From Theory to Action: Exploring the Institutional Conditions for Student Retention

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Though significant strides have been made in constructing a theory of student departure, there is still a good deal of disagreement over the details of such a theory (e.g., Bean, 1980; Braxton, 2000; Braxton, Hirschy, & McClendon, 2004; Cabrera, Castaneda, Nora, & Hengstler, 1992; Nora, 2001; Seidman, 2005; Tierney, 1992, 2000). This is not to say that we have not made substantial progress in our efforts to better understand the process that leads students to leave higher education. As it pertains to the process of student institutional departure, namely that which leads individuals to depart from their institution of enrollment, it can be said that we now have a reasonable understanding of the broad dimensions of that process. The same can be said of our understanding of the process of student retention, the series of events which leads individuals to stay within the institution in which they first enrolled. Though the process of student retention is not the mirror image of student institutional departure, we now know more than ever about the forces shaping student retention and graduation. The same cannot be said, however, for our understanding of institutional practice to promote greater institutional retention and graduation. Though we are increasingly able to explain why some students leave and others persist within an institution and have been able to point out some types of action that institutions can take to improve student retention, we have not yet been able to develop a comprehensive model of institutional action that would help institutions make substantial progress in helping students continue and complete their degree programs within the institution.

Consider the data on national rates of college completion, in this case the proportion of students who complete their degrees from their initial institution of registration. Despite years of effort and a good deal of research on student retention, rates of college completion in the United States do not appear to have changed appreciably in the past 20 years, if not longer (Carey, 2004). Among those who first enrolled in a 4-year institution, for instance, rates of institutional completion within 6 years have held steady at slightly more than 50% (National Center for Education

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Statistics [NCES], 2005). Among those who first enrolled in a public 2-year college, only some 25% earn a degree or certificate from their initial institution within the same time. Of course some students never intended to earn a degree and others go onto complete their degrees or certificates elsewhere. They persist to completion but not in their initial institution of enrollment. But though we know that overall degree attainment anywhere in higher education (student persistence and system completion) is greater than the popular press would have us believe, it is still the case that roughly 6 of every 10 students who began in either a four or 2 year institution do not complete either a 2 or 4-year degree or certificate within 6 years of entry in the institution in which they first enroll (NCES, 2003). Though there are many reasons why this is the case, it is clear that gains in our understanding of the process of student retention have not been translated into gains in rates of institutional completion.[1]

This is particularly evident in our continuing failure to promote the success of low-income students. Though enrollment of low-income students in higher education has grown over the past 20 years and the gap in access to higher education between low and high-income students shrunk, gains in rates of 4-year college completion have not followed suit. Data from a recently completed 6-year national longitudinal study of students who began college in 1995–96 bears testimony to this fact (NCES, 2003). While 56% of all high-income students (dependent family incomes of greater than $70,000) persist to earn a 4-year degree within 6 years of beginning their studies, only 26% of low-income students of dependent family income of less than $25,000 do so (NCES, 2003, Table 2.0C).

Understandably, this reflects the fact that a greater proportion of low-income youth enter 2-year rather than 4-year colleges and, in doing so, reduce the likelihood of earning a 4-year degree (Dougherty, 1987; Grubb, 1991; Shaw, 1997). Whereas nearly 6 in 10 4-year college entrants earn a bachelor's degree within 6 years, only a little over 1 in 10 public 2-year college entrants do so (NCES, 2003, Table 2.1A). But even among those who began higher education in a 2-year college, income matters. While nearly 25% of high-income students persist to earn a 4-year degree within 6 years, only 8% of low-income students do so (NCES, 2003, Table 2.1C). In other words, the chances of a low-income student completing a bachelor's degree within 6 years when beginning college in a 2-year college is around one-third of that for a high-income student who also begins in a 2-year college.

Similar differences in likelihood of completion exist among 4-year college entrants. Of those who began higher education in a public 4-year college or university in 1995–1996, only 48% of low-income students persist to earn their 4-year degree within 6 years, while 67% of high-income students did so (NCES, 2003, Table 2.2C). More telling still is the fact that even among those who began at a 4-year college with the stated goal of obtaining at least a 4-year degree, only a little over half of low-income students earned a bachelor's degree (53%) as compared to over three-quarters of high-income students (77%) (NCES, 2003, Table 8.6).

Of course, some of these differences can be attributed to well-documented differences in levels of academic preparation of students entering 2- and 4-year institutions (Cabrera, Burkum, & La Nasa, 2005) and to the fact that low-income students are considerably less likely to attend elite institutions where graduation

rates are quite high. But even among students attending the top tier of institutions, presumably among the most talented and motivated students in higher education, it proves to be the case that students from the lowest socioeconomic quartile are less likely to graduate (76%) than students from the highest quartile (90%) (Carnevale & Rose, 2003, p. 14).

The facts are unavoidable. Though access to higher education has increased and gaps in access between groups decreased, rates of college completion generally and gaps in completion between high- and low-income students have not followed suit. Indeed, they appear to have widened somewhat over the past decade (NCES, 2005, Table 5B). Clearly there is still much to do to translate access to college into meaningful opportunity for success in college among low-income students. Just as clear is the need to move beyond our theories of student retention to a model of institutional action that provides institutions reasonable guidelines for the development of policies, programs, and practices to enhance student retention and completion, in particular among those from low-income backgrounds.

Moving to a Model of Institutional Action

We begin our pursuit of a model of institutional action by first considering the nature of theory and research on student retention and persistence. After doing so, we turn our attention to what is known about the nature of institutional environments that promote student retention and institutional completion. As we do so, we will note the types of actions institutions have taken to more effectively promote student retention and completion, in particular among those of low-income backgrounds. Finally, we will conclude with several thoughts about the types of additional research on institutional action we need to pursue in order to develop a more fully articulated model of institutional action. Our goal in doing so is rather modest. It is to continue a conversation about how such a model might constructed that has been begun by others (e.g., Astin, 1975; Beal & Noel, 1980; Berger, 2001; Braxton, 2001; Braxton et al., 2004; Braxton & McClendon, 2001; Clewell & Ficklen, 1986; Kuh, Kinzie, Schuh, Whitt, & Associates, 2005; Swail, Redd, & Perna, 2003; Tinto, 2005; Ziskin, Gross, & Hossler, 2006).

As we pursue this conversation we will distinguish between the terms retention and persistence that are often confused in the literature. For the purpose of this chapter, retention refers to the perspective of the institution. Institutions seek to retain students and increase their rates of institutional retention. By extension the term student retention refers to that process that leads students to remain within the institution in which they enroll and earn a certificate or degree. By contrast, persistence refers to the perspective of the student. Students seek to persist even if it may lead to transfer to another institution. By extension, the term student persistence refers to that process that leads students to remain in higher education and complete their certificate or degree regardless of the institution from which the certificate or degree is earned.

Finally it bears repeating that our focus here is entirely on institutional action. Though it is more than apparent that student retention is influenced by a range of events external to the institution, personal, state, and federal, we are concerned here solely with the actions institutions can take on their own to further the retention and graduation of their students.

Reflections on Current Theories of Student Retention

The research on student retention and persistence is voluminous. It is easily one of the most widely studied topics in higher education over the past 30 years. That this body of work has not yet resulted in a model of institutional action reflects a number of issues.

First, much of our work on student retention makes the implicit assumption that knowing why students leave is equivalent to knowing why student stay and succeed. This is not the case. The process of retention is not the mirror image of the process of leaving.

Second, too much of our research focuses on theoretically appealing concepts that do not easily translate into definable courses of action. Take, for instance, the concept of academic and social integration. While it may be useful for theorists to know that academic and social integration matter, that theoretical insight does not tell practitioners, at least not directly, what they would do to achieve academic and/or social integration in their particular setting. The same can be said of the related concepts of academic and social involvement or engagement.[2] Though the early work of Pace (1980), Pascarella and Terenzini (1980), Astin (1984, 1993), and, more recently, Kuh (2003), has done much to operationalize these concepts in ways that can be reasonably measured and in turn used for institutional assessment, that work does not yet tell us how institutions can enhance integration or what it now commonly referred to as engagement. And while it is true that recent studies, such as those by Tinto and Russo (1994), Tinto (1997), Engstrom and Tinto (2007, 2008) Zhao and Kuh (2004), and Kuh et al. (2005) have looked into practices that enhance engagement, there is a great deal more to do.

