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An Examination of Persistence Research through the Lens of a Comprehensive Conceptual Framework

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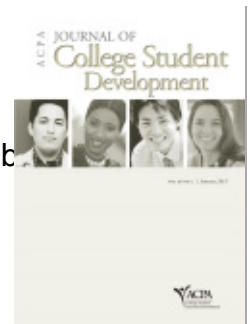
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An Examination of Persistence Research Through the Lens of a Comprehensive Conceptual Framework

Robert D. Reason

Arguably, student retention has been *the* primary goal for higher education institutions for several decades. Certainly, it has been the focus of much research effort among higher education scholars. Unfortunately, efforts to improve retention seem to be ineffective; attrition rates have endured despite significant efforts to close them (ACT, 2004b; Braxton, Brier, & Steele, 2007; Terenzini, Cabrera, & Bernal, 2001). Notwithstanding the emphasis placed on student retention, decades of research, and countless institutional initiatives, slightly over half of students who begin a bachelor's degree program at a four-year college or university will complete their degree at that same institution within six years (Berkner, He, & Cataldi, 2002). During the 1990s, while some colleges and universities certainly improved their retention of rates, in the aggregate student graduation rates changed little. Students enrolling in a four-year institution in the 1995–1996 academic year, for example, were no more likely to complete a baccalaureate degree five years later than were their counterparts who entered during the 1989–1990 academic year (Horn & Berger, 2004).

A substantial empirical and prescriptive literature does exist to guide faculty members, campus administrators, and public policy makers in attempts to increase student persistence in higher education. With rare exception (e.g., Astin, 1993), these persistence studies possess the same major flaw as most

higher education outcomes research; these studies fail to consider the wide variety of influences that shape student persistence, focusing instead on discrete conditions, interventions, and reforms (Terenzini & Reason, 2005). In 2005, Terenzini and Reason proposed a conceptual framework that takes into account the multiple and interrelated student, faculty, and institutional forces that influence college success. Although Terenzini and Reason originally proposed their framework to guide student outcomes research generally, they argued that it is applicable to specific outcomes like retention. I, therefore, use this framework to organize and synthesize the research on college student persistence.

Writing a comprehensive review of research on student persistence is a Herculean task. The publications that feature persistence as a primary outcome measure are almost innumerable. Moreover, literature reviews of persistence research have been published periodically in the higher education literature. I use these existing reviews as the foundation for this article. Beside my own previous review (Reason, 2003), I draw heavily upon reviews by Tinto (2006–2007) and Pascarella and Terenzini (1991, 2005), as well as the many scholarly and empirical works by Braxton. I supplement these secondary sources by incorporating persistence research published more recently. By using Terenzini and Reason's framework to organize the following discussion, this review offers scholars and practitioners a

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comprehensive, integrated conception of the forces that shape college student persistence. Further, the framework allows for a more complete explication and examination of the interactions between the person and college environments, a theme that runs throughout the articles in this special edition.

A NOTE ON LANGUAGE

Although the sheer number of studies exploring student persistence makes this review Herculean, so too does the ambiguity of what actually constitutes the outcome of interest. A cursory review of the literature leads the reader to note at least two terms for the outcome are used (erroneously) interchangeably: retention and persistence. Retention is an organizational phenomenon—colleges and universities *retain* students. Institutional retention rates, the percentage of students in a specific cohort who are retained, are often presented as measures of institutional quality. Persistence, on the other hand, is an individual phenomenon—students *persist* to a goal. That a student's ultimate goal may (or may not) be graduation from college introduces another important distinction between the two terms. Because individual students define their goals, a student may successfully persist without being retained to graduation.

Retention and persistence are not the only terms used to describe the topic of this article. Pascarella and Terenzini (1991, 2005) used the phrase “educational attainment” to capture the variability of students’ goals and the disconnection between retention and persistence. Yorke (1999) used the term *non-completer* to describe students who “disappeared from the student record system” (p. 4) before successfully completing a program of study. Tinto (1987) included the term “stop-out” (p. 9) to differentiate between students who leave permanently (dropouts) and those

who return after an extended absence.

The variability of goals *within* retention also complicates the issue. Although retention-to-graduation is the preferable goal for institutions of higher education, researchers study retention of students for varying lengths. Studies of within-year retention explore what effects student retention from one semester to the next in a given year; studies of between-year retention examine the predictors of student retention from one year to the next (e.g., from first to second year). Even retention to graduation, a clearly defined outcome, has some variability related to time to graduation: institutions report four-, five-, and six-year graduation rates.

One could even debate whether persistence (or retention) is an “outcome” or a part of the student environment. Proponents of the latter perspective argue that persistence is a necessary, but insufficient, characteristics for student success—not itself an indicator of success—a perspective I understand and share. Certainly, students must be present in higher education for our educational interventions to affect them. Researchers studying within-year or between-year retention, as opposed to retention-to-graduation, may lend greater support for this perspective. On the other hand, most of the research published to date treats persistence, especially persistence to graduation, as an end in itself.

For the purposes of this paper, I use primarily the term “persistence.” I do so intentionally, to focus attention on individual-level student goal attainment rather than the institution-level goal of keeping students. I also use persistence broadly to include progress toward goal attainment, differentiating between within-year and between-year persistence only when necessary for clarity. The vast majority of the theory and research reviewed in the paper assumes graduation as the goal to which a student is striving; therefore, I assume that

persistence is a positive outcome of college attendance. This perspective allows me to explore the literature using Terenzini and Reason's (2005) conceptual framework, which is focused on studying outcomes of college.

CONCEPTUAL FRAMEWORK

After reviewing more than thirty years of research, Pascarella and Terenzini (1991, 2005) concluded that multiple forces operate in multiple settings to influence student learning and persistence. According to their 2005 review, "the magnitude of change on any particular variable or set of variables during the undergraduate years may not be as important as the pronounced breadth of interconnected changes" (p. 578). Their review also indicated, however, that with few exceptions studies of college effects on students have adopted an overly narrow conceptual focus, concentrating

on only a relative handful of factors at a time. The result, these authors point out, is a body of evidence that "present[s] only a partial picture of the forces at work" (2005, p. 630).

