augments instructor-delivered information by shifting more opportunity for talking and more responsibility for learning to the students (e.g., interactive class discussions and small-group learning experiences that allow all students—not just the most assertive or most verbal—to become more actively involved in the classroom).

Active involvement in campus life outside the classroom is promoted by practices that deliver academic support *intrusively*, i.e., the college initiates supportive action by *reaching out* to students and bringing or delivering support *to* them, rather than passively waiting and hoping that students take advantages of these services on their own. For example, first-year experience courses that introduce new students to campus-support professionals by bringing them to class as *guest speakers*, or by intentionally designing *course assignments* that connect new students with key academic-support and student-development services.

**5. *Social Integration***: student success is augmented by *human interaction, collaboration,* and the formation of *interpersonal connections* between the student and other members of the college community—peers, faculty, staff, and administrators.

This principle is exemplified by:
(a) *New-student orientation* programs that moves beyond information dissemination and orientation to campus buildings, and moves toward community-building practices that connect new students with each other, with peer leaders and role models, with student development professionals, and the college faculty.
(b) Use of *collaborative and cooperative* learning practices inside the classroom that transform group work into team work by *intentionally forming* learning teams composed of students who can learn the most from each other (e.g., teams with diverse membership), and by assigning teammates complementary roles that enable them to work *interdependently* toward completion of a common work product.
(c) *Learning communities* in which cohorts of students co-register for the same block of courses during the same academic term, thereby providing them with an opportunity to congeal into a supportive peer community.

**6. *Personal Reflection***: students are more likely to be successful when they step back and reflect on what they are learning and elaborate on it, transforming it into a form that relates to what they *already know* or have *previously experienced*. This principle is most effectively implemented by writing-to-learn assignments that encourage students to reflect on what they are learning and connect it to their personal experiences or what they have previously learned (e.g., one-minute papers, learning logs, learning journals, and student portfolios).

***7. Self-Awareness***: student success is promoted when students gain greater awareness of their learning styles, learning habits, and thinking patterns. This principle is implemented by practices that promote students' mindfulness about who they are and how the learn, such as the following:
(a) having students reflect and record the conceptual steps they take while problem-solving, making choices, and reaching decisions to develop their capacity for self-monitoring and meta-cognition (thinking about their own thought processes); and
(b) encouraging students to complete self-assessment instruments designed to promote personal awareness of learning styles and habits.

*Conclusion*

In summary, practices and programs that most effectively implement the central principles of student success are those that validate students as individuals, generate a sense of relevance or purpose, balance challenge with support, and encourage students to learn in a manner that is active, interactive, reflective, and mindful.

# Seven *Properties* of Successful *Program Delivery*

This article defines and identifies empirical support for seven recurrent features or principles of effective educational programming.

**Core Characteristics of Effective Program Delivery**

**1. Intentional (Purposeful).** Effective programming is intentionally student-centered; it is deliberately designed to facilitate student success. Rather than being driven by procedural habits, institutional convenience, or the needs and preferences of faculty and staff, the program's delivery is consciously designed to promote positive student outcomes. The principle of intentionality is consistent with the call for a paradigm shift to "learning-centered management" originally articulated by Astin, Bowen, and Chambers (1979) and reiterated by Pascarella and Terenzini (1991).

**2. Proactive.** Effective programming takes *early, preventative* action to address students' educational needs and adjustment issues in an *anticipatory* fashion—*before* they eventuate in problems that require reactive intervention. Proactive delivery ensures that programmatic support is delivered early (e.g., during their first year)—at a time when students are most vulnerable to underachievement and attrition and when support is most likely to have the greatest long-term impact. Lee Noel, nationally recognized researcher and consultant on student retention argues that, "in retention, a minimal investment can put into place some practical approaches and interventions, frequently labeled 'front loading.' Our experience shows that even a modest investment in these critical entry-level services and programs can have a high payoff in terms of student retention" (1994, p. 6).

