TRANSITION MATTERS

COMMUNITY COLLEGE TO BACHELOR'S DEGREE

A PROCEEDINGS REPORT OF

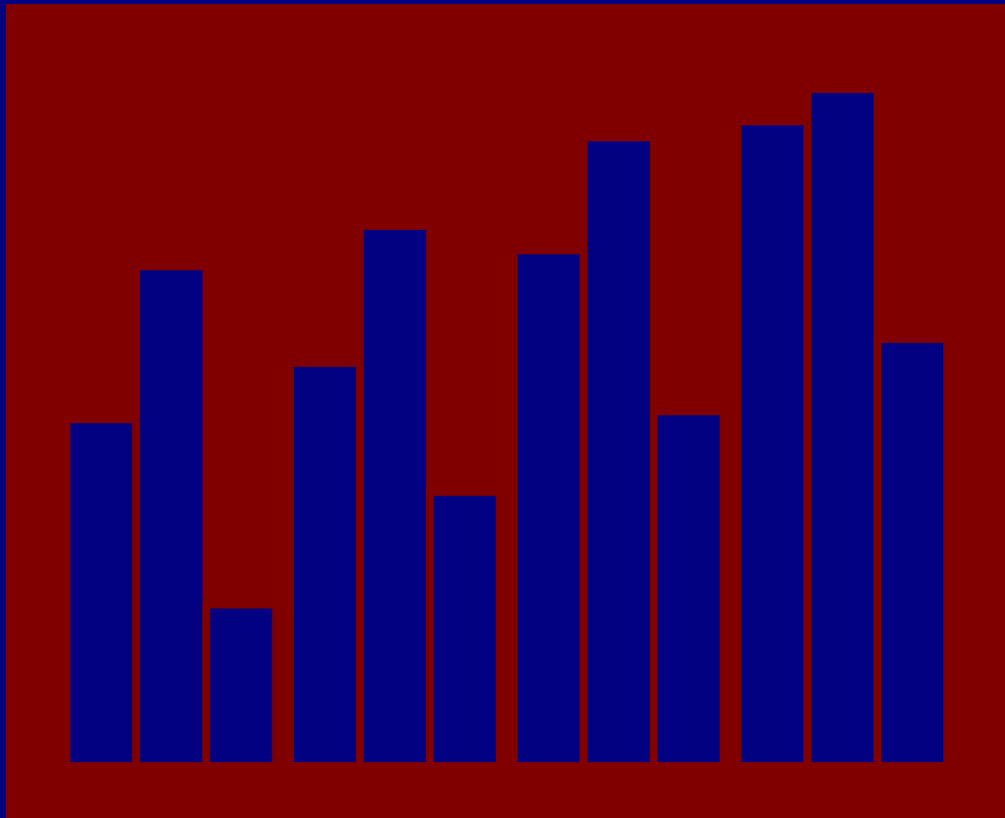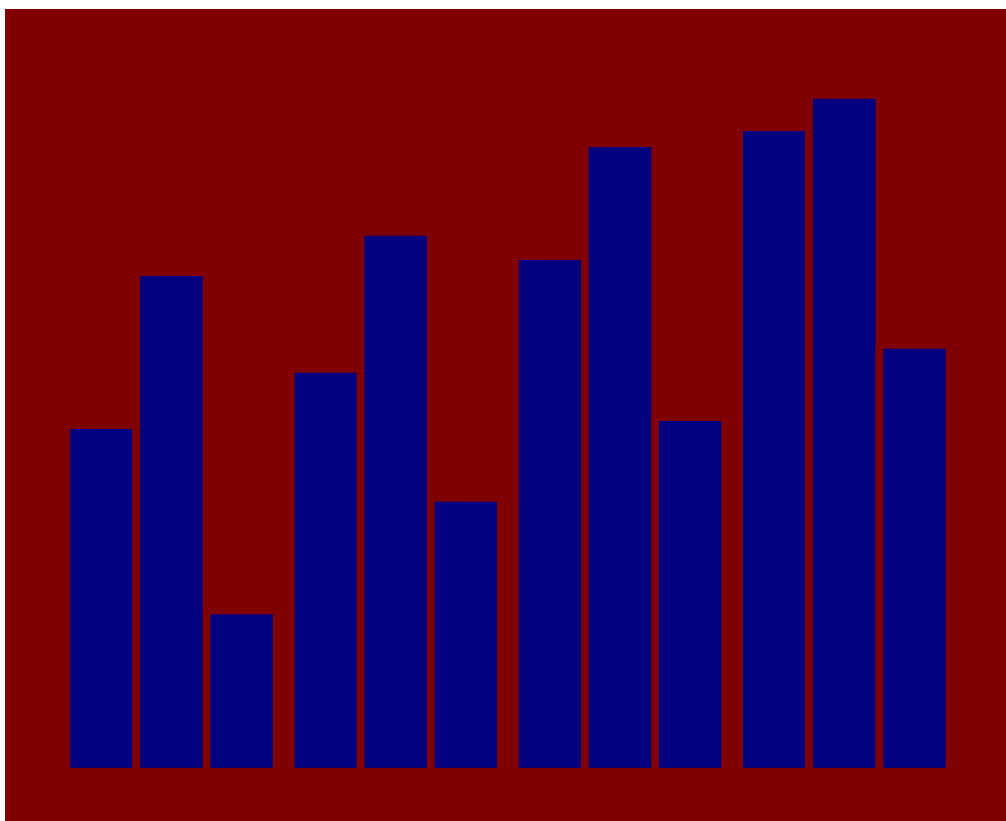THE ADVISORY COMMITTEE ON
STUDENT FINANCIAL ASSISTANCE