To answer the call for a more comprehensive and integrated model for studying student outcomes, Terenzini and Reason (2005) offered a conceptual framework that extended and synthesized models by Astin (1985, 1993), Tinto (1975, 1993), and Pascarella (1985) and drew on the model for studying organizational effects on student outcomes proposed by Berger and Milem (2000). Terenzini and Reason concluded that these existing college effects models, while adding to the understanding of the study of student outcomes, remained too narrowly focused on only a few areas affecting students' outcomes. With the exception of Berger and Milem (2000), for example, few models explicitly incorporated an emphasis on the organization's effects on student outcomes,

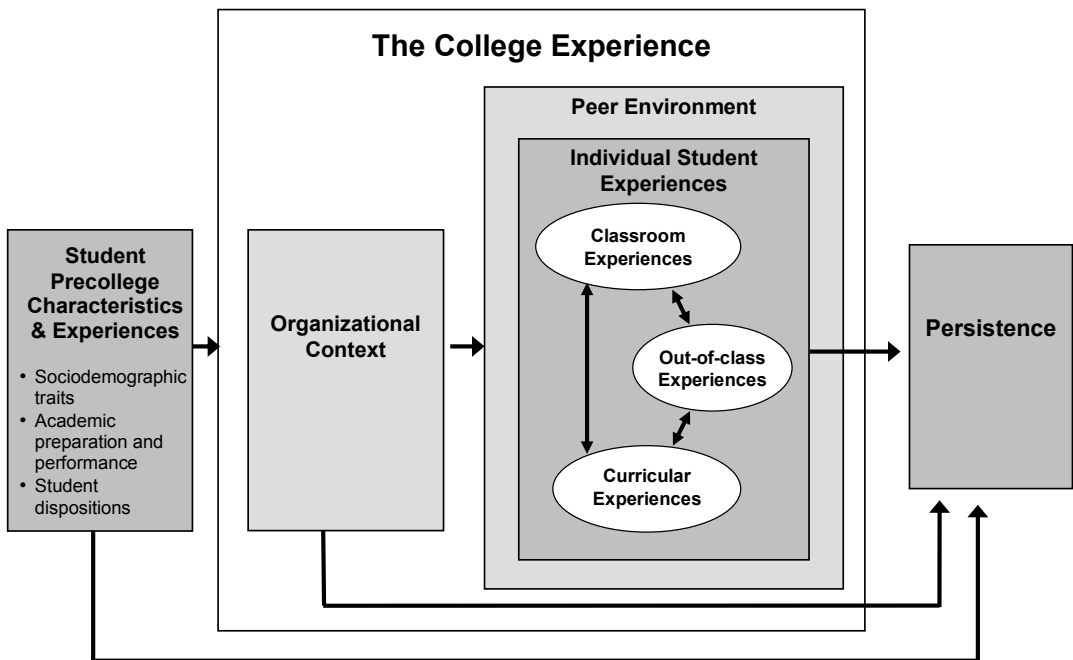


FIGURE 1. A Comprehensive Model of Influences on Student Learning and Persistence

(Adapted from Terenzini and Reason, 2005.)

and no existing models specifically included internal organizational features such as policies affecting course sizes, promotion and tenure, or budgetary and staffing arrangements. The Terenzini and Reason framework thus was meant to avoid the conceptual isolation Pascarella and Terenzini (1991, 2005) noted and encourage higher education researchers to look more broadly at the multiple forces affecting college student outcomes.

The framework incorporates, in four sets of constructs, the wide array of influences on student outcomes indicated in the research literature: student precollege characteristics and experiences, the organizational context, the student peer environment, and, finally, the individual student experience (Terenzini & Reason, 2005). At its broadest level, the framework hypothesizes that students come to college with a variety of personal, academic, and social background characteristics and experiences that both prepare and dispose them, to varying degrees, to engage with the formal and informal learning opportunities. These precollege characteristics shape students' subsequent college experiences through their interactions with institutional and peer environments, as well as major socialization agents (e.g., peers and faculty members). The college experience is broadly conceived, consisting of three sets of primary influences: the institution's internal organizational context, the peer environment, and, ultimately, students' individual experiences.

Using Terenzini and Reason's (2005) conceptual framework as a guide, I review the current understanding of the forces that affect college student persistence in each of the four areas. For ease of presentation and understanding, the literature review presents the areas as discrete and as if they proceed in a linear fashion. As noted, however, the discrete, linear presentation does not reflect actual student experience, in which factors from the four areas

overlap and interact. Recommendations for future research and implications for practice that improves the possibility of student persistence on college campuses incorporate this more complicated view of the interactions between the four areas.

STUDENT PRECOLLEGE CHARACTERISTICS

As with the models upon which it was based, Terenzini and Reason's model (2005) begins with an understanding that students enter postsecondary institutions with an array of precollege background characteristics; academic preparation and experiences; and social and personal dispositions and experiences. Students vary in their sociodemographic traits (e.g., gender, race/ethnicity, age, parents' education, family income), their academic preparation and performance (e.g., the nature and quality of their secondary school curriculum, and their academic achievements in the secondary school setting), their personal and social experiences (e.g., involvement in co-curricular and out-of-class activities), and their dispositions (e.g., personal, academic, and occupational goals; achievement motivation, and readiness to change). These differences affect the likelihood a student will persist through college (Pascarella & Terenzini, 2005) and have been a part of our understanding of student retention for several decades (Tinto, 1975).

Sociodemographic Traits

In recent years, researchers seem to be moving away from studies that focus on individual-level sociodemographic variables as predictors of student persistence. Higher education researchers have come to recognize the difficulty in finding actionable implications from studies focused on race, ethnicity, and gender (Tinto, 2006-2007). Within-group variance (i.e., heterogeneity within seemingly

homogeneous groupings) makes findings based on race, gender, or ethnicity difficult to interpret and almost useless in practice.

Sociodemographic characteristics remain important, however, because between-group differences in persistence rates remain. Further, the inclusion of individual-level sociodemographic characteristics in persistence research allows for greater understanding of the conditional effects of interventions aimed at increasing student persistence (Pascarella & Terenzini, 1998). We cannot assume that any single intervention is effective for all students, nor should we assume that interventions influence students the same way or to the same magnitude. It should be noted that in their 2005 review of empirical literature, Pascarella and Terenzini indicated that still relatively little was known about how student characteristics interacted with college experiences to influence persistence. There remains a great need for retention research that explores these conditional effects.

Earlier reviews of retention research focusing on sociodemographic characteristics (Peltier, Laden, & Matranga, 1999; Reason, 2003) concluded that gender, race, ethnicity, and socioeconomic status (SES) were generally found to be related to persistence in higher education. Although Peltier et al.'s earlier review concluded that gender was significantly related to persistence, with women persisting at higher rates, Reason reported more mixed findings, with gender differences disappearing when controls or interactions are taken into account. St. John, Hu, Simmons, and Musoba (2001), for example, reported interactions between gender and institutional type and on-campus residence. These authors concluded that men were advantaged related to retention because of "the type of college attended or the probability of living on campus" (p. 144). Leppel (2002), in a study using a large national dataset, also found that other sociodemographic variables

(e.g., race) and situational variables (e.g., marriage, children) affected the persistence of men and women differently. She concluded that, to be effective, interventions intended to increase retention must be targeted to the specific needs of either gender.

Similar conditional effects make an understanding of racial and ethnic differences in retention rates difficult (Reason, 2003). In general, research reports that Asian and White students tend to persist at higher rates than do other students of color. In studies in which other important variables are controlled (e.g., SES, academic preparation), however, racial differences disappear or are reversed, indicating that differences in income or preparation, not race, might be at the root of differences in student persistence. Hu and St. John (2001), in a large-scale comparison of White, Hispanic, and African-American student persistence in Indiana, for example, found that students from the different racial groups came from different socioeconomic groups, that these socioeconomic differences were related to persistence differences, and that adequate student financial aid could equalize persistence rates across racial groups.

Students' SES and income background remains significantly related to college persistence after controlling for gender, race, and ethnicity (Pascarella & Terenzini, 1991, 2005). In a recent report, ACT (2004c) found that students' SES was the second most powerful predictor of college retention, behind high school grade point average, even when controlling for many other demographic factors. ACT's conclusions reinforced Walpole's (2003) finding that low SES students had lower educational attainment levels than otherwise similar high SES peers nine years after beginning postsecondary education. The role of socioeconomic factors may be different at different types of institutions (Braxton, Hirschy & McClendon, 2004).