Third, too much of the research on student retention focuses on events, often external to the institution, that are not under the immediate ability of institutions to affect. Though informative, such research does not lead to reasonable policies and practices. For instance, though it is enlightening to know that student high school experiences and family context influence retention in college and persistence generally, such knowledge is less useful to institutional officials because they often have little immediate control over students' prior experiences or private lives. This is not to say that such information cannot be useful at least in an indirect way. In this case, knowing about the role of family context may help institutions more effectively configure their support programs for differing student situations (e.g., Torres, 2003a, 2003b). But it does not tell the institution either how to effectively tap into issues of family context or whether such actions are more likely to yield increased retention.

Fourth, there remains much confusion about what constitutes student retention and persistence. We continue to struggle with competing, if not conflicting, definitions and measures that on one hand see persistence as the completion of a college degree and, on the other, view it as students being able to fulfill the goal for which they began college. In other cases, some define persistence as continuous enrollment, while others measure persistence as success in one course at a time regardless of periodicity.

This confusion can also be seen in research on student leaving and on degree completion. Regarding the former, too many studies fail to distinguish between the type of leaving that may be said to be voluntary from that which is non-voluntary. For instance, leaving that results from a lack of personal contact is likely to be voluntary, whereas that arising from external events such as family obligations that pull a person away from college might be characterized as non-voluntary. Regarding the latter, some studies of student completion still do not distinguish between institutional completion that is the result of continuous enrollment in an institution from that occurring over time from intermittent enrollment at an institution (i.e., stopout) or between continuous or discontinuous enrollment in one institution (institutional completion) from that occurring through transfer to another institution (i.e., system completion). Such confusion matters, because the findings of different studies that employ different definitions and/or measures of student retention and persistence or success muddy the waters for institutions that seek guidance on the actions they should take to promote student retention and completion on their campuses.

Finally, much of the research and theoretical work on student success generally has been carried out in isolation, with one area of work separated from another. Regarding institutional action, some studies have focused on issues of financial aid, others on campus climate, and others still on programming such as freshman seminars. The result is that we have been unable to provide institutions with a comprehensive model of action that would allow them to weigh the outcomes of different forms of action and plan accordingly.

All this should not be taken to suggest that theory is not important or useful. It is, certainly as it pertains to understanding the process of student retention. Rather it is to argue that we have not yet been able to translate that understanding into forms of knowledge that faculty, staff, and administrators can readily use to form policies and practices to enhance student retention and completion on their campus, in particular for students from low-income backgrounds.

The Dimensions of a Model of Institutional Action

We will focus here on the conditions within institutions that are associated with student retention and completion rather than on the attributes of students themselves. We do so because it is too easy to see low rates of institutional retention as solely the responsibility of students. This is not to say that individual attributes do not matter. In some cases, they matter greatly. We all know of stories of students who by shear drive succeed against what are for most students seemingly insurmountable barriers.

At the same time, there are other students who do not succeed even when placed in settings that favor success. Nevertheless, though some might argue otherwise, student attributes such as personality, drive, and motivation are, for the great majority of institutions, largely beyond immediate institutional control.[3] This is not the case, however, for the conditions or environments within universities and colleges in which students are placed. Such environments are already within institutional control, reflecting as they do past decisions and actions. Those conditions and the decision that lead to them can be changed if institutions are serious in their pursuit of increased student retention. Since our focus is on institutional action, it makes sense then to begin our search for a model of action with those aspects of institutional environment that have been shown to shape student retention and are within the capacity of institutions to change.

In doing so, we take it as a given that there are limits to institutional action; limits to what institutions, acting on their own, can do to increase student retention and graduation. Other forces shape student retention over which institutions have little direct control. Understandably, limits to institutional action are greater in non-residential institutions, such as urban 2-year colleges, that serve large numbers of working and part-time students whose time on campus is often very limited, than it is for smaller private residential institutions where a much larger proportion of student life is spent within the institution and therefore within the reach of institutional action. Among the former institutions, students may spend but a small fraction of their time on campus and live in circumstances whose influence dwarfs that of the institution. For many such students, going to college is only one of a number of tasks that occupy their day. This does not mean that improvement in student retention is not possible in these cases, only that it may be more difficult to come by and more limited in scope. Nor does it mean that there are not other actions that other actors, local, state, and national, can take to enhance the likelihood of student retention and completion. For this chapter at least these actions are beyond the scope of the current conversation.

Conditions for Student Retention

What then does research on student retention tell us about the conditions within colleges and universities that promote retention and graduation? Though the research on this question is understandably broad, findings converge on four institutional conditions that are associated with student retention. These are expectations, support, feedback, and involvement.

Expectations

What students expect of the environment in which they enter and of themselves as a result of their experiences within that environment determines in part what students do. Though many students begin higher education knowing what to expect, others

do not. Low-income students are typically the first in their families to attend college and as a result frequently do not have the sorts of shared knowledge, often referred to as cultural capital, that more affluent students commonly possess about the nature of the college experience and what it takes to succeed in college. They often do not know what to expect.

As a reflection of institutional action, student expectations are directly and indirectly shaped by a variety of actions not the least of which are the expectations the institution establishes for its students, as represented, for instance, by the statements and actions of its members, administrators, faculty, and staff. Those that most directly influence student retention that concern us here have to do with the clarity and consistency of expectations and their level, that is to say whether they expect much or little of the student. This is not to say that other actors do not also influence student expectations. It is well established that student peer groups also influence student expectations as do significant others beyond the campus. Nevertheless, for the purposes of the present discussion we treat those expectations as beyond the reasonable reach of institutions to directly influence.

Knowing What to Do to Succeed

Student retention and completion is, among other things, conditioned by the availability of clear and consistent expectations, specifically about what students need to do during college be successful. Roughly speaking, these fall into three broad areas of expectation; those for success in a course, in a program of study, and in the institution broadly defined. Expectations of these sorts are typically expressed in concrete ways through coursework and formal advising and in less concrete ways through informal advising and/or mentoring that arises through a variety of formal and informal networks on campus such as that within student peer groups and faculty-student contacts.

Expectations about success in the classroom are primarily influenced in formal and informal ways by faculty and to some degree by student peers. The information faculty provide in their syllabi, course materials, and conversations with students informs students of what is expected of them to succeed in the classroom (e.g., what is required to attain different grades). But so also do faculty behaviors in particular those pertaining to the assessment and grading of student work. Unfortunately, it is sometimes the case that faculty statements on formal documents such as syllabi and faculty assessment behaviors in classrooms do not always convey the same expectations about what is required for successful class performance. Here as in other cases, consistency matters and actions speak louder than words.

The same applies to program and degree completion. Knowing the rules, regulations, and requirements for course, program, and degree completion is part and parcel of student success. To paraphrase the famous New York Yankee philosopher, Yogi Berra, "If you don't know where you're going, you might not get there." Student expectations about what they need to do to be successful in college, at least in the formal sense, is shaped not only by the prior knowledge students possess

at entry, but also by academic advising whether by faculty or staff (Frost, 1991; Elliott & Healy, 2001; Metzner, 1989; Ryan & Glenn, 2003; Young, Backer, & Rogers, 1989). Seidman (1991), for example, found that community college students who received post admission advising three times during the first semester to discuss issues such as course schedules, and academic and social involvement, persisted at a rate that was 20% higher than those who only participated in the college orientation program. Metzner's (1989) study of over one thousand freshmen at a public university found that student satisfaction with the quality of the advising they received was positively related to persistence to the second year in part because it was positively associated with higher grade point average during the first year. Unfortunately it remains the case that formal faculty advising remains a "hit and miss" affair on most campuses; some students are lucky to have an informed advisor and find the information they need, while others are not (Heverly, 1999).

Advising is particularly important to the success of the many students who either begin college undecided about their major and/or change their major during college (Lewallen, 1993).[4] The inability to obtain needed advice during the first year or at the point of changing majors can undermine motivation, increase the likelihood of departure, and for those who continue, may result in increased time to degree completion as they transfer to other programs (Lewallen, 1995). Though students may make credit progress, they do not make substantial degree-credit progress. Indeed it is sometimes the case that students will persist to the third year, even the fourth, yet not complete their degree because while they continue to earn credits they earn too few degree credits to graduate. They may have started in one major but transferred to one if not two other majors without become set on a course of study. In this case, the issue is not just advising the undecided student, or what is commonly referred to as developmental advising, but advising students who seek to change their programs of study.