MAY 2008

TRANSITION MATTERS

COMMUNITY COLLEGE
TO BACHELOR'S DEGREE

A PROCEEDINGS REPORT OF

**THE ADVISORY COMMITTEE ON
STUDENT FINANCIAL ASSISTANCE**

MAY 2008

**ADVISING CONGRESS AND
THE SECRETARY OF EDUCATION
FOR NEARLY 20 YEARS**

**Advisory Committee on
Student Financial Assistance
80 F Street NW, Suite 413
Washington DC 20202-7582
Tel: 202-219-2099 • Fax: 202-219-3032
ACSFA@ed.gov
www.ed.gov/acsfa**

EXECUTIVE SUMMARY

Due to changing demographics, issues of college affordability, and workforce expectations, there is an increasing demand for access to community colleges. At present, there are approximately 1,200 community colleges nationwide, serving over 11.5 million students – nearly half of all undergraduates. These institutions have multiple missions integral to their local communities, one of which includes helping students transition from a two-year college to a four-year college to earn a bachelor's degree.

These institutions are a primary access point to higher education for many Americans, particularly those who have been traditionally underrepresented, such as minority, first-generation, nontraditional, and low-income students. As college costs increase, community colleges are becoming a more popular entry point for students of various economic backgrounds, and more students are turning to community college for the first two years of their education, with plans to transfer to attain a bachelor's degree.

However, data from a report by the Advisory Committee on Student Financial Assistance, *Mortgaging Our Future: How Financial Barriers to College Undercut America's Global Competitiveness* (2006), reveals problems en route to a bachelor's degree for college-qualified low- and moderate-income students who initially enroll at a community college with the intention of transferring to a four-year institution and attaining a bachelor's degree. Specifically, the report shows that among the 1992 high school graduate cohort, only 20 percent of college-qualified low-income students actually attained a bachelor's degree by 2000. While the number of higher income students in this same category who attained a bachelor's degree is significantly higher, the pathway is not perfect for them either, indicating the need to strengthen this route. Furthermore, new enrollment data now available suggest that a major shift in college enrollment from four-year colleges to two-year colleges occurred among low- and moderate-income college-qualified high school graduates between 1992 and 2004. These shifts portend higher projected bachelor's degree losses for the high school class of 2004 – as well as higher projected cumulative losses for the current decade.