Braxton and his colleagues reported that parental education—one indicator of SES—was significantly related to the persistence at commuter institutions, but unrelated to persistence at residential institutions.

Finally, perhaps the largest component of a traditionally aged college student's precollege life—family—is left practically unexplored in relation to persistence. This oversight is likely a result of a reliance on Tinto's model. In the 1993 version of his model, Tinto posits a three-stage process of departure, which included "separation from communities of the past" (p. 95) as the first step, leading researchers and higher educators to assume students must break family ties to integrate into college. With the changing racial and ethnic demographic composition of college students, this assumption has been challenged (Gloria & Castellanos, 2003; Gloria, Castellanos, Lopez, & Rosales, 2005; Rendon, Jalomo, & Nora, 2000), although some evidence exists that parent and family support are influential in persistence decisions regardless of student racial or ethnic background (Bank, Slavings, & Biddle, 1990; Braxton et al., 2004).

Researchers have consistently drawn connections between the educational attainment of parents and persistence of children (Pascarella & Terenzini, 2005). Rendon et al. (2000), however, presented a theoretical argument for the inclusion of family relationships (i.e., support) when studying persistence among students of color. Gloria et al. (2003, 2005) demonstrated empirically the positive influence that family and community support can have on the persistence of Latino students, specifically. Braxton et al. (2004) noted the importance of familial support for commuter students. These studies serve as a foundation upon which to continue the exploration of the relationship between family support and student persistence, which is just now beginning to be understood.

Academic Preparation and Performance

Academic preparation and performance, including successful completion of college preparatory coursework in high school, are likely the strongest precollege predictors of college persistence and degree attainment (ACT, 2007). The influence of a rigorous high school curriculum on college persistence is particularly profound early in a student's college career. Adelman (2006), in an extensive study of data collected as part of the National Education Longitudinal Study 1988/2000, concluded that the quality of a student's high school curriculum was more influential than entrance test scores (i.e., SAT and ACT scores) in predicting successful completion of the first year of college. These results reinforce findings from a similar analysis on a different dataset (Adelman, 1999). Digging deeper, Adelman found that the completion of higher level math courses while in higher school seemed to have the greatest effect on college readiness and successful persistence into the second year of college.

Of course, students' high school preparation and coursework are shaped by both personal and institutional resources. The interaction of SES and academic resources, particularly for students who are low in both, is highly influential in student success (Adelman, 2006; Cabrera, Burkum, & LaNasa, 2003, 2005; Pascarella & Terenzini, 2005). Adelman concluded that the combination of SES and high school academic resources (a composite variable that includes the quality of a student's high school curriculum) were strongly related to eventual degree completion. Students from low socioeconomic backgrounds and with lower quality academic preparation are least likely to persist to degree attainment. Similarly, Cabrera et al. (2003) found that students from low SES backgrounds with minimal academic resources in high school

were less likely to graduate from college than moderately or highly prepared students from low SES backgrounds. These findings lead both sets of authors to conclude that a high-quality academic preparation in high school can overcome the deleterious effects of a low SES background; unfortunately, low SES students are more likely to come to college having not received such high-quality academic preparation.

Student Dispositions

Compared with the volume of research on other sociodemographic variables, relatively little is written in the higher education literature about the role of student dispositions in persistence. The existing literature, much of it in the psychological disciplinary literature, does directly connect students' dispositions to persistence in college (ACT, 2004c; Braxton et al., 2004; House, 1992; Robbins, Lauver, Le, Davis, Langley, & Carlstrom, 2004; Tross, Harper, Osher, & Kneidinger, 2000). A meta-analysis of research, primarily from the psychology literature, conducted by Robbins et al. (2004) found that academic goals, academic self-efficacy, and students' sense of academic skills were all related to persistence. Tross et al. (2000) found direct and indirect relationships between first-to-second year persistence and student conscientiousness, defined as the students' relative tendency to complete tasks carefully. Brown et al. (2008) found strong positive relationships between self-efficacy, educational goals, and college persistence. Interestingly, in this meta-analysis of existing research, the authors found no direct relationship between high school grade point average or admissions test scores (ACT/SAT) and persistence after these nonacademic dispositions were accounted for in the model, indicating that perceptions about academic success might be more important than—or at least mediate the importance of—more direct

indicators of academic success.

The importance of nonacademic, precollege characteristics of students, including academic motivation, self-discipline, and self-confidence, in predicting college persistence has also been highlighted by research from ACT (2004a, 2007). According to ACT, students with higher levels of these nonacademic characteristics are more likely to persist through the third year of college. Similarly, students with clearly articulated academic goals, strong academic skills, college social connections, a commitment to college, and an interest in their subject matter are more likely to persist.

Finally, student dispositions are particularly important in student persistence at nontraditional institutions. Braxton et al. (2004) note that student motivation, locus of control, self-efficacy, empathy, and need for affiliation influence persistence at commuter institutions in ways that are different than how these dispositions affect residential students. Pascarella, Wolniak, and Pierson (2003) found that high educational aspirations have compensatory effects on persistence for community college students. Specifically, these authors found that students with high educational aspirations who began their postsecondary education at community colleges were more likely to achieve bachelor's degrees than community college students with lower aspirations, net of the effects of many other student characteristics. High degree aspirations, therefore, may even help to compensate for the relative disadvantage of beginning a college career at a community college (Crook & Lavin, 1989; Pascarella, Edison, Nora, Hagedorn, & Terenzini, 1998), although recent studies indicate this community college disadvantage persists (Long & Kurlaender, 2008).

Findings linking student precollege characteristics with persistence, although interesting, are not necessarily actionable. Although we should all, as citizens, lobby for greater

rigor in high school curricula, we cannot, as higher education researchers or practitioners, do much to affect this or other precollege characteristics of our students. Although the fight for the brightest and best prepared high school students will continue, no higher education institution can afford to focus its efforts solely on high SES and well-prepared students. Moreover, the democratic mission of higher education excludes such a focus. Researchers and practitioners will do well to focus on characteristics and experiences over which they have more control.

ORGANIZATIONAL FACTORS

Upon enrolling in college, students enter environments that have the power to shape their behavior and influence their success. Berger and Milem (2000) reviewed the available research on the organizational effects of college on students, grouping these studies into two categories: one dealing with the “structural-demographic features” of institutions, the other with “organizational behavior dimensions” (p. 310). Studies in the structural-demographic category examine the influences of such institutional traits as source of support (public vs private), size, curricular mission, or admissions selectivity. The organizational behavior category includes studies based on concepts of organizational behavior, culture, and climate. Organizational behavior, according to Berger and Milem (2000), can be defined as “the daily patterns of functioning and decision-making within an organization” (p. 274). Organizational culture, on the other hand, is considered to be a holistic concept “that focuses on deeply embedded and enduring patterns of behavior, perceptions, assumptions, beliefs, attitudes, ideologies, and values about the nature of the organization and its functioning that are held and maintained by organizational members” (p. 274). Whereas “culture” seems to be relatively

enduring, “climate” is more temporary. Citing Petersen and Spencer (1990), Berger and Milem (2000) portray organizational climate as a function of

a primary emphasis on common views among organizational members, a focus on current patterns of perceptions and behaviors by organizational members, and the malleable, transitory nature of an organization’s climate. (p. 275)

Structural-Demographic Characteristics

Historically, and unfortunately, structural-demographic characteristics serve as the only institutional characteristics variables included in much of the higher education research on retention (Berger & Braxton, 1998). Studies that report the effects of institutional size, source of support, and/or selectivity on persistence abound in the literature (Pascarella & Terenzini, 1991 2005). These structural-demographic characteristics of an institution typically are included as control variables and are so ubiquitous that they often become the sole variables used to account for institutional differences. Even with the prevalence of these variables, understanding their effects on persistence seem tenuous at best.