Student expectations are also shaped by the sharing of accumulated knowledge, both formal and informal, that occurs on campus among and between faculty, staff, and students. But not all students are able to access that knowledge. Some students are able to locate that knowledge, often through informal networks of peers, while others, more commonly first-generation low-income students, are not. The acquiring of such knowledge may arise in mentoring relationships or more commonly in informal networks among faculty, staff, and students, and among peers as sometimes is the case for under-represented students who are able to make connection to other peers who are already on campus (Anderson & Ekstrom, 1996; Twomey, 1991). Attinasi's (1989) research is particularly instructive as it sheds light on how ethnic peers who are already on campus help new students develop what he calls "cognitive maps" of the physical, social, and academic geographies of the campus. These maps help new students cognitively manage and navigate what might otherwise be a foreign campus. For low-income students generally, the acquisition of that knowledge may occur through on-campus programs such as Student Support Services that are intentionally designed to help low-income students and first-generation college students safely navigate the sometimes turbulent waters of the institution.

Expectations for Effort

Student retention is also influenced by the expectations the institution establishes for the quality or level of effort required for successful performance (Pace, 1980). High expectations are a condition for student success, low expectations a receipt for failure. Simply put no one rises to low expectations. The literature on motivation and school performance noted by Schilling and Schilling (1999), for instance, argues that expectations have a powerful effect on student learning and performance. As they note "merely stating an expectation results in enhanced performance, that higher expectations result in higher performance, and that persons with high expectations perform at a higher level than those with low expectations, even though their measured ability is the same" (p. 5). The findings of the National Survey of Student Engagement [NSSE] are even clearer. Student perceptions of the level of effort expected of them by the institution are directly correlated with their level of effort, and in turn with their success in college (Kuh, Kinzie, Cruce, Shoup, & Gonyea, 2007).

It is regrettable therefore that students, especially during the critical first year of college, appear to expend less effort in their studies than faculty might expect or desire. Data from the National Survey of Student Engagement indicate that first-year students on average spend about half time studying than faculty deem necessary for successful learning (Kuh, 2003; NSSE, 2006, p. 19, Fig. 7). Too frequently we hear of instances where faculty and staff claim to expect one set of behaviors or level of effort by their students, while students seem to expect something entirely different. What is striking is not merely that students report that they work less than they had expected when they first entered the institution (Schilling & Schilling, 1999; NSSE, 2006, p. 19, Fig. 7) but that their expectations for the amount of work or effort they have to expend to succeed tend to decline over the course of the first year. Tellingly, this appears to be the case regardless of the level of expectations with which students enter and the types of institutions they enter. Though more selective institutions enroll students who enter with higher expectations and in turn exhibit higher levels of effort, it remains the case that even among those institutions students report working less than they had expected when they entered or roughly 2–6 h less per week than they expected (NSSE, 2006, p. 20). Clearly student expectations are shaped not only by what we tell them, but also, and perhaps more importantly, by what we do or not do.

Though there are a variety of reasons why this may be the case, it is the view here that the relative lack of student effort, in this case hours spent studying in the first year, reflects in part the fact that faculty, as expressed by their actions, often do not expect enough of their students nor construct educational settings in which students are placed that require students to invest in greater effort. Though there are no doubt many exceptions, there is good reasons to believe that on average faculty do not consistently employ pedagogies, give assignments, provide feedback on assignments, and employ sufficient assessment tools (exams, classroom assessment methods, etc.) that lead students to spend more time on task. The net result is that

students are placed in settings whose characteristics do not reinforce, indeed may sometimes run counter, to what the institution or faculty may say about what they expect of students. Institutions and faculty may claim to hold high expectations, but may not act to establish conditions to make those expectations real.

At the same time, institutions will sometimes hold differing expectations for differing students. For example, these expectations may be expressed in the labels they use to describe groups of students, such as the term remedial or more subtly in the way individuals, in particular faculty, treat students of different social classes, genders or ethnicities. However expressed, students clearly pick up expectations and are influenced by the degree to which those expectations validate their presence on campus. Rendon (1994) was referring precisely to this idea in her research on validation and the success of nontraditional, first-generation, community college students, and what Solorzano, Ceja, and Yosso (2001) were referring to in their study of "microaggressions" that students of color often encounter on a predominantly white campus.

This point should not be taken to suggest that student expectations are not shaped by other forces in and beyond the campus. We know, for instance, that significant others beyond the campus, most notably family members, also play a role in shaping student expectations (e.g., Attinasi, 1989). We also know that student peer groups, especially among traditional aged college students, can also influence what students expect of themselves (Astin, 1993; Bank, Slavings, & Biddle, 1990; Pascarella & Terenzini, 1991, 2005). Nevertheless, the institution is responsible for directing its actions such that the expectational climate for individuals and the peers groups that arise from the interaction of individuals are such as to promote clear, consistent, and high expectations. As regards the impact of peer groups, for instance, it suggests that conditions that promote high expectations for student effort will have both direct and indirect effects, via the peer group, on individual expectations. This but one reason why many institutions establish programs such as honors programs and residential learning communities.

Support

Though expectations matter, so does support. Holding high expectations is one thing, but providing the support students need to achieve those expectations is another. Without support—academic, social, and in some cases financial—many students struggle to meet institutional expectations and succeed in college (Belcheir, 2001; Filkins & Doyle, 2002; Upcraft, Gardner, & Barefoot, 2004; Ward, Trautvetter, & Braskamp, 2005; Zhao & Kuh, 2004). For instance, a recent study of 6,700 first year students on 30 campuses nationwide found that students' perceptions of the degree to which the campus was supportive of their academic, personal, and social needs was the most powerful predictor, among a wide range of variables, of growth of student academic competence (Reason, Terenzini, & Domingo, 2006).

Academic Support

No support is more important to student retention than academic support. This is especially true during the critical first year of college when student retention is still so much in question and still malleable to institutional intervention. It is unfortunately the case that more than a few students begin college academically under-prepared. The U.S. Department of Education reported that at least 28% of all beginning college students in the 2000 academic year enrolled in at least one basic skills or "remedial" course in reading, writing, or mathematics, (NCES, 2004, p. 17). Not surprisingly, that percentage was higher in 2-year colleges than in 4-year institutions (42% in public 2-year and 20% in public 4-year) (NCES, 2004010, Table 4). But even these percentages may substantially underestimate the number of students in college who should take such courses since not all students who are referred to those courses actually take them (Attewell, Lavin, Domina, & Levey, 2006).

Regardless, for many students, the availability of academic support in the form of basic skills courses, or what is commonly referred to as developmental or remedial education courses, tutoring, study groups, and academic support programs such as supplemental instruction and summer bridge programs, is critical to their ability to succeed in college (Barefoot, 1993; Blanc, DeBuhr, & Martin, 1983; Blanc & Martin, 1994; Commander, Stratton, Callahan, & Smith, 1996; Congos, Langsam, & Schoeps, 1997; Peterfreund, Rath, Xenos, & Bayliss, 2008; Ryan & Glenn, 2003; Upcraft et al., 2004). In no subject is academic support more important than in reading. As demonstrated by Adelman (2004), students whose reading skills require remediation are less likely to graduate from college than are students with other "remedial" needs. Presumably inability to read well undermines performance in a range of courses in ways that mathematics, for instance, does not.[5]

In this regard it is noteworthy that a study of students in the City University of New York found that while placement in developmental or remedial courses per se did little to increase student success, successfully completing those courses did improve student success relative to comparably skilled non-remedial students (Lavin, Alba, & Silberstein, 1981). In other words, what matters is not just that students gain access to those courses, but that they are able to successfully complete them. A similar conclusion is reached in a more recent study of approximately 8,000 first-time freshman enrolled in non-selective public 4-year colleges in the state of Ohio by Bettinger and Long (2004a).

Among 2-year college students the findings are similar if not more striking. Attewell et al. (2006) for example found that, once one controls for prior academic preparation, "taking remedial courses was not associated at all with lower chances for academic success, even for students who took three or more remedial courses" (p. 915). The authors also found that 2-year college students who enrolled in basic skills courses were no less likely to graduate than non-remedial students with similar academic backgrounds. Those who successfully completed those courses were more likely to graduate than similar students who did not take basic skills courses.

Academic support is important not just to those who begin college academically under-prepared, but also for many other first year students who struggle to adjust

to the new demands of college work. Attewell et al. (2006) analysis of the high school class of 1992, for example, revealed that a substantial number of students with relatively strong academic skills take "remedial" courses in colleges. For these students, the availability of support typically in the form of freshman seminars or study skills courses also proves to be an important part of their success in that year (Barefoot, 1993; Davis, 1992). A recent statewide study by the Florida Department of Education, for instance, followed 36,123 full-time community college students who first enrolled in Fall 1999 for seventeen terms, or over 5 years (Windham, 2006). Approximately 42% or 10,716 of those students took a Study Life Skills course designed to give students the skills they need to succeed in college. Students who successfully completed that course completed their Associate's Degree or certificate at a rate of 58% as compared to 41% for those who did not enroll in the course. Though one usually associates such courses with students requiring developmental education, it proved to be the case that the course "was beneficial to all students regardless of their preparation for college" (Windham, 2006, p. 7).

