# Organizational Structures Associated with Community College Student Success: Results from a National Survey

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**Abstract**

This paper presents findings from a national survey of community colleges. Descriptive results show the scope and forms of the resources and policies that institutions dedicate to improving student success, and results from ordinary least squares regression analyses explore organizational structures and policies associated with institutional completion and retention rates.

Much attention has turned to community colleges in recent years. While these institutions have historically have met multiple goals, such as developmental and remedial education for students following high school, transfer pathways into four-year institutions, and vocational training (Cohen & Brawer, 2003; Vaughn, 2000), they have more recently taken center stage in policy debates and national agendas. Community colleges have been called to both "fill the skills gap" in the US (Luhby, 2011; Marklein, 2012; Nocera, 2012) and play a big role in the nation's "completion agenda" (Mullin, 2010a; Templin, 2011). However, the complex mission has made existing research inadequate for providing sufficient support for administrators and practitioners on how to structure their institutional efforts to best support student success.

Institutional policies and practices that influence college student retention have been the focus of work by Braxton and colleagues (Braxton, Hirschy, & McClendon, 2004; Braxton & McClendon, 2001–2002) and Hossler and colleagues (Hossler, 2005; Stage & Hossler, 2000). These institutional efforts—or "policy levers" (Braxton & McClendon, 2001–2002; Pascarella & Terenzini, 2005)—include recruitment, advising, teaching/learning, student support, and financial aid practices that are intended to promote students' academic and social integration at the institution. However, the research on these institutional policies and practices has focused nearly exclusively on four-year colleges (Townsend, Donaldson, & Wilson, 2004).

While research on four-year institutions is helpful, it is also ill suited to guide the work at community colleges, which serve differing student populations and have different resources (Jenkins, 2007; Mullin, 2010b). Policy levers designed to retain financially dependent, traditional-age, full-time students living in on-campus residence halls, for

example, are not likely to be as effective for the part-time, working, adult-learner populations attending community colleges in great numbers (Bailey & Alfonso, 2005).

Research examining the effects of institutional policies and practices on student success in community colleges has emerged more slowly over time (Moore, Shulock, & Offenstein, 2009; Scrivener & Weiss, 2009; Summers, 2003). Literature that does exist on student success efforts at community colleges has concentrated on best practices, single-institution studies (Community College Survey of Student Engagement, 2007; Purnell & Blank, 2004), or developmental education (Bailey, Jeong, Cho, 2010; Bettinger & Long, 2009). Other work that has identified certain policies and practices for increasing student success at community colleges (i.e., advising and orientation programs, learning communities, developmental education, and college-wide reform) lacks sufficient connection to student success outcomes, with much ongoing debate surrounding their effectiveness (Grubb, 2003; Summers, 2003). More is needed to understand the broad overview of what is occurring and what is working for student success at community colleges across the country to inform those invested in these institutions and the students they serve.

This study speaks to this gap around community college effective use of policies and student success. It offers a broad-scale, descriptive, national view of community college policies and practices designed to support student success. Drawing from survey data and student success data from the Integrated Postsecondary Education Data System (IPEDS) of community colleges across the country, this study describes and examines the efforts currently in place at our nation's community colleges. Descriptive survey results are presented showing the scope and specific forms of resources and programs

community colleges dedicate to improving student retention and completion. These responses were matched with IPEDS data in order to be able to consider potential relationships between institutional policies and student outcomes. Drawing from this combined dataset, the paper presents results from inferential analyses on how key structures and policies are associated with student success outcomes, including full-time student retention and graduation rates at "200 percent normal time."

## Conceptual Framework

Though there is not much research on the effects of specific programs and practices on student retention and graduation, a number of policies and practices have been identified in the literature as being important elements in community college student success. For instance, learning communities have considerable research-based support (Fogarty & Dunlap, 2003; Scrivener & Weiss, 2009; Smith, MacGregor, Mathews, & Gabelnick, 2004; Taylor, 2003), as do in-depth orientation, proactive advising, and early warning practices (Jenkins, 2007).

To inform the work of this study, a conceptual framework was developed (see Figure 1), grounded in work on student success at community colleges, including the national-scale work of the Achieving the Dream (2005) initiative, the Community College Survey of Student Engagement (CCSSE), and Braxton, Hirschy, and McClendon's policy levers (2004), adapted to fit with the institutional roles and conditions informing policy and practice at community colleges. This framework informed the survey development and analysis of the data. The model includes two sets of constructs. Key concepts from these constructs are described below.

Figure 1

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**Foundational Leadership and Organizational Structures**

This first set includes three, interdependent constructs that includes policies and structures deriving from the institution's mission and focus of its leadership.

**Supportive institutional leadership and intensity of effort.** Leadership dedicated to improving student outcomes is an important element for student success (Hossler, 2006), as is the intensity of institutional effort (Hossler, Ziskin, & Gross, 2009). Organizational structures captured by this construct include designating an individual and establishing committees to oversee retention and diversity efforts, giving authority to retention coordinators, coordinating across efforts, being a learner-centered institution, facilitating transformational institutional change, and promoting faculty development (Boswell & Wilson, 2004; CCSSE, 2007; Habley & McClanahan, 2004; Hossler, 2006; Hossler et al., 2009; Jenkins et al., 2006; McArthur, 2005; McClenney & McClenney, 2010; McClenney, McClenney, & Peterson, 2007; Noel-Levitz, 2007; Ziskin, Hossler, & Kim, 2009).