Conventional wisdom suggests that attending a small, private, selective institution increases a student’s chance of graduating with a degree. Although technically true, the influence of who attends these institutions (the subject of the previous section) and what they do while there (the subject of subsequent sections) is much more influential than the structural-demographic characteristics of the institution itself (Pascarella & Terenzini, 2005). Research findings relating structural-demographic characteristics to student persistence are mixed. When researchers adjust for precollege characteristics of the students admitted to an institution, the effects of source

of support (public vs private) on student persistence disappear (Pascarella & Terenzini, 1991, 2005). Findings related to the effects of institutional size and mission (teaching vs research) are contradictory and/or very small.

Two exceptions exist to the general findings that institutional structural-demographic characteristics exert little influence on student persistence. First, where a student begins his or her college career affects subsequent educational attainment (Pascarella & Terenzini, 2005). Attending historically black colleges or universities or women's institutions positively influences persistence for African-American students and women students, respectively. As will be discussed in greater detail later, this advantage is likely because of environmental and student climate characteristics that positively influence academic achievement. On the other hand, beginning a college career at a two-year institution decreases students' chances of earning a bachelor's degree, even in studies with strong controls for students' precollege differences (Long & Kurlaender, 2008; Pascarella & Terenzini, 2005). This may, however, have more to do with the transfer function than any deleterious effect of two-year institutions; the research indicates that once a transfer to a four-year institution is successfully completed, the difference in bachelor's attainment disappears (Pascarella, 1999).

The second exception to the general rule is institutional quality (Pascarella & Terenzini, 2005). Students who attend higher "quality" institutions are more likely to persist to graduation than students who attend lower "quality" schools. However, institutional quality often is measured by admission test scores, selectivity of admission, or average high school grade point average of an institution's entering first-year cohort. Given these common definitions of institutional quality, which seem to be proxies for students' precollege academic

preparation, it is not surprising that a positive relationship between institutional selectivity and student persistence to degree completion is consistently found in the research literature.

Pascarella and Terenzini (2005), however, suggested the effects of institutional selectivity influence student persistence above and beyond the academic training students bring with them. One possible explanation for this effect, explored later in the article, might be the influence of peer environments that value and reinforce learning and persistence (Kuh, Kinzie, Whitt, Schuh, & Associates, 2005; Terenzini & Reason, 2005). Evidence does indicate that in various dimensions of student life, students tend to move toward the dominant values and belief structure held by other students—what Astin and Panos (1969) called progressive conformity. For example, Titus (2004), in a multi-institutional analysis of student persistence, found that institutional size and selectivity had contextual effects on students. He concluded that these structural-demographic characteristics may be linked with "peer climate and the positive influence it has on a student's chance of persistence" (p. 692), perhaps another example of progressive conformity.

Although it will always be important to "control" for these institutional factors when studying persistence, it is also important to note that, like the findings related to student precollege demographic characteristics, many of the findings about institutional demographic characteristics have little practical relevance. Certainly institutions can increase admissions selectivity over time—many have done just that—but other characteristics are largely immutable. Institutional size, location, and source of support are less malleable; institutions do, however, have control over their behavior, policies, and practices—the focus of the next section.

Organizational Behavior Dimensions

As noted in the previous section, research indicates that institutional structural-demographic features, although easily defined and measured, provide little explanatory power when it comes to student persistence. Berger (1997, 2000) and others (e.g., Baldridge, 1971; Birnbaum, 1988; Braxton & Brier, 1989) have offered more fine-grained descriptions of what might be called clusters of organizational behaviors. The assumption here is that institutional effects are more a function of what institutions do (and how they do it) than of what they are, an assumption supported by much of the research reported by Pascarella and Terenzini (2005). These specific internal organizational structures, practices, and policies, through the kinds of student experiences and values they promote or discourage, are more likely than institutional features to influence student outcomes (Terenzini & Reason, 2005).

Berger (2001-2002) reviewed the empirical research relating student persistence to organizational behaviors, clustering organizational behaviors into five types: bureaucratic, collegial, political, symbolic, and systemic. Bureaucratic organizations are characterized by formal administrative structures, hierarchy of decision making, and well-established rules, whereas collegial organizations nurture collaboration, participation, and consensus decision-making processes. Political organizations are characterized by competition between groups for limited resources and power. Symbolic organizations focus on history, lore, and myth in creating culture on campus. Finally, systemic organizations behave as interconnected subsystems, recognizing that behavior is influenced by others within and external to the organization. Although every organization likely exhibits characteristics of each cluster of behaviors, one cluster tends to dominate.

According to Berger's review (2001-2002), organizations that are perceived by students to exhibit collegial, symbolic, or systemic characteristics enhance students' chances of persistence. Organizations operating in a collegial manner influence student persistence indirectly through greater levels of student satisfaction, communication, and participation, as well as a sense of fairness and inclusion in organizational decision making (Berger, 2001-2002; Berger & Braxton, 1998; Braxton & Brier, 1989). Symbolic organizations, with their focus on the importance of history and tradition in decision making, nurture students' sense of shared meaning and culture (Berger, 2001-2002), likely resulting in greater levels of student integration (Berger, 2001-2002; Tinto, 1993).

Organizations functioning in a systemic manner also can positively influence student persistence, as institutional forces align to support students' success (Berger, 2001-2002). Recall that systemic behavior reinforces the interrelationships between subsystems within larger organizations. As institutions align policies and practices in support of student success and build on the strengths of these relationships, students are more likely to persist. Similarly, if institutions are able to parlay connections with external constituencies into the placement of students in prestigious occupations and graduate schools, the likelihood of persistence increases. This latter characteristic combines the benefits of systemic organizational behavior with those of symbolic behaviors to the benefit of students.

In their review of retention research related to residential and commuter institutions, Braxton et al. (2004) identified institutional characteristics influencing student persistence that incorporate Berger's (1997) ideas of collegial and symbolic organizational behavior. At both types of institutions, the degree to

which students perceive the institution's actions to be aligned with its vision and mission affects persistence. This alignment, which the authors called "institutional integrity," results in a sense of fairness in decision making, student satisfaction, and sense of purpose. Students at both residential and commuter institutions also are more likely to persist if they believe the institution is committed to student welfare. Institutions that convey a sense of caring, along with institutional integrity, likely increase the chances of student persistence through greater levels of social integration.