Nowhere is academic support more critical for student retention than in the classrooms of the campus. This is the case because student retention ultimately hinges upon student learning and therefore on the ability of students to succeed in the classroom. Classroom support is also critical because for a majority of students, especially those who work and/or attend part-time, the classroom may be the only place on campus in which they spend any appreciable time. If students do not receive support in the classroom or as a result of connections established via the classroom, they will have more difficulty finding the support they need to succeed. For this reason, academic support is most effective when it is connected to, not isolated from, the settings in which students are asked to learn; that is, when support is aligned with the classroom and the task of classroom learning. Such alignment, for instance through the attachment of academic support to specific courses, not only enables students to more effectively utilize support in the places where they are asked to learn, but it also allows support to be contextualized to the specific learning task of the classroom to which it is connected. This is but one reason why actions such as Supplemental Instruction, basic skills learning communities, and the embedding of basic skills within courses proves to be so effective (Engstrom & Tinto, 2008; Kenney & Kallison, 1994). By aligning support to and in some cases embedding support within the classroom, students are better able to connect and apply the support they are receiving to the immediate task to learning within the classroom. Regrettably, too many support activities such as learning centers are disconnected from the actual demands of the classroom. Though they may provide generic support, students struggle to figure out how that support can be applied to the specific demands of the particular course in which they are enrolled.

At no time is academic support more important than in the first year, indeed the first semester and weeks of that semester. Most students, in particular low-income students, do not measure their success by the common metrics of the first year, second year and so on as do researchers. Success is typically measured one course at a time and in those courses, one class at a time, one leading to another over the course of the semester. Early successes, whether in beginning classes or in the first

courses of a program of study, impact the likelihood of future success. Conversely, early failure substantially undermines success. For this reason, academic support activities such as those noted above are most commonly applied to the key first semester courses that dot the curriculum.

Self-Efficacy and Student Success

One way of understanding the impact of early classroom successes on subsequent course success and retention is through Bandura's (1986) social cognitive theory. Social cognitive theory argues that individuals' interpretation of their performance affects and alters their sense of self-efficacy and in turn their future performance. These self-evaluations of one's ability are based in beliefs in ones capabilities to organize and execute the courses of action required to manage prospective situations (Bandura, 1986). These beliefs influence in turn the choices people make and the courses of action they pursue in the future (Pajares, 1996). Individuals who see themselves as more capable are more ready to engage in tasks in which they feel competent and confident and influences how much effort they will expend on those tasks and how long they will persevere when confronting obstacles.

One of the benefits of support programs that focus on the first year, in particular the first semester and the classes of that semester, is that to the degree they help students succeed in that semester, they also enhance students' sense of self-efficacy, reduce stress, and in turn increase the likelihood of subsequent success (Chemers, Hu, & Garcia, 2001; Coffman, 2002; Fenel & Scheel, 2005; Grant-Vallone, Reid, Umali, & Pohlert, 2003; Lent, Brown, & Lark, 1984; Multon, Brown, & Lent, 1991; Ostrow, Paul, Dark, & Berhman, 1986). For no students is this more important than for those who enter academically under-prepared. Given their histories of academic struggle, they often enter college doubting their capacity to succeed. Their success depends as much on their coming to see themselves as being able to succeed as it does the acquisition of basic skills (Hall & Ponton, 2005). This is, in large measure also true for many under-represented and first-generation college students, especially those from low-income backgrounds. For them, believing in their capacity to succeed is critical to their success as is acquiring a cognitive map on how to succeed in college (Filkins & Doyle, 2002; Hall & Ponton, 2005; Solberg & Villarreal, 1997; Torres, 2004). This in part is what Rendon (1994) meant by the importance of validation for success of under-served students and Torres (2006) meant when she spoke of the importance of affirmation.

Social Support

Though student retention is ultimately an academic matter, it is also shaped, directly and indirectly, by social forces internal and external to the campus. Many students, for instance younger students on residential campuses, have to make a series of

adjustments to existing social relationships (e.g., family and friends) and form new social affiliations with other members of the campus (Gloria, Kurpius, Hamilton, & Wilson, 1999; Gloria & Robinson Kurpuis, 2001; Skahill, 2002; Somera & Ellis, 1996). For these students, as well as others, making friends and knowing people is important in gaining a sense of belonging and acceptance as a member of a social community and an important part of developing social identity. The social networks of affiliations, which result, provide stability, predictability, and positive affect. By contrast, the absence of social support and the resulting sense of marginalization if not isolation often leads to problems of adjustment and to eventual withdrawal, especially among under-represented students who are a minority on campus (Cabrera, Nora, Terenzini, Pascarella, & Hagedorn, 1999). Fleming's (1984) study is particularly instructive as it documents how the absence of social support for students of color on a predominantly white campus undermines the emotional energies students have to devote to the task of enduring what is perceived to be a hostile climate.

Not all social adjustments come easily. Without support, some students leave because of the stress such adjustments entail (Gohn, Swartz, & Donnelly, 2000) and the social isolation that often occurs (Cacioppo et al., 2000; Jackson, Soderlind, & Weiss, 2000). For many students, social support in the form of counseling, mentoring, and faculty and peer advising, can spell the difference between staying and leaving. This is especially true for low-income, first-generation college students for whom college is an entirely new experience (Torres, 2004). It is also true for many students of color on predominantly white campuses who sometimes find the environment not supportive, indeed even hostile (Hurtado & Carter, 1997). For these students, mentoring programs and ethnic study centers can be especially important to success (Torres, 2004). In the latter instance, ethnic centers provide much needed social as well as emotional support for individual students and a safe haven for groups of students who might otherwise find themselves out of place in a setting where they are a distinct minority (e.g., Attinasi, 1989; Fleming, 1984). For new students, these centers can also serve as secure, knowable ports of entry that enable students to develop cognitive maps of the academic and social geography of the campus and safely navigate the unfamiliar terrain of the university (London, 1989; Terenzini et al., 1994; Torres, 2004). They also provide a place to "let one's hair down" and restore one's emotional energy (Fleming, 1984).

A number of studies have also documented the relationship between first-year students' perceptions of institutional support and a range of social and personal development outcomes (Belcheir, 2001; Filkins & Doyle, 2002; Zhao & Kuh, 2004). Filkins and Doyle's (2002) study of low-income and first-generation first year students at six urban institutions, for instance, found that students' evaluation of institutional support were positively associated with self-reported gains in social and personal development. More recently, Reason, Terenzini, and Domingo's (2007) study of 6,687 first-year students in thirty colleges and universities similarly found that students' self-reported social and personal competence were also related to students' perceptions of the supportiveness of their institution, as measured by the National Survey of Student Engagement. Those perceptions were in turn related to students' perceptions that the faculty and staff were supportive of their academic, personal, and social needs.

Financial Support

Financial support also influences student retention and persistence, especially for those from low-income backgrounds (Heller, 2003; Pascarella & Terenzini, 2005; Paulsen & St. John, 2002; St. John, 1991). Though the research evidence is somewhat mixed, the weight of the findings support the claim that greater amounts of financial aid are associated with higher rates of student retention (Hossler, Ziskin, Kim, Cekic, & Gross, 2008). This finding seems particularly true of grants as opposed to loans, whose impact for low-income students can be negative (Bettinger, 2004; Dowd & Coury, 2006; Dynarski, 2002, 2003).