**Cultivating a positive institutional climate for diversity.** It is important that campuses seek to cultivate a positive and nondiscriminatory campus environment to facilitate academic success and equity for all students. To do so, colleges should have practices and structures explicitly engaged with and responsive to diversity, support all campus members in developing skills for a positive climate, engage diversity in campus efforts toward learning, developing a formal plan to assess and support diversity, designating staff to assess diversity initiatives, and providing faculty development

opportunities focused on racial/ethnic and cultural diversity efforts on campus (Jenkins, 2007; Matus-Grossman, Gooden, Wavelet, Diaz, & Seupersad, 2002; Williams, Berger, & McClendon, 2005).

**Fostering a culture of evidence.** Campuses must drive policy and decision making with data, developing and implementing improvement strategies and practices based on empirical research, and use these data to identify problems, set goals, establish priorities, allocate resources, and measure progress (Achieving the Dream, 2005; Bailey & Alfonso, 2005; Boswell & Wilson, 2004; CCSSE, 2007; Jenkins, 2007; Jenkins et al., 2006; Jenkins, Ellwein, Wachen, Kerrigan, & Cho, 2009). For campuses, this also translates into having systems, policies, and procedures for program review, strategic planning, and budgeting that are guided by evidence of what works to promote student success. This also means that colleges will use evidence to foster systemic improvements in the college's academic programs and student services.

**Adapted Policy Levers**

The second set of interdependent constructs focuses on activities and measures implemented to assure student success, encompassing a broad range of issues typically linked to community college success.

**Facilitating access to financial aid.** This includes the facilitating of access to financial aid through providing tuition reimbursements, communicating information about aid to students, providing financial aid counseling, broadening the definition of student expenses when considering college costs (e.g., direct and indirect costs; opportunity costs), and leveraging fee structures and credit loads to support students and to encourage full-time enrollment (Calcagno, Crosta, Bailey, & Jenkins, 2006; Matus-

Grossman et al., 2002; Moore et al., 2009).

**Developing excellence and coordination in student support services.** Excellence in and effective coordination of student support services that are comprehensive, provide consistent interaction with support staff, support goal development and attainment, and integrative (Purnell & Blank, 2004). These services include academic guidance and counseling; academic support, personal guidance, and counseling; career counseling; and logistical support such as child care and transportation (Gardenhire-Crooks, Collado, & Ray, 2006; Jenkins, 2007; Jenkins et al., 2006; Matus-Grossman et al., 2002; Moore et al., 2009; Purnell & Blank, 2004).

**Providing curricular structure, organization, and focus.** The last construct focuses on academic services being designed to meet the needs of students through course offerings, schedules, and formats; and pedogogy and approaches that are learner-centered and connect classroom learning to real-world issues (Braxton et al., 2004; Calcagno et al., 2006; CCSSE, 2007; Gardenhire-Crooks et al., 2006; Jenkins, 2007; Matus-Grossman et al., 2002).

## Methods and Data Sources

The data for this study come from a survey developed to describe the structures and policies in place to support student success at community colleges across the U.S. The survey was developed based in the conceptual framework (described above); in addition, as an early step in the development of the survey, we conducted focus groups and interviews with community college leaders across the country to help us situate the elements of our framework within current and emerging contexts for institutional policy and practice. Using *Atlas.ti* qualitative research software, we coded focus group

transcripts and research literature summaries to create a rich base of evidence on which to build the survey. Survey items and draft surveys were pretested with community college practitioners in the winter of 2011, and revisions were implemented based on the feedback we received.

In spring 2011, a web-based survey covering the framework concepts was administered to leaders at 1,064 community colleges nationwide, with a 22% response rate (237 institutions). While low response rates are an increasingly common problem in survey research, methodologists have demonstrated that nonresponse "can—but need not—induce bias in survey estimates" (Groves, 2006, p. 646). When broken out by institutional wealth (i.e., total revenue over FTE students enrolled) and by enrollment size (i.e., FTE students enrolled), the responding institutions were considered representative of the community colleges nationwide. Table 1 compares responding institutions and community colleges nationwide.

Table 1

The survey questionnaire asked respondents to describe structures, resources, and policies regarding the following areas: use of student success data, the organizational/structural climate for diversity, academic advising, student financial aid, orientation, academic support, learning communities, and developmental education.

Institutional survey results were matched with institutional data from IPEDS. This paper provides an overview of the survey results and inferential analyses focused on structures and policies that may be related to student success outcomes at community

colleges. The survey responses provide a glimpse into the prevalence and depth of key policies and structures including academic advising, early warning, academic support, orientation, and research and assessment of student success. Results are placed in context with institutional characteristics and resources, including institutional wealth, size, location, and student test scores.

Drawing on the analytical framework proposed by Jenkins (2007), we conducted ordinary least squares regression analyses to model participating community colleges' four-year graduation rates and full-time and part-time student retention rates drawn from 2009 IPEDS data. Jenkins (2007) key findings highlighted the effects of intensity and coordination of orientation, advising and student services on community college completion, showing in-depth orientation, proactive advising, and early warning practices to be important factors. In addition, Jenkins study stressed the importance of coordination and alignment, and intensity of institutional efforts surrounding student success. Accordingly, the independent variables included in the models for this study were as follows: (a) total enrollment and composition of student body (percentages by racial/ethnic categories, gender, full-time status, adult-learner status, and Pell grant eligibility); (b) student-faculty ratio and percentage of full-time faculty; (c) total revenue per student FTE, tuition; (d) expenditures by category, as a percentage of core expenses (instructional, student services, academic support, institutional support); (e) depth of orientation program (length, and whether it involved individual advising); (f) advising practices; (g) early warning practices; (h) formal assessment of student success programs; and (i) coordination of student success efforts. The following regression formula was used for predicting student outcomes:

$$(Graduation\ or\ \ Student\ Retention\ Rate) = \alpha + \beta_1(Student\ Demographics) + \beta_2(Student - to - Faculty\ Ratio) + \beta_3(Total\ Revenues, tuition) + \beta_4(Expenditures\ by\ Category) + \beta_5(Orientation\ Practices) + \beta_6(Advising\ Policies) + \beta_7(Early\ Warning\ Practices) + \beta_8(Program\ Assessment) + \beta_9(Coordination\ of\ Student\ Succes\ Efforts) + \varepsilon. \quad (1)$$

## Findings

This study had two objectives, both which contribute new information to the research literature: the first, to capture and describe current efforts of community colleges across the nation in place to support student success; and the second, to examine the relationship between these policies and practices and student success outcomes. Results from these descriptive and inferential analyses are provided below.