Institutional behaviors that fall under the political or bureaucratic type exhibit either negative or mixed influence on students' persistence, respectively (Berger, 2001-2002). Organizations exhibiting a high degree of political behavior, characterized by power differentials between groups and perceived in-fighting for limited resources, decrease the likelihood of student persistence. On the other hand, Berger's analysis suggested the relationship between bureaucratic organizational behavior and student persistence is not linear. Some level of bureaucracy is necessary to support student persistence. Too much bureaucracy can contribute to students' sense of being "just a number" and decrease the likelihood of persistence.

In a study exploring the relationship between college and university expenditures and student retention, Gansemer-Topf and Schuh (2006) supported Berger's (2001-2002) conclusion about bureaucratic organizations. If you accept the axiom, "if you want to know what an institution values, follow the money," juxtaposing these two papers provides insight and support for the relationship between organizational behavior and student persistence. Gansemer-Topf and Schuh found, for example, that increased expenditures for institutional support purposes negatively affected student persistence to graduation. The institutional

support category of expenditures included resources allocated to administrative functions characteristic of bureaucratic organizations, such as legal services and public relations.

In general, Gansemer-Topf and Schuh (2006) found that increased expenditures, other than those under the institutional support category, resulted in increased retention of students. Importantly, institutional expenditures for instruction were significantly and positively related to first-year student persistence and six-year graduation rates for all categories of institutions in the study. Similarly, expenditures for academic support services (e.g., library, academic computing, academic advising) positively predicted both measures of retention, although only for more highly selective institutions. Although the relationship between academic support expenditures and retention at less selective institutions is unclear, the authors concluded that institutional expenditures that support the academic mission of the institution result in higher retention rates.

Collectively, these studies, (Berger, 1997, 2001-2002; Berger & Braxton, 1998; Braxton et al., 2004; Gansemer-Topf & Schuh, 2006) support the conclusion drawn by Terenzini and Reason (2005) and Pascarella and Terenzini (2005): the institutional effects on college student outcomes (including student persistence) are less about what an institution is than about what an institution does. Clearly, the effects of structural-demographic characteristics of an institution are weak or nonexistent in strongly controlled research studies (Pascarella & Terenzini, 2005). On the other hand, institutional behavior, understood through the lens of organizational theory (Berger, 2001-2002), exerts influence, albeit often indirectly, on student persistence. The influence of these measures of institutional behavior reinforce the call by Terenzini and Reason that, to fully understand how colleges

affect students, researchers must move beyond structural-demographic characteristics and include measures of organizational culture and behavior.

STUDENT PEER ENVIRONMENT

Any effort to understand fully the multiple influences affecting persistence must also take into account the influences of students' peers. The peer environment embodies the system of dominant and normative values, beliefs, attitudes, and expectations that characterize a campus' student body (Terenzini & Reason, 2005). The influence of the peer environment is presumed to be subtle, inducing changes that are not immediately apparent to the individual student (Astin, 1993; Astin & Panos, 1969; Berger & Milem, 2000). Although they are described by a limited number of anthropomorphic characteristics that emerge as dominant within an institution (e.g., friendly, hostile), environments are unique collections of individuals within contexts and subcontexts (Strange & Banning, 2001) and the influence of an environment varies by type of institution (Braxton et al., 2004).

From the individual student's perspective, the peer environment is a "sense of the place" that conveys to students what others value and expect behaviorally, in the social and academic world (Terenzini & Reason, 2005). Understood in Tinto's term (1993), this shaping of students' sense of place is social integration. Much of the recent work by Braxton exploring and extending Tinto's theory focuses on the role of social integration's influences on student persistence (e.g., Braxton, 2008; Braxton & Lee, 2005). Braxton and Lee concluded that researchers have consistently found a link between social integration, institutional commitment, and subsequent student persistence in residential colleges and universities specifically. The authors

reported that sixteen of the nineteen studies they reviewed supported the proposition that greater social integration led to greater institutional commitment at residential institutions.

Campus Racial Climates

Much of the research involving campus environments and retention focuses on campus racial climates (Harper & Hurtado, 2007). The campus racial climate sends messages that indicate whether a student's experience is valued or minimized (Fegain, 1992), with the latter having deleterious effects on student outcomes, including persistence (Cabrera, Nora, Pascarella, Terenzini, & Hagedorn, 1999). As Pascarella and Terenzini (2005) point out, however, the effects of campus racial climate on student persistence is likely indirect and subtle.

Recently, Museus, Nichols, and Lambert (2008) explored the effects of racial climate on degree completion for four major racial and ethnic groups: African-American, Asian American, Latino/Latina, and White. Findings from this study reinforce the conclusion that the effects of climate on student persistence are indirect for all racial/ethnic groups under investigation. Museus et al. found that campus climate affected persistence through its influence on goal commitment, social involvement, academic involvement, and institutional commitment, although the strength and significance of these relationships varied by student group.

The influence of campus climate may be particularly robust at special purpose institutions. Recall the earlier discussion of the influence of structural-demographic characteristics of institutions had little, if any, effect on student persistence. Two important exceptions to this general rule involved women's colleges and historically black colleges and universities (Pascarella & Terenzini,

2005). Women attending women's colleges and African-American students attending historically black colleges or universities receive an advantage over similar students at coeducational and predominantly white universities, respectively. Based on their review of the literature, Pascarella and Terenzini concluded that "at both women's colleges and predominately Black institutions, the effects may be more indirect than direct, influenced by more supportive faculty and peer relations and overall educational environment" (2005, p. 438).

Unfortunately, little empirical evidence exists to support a similar conclusion for other racial or ethnic groups, including Latino/Latina students attending Hispanic-serving institutions (HSIs). Although, research connects campus climate to Latino student persistence at primarily White institutions (Gloria et al., 2005; Hernandez 2000; Hernandez & Lopez, 2004-2005), the research on HSIs is less clear. Contreras, Malcolm, and Bensimon (2008) found that Latino students at ten HSIs failed to persist to degree at equitable rates compared with White students, either generally or within majors in which they were underrepresented (e.g., STEM majors). It must be noted that the study was not able to control for entry characteristics or predict what might be affecting Latino student persistence in these institutions. The authors suggested that the lack of strong Hispanic identities, presumably a measure of campus climate, at HSIs might be related to these findings. The results of the study must be interpreted cautiously, but the results point researchers to a potentially fruitful area of exploration.

Campus Academic Climates

Beyond racial climate, the student environment is comprised of other aspects, including those that send messages about the importance of intellectual pursuits. The peer environment

exerts normative power of student behavior (Bank et al., 1990), including educational aspirations (McCormick, 1997). Astin (1993), in a comprehensive study of student outcomes, found that students' peer environments related to academics influenced almost all student outcomes. Similarly, Kuh et al. (2005) have explored how general levels of student engagement in educationally purposeful practices have positive effects on individual student outcomes. Reason, Terenzini, and Domingo (2006, 2007) have used similar measures of student environments to predict students' self-perceptions of increases in academic and personal competence. Research supports the conclusion that women receive some environmental benefits from attending women's colleges through the peer environment, especially in relation to a greater sense of academic challenge and likelihood of engaging in higher order thinking skills (Kinzie, Thomas, Palmer, Umbach, & Kuh, 2007). Women at women's institutions also show greater gains in academic ability, leadership experience, and job skill acquisition than women at coeducational institutions (Kim & Alvarez, 1995).

