What Community College Management Practices Are Effective in Promoting Student Success? A Study of High- and Low-Impact Institutions

EXECUTIVE SUMMARY

Davis Jenkins

Community College Research Center
Teachers College, Columbia University

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Study Overview

This study identifies community college management practices that promote student success. It was conducted by the Community College Resource Center (CCRC) through a partnership with the Florida Department of Education's Division of Community Colleges and Workforce Education, and funded by Lumina Foundation for Education as part of the Achieving the Dream: Community College Count initiative. Achieving the Dream is a national effort to increase the success of community college students, particularly those from groups that have been underserved in higher education. The initiative works on multiple fronts—including technical assistance to individual community colleges, research, public engagement, and public policy—and emphasizes the use of data to drive change.

This study builds on earlier CCRC research using national survey data. We used transcript-level data on 150,000 students in three cohorts of first-time Florida community college students and a regression methodology to estimate the effect that each of Florida's 28 community colleges had on the probability that its students would achieve a successful outcome, after controlling for characteristics of the individual students. This effect can be seen as a measure of value added—the impact that a college has on its students' educational success independent of the characteristics of individual students. We then ranked the colleges according to their estimated effects on student success.

Given the interest of Achieving the Dream in underserved students, we selected colleges for field research using rankings of the magnitude of the effect of each institution on the probability that its African American and Latino students would attain successful outcomes. In Florida, as in other states, African American and Latino community college students are less likely than other students to complete a degree or to transfer to a baccalaureate program. At the same time, because we are interested in what colleges are doing to retain students generally, we also examined each institution's impact on outcomes for all first-time students.

We used these rankings along with an analysis of descriptive statistics on each institution to select six colleges for field research: three with higher impacts on the chance that their minority students would succeed and three with lower impacts. The purpose of the fieldwork was to compare the institutional policies, practices, and cultural characteristics of the high- and low-impact colleges during the period in which the student cohorts were tracked (from academic year 1998-1999 through 2002-2003) to determine why some colleges had a greater net effect on their minority students' educational success than did others.

Research to Date

There has been surprisingly little rigorous research on institutional effectiveness in community colleges. Even the much larger body of research on institutional effectiveness among four-year institutions tells us more about the student characteristics and general institutional features (e.g., selectivity, size, resources) associated with positive student outcomes than about the policies and

practices affecting student success that are under a college's control. A key problem in this research is the difficulty in comparing the performance of different institutions serving different mixes of students.

Recent studies have sought to examine the policies and practices of undergraduate institutions that perform better than would be expected given their students' characteristics. While these studies offer important insights into the elements of institutional effectiveness, they focus on four-year institutions, so the applicability of their findings to community colleges is questionable. They also suffer from a number of data and methodological limitations.

The study of institutional effectiveness in community colleges summarized here addresses the limitations of previous research on the effectiveness of undergraduate institutions in several ways. It takes advantage of a rich set of longitudinal student unit record data to control for the individual characteristics of the students that the colleges serve. Because our study is based on the outcomes of both full-time and part-time students, its measure of institutional effectiveness is better suited to community colleges and their students than is the National Center for Education Statistics' (NCES) "student-right-to-know" measure commonly used by other studies. We also measured student persistence in addition to completion and transfer, which is appropriate given that community college students often take a long time to complete their programs or to transfer. Our sample is confined to all community colleges in a single state, thus eliminating the effects on institutional performance of variations in public policy and institutional mission, practice, and resources across states.

While some previous studies examined only institutions considered to be high performers, we directly compared colleges found to have a relatively high impact on the educational success of their students with colleges that have a low impact. In studying the policies and practices of the high- and low-impact colleges, we focused on their organization, activities, and environments during the period covering our data (1998-2003). Other studies have not addressed the fact that a college's policies and practices can change over time.

As noted, most of the earlier research on the effectiveness of undergraduate institutions relied on conceptual frameworks drawn from the model and experience of four-year colleges, particularly residential colleges. For this study, we developed a conceptual framework that reflects the distinctive challenges and characteristics of community colleges.