### Describing Policies and Practices at Community Colleges

The survey results of this study highlighted institutional practices and organizational structures in place to support student success at community colleges across the nation. The descriptive findings from this survey help set a benchmark of services and illuminate how these practices and structures differ across different organizational contexts, namely through a focus on differences in size[1] and institutional wealth.[2] Results are summarized within construct categories.

**Supporting institutional leadership and intensity of effort.** College-wide committees offer one structure through which institutions monitor and evaluate institutional efforts to promote student success. In SCCSSS survey results, a majority of responding institutions (69.2 percent) reported having college-wide committees that meet regularly to improve student retention. However, fewer institutions (51.5

[1]Based on 12-month full-time equivalent: small: 1,999 or less (36.4 percent of the population, or 24.6 percent of the sample); midsize: 2,000–4,499 (30.7 percent, or 36.9 percent); large: 4,500 or above (33.0 percent, 38.6 percent).

[2]Determined by total institutional revenue per student: Total revenue per FTE (total revenue and other additions/12-month, full-time equivalent enrollment: 2008–2009); low: $10,499 or less (33.5 percent of the population, or 33.8 percent of the sample); middle: $10,500–$12,999 (31.6 percent, or 32.0 percent); high: $13,000 or above (34.9 percent, or 34.2 percent).

percent) said they had established college-wide committees to improve degree or certificate completion, and still fewer institutions (37.6 percent) reported having college-wide committees to improve transfer rates to four-year institutions.

Additionally, the majority of responding institutions reported having a retention coordinator with one or both of the following roles: (1) coordinating efforts to improve student retention rates or (2) acting as a central resource for those efforts. The retention coordinator carried out both of these roles at most of the institutions that reported having a retention coordinator (85 percent). It is interesting to note that while institutions with middle or high revenues had, on average, less than one FTE position dedicated to the retention coordinator role (0.8 FTE), institutions with low revenue had, on average, more than one FTE position dedicated to the role (1.8 FTE). However, at a majority of institutions (64.6 percent), these coordinators were reported to have little to no authority to fund new initiatives, while only 2.7 percent of responding institutions reported that coordinators had "a great deal" of funding authority. Thus, although retention coordinators were reported to have flexibility to implement new initiatives without approval from other administrators or governing bodies on campus, that authority was limited when it came to funding those initiatives.

**Cultivating a positive institutional climate for diversity.** Structures to support a positive climate for diversity were more prevalent at large community colleges compared to midsize and small colleges. Among the large institutions responding to our survey, 60.7 percent had conducted a formal assessment of institutional climate for racial and cultural diversity within the last 10 years, 50.9 percent had a committee to assess campus diversity, and 67.9 percent provided faculty development focusing on diversity issues.

However, only 27.7 percent of responding small institutions had a committee charged with assessing the campus climate for racial/ethnic and cultural diversity, and just 30.4 percent offered faculty development opportunities focusing on diversity.

**Fostering a culture of evidence.** A number of questions in the survey ask about the extent to which there were structures to collect and use data to improve student success. In general, these findings show that community colleges across the nation are putting forth effort to create a culture of evidence on their campuses. Data were reportedly used to support assertions about what works in campus discussions on promoting student success at least to some extent at almost all responding institutions (97.5 percent) and to a great extent at more than half (52.5 percent). While a great number of institutions had institutional researchers dedicated to analyzing data, large institutions had a greater number of institutional researchers on their campuses—an average of 2.5 FTE institutional research professionals, whereas midsize and small institutions reported employing an average of 1.1 and 0.7 FTE institutional research professionals, respectively.

The specific student outcomes that a majority of institutions analyzed at least annually included retention, degree or certificate completion, and subsequent college level course completion rates for students enrolled in developmental education courses. A governing board required annual reports on student success outcomes at more than half of the responding institutions (60 percent), and the same percentage reported that their administration had initiated campus discussions on each measure of student success at least several times or more during the past year.

**Facilitating access to financial aid.** More commonly the role of the institution in

this context is to provide access to information about student aid from federal and state programs. For instance, the availability of financial aid literature in multiple languages was reportedly somewhat greater at low-revenue institutions (47.9 percent) than at middle- and high-revenue institutions (40 percent and 36.8 percent, respectively). In terms of staff available to carry out the work of financial aid support, large institutions reported having an average of 8.4 FTE financial aid counselors per institution, midsize institutions 3.6, and small institutions 2.4. However, the additional resources provided at large colleges are not necessarily in proportion to the greater student enrollment. When taking institution size into account, the ratio of FTE students to FTE financial aid counselors was 539:1 for small colleges, 1,000:1 for midsize colleges, and 1,738:1 for large colleges. Thus, the student–counselor ratios were smallest and most favorable at the small colleges.