Unfortunately, little research exists to link student academic peer environment specifically to student persistence. The research cited in the preceding paragraph links student peer environments to student behaviors believed to be related to persistence. The relationship between student environments and persistence, thus, is ripe for exploration. In his chapter on the role of climate in student persistence, Baird (2000) suggested several important areas of exploration which have yet to become the focus of much persistence research. Baird, for example, suggested that little is known empirically about the affects on persistence of climates in the various settings a student inhabits (e.g., classroom, residence hall). Further, Baird suggested that students' coping skills and abilities to persist in negative campus

climates needed to be studied further, because these teachable skills have the possibility of increasing student persistence.

INDIVIDUAL STUDENT EXPERIENCES

The final and most immediate set of influences in shaping student persistence includes students' own experiences in various areas of their academic and nonacademic lives (Terenzini & Reason, 2005). The three decades of research reviewed by Pascarella and Terenzini (1991, 2005) leave no doubt that students' experiences during their college years are salient influences on a wide spectrum of student outcomes, including educational attainment. Building on an earlier framework (Pascarella et al., 1996), Terenzini and Reason's framework clusters these experiences into three areas: curricular experiences, classroom experiences, and co-curricular experiences.

Curricular experiences consist of students' particular coursework patterns, their choice(s) of an academic major field, the nature and extent of students' socialization to that field, and the degree of exposure to other academic experiences that are part of the general or major field curriculum (e.g., internships, cooperative education, study abroad). Classroom experiences include, among other things, the kinds of pedagogies students encounter in their classrooms. Finally, students' out-of-class (co-curricular) experiences also shape their outcomes in subtle and complex ways. These experiences include a wide array of influences, including where students live while in school, degree of involvement in various co-curricular activities, hours spent studying, family and employment obligations, and family support. Although these categories of experiences are treated distinctly below for ease of explanation, a student's experiences certainly interact and influence each other and the student's persistence decisions.

Curricular Experiences

Students' academic major and subsequent course of study are the most obvious curricular experiences variable to consider in relation to student persistence, although they may not be the most salient. To be sure, students in certain majors persist to graduation at greater rates than students in other majors. Students in the STEM fields are more likely to persist to degree than are students majoring in education or the social sciences (Adelman, 1999; Leppel, 2002; Pascarella & Terenzini, 2005). Much of the effect of a major, however, seems to be indirect through students' perceptions of relationships with faculty and peers (Pascarella & Terenzini, 2005).

Participation in other curricular experiences is more powerfully related to student persistence. Specifically, research suggests that participation in first-year seminars (FYS) and the acquisition of academic skills that often accompanies FYS participation are much more powerful predictors of student persistence (Hunter & Linder, 2005; Pascarella & Terenzini, 2005). Cuseo (2007) reviewed research relating FYS participation to various measures of persistence, concluding that FYS participation positively influenced persistence within the first year, between the first and second year of college, and to degree completion. Hunter and Linder (2005) concluded that although a few studies present contradictory findings, "the overwhelming majority of first-year seminar research has shown that these courses positively affect retention . . . [and] graduation rates" (p. 288), along with a host of other outcomes. In perhaps the most rigorously designed study of FYS outcomes, Strumpf and Hunt (1993) randomly assigned student to a FYS and a control group, finding FYS students had significantly higher retention rates through the second year of college.

Teaching students effective study skills

and strategies is a goal of many FYS (Hunter & Linder, 2005; National Resource Center, 2002), as well as supplemental instruction and other programmatic interventions (Pascarella & Terenzini, 2005), which fall under the curricular experiences umbrella and have been shown to influence retention. Developmental programs and other remedial programs that foster the acquisition of study and learning skills have been related to student persistence as well (Reason & Colbeck, 2007), although the research suggests these interventions are most effective for semester to semester or first to second year retention rather than retention to graduation (Pascarella & Terenzini, 2005).

Classroom Experiences

A review of current literature reveals surprisingly little research exploring the connection between students' in-class learning experiences and persistence. Pascarella and Terenzini (2005) reported empirical relationships between classroom experiences and learning outcomes, but their summary mentions little about the relationship between these experiences and persistence in college. Certainly, Tinto's theory (1993) would suggest that classroom experiences are related to persistence, primarily through academic integration. Recently, Braxton et al. (Braxton, 2008; Braxton, Bray, & Berger, 2000; Braxton, Milem, & Sullivan, 2000) have begun to explore this relationship between pedagogy and persistence, focusing on the effects of classroom experience on social integration.

Pascarella and Terenzini (2005) reported empirical support for the relationship between student learning outcomes and classroom teaching practices and instructor characteristics. Pedagogical approaches that encourage active, collaborative, and cooperative learning provide advantages, in relation to academic and cognitive gains, over more passive instructional approaches. Similarly, factors such as instructor

preparation/organization, clarity, availability, and helpfulness; the quality and frequency of feedback provided to students; and instructor rapport with students all positively and significantly promote course content acquisition and mastery. Teacher preparation and organization (e.g., material well organized, class time is used effectively) also seem to facilitate gains on more general measures of learning not tied to specific courses.

Braxton et al. have taken this research a step further, linking classroom activities to students' persistence decisions. Using Tinto's theory as a guide, Braxton, Bray, and Berger (2000) and Braxton, Milem, and Sullivan (2000) demonstrated both direct and indirect relationships between in-class experiences, social integration, and students' intent to persist in college. Specifically, Braxton, Bray, and Berger demonstrated links between good teacher behaviors (e.g., clarity, organized presentation of material) and persistence. Braxton, Milem, and Sullivan found a positive link between active teaching pedagogies (e.g., classroom discussion) and persistence. This same study found a negative relationship between a passive pedagogy (i.e., testing for facts) and persistence. In both studies, the positive relationships demonstrated were direct as well as indirectly through greater student social integration.

Extending the findings of Braxton, Bray, and Berger (2000), Pascarella, Seifert, and Whitt (2008) found a direct relationship between exposure to organized and clear instruction and persistence into the second year of college. As with Braxton et al's results, the relationship between good teaching practice and persistence was both direct and indirect, through increased student satisfaction with their education.

The study by Pascarella et al. (2008) was an extension of previous studies (Braxton, Bray, & Berger, 2000; Braxton, Milem, & Sullivan,

2000) in that it uses actual persistence behavior, rather than student reported intent to persist, as the outcome measure. Although intent to persist is a strong proxy for actual persistence (Bean, 1983), the use of actual persistence into the second year allows for the examination of the relationship between in-class experiences and actual student behavior. Further, although all three studies are statistically rigorous, each is a single-site study, which certainly limits the overall generalizability of the results and our understanding of the role that various institutional contexts might play in the relationships under examination.