**3. Intrusive.** Effective programming is *initiated* by the institution, which *reaches out* to students and delivers support *to* them, rather than passively waiting and hoping for students to seek it out on their own. Intrusive programs ensure that support reaches all (or the vast majority of) students who will benefit from it, not just those students who are assertive enough to take advantage of it. The success of under-represented and first-generation students, in particular, is seriously undercut by institutional over-reliance on student-initiated involvement in campus-support programs (Rendon, 1994; Terenzini, et al., 1994).

**4. Diversified.** Effective programming is *tailored or customized* to meet the *distinctive* needs of students from different *subpopulations*, and the needs of students at different *stages* of their college experience. Diversified program delivery recognizes the reality that the undergraduate student body is comprised of different subgroups and subcultures whose needs may vary, depending on their background experiences prior to college and their level of experience with college. Diversified programming acknowledges students' unique characteristics (e.g., their age, gender, ethnicity, and income level) and addresses the developmental challenges they experience at different stages of the college experience (e.g., first year vs. final year). No single, formulaic response meets the needs of all students; an effective program is responsive to differences among learners and displays programmatic flexibility (Tierney, 2000).

**5. Collaborative.** Effective programming involves cooperative *partnerships* between and among different organizational units of the college, encouraging them to work interdependently in a *coordinated*, *complementary, and cohesive* fashion to support the student as a *whole person*. By so doing, collaborative programming acquires the potential to exert systemic and synergistic effects on student success. Following a review of the retention literature, Braxton and Mundy (2001-2002) reached the following conclusion: "The most meaningful and far-reaching institutional efforts call for collaboration within university divisions and departments. These relationships are imperative to effective retention programs and efforts" (p. 94). This conclusion is reinforced by the work of Kuh, et al. (2005) who conducted on-campus studies of 20 colleges and universities that had significantly higher graduation rates than would be predicted by their students' entry characteristics. Among the overarching characteristics common to all of these institutions was a "collaborative spirit" and a "shared responsibility for educational quality and student success" (p. 157).

**6. Centralized.** Effective programming occupies a central place in the college's organizational *structure or system*, giving it the capacity to exert a *pervasive* and *systemic* effect on the students' total college experience (as well as a reformative and transformative effect on the college itself.). Rather than being marginalized and relegated to tangential status as a peripheral "add-on," the program is woven integrally into the university's organizational blueprint and annual budgetary allotment. When situated centrally and deeply within the institution's structure, the program becomes institutionalized, thereby ensuring its stability and durability. As Laden, Milem, and Crowson (2000) note: "Many of the trappings of college and university efforts to retard departure tend to be just that—i.e., symbolic efforts to publicly legitimize through a demonstration of political correctness, with little that extends deeply into the structures and lifeways of the organization. They tend to be rather marginalized, inhabited by staff who must engage in ongoing battles to integrate more effectively their units and services in the core culture" (p. 241).

**7. Empirical (Evidentiary).** Effective programming is supported with and driven by assessment data (quantitative and qualitative, behavioral and perceptual) that are used to "sum up" and prove the program's overall impact or value, and to "form" or "shape up" the program as part of an ongoing process of continuous quality improvement. A high-quality program is one that "facilitates maximum growth among its students and can document that growth through appropriate assessment procedures" (Astin, 1985, p. 77). One common characteristic of campuses with significantly higher graduation rates is that they "systematically collect information" and "continually revisit and rework policies and practices to improve" (Kuh, et al., 2005, p. 156).

**Conclusion**

Effective programs depend not only on program content (the "what" of it), but also on their process of delivery (the "how" of it). In the next issue of *E-Source*, this column will explore how the general principles of effective program delivery may be transformed into specific programmatic practices that promote student success.

References

Astin, A. W. (1984). Student involvement: A developmental theory. *Journal of College Student Personnel, 25*, 297-308.

Astin, A. (1985). *Achieving educational excellence: A critical assessment of priorities in higher education*. San Francisco: Jossey-Bass.

Astin, A. W. (1991). *Assessment for excellence: The philosophy and practice of assessment and evaluation in higher education*. New York: Macmillan.