**Developing excellence and coordination in student support services.** The survey asked institutions to report on their orientation services, academic advising, and other student support efforts. In terms of orientation, the vast majority of responding community colleges reported offering orientation programming and more than half of all institutions reported requiring orientation for first-time first-year students and including individual meetings between students and their advisors in these programs. Orientation programs at only 10.2 percent of institutions were reported to be longer than one day; at 72.7 percent of institutions, such programs were half a day (four hours) or less. For academic advising, degree-seeking students were required to meet with an academic advisor each term at a larger proportion of small institutions (55.6 percent) than midsize (31.7 percent) or large (10.3 percent) institutions.

Students on academic probation were required to meet with an academic advisor at over 70 percent of large and small community colleges. Academic advising was reportedly available to students at large institutions during evenings (63.6 percent) and on weekends (14.0 percent) at higher percentages than those reported by small institutions. The presence of academic advisors focused specifically on transfer issues was also reported by a majority of large institutions (67.9 percent), compared to only 33.3 percent of small institutions. Lastly, early-warning mechanisms were in place to collect midterm information (at 51.6 percent of these institutions), to contact students with low midterm grades in one or more courses (58.1 percent), and to contact students who missed classes in the first three weeks of the term (59.0 percent). However, 30.0 percent of institutions indicated that they were not implementing these mechanisms.

**Providing curricular structure, organization, and focus.** All institutions surveyed reported offering developmental education. While mandatory placement for developmental education courses was reported by nearly all responding high-revenue and middle-revenue colleges (more than 90 percent in each revenue level), this practice was reported by a smaller proportion of low-revenue institutions (82.6 percent). Online developmental education courses were reportedly offered by more than half of all institutions, but smaller proportions of low-revenue institutions reported offering their students short-term developmental courses (47.8 percent) and self-paced developmental courses (43.5 percent) compared to middle-revenue and high-revenue institutions. The majority of responding institutions, over 85 percent, reported having conducted formal evaluations of their developmental education courses in the last five years. Furthermore,

close to 80 percent of institutions had evaluated their developmental education placement policies during the same period.

Accelerated degree programs were offered by nearly half (48.9 percent) of low-revenue institutions, but just 27.3 percent of high-revenue institutions offered similar programming. Courses that provided practical, career-related experiences were offered by nearly all responding colleges, ranging from 96.4 percent to 98.0 percent of institutions, regardless of revenue level. More than half of responding institutions in each revenue level offered cohort-based, structured curriculum programs, in which a student cohort enrolls together in blocks of courses in a predesignated sequence over an entire curriculum.

However, these programs were least common among high-revenue institutions (59.3 percent). The types of learning community programs available during the 2009-10 academic year differed in their prevalence at the responding institutions. Cohort-based programs were the most common (62.5 percent), followed by linked courses (51.6 percent), first-year experience programs (42.1 percent), and small-group discussions linked to course selections (35.2 percent), which were the least common.

**What Policies and Practices Predict Community College Student Success?**

While the survey data can describe to us efforts in place across the US, student success data provides further understanding of the relationships between these efforts and their association with student outcomes. The analyses of this study focus on three outcomes, as defined in IPEDS: full-time student retention, part-time student retention rates, and graduation rates (200% time).

Table 2

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**Full-time student retention.** An ordinary least squares regression analysis focused on full-time student retention showed an adjusted R-squared of .317. Results of this analysis (see Table 2) show that the percentage of students receiving Pell grants and student-to-faculty ratio were negatively associated with the participating community colleges' full-time student retention rates, while percentages of women, Hispanic/Latino students, and full-time students enrolled, were positively associated with full-time student retention. These results are consistent with the findings highlighted in previous research (Jenkins, 2007), but highlight some additional patterns worth noting. Findings on the negative relationship of student-to-faculty ratio may point to the higher proportions of the faculty made up by adjuncts at community colleges (American Federation of Teachers, 2009; NCES, 2012) which some work has associated with diminished student retention and graduation rates (Eagan & Jaeger, 2009; Ehrenberg & Zhang, 2005; Jacoby, 2006). Additionally, the association of higher percentages of Hispanic/Latino students with higher retention rates is consistent with what others have found regarding the effects of critical mass of Latino students on campuses contributing to student success (Gross, Zerquera, Berry, & Inge, In Press; Hagedorn, Chi, Cepeda, & McLain, 2007) may illuminate aspects of what goes into creating a positive climate for student success in community colleges.

Somewhat counterintuitively, however, other organizational structures included in the model were not significantly associated with retention. This result points to the possibility that, counter to what the practice literature expects from changes in

organizational structures, many such structures may in the end have no significant relationship with student outcomes, controlling for all else. However, it is likewise possible that the implementation of most of these policies, structures and programs may vary in quality across institutions. Our survey questions were designed to capture not just the presence of each practice, but also the depth of implementation. Nevertheless, it remains true that the effects of programs may be masked if the measures and correlational design of the study fail to capture this variation completely. This study begins the process of carefully examining the quality of implementation and intensity of institutional effort dedicated to policies and practices and the potential relationships between these organizational structures and student outcomes. Research in this direction will need to continue.

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Table 3

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**Part-time student retention.** Results from OLS analyses on part-time retention rate (adjusted R-squared=.192) indicated that female enrollment, tuition and fees, ratio of certificates to degrees awarded, student service expenses, academic support expenses, and practices requiring students to meets their academic advisor are associated with retention rate. In particular, the ratio of certificates to degrees awarded is statistically significantly, strongly, and positively (beta=0.485) related to part-time retention. Again, the positive association of certificate-to-degree ratios with part-time retention rate is worth noting. The results also showed that institutions requiring students to meet with an academic advisor each term have higher part-time retention rates. Given that part-time

students may have looser ties with their institutions, which may be negatively related to retention and completion rates, the positive impact of requiring students to meet with advisors points to an important policy implication. Finally, student service expenses as a percentage of total expenses were negatively associated with part-time retention rate at participating community colleges, while the opposite relationship was found between academic support expenses and part-time retention rate (See Table 3 for further detail).