Braxton, Jones, Hirschy, and Hartley (2008) extended this line of research even further, including both a direct measure of student persistence and multiple institutional settings. Results from this latest research lend some support for the belief that classroom experiences affect student persistence, although this relationship seems to be indirect rather than direct. Braxton et al. found that active teaching pedagogies resulted in a greater sense that faculty members care about students' welfare. The authors reported direct relationships between students' sense of social integration and commitment to the institution. Further, a direct relationship existed between institutional commitment and persistence. However, the authors were unable to find a significant relationship between active teaching and students' sense of social integration, an intermediate hypothesis that would have allowed for a stronger conclusion about the relationship between active teaching and persistence.

Taken together, this body of research provides some evidence that links students' classroom experiences to persistence (or at least, intent to persist). Active forms of teaching and higher quality teaching increase student social integration and commitment to an institution, two factors understood to be

directly related to increases in the likelihood that a student will persist. Still, further research, particularly research that includes actual measures of student persistence behavior and students from multiple institutions, is necessary to improve our understanding of the relationship between in-class experiences and persistence (Tinto, 2006-2007).

Out-of-Class Experiences

It is commonly believed that the more students involve themselves with (or "engage with" or are "integrated into") college life, the more likely they will be to persist. Astin (1985) defined student *involvement* as the extent to which students invested themselves in learning, an investment that included elements of physical and psychological time and energy. Tinto's (1975, 1987, 1993) concept of *integration* is closely related to Astin's involvement, as is Pace's (1988) *quality of effort*. More recently, writers and researchers have adopted the term *engagement* (Kuh et al., 2005). This final term, engagement, is meant to encompass the intersection between institutional conditions and student behaviors (Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006). Although the labels vary, the underlying dynamic is essentially the same.

Pascarella and Terenzini (2005) presented a litany of empirically based research articles that find positive relationships between out-of-class engagement and persistence. Generally speaking, the greater the student engagement in college, as measured by time and effort put into educationally purposeful activities, the more likely the student will be to persist. Positive interactions with faculty members and peers, especially interactions that further and relate to academic matters, increase the likelihood that students will persist. Astin (1993) reported that time spent studying and preparing for class, a measure of academic engagement with an institution, also was strongly related to persistence to graduation.

Involvement in student groups and organizations also influences student persistence, although the direction of the influence is mixed and indirect (Pascarella & Terenzini, 1991, 2005). Those co-curricular activities that serve to increase student involvement in educationally purposeful activities (e.g., student academic groups, service organizations) tend to increase the likelihood of persistence to graduation. Similarly, involvement in intercollegiate athletics increases persistence. On the other hand, the influence of fraternity and sorority involvement on persistence is less clear, although likely positive.

IMPLICATIONS

In a recent review of persistence-related research, Tinto (2006-2007) concluded that, although we have improved our understanding of what affects student persistence, this improved understanding has not increased overall student retention rates appreciably. He asked, "What else [do] we need to do to further improve the effectiveness of our work on behalf of increased student retention" (p. 2). Given the decades of research on persistence, the innumerable studies published in higher education journals, and the wealth of data currently available, the answer to this simple question is surprisingly elusive.

Two of Tinto's (2006-2007) conclusions are particularly pertinent to this discussion. First, Tinto's review of the research led him to conclude that the higher education community has come to recognize that students from different backgrounds (e.g., race, ethnicity, SES) experience differently the forces within our college and university environments, including our efforts to improve student persistence. That is, students matter. Second, Tinto believed the latest retention research indicated higher education professionals have come to appreciate that the "process of student

retention differs in different institutional settings" (p. 4). That is, institutional context matters.

The research presented in this article supports Tinto's (2006-2007) conclusions. Although findings were presented discretely in four clusters of influences for illustrative purposes, the clusters (precollege characteristics, organizational context, student peer environment, and individual student experiences) interact in ways that reinforce or mediate their influence on student persistence. That is, students' interactions with their environments matter.

Situating the extant literature in the comprehensive framework offered by Terenzini and Reason (2005) provides another possible answer to Tinto's (2006-2007) question: we must stop searching for the silver bullet—the panacea—to solve our institutions' retention problems. Rather, we must approach the study and practice of student persistence as a multidimensional problem, heeding the admonition of Pascarella and Terenzini (2005), by addressing the multiple forces operating in multiple settings that influence persistence. Influences on students' persistence decisions and behaviors are not uni-dimensional; our solutions cannot be either. The need for more complex thinking about persistence holds for both research and practice.

STUDYING PERSISTENCE

From a research perspective, placing our current understanding of the forces that influence student persistence within the conceptual framework offers scholars a comprehensive conceptual map to identify forces that shape persistence. It both identifies salient sets of constructs that may influence student persistence and suggests the possible causal linkages between them. In its breadth, it avoids the conceptually restricted perspective

of earlier decades and responds to the need identified by Pascarella and Terenzini (2005) for “conceptual models and research designs that might more fully account for multiple sources of influence [on student outcomes]” (p. 630).

The goal of persistence research must be to explore students within the multiple concentric environments they inhabit, recognizing that different students engage differently within those environments. Multi-institutional studies of student persistence should include measures related to organizational environments, moving beyond the standard measures of institutions (e.g., size, source of support, selectivity) to include measures of organizational behaviors and contexts (Berger, 1997, 2000). Measures of the student peer environments must be included to account for that context most proximal to individual behavior (Terenzini & Reason, 2005). Finally, individual student characteristics and sociodemographic traits must be included because these factors affect how students engage with the various environments within which students operate. A thorough study of persistence requires a complicated research design that can explicate not only the direct relationships of each constellation of variables on persistence, but also how the interactions between the constellations affect persistence.

Higher education researchers have been moving toward these more complicated analytic designs and methods over the last several years. My own and others’ (e.g., Feldman, 1993) reviews of contemporary journal articles, compared with those published in the 1970s and 1980s, show a progression from single-site, univariate studies to multisite, multivariate analyses. Advances in analytic techniques and data availability allow researchers the tools for greater specificity in persistence studies. The advent and widespread use of multilevel modeling techniques (e.g., Raudenbush &

Bryk, 2002) allows for greater specificity in apportioning causal influences between institutional variables and individual variables. These methods also allow for richer research designs that can account for the situations in which individual behavior (persistence) is nested within multiple environments (peer environment, organizational environments). As the study of persistence moves forward, higher education researchers will need to become more facile with these advanced analytic and design techniques.

Finally, the research reviewed within this article revealed several new, or emerging, areas of inquiry. Specifically, research must begin to focus (or at least include) students from important demographic groups that have been previously excluded or ignored. With the 2000 Census, the Hispanic population found to be the largest minority group in the United States; Latino and Latina students continue to enroll in college at greater rates (National Center for Education Statistics, 2005), yet their experiences are woefully underrepresented in our current persistence research. Similarly, students from low income and low SES backgrounds, although an increasing proportion of postsecondary students, are underrepresented in our current research. These and other emerging populations must be included in future research, because their background characteristics and life experiences will influence their chances of persistence.

Noting both the changing demographic characteristics of college students and our growing understanding that interventions affect students differently based on those demographic characteristics, Pascarella and Terenzini (1998) called on researchers to increase the exploration of the conditional effects of college. These authors called for higher education researchers to design and conduct studies that “explore whether the impact of any particular experience differs

in magnitude for different kinds of students” (pp. 153-154). Although Pascarella and Terenzini were specifically calling for increased attention to the conditional effects of specific interventions on diverse students, the research reviewed in this manuscript points to the need to explore further the conditional effects of specific organizational and peer environments on students as well.