Astin, A. W. (1993). *What matters in college?* San Francisco: Jossey-Bass

Astin, A., Bowen, H., & Chambers, C. (1979). *Evaluating educational quality*. Washington, D.C.: The Council on Postsecondary Accreditation.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman & Co.

Beal, P., & Noel, L. (1980). *What works in student retention*. The American College Testing Program and The National Center for Higher Education Management Systems. (Eric Reproduction No. 197 635).

Bligh, D. A. (2000). *What's the use of lectures*. San Francisco: Jossey-Bass.

Bransford, J. R., Sherwood, N. V., & Rieser, J. (1986). Teaching thinking and problem solving: Research foundations. *American Psychologist, 41*(10), 1078-1089.

Braxton, J. M., & Mundy, M. E. (2001-2002). Powerful institutional levers to reduce college student departure. *Journal of College Student Retention, 3*(1), 91-118.

Cross, K. P. (1982). Thirty years passed: Trends in general education. In B. L. Johnson (Ed.), *General education in two-year colleges* (pp. 11-20). San Francisco: Jossey-Bass.

Cross, K. P. (1993). Reaction to "Enhancing the productivity of leaning" by D. B. Johnstone. *AAHE Bulletin, 46*(4), p. 7.

Gardner, J. N. (1986). The freshman year experience. *College and University, 61*(4), 261-274.

Gardner, H. (1999). *Intelligence reframed: Multiple intelligences for the 21st century*. New York: Basic Books.

Judge, T. A. & Bono, J. E. (2001). Relationship of core self-evaluations traits—self-esteem, generalized self-efficacy, locus of control, and emotional stability—with job satisfaction and job performance: A meta-analysis. *Journal of Applied Psychology, 86*, 80-92.

Keup, J. R., & Sax, L. J. (2002, Dec. 17). *Findings from the 2002 Your First College Year (YCY) Report*. [http://www.gseis.ucla.edu/heri/yfcy].

Kuh, G. D. (2001). Assessing what really matters to student learning: Inside the National Survey of Student Engagement. *Change, 33*(3), pp. 10-17, 66.

Kuh, G. D., Kinzie, J., Schuh, J. H., Whitt, E. J, and Associates (2005). *Student success in college: Creating conditions that matter*. San Francisco: Jossey-Bass.

Kuh, G., Shedd, J., & Whitt, E. (1987). Student affairs and liberal education: Unrecognized (and unappreciated) common law partners. *Journal of College Student Personnel, 28*(3), 252-260.

Kurfiss, J. G. (1988). *Critical thinking: theory, research, practice, and possibilities*. ASHE-ERIC, Report No. 2. Washington, D.C.: Association for the Study of Higher Education.

Laden, B.V., Milem, J. F., & Crowson, R. L. (2000). New institutional theory and student departure. In J. M. Braxton (Ed.), *Reworking the student departure puzzle* (pp. 235-256). Nashville: Vanderbilt University Press.

Langer, E. J. (1989). *Mindfulness*. New York: Perseus Books.

Langer, E. J. (1997). *The learning power of mindfulness*. New York: Perseus Books.

Levin, M., & Levin, J. (1991). A critical examination of academic retention programs for at-risk minority college students. *Journal of College Student Development, 32*, 323-334.

Levitz, R., & Noel, L. (1989). Connecting students to institutions: Keys to retention and success. In M. L. Upcraft, J. N. Gardner, & Associates, *The freshman year experience* (pp. 65-81). San Francisco: Jossey-Bass.

Means, B., Chelemer, C., & Knapp, M. (Eds.) (1991). *Teaching advanced skills to at-risk students*. San Francisco: Jossey-Bass.

Noel, L. (1985). Increasing student retention: New challenges and potential. In L. Noel & Associates, *Increasing student retention* (pp. 1-27). San Francisco: Jossey-Bass.

Noel, L. (1994). Defending against budget cuts. *Recruitment and Retention in Higher Education*, (January), p. 6.