The impact of financial support on retention is both direct and indirect. In the latter case, this reflects the way in which differing amounts of aid, loans and grants, influences where one goes to college (2 verses 4-year institutions) and the differing forms of participation (i.e., full verses part-time attendance and working while in college) in which one engages in while attending (Heller, 1996). For low-income students in particular, lower levels of aid are associated with attendance at 2-year institutions that is, in turn, associated with lower levels of retention and eventual completion (Bettinger, 2004). Similarly lower levels of financial support typically leads students to attend part-time and/or work while in college both of which have the net consequence, other things being equal, of lowering the likelihood of persistence and completion. Among students who began college in 2003–2004, for instance, approximately 70% who always attended part-time in a 2 or 4-year college left without a degree within 3 years of enrolling, whereas among students who always attended full-time, only 17% in 4-year institutions and 40% in 2-year colleges had done so (Berkner, He, Mason, Wheeless, & Hunt-White, 2007). It is therefore regrettable not only that the purchasing power of Pell Grants have, until just recently, declined over the past 30 years (Farrell, 2007; Fischer, 2007), but also that institutional aid has shifted away from need-based to more merit-based aid and away, by extension, from low-income students to students from more affluent backgrounds (St. John, Hu, & Weber, 2001). Little wonder then that there have been calls for the Federal government to substantially increase the level of Pell Grant awards and institutions to increase the amount of awards so that fewer students would have to attend part-time (e.g., Bettinger, 2004; Hossler, Gross, & Ziskin, 2006).[6]

Part of the impact of financial support on student retention may also result from the way in which varying amounts of aid influence the amount of time students have to be socially and academically engaged in college (Cabrera, Nora, & Castañeda, 1992; Herzog, 2005; Lichtenstein, 2005). Cabrera et al. (1992) analysis of the combined effects of student engagement and student financial aid, for example, indicted that though engagement variables had stronger direct impacts on retention, financial aid has an indirect effect on retention via its impact on levels of student engagement and thus on retention.

This may also help explain why work-study programs as a form of financial aid appear to enhance student retention and are, in turn, an increasingly popular part of financial aid packages (Astin, 1975; DesJardins, Ahlberg, & McCall, 2002; St. John, Hu, & Tuttle, 2000; St. John et al., 2001). All things being equal, students

who participate in work-study programs tend to be more socially and academically engaged and in turn more likely to continue in college.

All this is not to say that financial support cannot have a direct impact on retention. It can. This is most apparent when students, especially low-income students, experience financial difficulties while in college (McGrath & Braunstein, 1997). Though one typically thinks of issues such as family emergencies, it is the case that some low-income students are unable to purchase needed books and supplies until the financial aid packages from external sources such as Pell Grants clear the financial aid office. In this case, short-term institutional financial support is important to student success because it enables students to keep pace with the demands of classroom work. Unfortunately, not all institutions provide such support or do so in a timely fashion.

A cautionary note about the impact of financial support is warranted however. Like any other form of investment, a student's response to the cost of investing in higher education is necessarily conditioned by the perceived value of that investment. Though there are obvious limits to a person's ability to respond to cost, especially among low-income students, it is sometimes the case that the perception of value may lead students to persist even when costs dictate part-time attendance and/or require working while attending college. By contrast, students may choose to leave college even with little financial pressure when the value of college is seen as marginal. While colleges may have limited ability to influence the net cost of college attendance, they can influence the value of attendance by enhancing the quality of the education it offers to students.

Nevertheless there are limits to the ability of students, in particular those from low-income backgrounds, to bear the cost of college. That is but one reason why the documented shift in institutional aid from need-based to merit-based is worrisome. During the 2003–2004 academic year, it is estimated that of the roughly $10.2 billion financial aid provided by institutions in the United States to full-time students, approximately 54% was distributed in the form of merit-based aid of which nearly 60% went to students whose families earned $60,176 per year or more and only about 20% to students whose families earned $33,346 or less. But even in the distribution of need-based aid, only approximately 21% went to the latter families (Heller, 2008).

Assessment and Feedback

An environment rich in assessment of and feedback on information about student progress is another condition for student retention. Students are more likely to succeed in settings that provide faculty, staff, and students frequent feedback about their performance in ways that enable all parties to adjust their behaviors to better promote student success. Feedback is particularly helpful when it creates a slight cognitive dissonance between what one thinks of his or her performance and what one discovers from feedback because such dissonance is believed to cause the deepest kinds of change in behavior (Carroll, 1988). Students tend to do better in a variety

of ways, cognitive and developmental, when faculty consistently and frequently obtain feedback from students and share their own assessment of that feedback with them (Boud, 2001; Guskin, 1994). This is especially true during the first year when students are seeking to adjust their behaviors to the new academic and social demands of college life.

Assessment and feedback can take a variety of forms ranging from entry assessment of learning skills, monitoring of student progress, early warning systems, and a variety of classroom assessment strategies that gauge student learning within class. When applied in the form of entry assessment it enables the institution to ascertain the level of student academic skills and place students in the academic settings (e.g., programs and classrooms) best suited to their learning needs. Though such assessment still suffers from issues of accuracy, it helps institutions not only avoid placing students in classes unsuited to their learning needs, but also having faculty encounter classes in which the range of learning skills is so wide as to make it difficult for them to effectively help all students in the class learn the material of the course.

Assessment and feedback can also be employed to monitor student progress and alert institutions to students who need assistance and thereby trigger the provision of support when it is most needed. Again, this is especially important during the first year when persistence is still so much in question. Such "early warning" systems can take on a variety of forms from the assessment of student behaviors in residential settings to student academic performance in programs and in classrooms. In the former case, assessment may trigger the provision of social support such as counseling, while in the latter case it may result in academic support to students who are struggling in class. In either case, assessments must be shared with student support staff so as to enable them, as well as faculty, to intervene to help students succeed before it is too late. In this regard, an essential condition for effective feedback in the form of an early warning systems, academic or social, is that it is early; the earlier the better. This is the case because classroom failure and student withdrawal have its own dynamics such that early difficulties, if left unattended, can snowball over time. The longer one waits to intervene with support, the more difficult it is to reverse the momentum toward withdrawal that is established by earlier difficulties. This is especially true of classroom learning because early confusions tend to escalate over time. This is why classroom assessment techniques, when connected to support services, are particular important to those classes that are considered foundational to student academic skills generally or to programs in particular. Failure in those courses tends to undermine future success in the courses that follow that depend upon the skills and knowledge that the prior classes are intended to produce.

Given the effort early-warning systems entail—they typically require classroom faculty to initiate a "warning" and staff, as well as faculty, to reach out to students—it is understandable why many institutions first locate those systems in the several key gateway or foundational courses in the first year.[7] This is the case because success in those courses is critical to subsequent student success. If students do poorly in those courses, for instance reading, they are less likely to succeed in subsequent courses that depend on the skills acquired in the foundational course. Recall student success is about learning, not mere retention.

Assessment and feedback loops can also be constructed within classrooms. (Brookhart, 1999; Huba & Freed, 2000). If properly employed, classroom-based assessment improves both student learning and student success. Here an important caveat is called for. To be effective, classroom assessment must be frequent, early, and formative as well as summative in character. Myers and Myers (2006), for example, found that frequent (bi-weekly) exams produce significantly higher scores on a final examination than did a single mid-term exam employed in the same content and teaching format. This is true as well for those forms of classroom assessment such as those described by Angelo and Cross (1993) and those that involve the use of learning portfolios (Barton & Collins; 1997). In the latter case, such assessments also promote the development of critical reflection. Over two hundred institutions, such as Alverno College, Elon College, Evergreen State College, LaGuardia Community College, and Miami University of Ohio, have employed web-based portfolios that enable students and in some cases faculty to collect and reflect upon their experiences and accomplishments across their college years.[8] In some instances, graduating students employ their portfolios as part of an electronic resume when they apply for work and graduate education opportunities.

One of the purposes of classroom assessment is to create a classroom "feedback loop" that provides faculty and students with continuing information and insights that are needed to improve both faculty teaching and student learning (Yao & Grady, 2005). Faculty use feedback gleaned through classroom assessments not only to inform adjustments in their teaching, but when shared with students, also helps improve student learning strategies and study habits (Angelo, 1991, 1998). Both promote student learning and in turn student course success. But to be effective, classroom assessment techniques, such as the "muddiest point" or "one-minute paper," have to be used frequently and must provide immediate feedback to students, ideally no later than the next class. Frequent assessment and timely feedback helps establish a classroom environment in which students are not only more likely to adjust their behaviors over time but also think about what they are learning as they are learning. Such "critical" attention further promotes student learning. These techniques are not to be confused, however, with testing. Nor do they replace testing. They are forms of assessment that provide both students and faculty information on what is or is not being learned in the classroom so that students will do better on tests when they are administered.

A number of institutions are now using immediate feedback techniques often referred to as student response systems (Beatty, 2004; Kaleta & Joosten, 2007; Martyn, 2007). These allow the faculty to ascertain the degree of student comprehension during class and therefore enable them to correct any confusion before the end of class. Though such systems can be quite effective in improving student classroom learning, they do have a steep learning curve and can take up a good deal of classroom time (Kaleta & Joosten, 2007). Nevertheless they do add another tool that can be used to improve student learning within the classrooms in which they are employed.