I hesitate to offer specific researchable areas for fear of omitting other important areas or implying that I have identified an exhaustive list. But, four specific areas of inquiry emerged from this review of persistence literature.

1. *Continued Exploration of Sociodemographic Characteristics.* As noted, the demographic characteristics of students continue to change, with different groups of students attending college at different rates than they had previously. Existing research suggests that different groups of students respond differently to interventions, which requires higher education researchers to reassess the efficacy of existing interventions for these new students. Further, the changing student demographic compositions of our campuses change the student environment within which our students engage with those interventions. Researchers must explore the influences on persistence of interactions between interventions and changing student environments.
2. *Increased Exploration of the Role Organizational Behavior.* Berger’s (1997, 2000) work provides a foundation upon which current research must grow. His review (2001-2002) provides broad insight into how organizational behavior influences student persistence, but researchers must continue to build empirical connections between institutional policies and practices and student behavior. Kuh et al. (2005) connected institutional policies and prac-

tices with student engagement, but the connection between those policies, student engagement, and, ultimately, student persistence is currently unsubstantiated. Researchers must answer this question: which institutional policies/practices can create student environments that encourage student persistence?

3. *The Role of Student Environments Within Different Institutional Settings.* Recall that where a student begins his or her education affects the chance that student will persist to a four-year degree (Pascarella & Terenzini, 2005). Pascarella and Terenzini posit, however, that much of the effects of institutional type can be accounted for through the characteristics of campus climate. In 2000, Baird called for greater exploration of the effects of campus climate on persistence, although campus climate has been an area of great interest among researchers since Baird’s article (Harper & Hurtado, 2007), the links between campus type, campus environments, and student persistence remain largely unexplored.
4. *The Effects of Student Subclimates.* Baird (2000) also called for greater exploration of the effects on persistence of the various subcultures within which students operate on a college campus. Terenzini and Reason (2005) identified three areas of possible explorations within the broader student environment: curricular experience, classroom experiences, and co-curricular experiences. Although we know that academic major, exposure to various pedagogies, and engagement with student groups and peers all influence behavior (Pascarella & Terenzini, 1991, 2005), we know less about how the various climates within these areas influence persistence.

Further, the interaction between the overall

student environment and various subclimates seems a particularly fruitful area of study. Kuh and Love (2000) suggest the importance of subcultures to the persistence of student from traditionally underrepresented student groups. These “cultural enclaves” (p. 205) help students to negotiate the psychological distance between their home cultures and an academic environment that is potentially hostile. More generally, Kuh and Love suggest a conditional effect of the interaction between overall climate and subclimate for students. The research reviewed in this article, and the framework upon which the review was based (Terenzini & Reason, 2005), as well as the review by Baird (2000) all suggest the need to further explore this line of inquiry.

IMPROVING PERSISTENCE

Situating persistence research in the framework proposed by Terenzini and Reason (2005) reveals an almost paradoxical relationship between research and practice related to persistence. Researching student persistence is a multi-institutional task; increasing student persistence is local. Terenzini and Reason concluded that, from a research perspective, “the framework’s focus on organizational context factors clearly implies that its utility (as presented) will be restricted to multi-institutional studies” (p. 26). To parse out the effects of different organizational practices or cultures a study must include multiple organizations.

The literature reviewed for this article, however, leads to the conclusion that increasing student persistence must be an institution-specific enterprise. To fully and effectively address student persistence, any intervention must consider the local organizational context and the local student peer environment. Individual student’s decisions about whether to persist are made within, and influenced

by, these two proximal contexts. It seems clear that no effective interventions can be devised without consideration of them. A strong understanding of these environments is necessary for any institution wishing to improve student persistence.

The entirety of the research presented also affirms that engagement matters to persistence; it is, perhaps, the most influential driver of student decisions about persistence. In light of the conclusion “the student matters,” the question becomes, how do we increase student engagement—with the college broadly, with peers, and with faculty members—given the increasing diversity of students, experiences, and institutions?

For an intervention designed to increase engagement to be effective, it must meet the specific needs of the students within a specific institutional context. Institutions with large populations of traditionally aged, residential students certainly need different interventions than commuter institutions with a larger population of adult learners (Braxton et al., 2004). The former has multiple contexts within which to increase student engagement; the latter is likely more constrained. Tinto (1998) suggested the classroom as the primary context to increase engagement. On highly commuter-based campuses, time constraints and other responsibilities hinder student engagement with typical co-curricular activities; the classroom may be the only context regularly inhabited by every student. As the research has shown, faculty characteristics and behaviors that increase engagement within the classroom can increase persistence (Braxton, Bray, & Berger, 2000; Braxton, Milem, & Sullivan, 2000; Pascarella et al., 2008). Of course, increasing engagement in academic settings is a good idea at all colleges and universities, but it becomes imperative when classrooms become the only organizational context students experience. Institutions must know who their

students are, and the constraints to engagement they face, to design effective interventions.

Similarly, institutions must understand who they are and how they operate. If, as Terenzini and Reason (2005) suggested by their framework, organizational contexts precede and influence the student peer environment and individual student behaviors, institutional policies and practices are powerful levers for increasing engagement and persistence. Kuh et al. (2005) provide multiple examples of ways to increase student engagement in different institutional settings, indicating the various ways in which organizational behaviors influence student behaviors. These authors lay out several characteristics of organizational behaviors that seem to cross institutions (e.g., a clear pathway to success; a shared responsibility for educational quality and student success), but they also delineate how these broad characteristics are employed differently within different institutions.

Like Kuh et al. (2005), Laden, Milem, and Crowson (2000) suggested that higher education must institutionalize student success, calling for a shift within the culture of higher education institutions. According to these authors, historical and current conceptions of academic quality and rigor have hindered student persistence. As high expectations about student engagement and persistence become “highly normative and symbolic” (Laden et al., 2000, p. 238), forces within institutions, persistence should increase. Much like the emerging trend in student outcomes research (e.g., Harper, 2005), institutions of higher education should focus on success rather than failure (Tinto, 2006-2007).

In conclusion, in this article I sought to

provide a comprehensive view of what matters in student persistence using the existing empirical research and a conceptual framework that incorporates four sets of constructs. Understanding the existing research through the lens of this conceptual framework illuminates the complexity of student persistence in higher education. Indeed, multiple forces are at work in multiple settings (Pascarella & Terenzini, 2005). Further, these forces likely interact to create inestimable, distinct contexts within which students, themselves unique and diverse, make decisions.

In presenting the research in this manner, I am afraid I painted a picture of futility for those who hope to improve student persistence. On the contrary, understanding the complexity of students' persistence behaviors within the various contexts of higher education institutions begins to shed light on what has been the inexorable problem of student departure. Focusing on the interactions of students and environments, particularly those environments most proximal to students' lives, provides promise in the arenas of research and practice of student persistence. Existing knowledge and developing analytic tools combine to allow researchers to more fully explicate the relationships and interactions between students and environments as these relate to persistence decisions. Practitioners, recognizing the importance of local environments in the persistence decision, can adapt research findings to their local contexts to maximize institutional efforts.

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