Recognizing the need to strengthen the community college pathway, the Advisory Committee has undertaken an initiative on community colleges. Through its research, the Committee has noted three critical transition points for students who start at a community college and intend to obtain a bachelor's degree: enrollment, persistence, and transfer. Students encounter barriers at each stage that often prevent them from attaining a degree, barriers that fall into five categories: academic, social, informational, complexity, and financial. In this proceedings report, the Committee has identified and described multiple practices that reduce barriers, and, in so doing, enable enrollment, ensure persistence, and facilitate transfer.

This abbreviated version of the full report examines the background, related barriers, and practices to improve these transition points at community colleges. The full report details the proceedings of the Advisory Committee's Community College Symposium, held on December 10, 2007 in Washington DC, and contains all panelist testimony.

TABLE OF CONTENTS

OVERVIEW

Community colleges are the primary access point to higher education for those who have been traditionally underrepresented, such as minority, first-generation, nontraditional, and low-income students (Bailey and Morest 2006). For these populations, financial barriers to college access are significant obstacles, and, increasingly, these students are turning to two-year colleges as a less expensive pathway to bachelor's degree attainment. Increasing the number of students who attain the bachelor's degree is critical to America's global competitiveness because, over the next decade, more jobs will require at least some college education or a bachelor's degree (Bureau of Labor Statistics 2005; Uhalde et al. 2006). Therefore, strengthening the community college pathway to bachelor's degree attainment is one way to move more Americans toward economic security.

Strengthening the community college pathway to bachelor's degree attainment is one way to move more Americans toward economic security.

However, community colleges are the sector of higher education that is most likely to feel the impact of political and economic change. As states assess budget shortfalls, public colleges are often hit hard and costs to students are increased. Because community college fees are already low, policymakers may not hesitate to raise them as a method of meeting budget gaps. However, many low- and moderate-income students attend community colleges. These students are most sensitive to fee increases as well as to general economic hardship. Many live paycheck to paycheck, and forgoing income to earn a degree is an arduous task. In difficult economic times, such as are current, community college students may often have to choose between basic necessities and educational advancement. Even small changes to federal or state loan and grant programs can make or break the chance that a low-income student can assemble the financial resources required to enroll and persist in higher education to the completion of an associate's and then bachelor's degree.

Nearly 3.2 million bachelor's degrees among college-qualified low- and moderate-income students will be lost in the current decade due to financial barriers.

The Advisory Committee's 2006 report, *Mortgaging Our Future: How Financial Barriers to College Undercut America's Global Competitiveness*, reports that as many as 2.4 million bachelor's degrees among college-qualified low- and moderate-income students will be lost in the current decade due to financial barriers. Recently available data updates these numbers to nearly 3.2 million (ACSFA 2008). Without question, obtaining an associate's degree en route to a bachelor's degree is a lower cost option for this population to obtain the skills needed to thrive in an increasingly complex economic environment. Maintaining this option for students will be a collective endeavor among states, postsecondary schools, secondary school systems, and the federal government. All stakeholders must consider how best to strengthen three critical transition points for those who enroll at a community college with

the intention of eventually obtaining a bachelor's degree: how to enable enrollment, ensure persistence, and facilitate transfer.

Enabling enrollment involves collaboration among states, colleges, and secondary school systems to create a better understanding of the skills required for students to be truly college-ready at both the levels of academic and informational preparedness. While community colleges must maintain open door policies as a means of maximizing the number of potential students, they must still work with states and secondary schools to ensure basic college-preparedness. In addition, outreach activities can reduce the information barriers that students often face that prevent them from understanding administrative procedures or the availability of financial aid. States should also partner with institutions to better link secondary and postsecondary education.

All stakeholders must consider how best to strengthen three critical transition points for those who enroll in a community college with the intention of obtaining a bachelor's degree.