Though research on the impact of feedback on student retention, as opposed to classroom success is generally limited—most studies are in the form of descriptive institutional reports—it is commonly accepted that a carefully constructed assessment program that entails feedback on student performance is critical to an institutional ability to improve student retention (Banta, 2001; Ewell, 1997; Wholey, Hatry, & Newcomer, 1994). Research on the use of classroom-based assessments, such as student portfolios (White, 2005), and classroom assessment techniques (CATs) (Angelo & Cross, 1993) is, however, quite extensive. The research documents, for instance, the fact that the use of CATs as a consistent part of classroom practice improves student learning and in turn student persistence (Cottell & Harwood, 1998; Cross, 1998; Light, 1990). It does so in part because of the way it promotes students' awareness of their own learning and the feedback it provides faculty about what is and is not being learned in the classroom (Corno & Mandinach, 1983).

Feedback can also influence student retention indirectly when it is provides faculty, staff, and program administrators information on the quality of student learning and the nature of their experiences within the college. Such feedback can arise through the use of student learning outcomes, student assessments of their educational experiences, for instance as captured in the National Survey of Student Engagement (NSSE) and the Community College Survey of Student Engagement (CCSSE), and/or student evaluations of specific courses or programs. To the degree that faculty, staff, and program administrators use that information to evaluate their own performance and improve, in turn, the education they provide students, students also benefit (Yao & Grady, 2005). This is but one reason why one speaks of the importance of building feedback loops that connect information on student experience and learning to faculty and support staff who have the capacity to act on behalf of student learning. Such information is particularly effective when it provides for a continuing feedback that it triggers action on the part of student, faculty, and staff alike.

One final note: given the importance of early warning, it is not reassuring to learn that the Project for Student Success study found that only a little over half of the 4-year institutions survey collected mid-term grades on first year students and slightly less than half flagged specific first-year courses with high percentages of Ds, Fs, or withdrawals (Hossler, Ziskin, & Orehovec, 2007).

Involvement

Another condition for student retention, perhaps the most important, is involvement or what is now commonly referred to as engagement (Astin, 1984; Kuh et al., 2005; Kuh, Schuh, Whitt, & Associates, 1991; Tinto, 1975, 1993). Simply put, the more students are academically and socially engaged, the more likely they are to

persist and graduate (Tinto, 1993). This finding is especially true during the first year of study because involvement during that year serves as the foundation upon which student and faculty affiliations are built and academic and social memberships established (Elkins, Braxton, & James, 2000; Fischer, 2007; Malaney & Shively, 1995; Nicpon et al., 2006; Polewchak, 2002; Sand, Robinson Kurpuis, & Dixon Rayle, 2004; Tinto, 1993; Upcraft, Gardner, & Associates, 1989). This appears to be true for all students, majority and minority, alike and applies even after controlling for background attributes (Greene, 2005; Kuh et al., 2007). Fischer's (2007) recent study, for example, employed data from approximately 4,000 students who participated in the National Longitudinal Survey of Freshmen to study the relationship between different forms of involvement in the first year of college and student satisfaction, academic achievement, and retention to the second year of college. She found that for all students, regardless of ethnicity and race, having more formal academic connections with faculty and formal and informal social connections with faculty, staff, and peers were all associated with satisfaction and persistence. Conversely the absence of such ties, that is academic and social isolation, proved to be a predictor of leaving.

Though involvement or engagement matters for all students, it may matter more for some students than others. A recent analysis of NSSE data of student performance within institutions suggest that the impact of engagement on first year grades and retention to the second year may be greatest for those of lower ability and students of color when compared to White students (Cruce, Wolniak, Seifert, & Pascarella, 2006; Kuh et al., 2007). For academically under-prepared students, in particular, engagement may have important compensatory effects that help offset the otherwise negative effects of lower academic skills (Kuh et al., 2007).

Involvement or engagement—academic and social—influences retention in a number of ways. In the former case, involvement influences retention through its direct and indirect impact on academic performance (e.g., Astin, 1984, 1993; Friedlander, 1980; Ory & Braskamp, 1988; Parker & Schmidt, 1982; Pascarella & Terenzini, 1991). This finding is particularly true of student contact with faculty. Student-faculty contact, both inside and outside the classroom has repeatedly been shown to promote student educational gains (e.g., Pascarella & Terenzini, 1980; Terenzini & Pascarella, 1980). More striking still is that finding that even among those who persist to graduation, students who report higher levels of contact with faculty as well as peers also demonstrate higher levels of learning gain and student development (Astin, 1993; Endo & Harpel, 1982; Pascarella & Terenzini, 1980; Wilson, Wood, & Gaff, 1974). This is the case because greater academic involvement inside and outside the classroom directly impacts the amount of time and effort students put into their studies. Greater effort and time spent on studies leads, other things being equal, to greater learning and heightened academic performance (Kuh, Carini, & Klein, 2004). Both lead, in turn, to retention and graduation.

Carini, Kuh, and Klein (2006) employed the National Survey of Student Engagement to survey 1,058 students at fourteen 4-year colleges and universities in order to assess the degree to which various forms of student engagement are

associated with different learning outcomes and measures of academic performance. Many measures of student engagement were positively linked with a variety of learning outcomes such as critical thinking and grades. As did Kuh, Cruce, Shoup, Kinzie, and Gonyea (2008), they also found that college students with the lowest SAT scores appeared to benefit more from student engagement than those with the highest SATs. The relationship between engagement and learning outcomes was not, however, uniform among institutions. Student engagement was more positively associated with student performance, in this case as measured by critical thinking, among some institutions than others. In other words the impact of engagement on student performance is conditioned or mediated by other aspects of the institution. This does not mean that greater involvement or engagement of students does not produce greater performance. We know it does. Rather it means that the extent of its impact upon performance in any institution reflects in part the institutional setting in which involvement occurs, not the least of which is the cultural context that gives meaning to student interactions with people on campus.

Involvement also shapes retention through its impact on student social membership and the social and emotional support that accrues from membership (Gloria & Robinson Kurpuis, 2001; Gloria et al., 1999; Mallinckrodt, 1988). By contrast, the lack of social involvement and the social isolation and loneliness that arises is can lead to withdrawal (Fleming, 1984; Rottenberg & Morrison, 1993). Understandably this appears to be particularly true in situations where students are a minority on campus or leave home to attend college in part because doing so makes it difficult to maintain prior friendships (Fleming, 1984; Nicpon et al, 2006). In this latter regard, it should be noted that research has consistently pointed up the fact that students living in residence halls on campus have higher retention rates than those who live off campus (Pike, 1999; Pike, Schroeder, & Berry, 1997).

Academic and social involvements, though conceptually distinct, overlap such that one form of involvement can promote the other. Academic involvement in class through the use, for instance, of group work has been shown to promote social involvements that may extend to peer relationships beyond the class (Tinto, 1997). In this instance, as well as others, institutional academic practices can and do impact student social relationships and in turn social memberships in the broader communities of the campus. Both promote retention and graduation.

Involvement, Meaning, and Sense of Belonging

Involvements, academic or social, do not occur in a vacuum. They take place within specific social and cultural settings and among individuals, faculty, staff, and students whose values give meaning to those involvement. The impact of involvement on student outcomes is not simply a reflection of the degree of involvement, but how those involvements or engagements lead to forms of valued social and academic membership and the "sense of belonging" they engender (Harris, 2006; Hoffman, Richmond, Morrow, & Salomone, 2003; Schlossberg, 1989; Tucker, 1999). Though this is the case for all students, it is particularly important to the retention of

under-represented students and low-income students on majority and more afflu-ent campuses (Attinasi, 1989; Nora, 1987; Nora & Cabrera, 1996; Ostrove & Long, 2007; Pavel, 1991). In these situations, it is the meaning students attach to their involvement that seems to drive decisions to stay or leave, specifically that their involvement is valued and the community with which one interacts is sup-portive of their presence on campus (Fries-Britt & Turner, 2001; Gonzales, 2002; Hurtado & Carter, 1996, 1997; Hurtado, Carter, & Spuler, 1996; Nora, 1987; Nora & Cabrera, 1996; Suen, 1983). This is precisely what Hurtado (1994) and Hurtado and Carter (1997) argue in their analysis of "hostile climates" for minority students. Understandably, the same may also apply, but perhaps in a somewhat different man-ner, to any group of students who see themselves as a minority on campus as may be the case for older students who return to campuses whose students are mostly of "traditional" college-going age (Donaldson, 1999). Of course, it can also apply to any individual student regardless of their racial, ethnic, or other forms of identi-fication. Nevertheless, as Fischer (2007) makes clear the absence of academic and social involvements and the isolation that results is clearly related to withdrawal for virtually all students.