Table 4

**Graduation rates.** Results from OLS analyses on graduation rates (adjusted R-squared=.372) showed that institutional support expenses as a percentage of total expenses were positively associated with completion rates at participating community colleges, as was the ratio of certificates to degrees, significant at the .001 level (See Table 4 for further detail). More research is clearly needed, but these results point to interesting new directions for exploring how institutions can play a role in student success. The positive result shown for institutional support expenses may reflect, for example, a higher level of resources available for coordination and oversight in student services, engagement with student outcome data, or other practices posited in practice-oriented literature to improve student retention and completion rates. Moreover, the positive association of certificate-to-degree ratios with graduation rates provides important context to discussions about college completion nationally. While it may be that certificate programs have higher completion rates overall, in part because of their shorter

timelines, it may also be worth exploring whether colleges that award more certificates may be creating institutional cultures particularly conducive completion and success.

## Discussion of Findings

The national-scale picture of community colleges' student success policies afforded by this study can help illuminate the complexities of student retention and untangle the complex relationships among factors influencing community college student completion outcomes. Our analyses applied Jenkins' (2007) conceptual framework for institutional effectiveness to a national context, producing models that explained more than 30 percent of the variance in full-time student retention and graduation rates. While studies on student success have long centered on students' characteristics and experiences before and during college, finding them to associated with graduation and retention rates (Adelman, 2006; Cabrera, Nora & Castañeda, 1993; Ishitani & Desjardins, 2002-2003; St. John, Paulsen & Carter, 2005; Somers, 1995), this study follows the strategies recommended by Braxton, Hirschy and McClendon (2004) and Jenkins (2007), to focus on institutional policies and practices influencing student outcomes. This shift in the research is necessary and valuable in that it extends the discussion about how policy and institutional practice can support student success. Nevertheless, because educational inequities US are strongly associated with race and economics in the US, the decision to focus on institutional contributions may also in part explain the relatively low R-squared results seen in our analyses. Follow-up studies using two-stage regression analyses or multilevel modeling could help us in developing this line of inquiry further, showing how institutional practice can make a difference (Bensimon, 2007; Dadashova, Ziskin & Hossler, 2010; Engle & O'Brien, 2007; Jenkins, 2007; Muraskin & Lee, 2004; Ziskin,

Hossler, & Kim, 2009-2010). Moreover, there are some institutional-level variables which were not accounted for in this study (e.g., developmental education, learning communities) (Fogarty & Dunlap, 2003; Jenkins, 2007; Scrivener & Weiss, 2009; Smith et al., 2004; Taylor, 2003). In future research, we plan to explore whether these structures and programs might further contribute to explained variance in graduation and retention rates. The results of this study lead us to conclude that this conceptual framework provides an appropriate basis for examining the role of community colleges in ongoing research in this area, particularly if improved measures of the depth and quality of implementation are included.

The descriptive results from the survey can also provide important national comparative data to campus policy makers as they think through their own efforts. Findings outlined in the paper can support institutions as they compare their practices to those of peer institutions, weigh the limitations and potentials of specific approaches to enhancing student retention, and work to improve student success outcomes overall.

This work has direct and useful implications for researchers and institutions. Exploring the relationships shown between organizational structures and student success outcomes has created many questions that could challenge existing literature. Both the limitations and the findings in this study warrant additional research, since there is a clear need to investigate further whether structures, per se, make a difference at the community college level. Additionally, the findings point to implications for policy makers at the state and national levels. Community colleges are charged with fulfilling many roles without sufficient support to do so (Mullin, 2010b). The findings of this study highlight structural differences between institutions in the support efforts they provide students,

and the implications not having these structures can have. The expectations of community colleges must be met by sufficient support in the form of financial resources, policy mandates, and support networks from state and federal policymakers to enable these institutions in their work to achieve successful student outcomes at their campuses.

## References

Achieving the Dream (2005). *Achieving the Dream: Community colleges count*. Retrieved from http://www.achievingthedream.org/ABOUTATD/OVERVIEW/default.tp

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.

American Federation of Teachers. (2009). *American academic: The state of the higher education workforce 1997-2007*. Washington, DC: JBL Associates, Inc.

Bailey, T. R., & Alfonso, M. (2005). *Paths to persistence: An analysis of research on program effectiveness at community colleges* (New Agenda Series, Vol. 6, No. 1). Indianapolis, IN: Lumina Foundation for Education.

Bailey, T., Jeong, D.W., & Cho, S. (2010). Referral, enrollment, and completion in developmental education sequences in community colleges. *Economics of Education Review, 29*(2), 255-270.

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.

Bettinger, E. P., & Long, B. T. (2009). Addressing the needs of underprepared students in higher education: Does college remediation work? *Journal of Human Resources, 44*(3), 736–771.

Braxton, J. M., Hirschy, A. S., & McClendon, S. A. (2004). *Understanding and reducing college student departure* (ASHE-ERIC Higher Education Report, Vol. 30, No.

3). 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: Research, Theory, & Practice, 3*(1), 57–71.

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.

Calcagno, J. C., Crosta, P., Bailey, T., & Jenkins, D. (2006). *Stepping stones to a degree: The impact of enrollment pathways and milestones on older community college student outcomes* (The Community College Research Brief No. 32). New York, NY: Columbia University, Teachers College, Community College Research Center. Retrieved from http://www.inpathways.net/SteppingStonestoaDegree.pdf

Cohen, A. M., & Brawer, F. B. (2003). *The American community college* (4th ed.). San Francisco, CA: Jossey-Bass.

Community College Survey of Student Engagement [CCSSE]. (2007). Building relationships for student success. *CCSSE Highlights, 6*(3), 4.