Ensuring persistence will require community colleges to define collectively and respond individually to measures established to guide enrolled students through the associate's degree process and onward toward transfer and bachelor's degree attainment. Schools should develop these measures not just to track student persistence, but to evaluate enrollment and transfer as well, keeping in mind the complexity of community college student populations who often face conflicting responsibilities while enrolled. Aligning curriculum and standards between K-12 and higher education, as well as targeting developmental education resources are two steps states and institutions can take to prepare students for the rigors of postsecondary education. Underlying all of these efforts should be clear public goals at the state level to support student persistence.

Enabling enrollment, ensuring persistence, and facilitating transfer are the necessary steps to improve this pathway.

Facilitating transfer requires that colleges and states look back at the collaborative and evaluation mechanisms that promote enrollment and persistence in order to apply them to the next leap students must take. For instance, understanding the skills required for basic college-readiness encourages dialogue to begin an articulation or support services discussion. Measurements that ensure persistence can be extended to encourage further educational attainment, information that can be shared with four-year college administrators. Building partnerships between two-year and four-year institutions that allow seamless transfer is an overarching goal of increasing bachelor's degree attainment levels. And, as with persistence, public goals to increase transfer as a means of improving employment rates and quality of life should be a priority of the states.

Community colleges have been responsive to these concerns and already are taking steps to better serve and enable more students to move toward completion of an associate's degree and transfer to a four-year institution.

To provide support to community colleges in their efforts, the Advisory Committee has reviewed and analyzed the numerous obstacles students and institutions report that impede progress toward enrollment, persistence, and transfer. These barriers fall into five categories: academic, social, informational, complexity, and financial.

At the Committee's Community College Symposium, held on December 10, 2007 in Washington DC, representatives from a broad cross-section of community colleges shared their efforts to address these barriers and move students toward professional and economic success. As all three sessions of the symposium show, community colleges represent a diverse constituency of students, many whom begin their educational pathway there with plans to transfer and attain a bachelor's degree. Now is the time to muster resources and align standards so that students may achieve their dreams.

Barriers to student enrollment, persistence, and transfer fall into five categories – academic, social, informational, complexity, and financial.

ENABLING ENROLLMENT

Background

As demand for higher education has risen, enrollment at community colleges has dramatically increased—five-fold since 1965 (NCES 2002)—and is expected to continue rising. By 2015, enrollment could increase by as much as 46 percent beyond the level of enrollment in 2000 (Martinez 2004). In addition, the number of low-income, minority, first-generation, non-native English speakers, and adult students expected to enroll in community college will continue rising (McClenney 2004).

Community colleges feel significant pressure to effectively meet this demand, and remain committed to their open door policies that provide access to all students. However, increased enrollment has also come at a time of decreased funding for enrollment-related resources such as outreach and counseling, number of class offerings, and tuition subsidies. All of these factors can negatively impact students' ability to enroll (Bailey and Morest 2006). Specifically, when decreased funding results in increased tuition, students are directly affected. For example, in 2003-04, at least 250,000 potential college students did not enroll in higher education due to reduced state funding and increased tuition levels (The National Center for Public Policy in Higher Education 2004).

Despite decreased funding, community colleges continue to assist students who are considering, approaching, and moving through this higher education entry point. However, these institutions face numerous enrollment-related challenges as a result of their multiple missions and varied range of students. Some of these challenges include helping students understand the benefits of a community college education, the availability of financial aid and how to apply, the purpose and need for developmental courses, the enrollment process, and enrollment services for nontraditional students (Giegerich 2006).

Maximizing the potential of an open door policy means analyzing the barriers to enrollment that prospective students face. These barriers fall into five major categories—academic, social, informational, complexity, and financial—all with particular ramifications for community college students. As state systems work through enrollment issues, they must come to understand the effects of these enrollment barriers on prospective students.

Community colleges feel significant pressure to meet increasing enrollment demands.

Community colleges remain committed to their open door policies despite multiple missions and a varied range of students.

Main Barriers

Academic. Inconsistent academic standards in secondary education leave many students thinking they are prepared for college, only to start the enrollment process and discover they are in need of remediation. In the fall of 2000, 42 percent of entering community college students took at least one remedial course (U.S. Department of Education 2003*).* This is partially a result of a lack of standard course requirements that align secondary and postsecondary institutions (Pathways to College Network 2007a). Although many states are in the process of aligning high school standards with college expectations, only nineteen states currently have aligned standards in place (Achieve 2008).

