

**An Examination of Institutional Practices
Surrounding Student Retention**

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Purpose of the Study

Colleges and universities put significant resources toward improving student retention, yet they have had to conduct much of this activity in isolation. Although knowing more about retention efforts across the country would almost certainly support better decisions and practices in this area, it has long remained difficult for colleges and universities to gain insight into what other institutions are doing—and how these policies and practices affect student persistence. To address this need, as a part of the College Board Study on Student Retention, we conducted a national survey to identify and document policies and practices associated with student persistence at institutions across the U.S.—compiling a broad-scale descriptive view of campus retention efforts while also exploring how these efforts influence student persistence across multiple institution types.

In this paper, we report on the survey's results showing the scope and specific forms of the policies and practices four-year colleges and universities devote to improving student retention. In addition, we outline results from an analysis that sheds light on which of these policies and practices are associated with student retention. Employing an approach similar to that used by the Pell Institute (Engle & O'Brien, 2007), we first identify institutions with a higher-than-predicted retention rate and then examine which institutional policies and practices have the potential to explain this outcome. This approach seeks to control for the institutions' student population and institutional characteristics, thus allowing us to examine institution-level student success outcomes that do not simply reflect structural differences between the institutions, their missions, and their students' precollege schooling experiences.

Residential segregation and school funding patterns have resulted in a concentration of

low-income students and students of color in under-resourced schools across the country (Massey, 2007). In addition, financial aid policies privilege middle-income students and fail to fit the economic situations and college attendance patterns (e.g., part-time enrollment) of many low-income students (Dynarski, 2003; Heller & Shapiro, 2000; St. John, Paulsen & Carter, 2005; Singell, 2004; Somers & Cofer, 1998; Ziskin, Fischer, Torres, Player-Sanders & Pellicciotti, 2009). These inequalities and other factors combine to produce the patterns in persistence and completion outcomes.

It is widely shown in studies on postsecondary student outcomes that independent-status students, African American and Latino students, and low-income students are experiencing gaps, with lower student persistence and completion rates—compared to their dependent-status, White and API, and higher-income peers. Independent-status students, for example, were reported by the American Council on Education (ACE) as having a 51% persistence rate nationally, compared with the 85% rate reported for dependent-status students (Ryu, 2008). Similar although less extreme differences were reported on persistence rates across racial/ethnic categories. The ACE report for 2008 cited above shows three-year persistence rates of 73% for African American students who began college enrollment at four-year institutions, and 76% for Hispanic students. The corresponding figures for White students and API students were 83% and 89%, respectively. Similarly stratified patterns emerge from analyses that disaggregate national patterns by income, with four-year institution persistence rates for dependent-status students in the lowest income quartile at 76%, compared with 91% for students in the highest quartile for income.

In the correlational studies that predominate in the research on this topic, this plays out somewhat problematically (Adelman, 2006; Bensimon, 2007) in the factors found to be

associated with these outcomes. Student characteristics such as income, race/ethnicity, gender, or financial-aid status are shown in many studies' results to be significantly associated with these student success outcomes (Adelman, 2006; Cabrera, Nora & Castañeda, 1993; Hoyt, 1999; Ishitani & Desjardins, 2002-2003; Murtlaugh, Burns & Shuster, 1999; St. John, Paulsen & Carter, 2005; Somers, 1995).

This kind of correlation is one palpable indication that inequality exists in U.S. schooling. Indeed, choosing any other interpretation would amount to arguing that these gaps reflect inevitable societal inequalities that educational institutions can only perpetuate but are helpless to counteract. This last position is not one we support. Counteracting such a view, furthermore, is arguably the very purpose of higher education research. Institutions of higher education have been assigned a societal role—although it is complex and compromised—as an equalizer of opportunity and vehicle for social mobility. Because of this role, part of our expectation of an institution's performance is that it should work to disrupt the links between student characteristics and student success outcomes. As entrenched and complex as patterns of inequality are, we see a clear argument that institutions should be in the business of disrupting this association. Without institutions' competent mitigation of this association, disproportionately low persistence and completion rates for adult learners, students of color, and low-income students will continue to constrain educational opportunity for thousands of students each year.