Dadashova, A., Ziskin, M., & Hossler, D. (2010). *An Examination of Institutional Practices Surrounding Student Retention*. Paper presented at the Annual Conference of the Association for Higher Education.

Eagan, Jr., K. M., & Jaeger, A. (2008). Effects of exposure to part-time faculty on community college transfer. *Research in Higher Education, 50*(2), 168-188.

Ehrenberg, R. G., & Zhang, L. (2005). Do tenured and tenure-track faculty matter? *The Journal of Human Resources, 40*(3), 647-659.

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 Fogarty, J., & Dunlap, L. (with Dolan, E., Hesse, M., Mason, M., & Mott, J.) (2003). *Learning communities in community colleges* (National Learning Communities Project Monograph Series). Olympia, WA: The Evergreen State College, Washington Center for Improving the Quality of Undergraduate Education, in cooperation with the American Association of Higher Education and the American Association of Community Colleges.

Gross, J., Zerquera, D., Berry, M.S., & Inge, B. (in press). Latino associate degree completion: Effects of financial aid over time. *Journal of Hispanic Higher Education.*

Groves, R. M. (2006). Nonresponse rates and nonresponse bias in household surveys. *Public Opinion Quarterly, 70*(5), 646–675.

Grubb, W. N. (2003). *Using community colleges to reconnect disconnected youth.* Menlo Park, CA: The William and Flora Hewlett Foundation.

Hagedorn, L.S., Chi, W., Cepeda, R.M., & McLain, M. (2007). An investigation of critical mass: The role of Latino representation in the success of urban community college students. *Research in Higher Education, 48*(1), 72-91.

Hossler, D. (2005). Managing student retention: Is the glass half full, half empty, or simply empty? *College & University, 81*(2), 11–14.

Hossler, D., Ziskin, M., & Gross, J. P. K. (2009). Getting serious about institutional performance in student retention: Research-based lessons on effective policies and practices. *About Campus, 13*(6), 2-11. Doi: 10.1002/abc.271.

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.

Jacoby, D. (2006). Effects of part-time faculty employment on community college graduation rates. *The Journal of Higher Education, 77*(6), 1081-1103.

Jenkins, D., Bailey, T. R., Crosta, P., Leinbach, T., Marshall, J., Soonachan, A., & Van Noy, M. (2006). What community college policies and practices are effective in promoting student success? A study of high- and low-impact institutions. New York, NY:

Jenkins, D. (2007). Institutional effectiveness and student success: A study of high-and low-impact community colleges. *Community College Journal of Research and Practice, 31*, 945-962.

Luhby, T. (2011, August). Community colleges step in to fill 'skills gap'. *CNN Money.* Retrieved from http://money.cnn.com/2011/08/01/news/economy/community_colleges/.

Marklein, M.B. (2011, April). Community college programs help fill skills gap in U.S. *USA Today.* Retrieved from http://usatoday30.usatoday.com/news/education/story/2012-04-09/community-colleges-fill-work-skills-gap/54136996/1.

Matus-Grossman, L., & Gooden, S. (with Wavelet, M., Diaz, M., & Seupersad, R.) (2002). *Opening doors: Students' perspective on juggling work, family, and college*. New York, NY: MDRC.

Moore, C., Shulock, N., & Offenstein, J. (2009, October). *Steps to success: Analyzing milestone achievement to improve community college outcomes.* Sacramento, CA: Institute for Higher Education Leadership and Policy.

Mullin, C.M. (2010a). *Rebalancing the mission: The community college completion challenge.* Washington, DC: American Association of Community Colleges.

Mullin, C.M. (2010b). *Doing more with less: The inequitable funding of community colleges.* Washington, DC: American Association of Community Colleges.

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.

Nocera, J. (2012, July). Filling the skills gap. *The New York Times.* Retrieved from http://www.nytimes.com/2012/07/03/opinion/nocera-filling-the-skills-gap.html?_r=0.

Noel-Levitz, Inc. (2007). *Student retention practices at two-year institutions* (2007 National Research Report). Retrieved from www.noellevitz.com/retentionpractices

O'Bannion, T. (1997). *A learning college movement for the 21st century* (The American Community College Association and the American Council on Education Series on Higher Education). Washington, DC: Oryx Press.

Pascarella, E. T., & Terenzini, P. T. (2005). *How college affects students: Vol. 1. Findings and insights from twenty years of research*. San Francisco, CA: Jossey-Bass.

Purnell, R., & Blank, S. (2004, November). *Opening doors: Support success—Services that may help low-income students succeed in community college*. New York, NY: MDRC.

Roueche, J. E., Ely, E. E., & Roueche, S. D. (2001). *In pursuit of excellence: The Community College of Denver*. Washington, DC: Community College Press.

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.

Scrivener, S., & Weiss, M. J. (2009, August). *Opening doors: More guidance, better results? Three-year effects of an enhanced student services program.* New York, NY: MDRC.

Smith, B. L., MacGregor, J., Mathews, R. S., & Gabelnick, F. (2004). *Learning communities: Reforming undergraduate education.* San Francisco, CA: Jossey-Bass.

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.

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.

Summers, M. D. (2003). ERIC Review: Attrition research at community colleges. *Community College Review, 30*(4), 64–84.

Taylor, K. (with Moore, W. S., MacGregor, J., & Limblad, J.) (2003). *Learning community research and assessment: What we know now* (National Learning Communities Project Monograph Series). Olympia, WA: The Evergreen State College, Washington Center for Improving the Quality of Undergraduate Education, in cooperation with the American Association for Higher Education.

Templin, R.G. (2011). America's community colleges: the key to the college completion challenge. *The Presidency, 2011*(Spring Supplement). Washington, DC: American Council on Education.