What matters for student retention then is not simply whether students are involved, but how that involvement is understood and interpreted by students. This is not to say that involvement of any degree does not matter. We know it does and that the absence of involvement and the academic and social isolation that follows can and does lead to withdrawal. But we also know that the climate established on a campus informs those involvements and helps explain the ways they shape students "sense of belonging," the acquisition of social and academic support, and subse-quent retention. This is why one speaks of the importance of building supportive climates on campus. In turn this is also why the expectational climate of a cam-pus is so important to student retention for it serves to establish the broader context within which involvements occur and are interpreted.

Sense of belonging is a generalized sense of membership that stems from the student's perception of their involvement in a variety of settings and the support, academic and social, they experience from faculty, staff, and peers (Hoffman et al., 2003). It is entirely possible for students to feel a sense of belonging with one com-munity of persons and/or one faculty or staff member, but not others or with the institution generally. It follows that when one asks about student involvement, one must also ask with whom, in what settings, and about what issues does involvement occur and how, in turn, how the student interprets those involvements.

Involvement or better yet the quality of involvement also depends on the degree to which individuals see their involvement at "relevant" or "meaningful." In a very real sense, individuals will become or at least are more likely to become involved or engaged in those forms of activity that are perceived to be relevant or at least mean-ingfully related to an individuals interests broadly understood. Like other people, students will allocate their involvements to those forms of activity that are perceived to be most relevant. Students go to college to be involved. The issue is not whether students want to be involved, but to which forms of involvement they will direct their energies and how those involvements will shape their success in college.

Conditions for Student Retention: An Observation

The preceding discussion about the conditions for student retention is not meant to imply that individuals have no say in their own success. Of course individuals matter; their actions as framed by their values, commitments, abilities, and prior academic preparation all come to play a part in individual success at least as measured here by retention and persistence. It is evident that there are some individuals who by sheer willpower, skill, and perseverance succeed even when conditions would appear to militate against success. Conversely there are individuals who do not succeed even when placed in settings that are conducive to success. The fact is that there is only so much institutions can do, and some would argue should do, to promote student success if individuals are themselves not inclined to invest in those activities that lead to success. Nevertheless, it is the view here that institutions have an obligation, having admitted students, to establish conditions on campus for students that have been demonstrated to be conducive to their success so that more students, who seek to succeed, are more likely to does so. This is not to understate the importance of individual behavior but to stress the obligations of the institution and the sorts of actions it should take to increase the likelihood that more students, once admitted, will be successful.

To sum up, students are more likely to succeed and continue within the institution when they find themselves in settings that hold high expectations for their success, provide needed academic and social support, and frequent feedback about their performance, and actively involve them, especially with other students and faculty, in learning. The key concept is that of educational community and the capacity of institutions to establish supportive social and academic communities, especially in the classroom, that actively involve all students as equal members.

It is important to recognize that student retention is most likely when all four conditions exist on campus. Though it may be the case that some conditions may be more important to some students than others, for instance academic support for academically under-prepared students, all matter. The absence of one undermines the efficacy of the others as for instance the absence of feedback undermines the ability of the institution to provide support when it is needed.

Moving to a Model of Institutional Action for Student Retention: What Next?

The preceding conversion has described the sorts of conditions that institutions need to establish to promote student retention and, where evidence warrants, indicated some of the actions institutions can take to establish those conditions. Research evidence is, however, spotty and still subject to a range of methodological limitations. There is still much we do not know and therefore still a good deal of research that has to be carried to more fully describe the range of actions that institutions should take to promote student retention. We conclude this chapter with several

thoughts about the sorts of studies that need to be carried out to move to a more fully articulated model of institutional action. In this case, our attention will focus on the classroom and those types of studies that would highlight the impact of institutional actions on the classroom and student success therein. We do so because for most institutions the classroom is the primary unit of institutional life and the one place where institutional action can have an immediate impact upon student retention. This is not to say that are not other domains of action such as financial aid, residential life, out-of-class activities including extra-curricular activities that warrant research. There are but these are beyond the scope of the present discussion.

Enhancing Student Success in the Classroom

At the outset, it is important to recognize that a number of researchers have already turned their attention to the role of the classroom and classroom practice in student success. John Braxton, in particular, has with a number of his colleagues, explored the ways in which faculty behaviors shape student success (see Braxton, 2008; Braxton, Bray, & Berger, 2000; Braxton, Jones, Hirschy, & Hartley, 2008; Braxton, Milem, & Sullivan, 2000). Their work and that of others (e.g., Eagan & Jaeger, 2008; Engstrom, 2008; Kinzie, Gonyea, Shoup, & Kuh, 2008; Laird, Chen, & Kuh, 2008; Pascarella, Seifert, & Whitt, 2008) has begun to document a number of ways in which classroom practices shape student persistence.

That being said, it remains the case that there is still much that we do not know and therefore much that we need to do to further delineate the various ways in which classroom practice shapes student retention and completion.

The impact of pedagogy. Though there is a good deal of research on the impact of differing pedagogies on student learning (e.g., Blumberg, 2000; Johnson, Johnson, & Smith, 1998; Major & Palmer, 2001; Smith, 2000; Springer, Stanne, & Donovan, 1999), there are but a few studies on the impact of active learning on student success (e.g., Braxton et al., 2008; Braxton, Milem et al., 2000; Laird et al., 2008). Though useful in a general way, they are limited by the nature of their measures of active learning to only a very general view of the impact of pedagogy on student success. What is needed are more detailed studies of the impact of different types of active learning strategies (e.g., cooperative learning, problem-based learning, and team learning) on the retention of students success generally and specific groups of students (e.g., low-income, academically under-prepared, minority, and international). Given the group nature of each of these pedagogies, we would also want to know if their impact on retention is in part due to their possible influence on patterns of student social and academic engagement in and beyond the classroom (Tinto, 1997). When utilized in diverse classroom settings, one would also want to know if such pedagogies also influence of the nature of inter-racial patterns of engagement and in turn the development of networks of affiliation that endure beyond the boundaries of the classroom. Similar questions need to be asked of effective lecturing and other ways of engaging students in learning within the classroom (e.g., service learning). Here the use of the term "effective" is meant to point what to many students is

obvious, namely that most faculty have not be trained to use any pedagogy effectively. This does not mean that there are not many faculty who are quite skilled in the use of pedagogy, be it lecture, cooperative, or problem-based. Rather it means that most faculty in higher education, unlike their elementary, middle, and high school counterparts, have not been trained to use those pedagogies effectively. As a result, research that has looked at the use of cooperative teaching, for instance, has typically compared its use to that of existing practice that is typically the result of the untrained application of other pedagogies, most often lecturing. What is needed are more finely tuned comparative studies of different pedagogies that in fact compare each not only to existing practice but to other pedagogies that are applied equally effectively.

The impact of assessment. That students do better in a variety of ways, cognitively and developmentally, when faculty consistently and frequently obtain feedback from students and share their own assessment of that feedback with them is well-established (Boud, 2001; Guskin, 1994). The impact of such assessment is especially pertinent during the first year when students are seeking to adjust their behaviors to the new academic and social demands of college life. The key to impact seems to be that assessment and feedback are offered early (Kinzie et al., 2008; Kuh et al., 2005). Early assessment and feedback enables both students and faculty to adjust their behaviors early enough to avoid academic problems. But though we have some evidence of the impact of early assessment and such in-class assessments techniques as the "one-minute" paper (Cottell & Harwood, 1998; Cross, 1998; Light, 1990), there is still much we do not know about the short and long-term effects of classroom assessment on student retention. What, for instance, is the impact of classroom assessment, such as the "one-minute" paper, on student learning behaviors and in turn success in subsequent courses? Do their impacts persist beyond the class in which they are employed? What of the comparative impact of different types of assessment (e.g., end of term examinations, frequent mini-exams) and feedback loops on different types of learning outcomes and in turn retention? Furthermore, since some forms of assessment are part of institutional early-warning systems that serve to activate the actions of other staff (e.g., student support services) on behalf of students, we also need to know more about the effectiveness of various early-warning systems on student retention. What forms of linkages between academic and student affairs staff are most effective in promoting student success and in what sorts of settings? Can such systems promote patterns of engagement with student affairs staff beyond the classroom that further promote student retention?