Additionally, students who do not have specific career or degree plans find enrollment a more tenuous prospect as they lack direction and, possibly, the motivation to enroll. If such students decide to enroll, they may feel uncertain as they navigate the enrollment process in terms of course registration and how to proceed generally (Rosenbaum et al. 2006).

Social. Many students do not know others who are college-bound. They also lack encouragement from their families, teachers, colleagues, and community members and do not receive educational guidance or mentoring. As a result, they are less likely to enroll (Pathways to College Network 2007b). Even college-qualified low-income, first generation, and other underserved students are more likely to lack such supports and are at greater risk (Choy 2002; Bailey and Morest 2006). These students need people in their lives who encourage them to aspire to college, expect them to enroll, and assist them with the preparation process (Bedsworth et al. 2006).

In addition, students often have competing obligations, such as family and work-related responsibilities, that restrict their ability to enroll. They may be the primary income earner for the extended family, or may be working or single parents. For example, 27 percent of full-time and 50 percent of part-time students work 40 hours a week or more, and 17 percent of students are single parents (AACC 2008).

Informational. Many students lack information about college preparation and benefits, the admissions process, and what to expect from college (Vargas 2004). But students who receive information on preparing for college are more likely to enroll than students who do not (King 1996). Unfortunately, low-income and other underserved students are less likely to obtain information about college, and without such guidance are less likely to enroll (Pathways to College Network 2004).

> **Students who do not have specific career or degree plans find enrollment a more tenuous prospect.**

> **Students often have family and work-related responsibilities that restrict their ability to enroll.**

Traditional students rely on their schools and communities to provide information on college, but public high schools, on average, offer one guidance counselor for every 300 students (NCES 2003). This places the low-income student at an even greater disadvantage. Nontraditional students have even fewer options for obtaining information about college, relying more heavily on admissions, financial aid, and other student services at a community college. Due to a lack of funding, such services are often understaffed (Bailey and Morest 2006).

Complexity. As a result of a lack of guidance on college-enrollment processes, students can make mistakes or incorrect choices regarding courses, major, enrollment status, and need for financial assistance (Rosenbaum et al. 2006). Academic catalogs and course requirements may be confusing and offices may be difficult to locate. Steps to complete enrollment, registration, and financial aid requirements may be drawn-out and complicated (Rosenbaum et al. 2006).

Nontraditional students have few options for obtaining information about college.

This lack of clarity can overwhelm or frustrate students and hinder their ability to enroll. A recent study comparing public community colleges to private occupational two-year colleges found that occupational colleges took extra measures to reduce complexity in and assist students with administrative processes and procedures. Not surprisingly, students at occupational colleges had greater enrollment success and did not encounter the problems related to complexity that students at public community colleges experienced (Rosenbaum et al. 2006).

Financial. Students often encounter difficulty paying tuition, fees, and related educational and living expenses. Many work to cover such expenses, yet, by doing so, they often become ineligible for state and federal aid due to increased income (Advisory Committee on Student Financial Assistance 2005). Borrowing funds may be necessary if state and federal grant aid is insufficient; however, low-income and minority students in particular are averse to taking out loans to pay for education (ECMC Group Foundation 2003; Price 2004).

Students often encounter difficulty paying tuition, fees, and related educational and living expenses.

On the other hand, many students do not even apply for aid and fail to take advantage of funds available to them (King 2006). Community college students who do fill out the FAFSA often apply just before or after the start of the academic term. These late applications may cause students to miss state deadlines for financial aid in some states or arrive after available aid has been distributed (Zumeta and Frankle 2007; Kirshstein and Rhodes 2001). Late applicants may not receive their funds until several weeks into the term due to the time required for processing and disbursement.