Pascarella, E. T., & Terenzini, P. T. (1991). *How college affects students: Findings and insights from twenty years of research*. San Francisco: Jossey-Bass.

Pascarella, E. T. (2001). Cognitive growth in college: Surprising and reassuring findings from The National Study of Student Learning. *Change, 33*(6), 20-27.

Pascarella, E. T., & Terenzini, P. T. (2005). *How college affects students, Volume 2: A third decade of research*. San Francisco: Jossey-Bass.

Policy Center on the First Year of College (2003, January). *Second national survey of first-year academic practices, 2002*. [http://www.Brevard.edu/fyc/survey2002/findings.htm]

Pintrich, P. R. (Ed.) (1995). *Understanding self-regulated learning*. New Directions for Teaching and Learning, no. 63. San Francisco: Jossey-Bass.

Rendon, L. I. (1994). Validating culturally diverse students: Toward a new model of learning and student development. *Innovative Higher Education, 19*(1), 23-32.

Robbins, S. B., Lauver, K., Le, H., Davis, S., Langley, R., & Carlstrom, A. (2004). Do Psychosocial and Study Skill Factors Predict College Outcomes?: A Meta-Analysis *Psychological Bulletin, 130* (2), 261-288.

Roueche, S. D., & Comstock, V. N. (1981). *A report on theory and method for the study of literacy development in community colleges*. Technical Report NIE-400-78-0600. Austin: Program in Community College Education, The University of Texas at Austin.

Schlossberg, N. K., Lynch, A. Q., & Chickering, A. W. (1989). *Improving higher education environments for adults: Responsive programs and services from entry to departure*. San Francisco: Jossey-Bass.

Shouping, H., & Kuh, G. (2001). *Being (dis)engaged in educationally purposeful activities: The influences of student and institutional characteristics*. Paper presented at the annual meeting of the American Educational Research Association, Seattle, WA.

Smith, R. (2003). Changing institutional culture for first-year students and those who teach them. *About Campus, 8* (March-April), pp. 3-8.

Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L. M., Sigmon, S. T., Yoshinobu, L., Gibb, J., Langelle, C., & Harney, P. (1991). The will and the ways: Development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology, 60*, 570-585.

Swing, R. L. (2002). “The impact of engaging pedagogy on first-year students.” E-mail message to the First-Year Assessment Listserv [fya-list@vm.sc.edu]. Sept. 6, 2002

Terenzini, P. T. (1986). *Retention research: Academic and social fit*. Paper presented at the annual meeting of the Southern Regional Office of the College Entrance

Examination Board, New Orleans.

Terenzini P. T., Rendon, L., Upcraft, L., Millar, S., Allison, K., Gregg, P., & Jalomo, R. (1994). The transition to college: Diverse students, diverse stories. *Research in Higher Education, 35*(1), 57-73.

Tierney, W. G. (2000). Power, identify, and dilemma of college student departure. In J. M. Braxton (Ed.), *Reworking the student departure puzzle* (pp. 213-234). Nashville: Vanderbilt University Press.

Tinto, V. (1987). *Leaving college: Rethinking the causes and cures for student attrition*. Chicago: University of Chicago Press.

Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition* (2nd ed.). Chicago: University of Chicago Press.

Upcraft, M. L., Gardner, J. N. (1989). *The freshman year experience*. San Francisco: Jossey-Bass.

Vygotsky, L. S. (1978). Internalization of higher cognitive functions. In M. Cole, V. John-Steiner, S. Scribner, & E. Souberman (Eds. & Trans.), *Mind in society: The development of higher psychological processes* (pp. 52-57). Cambridge: Harvard University Press.

Weinstein, C. E., & Underwood, V. L. (1985). Learning strategies: The how of learning. In J. W. Segal, S. F. Chapman, & R. Glaser (Eds.), *Thinking and learning skills* (pp. 241-258). Hillsdale, NJ: Lawrence Erlbaum.

Zohar, D., & Marshall, I. (2000). *SQ: Connecting with your spiritual intelligence*. New York: Bloomsbury.