The impact of faculty development. A focus on the role of pedagogy and assessment necessarily leads to questions about the impact of faculty skills and in turn faculty development programs on student retention. In this case, however, the impact of faculty development programs is likely to be largely indirect in that their purpose is or ought to be the enhancement of faculty skills, in particular those that have to do with pedagogy (Bothell & Henderson, 2004; Braxton, Bray et al., 2000; McShannon, 2002). Several research questions follow: What are the impacts of faculty development programs on faculty pedagogical skills? How do those impacts vary among different types of faculty development programs? Do those impacts,

where they exist, translate to enhanced student success in the class and in turn student retention? Where programs are voluntary, which is most often the case, to what degree are their impacts on student success and retention largely a reflection of self-selection artifacts that reflect the motivation and commitments of those faculty who choose to participate? Where programs are not, such as required first-year faculty development programs, we need to know of their impact on faculty classroom skills and whether or not those skills endure over time. Similarly, as we would want to know for patterns of student affiliation, we would want to explore how faculty development programs, in particular those that adopt the faculty learning community model, shape patterns of faculty affiliation that cross the boundaries of field and department (Cox, 2001, 2002; Cox & Richlin, 2004; Fayne & Ortquist-Ahrens, 2005). Too often faculty are less connected to each other than are students.

The impact of learning communities. There is little question that learning communities enhance student engagement and subsequent retention (e.g., Bloom & Sommo, 2005; Castro-Cedeno, 2005; Engstrom & Tinto, 2007; Hotchkiss, Moore, & Pitts, 2005; Johnson, 2000; Scriverner et al., 2008; Smith, MacGregor, Matthews, & Gablenick, 2004; Tinto, Goodsell, & Russo,1993; Zhao & Kuh, 2004). There are, however, various types of learning communities that require differing degrees of faculty and staff action. These range from simple co-registration of two or more courses, groups of courses to which a seminar is attached (e.g., Freshman Interest Groups), to clusters of course that alter both pedagogy and assessment in significant ways. Some are entirely curricular based while others are housed in residential settings (e.g., living-learning communities). Some serve honors students, others are for first year students generally, while others focus on students who enter college academically under-prepared. What we do not yet have are comparative studies that gauge the impact as well as cost of these variants. Though we have reason to believe that models that alter pedagogy and assessment as well as residential patterns are most effective, these tend to be the most expensive to implement. As regards impact, our studies have tended to focus on short-term student gains such as retention into the following semester or year. What we need are longer-term studies that gauge, among other things, the ways in which different types of learning communities reshape the character of student academic and social engagements and patterns of peer affiliation over time (e.g., via the utilization of network analysis) and in turn subsequent student performance and retention. And we must know how these outcomes vary for different students (e.g., race, gender, social background) within the learning community in both 2 and 4-year institutions. For instance, we have seen that some students in first-year learning communities will, in following semester or year, continue to stay connected and participate in shared learning activities (e.g., study groups, course taking), but we have not yet empirically tested whether these effects endure over time. Finally, we have yet to shed light on the ways in which participation in learning communities, in particular those that require high degrees of faculty coordination as well as altered pedagogical and assessment practices, impact faculty behaviors. Though faculty will often report that participating in such learning communities is a very positive, if not transformative experience, we have not yet explored whether this is the case in any significant manner. Nor have we

explored how that experience alters faculty practices beyond the learning community and in turn impacts the students in their classes in subsequent semesters. The fact is that many institutional actions that impact faculty practice in the short term, such as learning communities, have spill over effects that endure and possibly expand over time.

Impact of part-time faculty. Though the use of part-time faculty is widespread, in particular in first-year gateway and basic skills courses, only recently have researchers turned their attention to the impact of part-time faculty on student retention (Bettinger & Long, 2004b, 2006; Boggs, 1984; Burgess & Samuels,1999; Eagan & Jaeger, 2008; Harrington & Schibik, 2001; Jacoby, 2006; Jaeger, Thornton, & Eagan, 2007). Thus far the results have been mixed. While most studies have found that the use of part-time faculty had a negative effect on student performance and retention (e.g., Bettinger & Long, 2004a, 2006; Eagan & Jaeger, 2008; Ehrenberg & Zhang, 2005; Jaeger et al., 2007), several others have found no or very little impact (Boggs, 1984; Burgess & Samuels, 1999). Though it seems to be the case that the use of part-time faculty, on average, negatively impacts retention, there appears to be significant variation of impact within an institution and among part-time faculty. Not all part-time faculty or indeed full-time faculty are equally effective in the classroom nor equally engaged with their students. As Evans (2008) points out in her study of a small residential public college in New York, some part-time faculty prove to be more effective in shaping student performance across a range of courses than some full-time faculty. The issue appears to be as much one of teaching practices than it is of being part or full-time. Furthermore, as Bettinger and Long's (2004b) study suggests, the impact of part-time instructors on student performance may vary by field. In community colleges in particular, technical and vocational courses are taught be part-time instructors who are actively employed in the fields in which they teach. Here then there are a range of questions that need answering. For instance, can institutions more effectively employ part-time faculty in some fields (e.g., technical and vocational) than others (e.g., basic skills and first-year gateway courses)? Are there areas of instruction where part-time faculty are as if not more effective than full-time faculty? The unavoidable fact is that colleges and universities will continue to use part-time faculty. The practical question we must answer is where the use of part-time faculty makes most sense and does not negatively impact student performance and retention.

Concluding Thoughts

There is still much to learn about how institutional actions can more effectively promote student retention generally and for particular groups of students (e.g., academically under-prepared, underserved). In an area of inquiry that has been typically focused on matters of financing and financial aid (e.g., Heller, 2003; Hossler et al., 2008; St. John et al., 2001), researchers have begun to shed light on the role of the classroom in student retention. But it is only a beginning. There are other domains

of institutional action that directly and indirectly impact the classroom that have yet to be sufficiently explored. What of the impact of technology in the classroom or the ways in which on-line instruction impacts student success? What of the impact upon faculty and in turn classrooms of institutional incentive, promotion, and tenure policies or the institutional accountability systems that hold departments accountable to some measure of student retention? A host of questions await our attention not only about institutional actions that impact the classroom, but also about a range of institutional policies and action that in many complex ways directly and indirectly impact student retention on campus.

Seen in this light, the present discussion should be understood as the continuation of a conversation that has been slowing emerging in the field that seeks to move us from a focus on theory and research about the nature of student retention to one of action that endeavors to translates what we know from our theories and research into guidelines for institutional action to promote greater retention and in turn graduation from institutions of higher education. In this case, the present conversation has been constructed by first focusing on what we already know about the conditions within institutions and classroom in which students are placed that promote their retention and graduation. It has argued that to be effective institutional action must address each of these conditions and do so, first and foremost, in the classrooms of the campus, the basic building blocks of institutional educational life. Least we forget for most students, in particular those who attend community colleges and those who attend part-time and/or work while attending college, the classroom may the only place where they encounter their peers and the faculty and engage in formal educational activities. For them, indeed for most students, the classroom is the one place where institutional action can most directly impact the learning, retention and in turn graduation. Retention is ultimately an educational matter. Without learning, student retention is, in this author's eyes, a hollow achievement.

Notes

1. It does not follow that overall rates of completion within the system of higher education have not changed. We know that they have in large measure because of the increased incidence of transfer between institutions.
2. The concepts of integration, involvement, and engagement are not identical. Whereas the latter refer to forms of behavioral interaction, such as being engaged in campus activities, the former includes as well forms of value interaction such as arises when one perceives oneself as a valued member of a community.
3. Not surprisingly, many institutions see this issue as one of recruitment, of attracting more able and motivated students who themselves are more likely to graduate. But there are only so many able and motivated students, and it seems as if every university is seeking to attract the same students. In any event, such efforts leave untouched the environments in which students are placed and do little to ensure that the experience of students will in any way be changed by attracting more able students.
4. It is estimated that among 4-year college students, nearly two-thirds either begin undecided or change their majors at least once during college.
5. This fact runs counter to what many faculty believe is the case, namely that mathematics is the major barrier to student success.

6. It is noteworthy that a number of elite universities have recently decided to fund the entire cost of attendance for students whose income fall below a certain level, typically set somewhat higher than that established by the Pell Grant program.
7. In residential campuses, early warning systems are also employ in residential halls to alert residential staff to student struggles.
8. The reader is encouraged to visit the ePortfolio Project at LaGuardia Community College at http://www.eportfolio.lagcc.cuny.edu

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