Townsend, B. K., Donaldson, J., & Wilson, T. (2004). *Marginal or monumental? Visibility of community colleges in selective higher education journals.* Paper presented at the Conference of the Council for the Study of Community Colleges, Minneapolis, MN.

Vaughan, G. B. (2000). *The community college story*. Washington, DC: American Association of Community Colleges.

Williams, D. A., Berger, J. B., & McClendon, S. A. (2005). *Toward a model of inclusive excellence and change in postsecondary institutions.* Washington, DC: Association of American Colleges and Universities.

Ziskin, M.B., Hossler, D., & Kim, S. (2009–2010). The study of institutional practices related to student persistence. *Journal of College Student Retention: Research, Theory, and Practice, 11*(1), 101–121.

Table 1

*Responding Institutions Compared to Community Colleges Nationwide*

| | | Population | | Sample | |
|---|---|---|---|---|---|
| Total Revenue per FTE | Low (Less than $10,500) | 355 | 33.8% | 78 | 33.2% |
| | Middle $10,500-$12,999) | 336 | 32.0% | 74 | 31.5% |
| | High ($13,000 and more) | 359 | 34.2% | 83 | 35.3% |
| Enrollment Size | Small (Less than 2,000) | 369 | 35.0% | 58 | 24.6% |
| | Medium (2,000-4,499) | 328 | 31.2% | 87 | 36.9% |
| | Large (4,500 and more) | 354 | 33.7% | 91 | 38.6% |
| | Total | 1050 | | 236 | |

Table 2

*OLS Regression Results: Factors Associated with Full-Time Student Retention (Adjusted R-Squared=0.317)*

| | Beta | t | Sig. | |
|---|---|---|---|---|
| 12-month full-time equivalent enrollment: 2008-09 | .047 | .198 | .843 | |
| Percentage of total enrollment that are women | .231 | 2.553 | .012 | * |
| Percentage of total enrollment that are Black or African American | -.060 | -.617 | .538 | |
| Percentage of total enrollment that are Hispanic/Latino | .248 | 2.421 | .017 | * |
| Percentage of total enrollment that are American Indian or Alaska Native | .087 | .930 | .355 | |
| Percentage of full-time first-time undergraduates receiving Pell grants | -.376 | -3.257 | .002 | ** |
| Percentage full time students | .398 | 3.504 | .001 | ** |
| Percentage traditional age students | .051 | .530 | .597 | |
| Tuition and fees, 2009-10 | .086 | .910 | .365 | |
| Ratio of certificates to degrees awarded | .432 | 4.042 | .000 | *** |
| Student-to-faculty ratio | -.209 | -2.446 | .016 | * |
| Percentage full time faculty | .095 | 1.000 | .320 | |
| Total revenues per FTE/1000 | .224 | 1.014 | .313 | |
| Instruction expenses as a percentage of total core expenses (GASB) | .146 | 1.567 | .120 | |
| Student service expenses as a percentage of total core expenses (GASB) | -.115 | -1.368 | .174 | |
| Academic support expenses as a percentage of total core expenses (GASB) | .191 | 2.295 | .024 | * |
| Institutional support expenses as a percentage of total core expenses (GASB) | .069 | .760 | .449 | |
| Length of the orientation program | .007 | .081 | .936 | |
| Orientation program included an individual meeting with advisor | -.141 | -1.621 | .108 | |
| Students required to meet with an academic advisor each term | .079 | .854 | .395 | |
| Institutions contacted students reported to have low midterm grades in one or more courses | -.150 | -1.862 | .065 | |
| Frequency of evaluation of programs designed to improve completion rates | .043 | .537 | .593 | |
| Coordination of student success efforts coordinated | .036 | .453 | .652 | |

Dependent variable Full-time retention rate, 2009

*p<.05, **p<.01, ***p<.001

Table 3

*OLS Regression Results: Factors Associated with Part-Time Student Retention (Adjusted R-Squared=0.192)*

| | | Beta | t | Sig. | |
|---|---|---|---|---|---|
| | 12-month full-time equivalent enrollment: 2008-09 | .199 | .772 | .442 | |
| | Percentage of total enrollment that are women | .235 | 2.392 | .019 | * |
| | Percentage of total enrollment that are Black or African American | -.196 | -1.846 | .068 | |
| | Percentage of total enrollment that are Hispanic/Latino | .087 | .781 | .437 | |
| | Percentage of total enrollment that are American Indian or Alaska Native | .009 | 0.093 | .926 | |
| | Percentage of full-time first-time undergraduates receiving Pell grants | -.223 | -1.779 | .078 | |
| | Percentage full time students | .106 | 0.861 | .391 | |
| | Percentage traditional age students | -.054 | -.512 | .609 | |
| | Tuition and fees, 2009-10 | .232 | 2.246 | .027 | * |
| | Ratio of certificates to degrees awarded | .485 | 4.167 | .000 | *** |
| | Student-to-faculty ratio | -.066 | -0.708 | .480 | |
| | Percentage full time faculty | .061 | .590 | .556 | |
| | Total revenues per FTE/1000 | .069 | .287 | .775 | |
| | Instruction expenses as a percentage of total core expenses (GASB) | -.005 | -0.050 | .960 | |
| | Student service expenses as a percentage of total core expenses (GASB) | -.195 | -2.126 | .036 | * |
| | Academic support expenses as a percentage of total core expenses (GASB) | .192 | 2.128 | .036 | * |
| | Institutional support expenses as a percentage of total core expenses (GASB) | .005 | 0.046 | .963 | |
| | Length of the orientation program | .057 | .601 | .549 | |
| | Orientation program included an individual meeting with advisor | -.012 | -.129 | .898 | |
| | Students required to meet with an academic advisor each term | .217 | 2.162 | .033 | * |
| | Institutions contacted students reported to have low midterm grades in one or more courses | -.094 | -1.073 | .286 | |
| | Frequency of evaluation of programs designed to improve completion rates | .010 | 0.110 | .912 | |
| | Coordination of student success efforts coordinated | .011 | .132 | .895 | |