Research Hypotheses

To frame this study of community college effectiveness, we drew on previous research to develop a set of seven hypotheses about the ways that we expected that those community colleges more effective in promoting their students' education success would differ from those with a less positive impact on student success. Specifically, we hypothesized that community colleges would be more effective if they do the following:

Have an institutional focus on student retention and outcomes, not just on enrollment. We expected that effective community colleges would be actively focused on student retention and outcomes, while less effective colleges would be primarily concerned about enrollment. Funding

for community colleges (and for public higher education institutions generally) is largely based on enrollments rather than on completions or other outcomes, so it is not surprising that community colleges often pay more attention to the former than the latter.

Offer targeted support for underperforming students. Where there are systemic gaps between the outcomes of different student groups, as is typically the case between minority and White students, we expected that effective colleges would undertake targeted efforts to address these gaps.

Have well-designed, well-aligned, and proactive student support services. We hypothesized that effective community colleges would offer student services that are well designed and aligned to guide and support students from the time they enter the college until they leave. Effective colleges use technology and other means *proactively* to identify and reach out to students who are struggling or are at risk of dropping out to ensure that they stay on track.

Provide support for faculty development focused on improving teaching. We expected that effective colleges would devote more attention and resources to helping faculty become better teachers, with a particular focus on instructors of students who are academically unprepared or from minority populations. Given that the majority of faculty in most community colleges are part time, we hypothesized that effective colleges would take steps to orient and prepare adjunct instructors and monitor the quality of their teaching.

Experiment with ways to improve the effectiveness of instruction and support services. We expected that effective community colleges would be more likely than less effective colleges to experiment with better ways to teach and support students, particularly those who have academic deficiencies. Because so many community college students are required to take remedial or developmental courses, and many students who take such courses fail to advance to and succeed in degree credit coursework, we expected that effective colleges would to try to find ways to improve the outcomes of developmental programs. We also expected that effective colleges would be more likely to evaluate the impact of efforts to improve student learning and success and to use the findings to inform further improvements in practice.

Use institutional research to track student outcomes and improve program impact. We hypothesized that effective community colleges would collect data on student outcomes and use this information to evaluate and manage programs and services in ways that improve student success. This hypothesis is based on the premise of organizational management that "you measure what you value," and its corollary, "you don't value what you don't measure." A recent survey by the Community College Research Center on community college institutional research found that relatively few colleges collect data on student outcomes, other than what is required for compliance and accountability. Even fewer colleges use data on student outcomes to inform decisions about how to organize and deliver programs and services.

Manage the institution in ways that promote systemic improvement in student success. Our final hypothesis was that the more effective community colleges would approach institutional management with a strategic focus on improving student outcomes. Specifically, we expected effective colleges to have in place systems, policies, and procedures for program review, strategic planning, and budgeting that are guided by evidence of what works to promote student

success and that are designed to foster systemic improvements in the impact on students of the college's academic programs and student services.

Taken together, the elements of institutional policy, practice, and culture defined by these hypotheses form a model of community college institutional effectiveness that we tested through this study. What connects our hypotheses is the idea that effective community colleges deliberately and systematically manage programs and support services in ways that optimize the impact of the college's limited resources on student success. Making effective use of resources is especially important to community colleges because a high proportion of community college students are poorly prepared for college and therefore more costly to serve than well-prepared students, and yet community colleges have relatively few resources to serve their students (compared with four-year institutions). From this perspective, a college's effectiveness in serving students results less from whether it adopts particular policies or practices than from how well it aligns and manages all its programs and services to support student success.

Research Design

We used longitudinal, transcript-level data on 150,000 students in three cohorts of Florida community college students to estimate the effect that each of the 28 community colleges in the state has on the probability of its students' completing a certificate or degree, transferring to one of the state universities, or persisting at the college. The cohorts consisted of first-time college students who enrolled in a degree program at a Florida community college in the fall of 1998, 1999, or 2000.

We ranked all 28 Florida community colleges according to the size of their respective estimated effect on the probability that entering *minority* students would complete, transfer, or persist within three years. The college with the highest average effect was ranked first; the one with the lowest effect was ranked last. For the field research, we selected three "high-impact" colleges from the top-ranked institutions and three "low-impact" colleges from the low-ranking institutions.