For a clear view of the role of institutional practices in this maintaining or disrupting this association, however, "garden-variety" correlational-design research on institutional student retention measures has not been helpful, as noted by Bensimon (2007). Institutions operate within a broader context in the U.S., where race, income, and power are pervasively linked. For

this reason, schooling and educational institutions operate within these inequities—protracting them even while working to mitigate them. Consequently, we cannot simply conduct institution-level analyses and discover the campuses where these broad-based effects are simply not felt. Due to unequal schooling, racialized discourses on academic achievement, the stratification of resources across institution types, as well as other factors, we find that student and institutional characteristics are significantly associated with student outcomes at almost any institution in the U.S. Because the educational system itself is a part of this problem, therefore, we need to contextualize the analysis to see which campuses are making a difference. For these reasons, we have extended previous work in this area to home in on an outcome that can help us explore the contributions of institutions to equity.

To conduct this study we employed a strategy also put forward in the work of the Pell Institute, including in its report *Demography Is Not Destiny* (Muraskin & Lee, 2004) and in other work (Engle & O'Brien, 2007). The Pell Institute first calculated predicted retention rates for its participating institutions, using a model that included student and institutional characteristics. Subsequently Pell identified institutions whose actual retention rates were above and below these predicted values and used these results to identify institutions for a set of case studies. We adapted this model for this study, using a similar approach to produce the predicted retention rates, and then identified participating institutions whose actual rates were significantly higher than the predicted values. Finally, in our principal analysis we used logistic regression to model—based on institutional policies and practices—the likelihood of an institution having a higher-than-predicted retention rate. We argue that this measure reflects the extent to which campus policies and practices are mitigating widely experienced patterns of educational inequality by disrupting the level of association apparent in the broader population of institutions.

Theoretical Framework and Previous Research

Institutional policies and practices and student behaviors that bear on college student retention have been the focus of a recent line of thinking led by Braxton and colleagues (Braxton, Hirschy, & McClendon, 2004; Braxton & McClendon, 2001–2002) and Hossler and colleagues (Hossler, 2005; Stage & Hossler, 2000). These institutional policies and practices—which some have termed “policy levers” (Braxton & McClendon, 2001–2002; Pascarella & Terenzini, 1991)—include recruitment, advising, teaching/learning, student support, financial aid, and (on residential campuses) residential life practices intended to promote students’ academic and social integration at the institution.

Identified through both theory and research, some of these levers have a well-established empirical record supporting them; others need to be explored further in research before we can understand whether they are associated with student persistence. For example, recruitment practices that result in the fulfillment of students’ academic and social expectations of college have been linked positively to students’ social integration at institutions (Braxton, Vesper, & Hossler, 1995; Helland, Stallings, & Braxton, 2001–2002). The role of academic advising in student persistence, however, is relatively unexplored (Hossler, 2005). The roles of still other levers—such as career-advising practices—are subjects of ongoing debate (Patton, Morelon, Whitehead, & Hossler, 2006; Peterson, 1993).

There is a long history of research studying the role of orientation programs (Boudreau & Kromrey, 1994; Glass & Garrett, 1995; Murtlaugh, Burns, & Schuster, 1999) in student retention. One common goal of new student orientation programs is to help students form strong and lasting relationships with their institutions, thereby helping them integrate into the campus

community more effectively (Braxton et al., 2004; Hossler 2005; Patton, Morelon, Whitehead and Hossler 2006).

In addition, studies have explored the impact of campus racial climate and racial discrimination on student persistence (Cabrera, Nora, Terenzini, Pascerella, & Hagedorn, 1999; Eimers & Pike, 1997; Nora & Cabrera, 1996; Tracey & Sedlacek, 1987), finding that a negative campus racial climate is detrimental to student persistence. The role of perceived discrimination in student retention is well documented in a long record of research studies (Cabrera & Nora, 1994; Eimers & Pike, 1997; Hurtado, 1992, 1994; Hurtado, Carter, & Spuler, 1996; Hurtado, Milem, Clayton-Pederson, & Allen, 1998; Nettles, Thoeny, & Gossman, 1986; Nora & Cabrera, 1996). Cabrera, et al. (1999) suggest a series of practices that institutions of higher education can employ to improve the racial climate on their campuses. General recommendations include creating an environment that encourages acceptance of diverse groups. Recommendations that apply to students specifically include highly collaborative classroom experiences that allow students to work together and a curriculum infused with multiculturalism. While these practices have been shown to impact students' sense of security, their more direct relationship with retention has not been thoroughly explored.