Dependent variable Part-time retention rate, 2009

*p<.05, **p<.01, ***p<.001

Table 4

*OLS Regression Results: Factors Associated with Graduation Rates—200% Normal Time (Adjusted R-Squared=0.372)*

| | Beta | t | Sig. | |
|---|---|---|---|---|
| 12-month full-time equivalent enrollment: 2008-09 | .123 | .561 | .576 | |
| Percentage of total enrollment that are women | .112 | 1.198 | .234 | |
| Percentage of total enrollment that are Black or African American | -.184 | -1.876 | .064 | |
| Percentage of total enrollment that are Hispanic/Latino | -.085 | -.820 | .414 | |
| Percentage of total enrollment that are American Indian or Alaska Native | .130 | 1.386 | .169 | |
| Percentage of full-time first-time undergraduates receiving Pell grants | -.029 | -.251 | .803 | |
| Percentage full time students | .274 | 2.476 | .015 | * |
| Percentage traditional age students | .055 | .574 | .568 | |
| Tuition and fees, 2009-10 | -.092 | -.980 | .330 | |
| Ratio of certificates to degrees awarded | .494 | 4.521 | .000 | *** |
| Student-to-faculty ratio | -.126 | -1.485 | .141 | |
| Percentage full time faculty | .060 | .650 | .517 | |
| Total revenues per FTE/1000 | -.178 | -.879 | .381 | |
| Instruction expenses as a percentage of total core expenses (GASB) | .092 | 1.002 | .319 | |
| Student service expenses as a percentage of total core expenses (GASB) | .054 | .645 | .520 | |
| Academic support expenses as a percentage of total core expenses (GASB) | .009 | .105 | .917 | |
| Institutional support expenses as a percentage of total core expenses (GASB) | .245 | 2.659 | .009 | ** |
| Length of the orientation program | -.034 | -.391 | .697 | |
| Orientation program included an individual meeting with advisor | -.005 | -.060 | .952 | |
| Students required to meet with an academic advisor each term | -.149 | -1.604 | .112 | |
| Institutions contacted students reported to have low midterm grades in one or more courses | .029 | .364 | .717 | |
| Frequency of evaluation of programs designed to improve completion rates | -.136 | -1.683 | .096 | |
| Coordination of student success efforts coordinated | .014 | .180 | .857 | |

Dependent Variable: Graduation rate - degree/certificate within 200% of normal time

*p<.05, **p<.01, ***p<.001

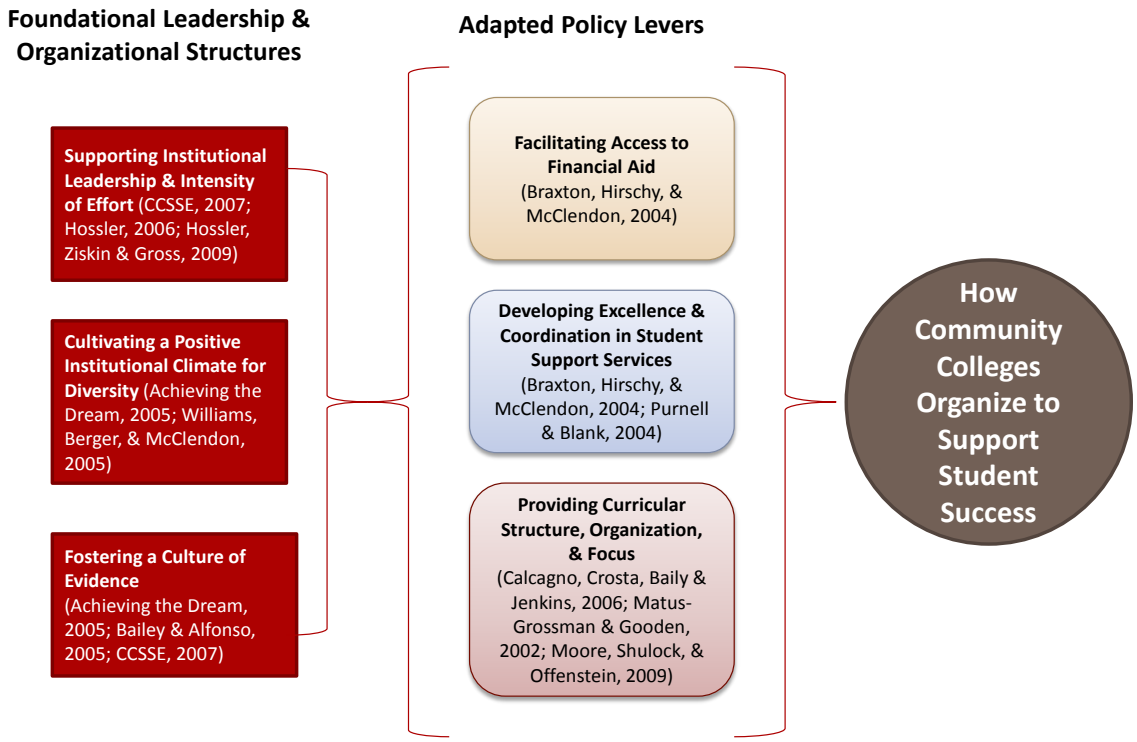


*Figure 1*. Conceptual Framework. This figure presents the conceptual framework developed based in the literature on community college student success that informed survey design.