Table 1 compares the three high-impact colleges selected with the three low-impact colleges according to their quartile ranking among all 28 Florida community colleges on selected institutional characteristics. The high-impact and low-impact colleges are roughly comparable on characteristics that other studies have found to affect student outcomes and institutional performance and for which we do not control in our selection methodology. They include such factors as instructional expenditures, proportion of faculty who are part time, and the ratio of certificates to associate degrees. In fact, the low-impact colleges rank higher in instructional expenditures and are somewhat more oriented toward awarding occupational certificates over degrees, which might give them an advantage over the high-impact colleges in student completion rates. Two of the high-impact colleges have higher proportions of part-time students, which might put them at a disadvantage. The low-impact colleges include no urban institutions or any very large colleges, although the high-impact colleges include a small institution. Therefore, even though we were unable to control statistically for the effects on performance of institutional characteristics, there do not seem to be substantial differences between the sets of high- and low-impact colleges that might explain their relative performances.

We conducted interviews and reviewed documents at the six sample colleges. The goal of this field research was to identify differences in the policies and practices of the high-impact and low-impact colleges that would explain why, controlling for individual student characteristics, minority students at the former were more likely to graduate, transfer, or persist than were minority students at the latter. Since the data used to select the two sets of institutions covered the period 1998 to 2003, our field research focused on the colleges' policies and practices during that period.

Findings and Conclusions

Table 2 summarizes the state of development of the seven elements of the hypothesized model of institutional effectiveness at the six colleges we visited, indicating for each college whether the given element was well developed, developing, or weak or non-existent during the study period.

Our findings indicate that the dimensions of our model of community college effectiveness where there is the clearest difference between the high- and low-impact colleges fit into the category, "Targeted support for minority students," and specifically into "Minority-inclusive campus environment" and "Specialized retention services for minority students." Thus, minority community college students are more likely to succeed at colleges where they are made to feel welcome and where there are support services and programs specifically designed for them.

At the three low-impact colleges (identified as L-I A, L-I B, and L-I C), and at one of the high-impact colleges (H-I C), some respondents argued that community colleges should not give preferential treatment to any one group because many if not most community college students face barriers to success in college. Others at these four colleges, and particularly some (but not all) of the minority staff and faculty we interviewed, maintained, conversely, that special efforts are needed precisely because there are persistent gaps in achievement between minority and White students. The findings from this study support this latter position.

Most of the other dimensions of the model beyond those related to a focus on minority student achievement were better developed at two of the high-impact colleges (H-I A and H-I B) than at the three low-impact colleges. This finding supports our hypothesis that policies and practices that affect students generally can benefit minority students as well as others. These practices include a focus on student retention and graduation, rather than just on enrollment; well-aligned and proactive student support services; experimentation with ways to improve student success; and use of data on students to improve programs and services.

H-I C seems to be a conflicting case. However, further analysis shows that, while H-I C ranks high among Florida community colleges in its impact on minority student success (adjusted for student characteristics), it ranks low in its effect on success of students generally. The other two high-impact colleges (H-I A and H-I B) rank high in their impact on the adjusted success rates of all students, while the three low-impact colleges have relatively low impacts on overall student success.

The three small colleges in the our sample (H-I C, L-I B, and L-I C) generally lacked formal student support services. They relied instead on the commitment of faculty and staff, and the personal attention made possible by their smaller size, to create a supportive environment for students. Respondents at each of these colleges argued that these college qualities were more important to student success than formal systems, procedures, and programs. The findings here do not support this contention, however.

Because it was categorized as a high-impact institution, but lacked formal systems, procedures, and programs for student support, H-I C once again seems to present a conflicting case. Yet, further investigation shows that most of the minority students at the college during the study period were likely to have benefited from the more organized and intensive support services provided through a federal Student Support Services grant for disadvantaged students.

Our findings suggest that, to promote student success, not only do particular student support services – such as in-depth orientations, proactive advising, early warning systems, and well-organized academic support services – need to be in place, but they must be well aligned and coordinated across the campus. While administrators may see different functional areas of the college as providing discrete services, students do not see, nor should they experience, such divisions. Seamless integration of services from the student's perspective and collaboration among faculty, staff, and administration in providing these services are the college characteristics that seem to contribute most to student success.

The findings also support our overarching hypothesis that the key to a college's effectiveness is not whether it adopts particular policies or practices, but how well it aligns and manages all of its programs and services to support student success. Small-scale "boutique" programs or pilots may represent important sources of innovation for a college in the long term, but they are unlikely by themselves to have much of a direct impact on overall institutional effectiveness.