As noted above, the Pell Institute conducted a series of studies examining institutional practices tied to persistence at institutions that retain students above or below expected rates (Engle & O'Brien, 2007; Muraskin & Lee, 2004). These studies focused on five components posed as important to student success: academic skills, financial support, academic direction, instruction, and campus participation (Muraskin & Lee, 2004). Our analyses extend these and similar investigations to examine how institutions organize themselves to improve student

retention and whether the prevalent policies and practices in this area are associated with institutional outcomes related to student persistence.

Data Sources

Primary and secondary data used in this analysis come from public and private not-for-profit four-year institutions nationwide. The primary data come from a national survey focused on how institutions organize themselves to increase student persistence. The survey was administered via e-mail to 1,484 four-year institutions nationwide in 2009. Institution representatives were asked questions about the form and intensity of their institutions' efforts during the 2007–2008 academic year to increase persistence through retention program coordination, retention research and assessment, orientation programs, early warning practices, faculty-student interaction, and advising practices. The survey response rate was 30%, with 441 institutions responding.

Survey responses were supplemented with secondary data drawn from the Integrated Postsecondary Education Data System (IPEDS). These data include information on the institutions' retention rate, demographics, financial aid from federal sources, and other data relevant for this study. The data for all public and private not-for-profit institutions were extracted from IPEDS. These data subsequently were matched with the survey data using unique IPEDS identifiers resulting in a complete data set for 441 institutions.

To answer our research question, we first calculated an expected retention rate for each institution—based on the formula developed by Astin (1997) and later used by the Pell Institute. The Pell Institute (Engle & O'Brien, 2007) had computed predicted graduation rates of 14 large public four-year institutions using 2002 IPEDS data. Comparing the predicted retention rates with the actual rates and the national average retention rate, they categorized the institutions into

those with higher- and lower-than-predicted retention rates. The researchers later collected qualitative data on institutional policies and practices that might have explained these results.

Drawing on this approach, we conducted an ordinary least squares regression for the retention rates of the surveyed institutions. The institutions' full-time retention rate drawn from the 2007–2008 IPEDS data was used as the dependent variable in the expected retention rate model. First, we calculated a predicted retention for each institution, controlling for institutional characteristics. Second, we subtracted the institution's predicted retention rate from its actual retention rate. Based on the results of this subtraction we created a dichotomous variable, with value labels being 1 if the institution's actual retention rate was higher than predicted and 0 for all else. Finally, we modeled the institution's higher-than-predicted retention rate as a function of multiple institution-level variables from our survey.

Research Methods and Models

Calculating Predicted Retention Rates: OLS Regression

To derive a predicted retention rate for each institution, we conducted an ordinary least squares regression analysis using the institution's full-time retention rate for the 2007–2008 academic year reported to the IPEDS as a dependent variable. The full-time retention rate is defined in IPEDS as the percentage of the fall full-time cohort from the prior year that reenrolled at the institution as either full- or part-time in the second year. The independent variables in the model were as follows: (a) institution type (research, master's, with baccalaureate institutions being a reference group), (b) percentage of minority students, (c) SAT 75th percentile score, (d) percentage receiving federal grant aid, and (e) percentage of students 25 and older. Although other institutional context variables can add to the prediction of the retention rate, these five

variables accounted for much of the variance in the institutions' retention rate. The following regression formula was used for predicting institutions' retention rate:

Equation 1: OLS model

$$\begin{aligned} \text{Institution's retention rate} &= \alpha + \beta_1 (\text{research}) + \beta_2 (\text{master's}) \\ &+ \beta_3 (\% \text{ minority students}) + \beta_4 (\text{SAT } 75^{\text{th}} \text{ percentile score}) \\ &+ \beta_5 (\% \text{ receiving federal grant aid}) + \beta_6 (\% \text{ students } 25 \text{ and older}) + \varepsilon \end{aligned}$$

Using estimates from this model we calculated a predicted retention rate for each institution.

Logistic Regression Analyses

Comparing the institution's predicted retention rate with the actual retention rate reported to IPEDS, we created a dichotomous variable with the value 1 for the institutions with a significantly higher-than-predicted retention rate and 0 for all else. Through t-test statistics we determined that only those institutions whose actual retention rate was more than 3 percentage points higher than its predicted retention rate should be included into the group of institutions having a higher-than-predicted retention rate.

Because the outcome of interest was dichotomous, the use of logistic regression in the second part of the analysis was appropriate. Equation 2, below, provides the general logit model, where P is the probability that the institution had a higher-than-predicted retention rate

Equation 2: Logit model

$$\ln\left(\frac{P_i}{1-P_i}\right) = x_i\beta_i$$

Variables

A range of institutional variables hypothesized to be related to the likelihood of having a higher-than-predicted retention rate entered into the logistic regression, specifically (a) coordination of retention efforts, (b) authority of the retention coordinator to implement new

initiatives, c) availability of a formal, written plan that the institution uses in planning retention efforts, d) orientation programs, (e) early warning practices, (f) academic support programs, and (g) support for the retention of minority students.

Limitations

This study has had at least two limitations. First, despite our well-designed strategies to reach out to more respondents, the response rate of the survey was only 30%. For this reason generalizability of the findings is limited. Second, as it is usually the case with survey data, variables included in the analysis had missing data, which ranged from 4.3% to 34.9%. We used listwise deletion as a technique to handle missing data, resulting in reduction of the sample size.

Results

Descriptive Statistics

Of the 441 responding institutions, 24% were research universities, 36% were master's institutions, and 40% were baccalaureate colleges. The average full-time retention rate of participating institutions was 74%. The mean percentage of minority students was 33%, while 19% of students, on average, were 25 years old or older. On average, 28% of students received federal grant aid.

Table 1, below, presents descriptive statistics for the variables included in the analysis. The majority of the responding institutions (71%) reported having an administrator whose responsibilities included coordinating efforts to improve student persistence rates. Only 38% of the institutions used a formal, written plan at the institutional level in planning retention efforts. While 43% of the institutions had an orientation program that extended through the first semester of classes, over half of the institutions (53%) flagged specific courses with high percentages of Ds, Fs, or withdrawals.

Table 1. Descriptive Statistics for Variables Included in the Model ($N = 240$)

Variable Description	Minimum	Maximum	Mean	Std. Deviation
Does your institution have an administrator whose responsibilities include the following? Coordinating efforts to improve student persistence rates.	0	1	.71	.455
How much authority does the “retention coordinator” have to implement new initiatives without having to seek approval from other administrators on campus?	1	4	2.78	.931
Indicate whether each response describes the approach your institution currently uses in planning retention efforts: A formal, written plan at the institutional level.	0	1	.38	.485
Does your institution have an orientation program that extends through the first semester of classes?	0	1	.43	.496
Indicate whether your institution engaged in any of the following practices during the 2007–2008 academic year: Regularly flagging specific courses that have high percentages of Ds, Fs, or withdrawals.	0	1	.53	.500
In your estimation, how extensive are each of the following at your institution? Availability of academic support programs (e.g., tutoring, writing centers, supplemental instruction).	1	5	3.61	.917
In your estimation, how extensive are each of the following at your institution? Structures in place to support the retention of students of color.	1	5	3.23	1.034

Logistic Regression Analyses

Results of the logistic regression analyses (see Table 2, below) showed that retention coordinators' authority to implement new initiatives without having to seek approval from other administrators on campus was positively related to the institution having a higher-than-predicted retention rate. Support for the retention of students of color also showed significant positive association with the outcome of interest in this study.

Somewhat counterintuitive was the finding that having an administrator whose responsibilities included coordinating efforts to improve student persistence rates was negatively associated with the likelihood of having a higher-than-predicted retention rate. Another institutional variable that had significant negative relationship with the outcome of interest was having an orientation program that extended through the first semester of classes. Other variables included in the model—namely having a formal, written plan at the institutional level; flagging courses with high percentages of Ds, Fs, or withdrawals; and the availability of academic support programs—were not related to the institution's likelihood of having a higher-than-predicted retention rate.

Table 2. Effects of Institutional Variables on Likelihood of Having a Higher-Than-Predicted Retention Rate

Variable	β	Sig.	Odds ratio
Availability of a retention coordinator	-1.622	**	.197
Authority to implement new initiatives	.409	*	1.505
Availability of a formal, written plan at the institutional level	-.231		.794
Availability of an orientation program that extends through the first semester of classes	-1.057	***	.347
Institution flags courses with high % of Ds, Fs, or withdrawals	-.487		.615
Availability of academic support programs	.130	.	1.139
Having structures in place to support the retention of students of color	.412	**	1.510
Constant	-1.906		
Nagelkerke	0.133		
N = 188			