Of the six colleges, only H-I A had well developed systems and procedures for managing college-wide improvements in practice based on research and data on student achievement. They included a standing committee responsible for monitoring and evaluating the college's efforts to promote student success, a process for regularly and systematically reviewing the performance of all programs down to the course level, and a strategic online planning tool that tracks budget requests from each unit to ensure that they are connected with the unit objectives. Each unit's objectives are tied to the college's goals, which in turn are aligned with state accountability goals and measures. Arguably, such an approach is needed to bring about improvements in practice over time, although it may not be necessary to create the conditions for student success.

In the three years since the end of the study period, all of the six colleges we visited have adopted a fuller set of the elements of our model of institutional effectiveness. The shaded cells in Table 3 show particular features of the model that are now more strongly developed at each college than at the end of the study period. All have sought to strengthen and better align student services. As part of these efforts, the colleges have put more information for students on the Internet, allowing students to seek answers to their routine questions and freeing up staff to help students with more complex issues. All but one of the colleges have strengthened their systems for evaluating and improving practices based on student performance data. With one exception, all have implemented or are in the process of putting in place management systems to support

ongoing improvements in programs and services. With these changes since the study period, we would expect to see improvements in student success at all six colleges, although data are not yet available to allow us to test this prediction.

In two cases, the impetus for these changes came from new leadership that brought a greater focus on improving student outcomes and putting in place systems, policies, and procedures to accomplish this goal. In at least two others, it was a response to accreditation reviews indicating the need for a more systematic and systemic approach to ensuring institutional effectiveness. In the other case, the changes resulted from the implementation of a system for institutional planning and improvement that grew out of a 1998 planning retreat, spurred by a president who has for nearly ten years been pushing the college to become more student-focused. In making these changes, the colleges may also have been responding to the increased attention that higher education policy makers in Florida and elsewhere are paying to student outcomes.

These developments show that colleges can and do change the way they operate, but they also suggest that bringing about such changes may require some internal or external catalyst and that change generally takes a long time. In every case, the groundwork for the recent changes was laid during the study period. In one case, it took nearly a decade for the college's leadership to change the mindset of faculty and staff from a primary focus on access and enrollments to a concern for student retention and degree completion as well.

The fact that the colleges are operating in some substantially different ways three years after our study period ended supports our approach of focusing the field research on what the colleges were doing during the study period, not what they are doing now. We acknowledge that it is not easy to reconstruct, through interviews and document reviews, a college's policies and practice during a period that started eight years prior. Still, to have focused our field research on the colleges' current practices while using data from an earlier period to select the colleges would have produced misleading findings.

This study shows that comparing the performance of different institutions is complicated and should be approached with caution. Straightforward comparisons of institutional performance are misleading because each college serves a different mix of students and has different characteristics, such as size, level of resources, and program mix, that bear on performance. In this study, we used a rich set of longitudinal data on cohorts of first-time students to control for the effect of individual student characteristics and behaviors on student outcomes. Our purpose in examining the relative performance of institutions was to set up fieldwork designed to identify the policies and practices that distinguish community colleges that have a higher impact on the success of students (in this case of minority students) from those that have a lower impact. Nevertheless, a better benchmark for a college seeking to gauge whether it is doing well or needs to improve is probably its own historical performance, rather than the performance of other institutions.

Limitations of the Study

We believe that the methodology used to select institutions for fieldwork is generally robust, but a major limitation is the lack of a direct measure of student socioeconomic status (SES), such as

family income or parental education, which other studies have shown to be a key determinant in college success. SES is correlated with test scores, which we do measure. Also, we selected and ranked the colleges using the sub-sample of African American and Hispanic students. We know from studies of national survey data on community colleges that students from both populations graduate and transfer at lower rates than do Whites, even after controlling for income. Still, without data to control for student SES, it could be the case that our methodology ranks some colleges higher (or lower) than others because they are serving more (or less) well-off students.

In addition, while we did find through the field research that the high-impact colleges tended to follow more of the policies and practices we hypothesized to be associated with greater institutional effectiveness than did the low-impact colleges, these findings should be considered suggestive given the small sample size for our qualitative fieldwork. We hope that future studies will follow a similar methodology, but with a larger sample of colleges.