p<.01*** p<.05** p<.10*

Implications and Significance of the Study

The study's findings—results related to the retention coordinator's authority, for example—hold important campus policy implications. Institutions may benefit from investing real authority and resources in the hands of an identified administrator whose responsibilities focus on improving student persistence. The significant and positive relationship between support for the retention of students of color and a higher-than-predicted retention rate suggests, furthermore, that institutions should refine their efforts to serve the multiple needs of a diverse student body. Also, results regarding orientation courses suggest that disparities may exist between students' perceived support for their transition to college and their experiences in programs traditionally designed to aid in that transition (e.g., first-year experience classes and

orientation programs). This finding could imply the need for institutions to consider the many ways first-year students interact with, and potentially find support from, multiple aspects of their experience. Finally, each of these findings has further utility for inquiry on the institutional role in student persistence. For example, the findings may point to the need for a clearer sense of how institutions organize specific programs and practices (e.g., formal planning of retention efforts) or a deeper understanding of particular issues (e.g., institutions' multi-pronged approaches to supporting students' transition to college).

This study begins to extend the empirical record for the long-standing pursuit of theory-building on student persistence, and it advances our understanding of how colleges and universities—with their varying and unique policies, practices, and organizational cultures—organize themselves for student success. Most important, by identifying in contextualized and meaningful ways which practices are associated with improved student success outcomes, this study has the potential to uncover leads in theory and research that can guide institutional practice. If these findings show that through this kind of analysis we can document and understand the influences of actionable policies and practices, campus policy makers and the research community will benefit. An examination of this kind is central to understanding student success in college and, more specifically, the role of institutional practices in supporting that success.

References

- Adelman, C. (2006, February). *The tool box revisited: Paths to degree completion from high school through college*. Washington, DC: U.S. Department of Education, Office of Vocational and Adult Education.
- Astin, A.W. (1997). How “good” is your institutions retention rate. *Research in Higher Education*, 38(6), 647–658.
- Bensimon, E. M. (2007). The underestimated significance of practitioner knowledge in the scholarship on student success (Presidential address). *The Review of Higher Education*, 30(4), 441–469.
- Boudreau, C., & Kromrey, J. (1994). A longitudinal study of retention and academic performance of participants in a freshman orientation course. *Journal of College Student Development*, 35(6), 444–449.
- Braxton, J. M., Hirschy, A. S., & McClendon, S. A. (2004). *Understanding and reducing college student departure*. San Francisco, CA: Jossey-Bass.
- Braxton, J. M., & McClendon, S. A. (2001–2002). The fostering of social integration through institutional practice. *Journal of College Student Retention*, 3(1), 57–71.
- Braxton, J. M., Vesper, N., & Hossler, D. (1995). Expectations for college and student persistence. *Research in Higher Education*, 36(5), 595–612.
- Cabrera, A. F., & Nora, A. (1994). College students’ perceptions of prejudice and discrimination and their feelings of alienation. *Review of Education, Pedagogy, and Cultural Studies*, 16, 387–409.

- Cabrera, A. F., Nora, A., & Castañeda, M. B. (1993). College persistence: Structural equations modeling test of an integrated model of student retention. *The Journal of Higher Education, 64*(2), 123–139.
- Cabrera, A. F., Nora, A., Terenzini, P. T., Pascarella, E., & Hagedorn, L. S. (1999). Campus racial climate and the adjustment of student to college: A comparison between White students and African American students. *The Journal of Higher Education, 70*(2), 134–160.
- Dynarski, S. (2003). Race, income, and the impact of merit aid. In G. Orfield & P. Marin (Eds.), *Who should we help? The negative consequences of merit scholarships* (pp. 73–92). Cambridge, MA: The Civil Rights Project Harvard University.
- Eimers, M. T., & Pike, G. R. (1997). Minority and nonminority adjustment to college: Differences or similarities? *Research in Higher Education 38*(1), 77–97.
- Engle, J., & O'Brien, C. (2007). *Demography is not destiny: Increasing the graduation rates of low-income college students at large public universities*. Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education.
- Glass, J. C., & Garrett, M. S. (1995). Student participation in a college orientation course, retention, and grade point average. *Community College Journal of Research and Practice 19*(2), 117–132.
- Helland, P., Stallings, H., & Braxton, J. M. (2001–2002). The fulfillment of expectations for college and student departure decisions. *Journal of College Student Retention: Research, Theory, and Practice, 3*(4), 381–396.