Table 1.
Quartile Rankings of High-Impact and Low-Impact Colleges Among 28 Florida Community Colleges on Selected Institutional Characteristics During the Study Period (1998-2003)[a]

Characteristic	High-Impact Colleges			Low-Impact Colleges		
	A	**B**	**C**	**A**	**B**	**C**
Location	Suburban	Urban	Rural	Suburban	Rural	Rural
FTE Students	2	1	4	3	4	4
% Female	1	2	2	4	4	4
% Black	2	1	1	3	2	3
% Hispanic	2	1	4	1	1	4
% P-T Students	1	1	4	3	3	4
Avg. Student Test Scores[b]	3	4	4	1	1	2
Pell grants per FTE	4	1	2	3	1	2
% P-T Faculty	1	2	3	2	2	2
Tuition	3	3	4	4	2	4
Instructional Expenditures per FTE	1	3	3	1	1	1
Student Service Expenditures per FTE	2	4	1	3	1	1
Ratio of Certificates to Associate Degrees Granted	1	3	1	2	1	1

[a] Quartile 1 includes the seven colleges with the highest values for the given characteristic, quartile 2 includes the seven colleges with the next highest values, and so on. The values on which these quartile rankings are based were calculated from IPEDS data for all measures except "location," "avg. student test scores," and "ratio of certificates to associate degrees," which were calculated from the sample data. All numeric values were averaged over the three years for which we have starting student cohort data: 1998-99, 1999-00, 2000-01.

[b] Some students in the sample submitted SAT or ACT test scores upon enrollment. Those who did not were required to take the College Placement Test used by all community colleges in Florida. We converted all test scores to an SAT scale (200-800) using the test makers' formula.

Table 2.
Development of Community College Institutional Effectiveness Model Elements During the Study Period: High- and Low-Impact Colleges Compared

Model Element	High-Impact Colleges			Low-Impact Colleges		
	A	B	C	A	B	C
1. Institutional focus on student retention and outcomes, not just enrollment	+	~	0	~	0	0
2. Targeted support for minority students: a. Clear commitment by college's leadership	+	~	0	+	0	0
b. Minority-inclusive campus environment	+	+	+	0	0	0
c. Outreach to improve college access by minority students	+	+	+	+	+	~
d. Specialized retention services for minority students	+	+	+	0	~	0
e. Active recruitment of minority faculty and staff	+	~	0	+	0	0
3. Well-designed, well-aligned, and proactive student support services	+	~	0	0	0	0
4. Support for faculty development focused on improving teaching	~	~	0	0	0	0
5. Experimentation with ways to improve the effectiveness of instruction and support services	+	~	0	~	0	~
6. Use of institutional research to track student outcomes and improve program impact	+	~	0	~	0	0
7. Institutional management processes designed to promote systemic improvement in student success	+	0	0	0	0	0

KEY:
+ = policy, practice, or cultural characteristic well developed during the study period.
~ = policy, practice, or cultural characteristic was developing during the study period.
0 = policy, practice, or cultural characteristic weakly developed or nonexistent during the study period.

Table 3.
Development of Community College Institutional Effectiveness Model Elements Since the Study Period: High- and Low-Impact Colleges Compared

Model Element	High-Impact Colleges			Low-Impact Colleges		
	A	B	C	A	B	C
1. Institutional focus on student retention and outcomes, not just enrollment	+	+	+	+	~	~
2. Targeted support for minority students a. Clear commitment by college's leadership	+	+	0	+	0	0
b. Minority-inclusive campus environment	+	+	+	~	0	~
c. Outreach to improve college access by minority students	+	+	+	+	+	+
d. Specialized retention services for minority students	+	+	+	+	0	0
e. Active recruitment of minority faculty and staff	+	+	0	+	0	0
3. Well-designed, well-aligned, and proactive student support services	+	+	+	~	~	~
4. Support for faculty development focused on improving teaching	+	+	~	+	0	0
5. Experimentation with ways to improve effectiveness of instruction and support services	+	+	+	~	~	~
6. Use of institutional research to track student outcomes and improve program impact	+	+	~	+	~	~
7. Institutional management processes designed to promote systemic improvement in student success	+	+	~	~	0	~

KEY
+ = policy, practice, or cultural characteristic well developed by fall 2005.
~ = policy, practice, or cultural characteristic developing in fall 2005.
0 = policy, practice, or cultural characteristic weakly developed or nonexistent in fall 2005.

Shaded cells indicate a change in policies, practices, or cultural characteristics since the study period.