- Heller, D. E., & Shapiro, D. T. (2000, November). *High-stakes testing and state financial aid: Evidence from Michigan*. Paper presented at the annual conference of the Association for the Study of Higher Education, Sacramento, CA.
- Hossler, D. (2005). Managing student retention: Is the glass half full or half empty, or simply empty? *College and University Journal*, 81(2), 11–14.
- Hoyt, J. E. (1999). Remedial education and student attrition. *Community College Review*, 27, 51–72.
- Hurtado, S. (1992). The campus racial climate: Contexts for conflict. *The Journal of Higher Education*, 63(5), 539–569.
- Hurtado, S. (1994). The institutional climate for talented Latino students. *Research in Higher Education*, 35(3), 21–41.
- Hurtado, S., Carter, D. F., & Spuler, A. (1996). Latino student transition to college: Assessing difficulties and factors in successful college adjustment. *Research in Higher Education*, 37(2), 135–157.
- Hurtado, S., Milem, J. F., Clayton-Pederson, A. R., & Allen, W. R. (1998). Enhancing campus climates for racial/ethnic diversity: Educational policy and practice. *The Review of Higher Education*, 21(3), 279–302.
- Ishitani, T. T., & DesJardins, S. L. (2002-3). A longitudinal investigation of dropout from college in the United States. *Journal of Student Retention*, 4(2), 173–201.
- Massey, D. S. (2007). *Categorically unequal: The American stratification system*. New York, NY: Russell Sage Foundation.
- Muraskin, L., & Lee, J. (2004). *Raising the graduation rates of low-income college students*. Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education.

- Murtlaugh, P. A., Burns, L. D., Schuster, J. (1999). Predicting the retention of university students. *Research in Higher Education, 40*(3), 355–371.
- Nettles, M. X., Thoeny, A. R., and Gosman, E. J. (1986). Comparative and predictive analyses of black and white students' college achievement and experiences. *The Journal of Higher Education, 57*, 289–328.
- Nora, A., & Cabrera, A. F. (1996). The role of perceptions of prejudice and discrimination on the adjustment of minority students to college. *The Journal of Higher Education, 67*(2), 119–148.
- Pascarella, E. T., & Terenzini, P. T. (1991). *How college affects students: Vol. 1. Findings and insights from twenty years of research*. San Francisco, CA: Jossey-Bass.
- Patton, L. D., Morelon, C., Whitehead, D. M., & Hossler, D. (2006). Campus-based retention initiatives: Does the emperor have clothes? In E. P. St. John & M. Wilkerson (Eds.), *Reframing persistence research to improve academic success. New Directions for Institutional Research, 2006*(130), 9–24.
- Peterson, S. L. (1993). Career decision-making self-efficacy and institutional integration of underprepared college students. *Research in Higher Education, 34*(6), 659–685.
- Ryu, M. (2008). *Minorities in higher education 2008: 23rd annual status report*. Washington, DC: American Council on Education.
- St. John, E. P., Paulsen, M. B., & Carter, D. F. (2005, September/October). Diversity, college costs, and postsecondary opportunity: An examination of the financial nexus between college choice and persistence for African Americans and Whites. *The Journal of Higher Education, 76*(5), 545–569.

- Singell, Jr., L. D. (2004). Come and stay awhile: Does financial aid effect (sic) retention conditioned on enrollment at a large public university? *Economics of Education Review*, 23, 459–471.
- Somers, P. (1995). A comprehensive model for examining the impact of financial aid on enrollment and persistence. *Journal of Student Financial Aid*, 25(1), 13–27.
- Somers, P., & Cofer, J. (1998). Singing the student loan blues: Multiple voices, multiple approaches? In *Student loan debt: Problems and prospects* (Proceedings from a National Symposium, December 10, 1997; pp. 97–128). Washington, DC: Institute for Higher Education Policy, Sallie Mae Education Institute, The Education Resources Institute. Retrieved from <http://www.ihep.org/assets/files/publications/s-z/StudentLoanDebt.pdf>
- Stage, F. K., & Hossler, D. (2000). Where is the student? Linking student behaviors, college choice, and college persistence. In J. M. Braxton (Ed.), *Reworking the student departure puzzle* (pp. 170–194). Nashville, TN: Vanderbilt University Press.
- Tracey, T. J., & Sedlacek, W. E. (1987). Prediction of college graduation using noncognitive variable by race. *Measurement and Evaluation in Guidance*, 19, 177–184.
- Ziskin, M. B., Fischer, M. A., Torres, V. A., Player-Sanders, J., & Pellicciotti, M. B. (2009, November). *Working students' perceptions of paying for college: Understanding the connections between financial aid and work*. Paper presented at the national conference of the Association for the Study of Higher Education, Vancouver, BC, Canada.