Session Panelists

Session one panelists discussed the enrollment barriers described above in the context of a climate in which community colleges serve as a gateway to higher education. The challenge of increasing such opportunity is commensurate with addressing the needs of underprepared students and the other barriers to enrollment that low-income students, in particular, face. Each of the panelists represented a college that is developing innovative measures at the state or institutional level that have been successful in increasing the number of enrollments while maintaining an open door policy. Panelists explained how various efforts—marketing campaigns, personal outreach to local high schools, and targeted high school-to-college transition programs—might serve as models for other states and institutions. Complete panelist testimony can be found in the full report.

The session was moderated by Chairperson Judith Flink. Prior to the panelist testimony, Moira Lenehan Razzuri, Legislative Assistant to Congressman Rubén Hinojosa, provided remarks on the importance of community colleges to the national economy and steps that Congress has taken that benefit community college students.

Panelists included:

Ms. Melissa Gregory
College Director of Student Financial Aid
Montgomery College

Ms. Gregory discussed her outreach efforts to Maryland-area high schools and the local community to help students prepare for community college and better understand the financial aid application process. These efforts include an initiative to increase the number of low-income students who complete the Free Application for Federal Student Aid (FAFSA) in time to receive state grants, as well as *You Can Afford College*, a televised event in Maryland during which student and parent questions about financial aid are answered.

Ms. Linda Michalowski
Vice Chancellor
Student Services and Special Programs
California Community Colleges Chancellor's Office

Ms. Michalowski discussed an initiative of the California Community Colleges Chancellor's Office, the *I Can Afford College* public awareness campaign. She explained how the campaign better informs students about paying for college through television, radio, and print announcements. These efforts are intended to increase the number of students who enroll in and apply for financial aid at California Community Colleges.

Mr. Christian Campagnuolo
Assistant Vice President
Marketing and Media Relations
Valencia Community College

Mr. Campagnuolo discussed the marketing and outreach efforts he is leading to improve the enrollment process at Valencia Community College, as well as efforts to inform students about career pathways offered by Valencia. These include www.EducationIsIn.com, related television commercials, the use of segmented marketing in enrollment, and improvements in communication between campus administrators and students.

Ms. Kerin A. Hilker-Balkissoon
Director
Pathway to the Baccalaureate Program
Northern Virginia Community College

Ms. Hilker-Balkissoon discussed her work with *Pathway to the Baccalaureate Program*, a joint initiative of Fairfax and Loudoun County Public Schools, Northern Virginia Community College, and George Mason University. The *Pathway* program promotes the transition and retention of at-risk students in postsecondary education. Other objectives of the program include assisting high school students with enrollment and persistence in community colleges, and encouraging transfer to a four-year college.

Practices to Enable Enrollment

Panelist testimony and a review of the literature have revealed a number of practices that enable student enrollment at community colleges. These strategies include identifying and responding to institution- or state-specific enrollment barriers, communicating information through outreach efforts, creating systems to better link secondary and postsecondary education, improving administrative procedures, and ensuring that sufficient financial aid is available. As noted earlier, research suggests that low-income and disadvantaged students face five general barriers when enrolling, persisting, and transferring: academic, social, informational, complexity, and financial. The enrollment practices that follow work to address multiple barriers, thereby maximizing enrollment and opportunity for as many students as possible. These practices are offered as possible models for institutions to implement in ways that best serve their needs.

Identify and Respond to Institution- or State-Specific Enrollment Barriers

Working collaboratively to identify and respond to institution- or state-specific barriers is an initial step in the process of enabling enrollment for low-income students. Research suggests the need to analyze a system and identify problem areas before implementing policies or programs. The Education Commission of the States encourages evaluating and understanding conditions in the state, particularly the needs of underrepresented students, and crafting policies to address

those needs (Ruppert 2003). *Achieving the Dream* is an excellent example of this approach. The project works with states and community colleges to identify policies affecting access and success, learn how to gather and analyze pertinent data, and respond with appropriate policies and programs (Dougherty and Reid 2006). By first identifying barriers unique to a state or community college system, practitioners can determine targeted approaches to address them and better enable enrollment.

Panelists from Maryland and California discussed enrollment-related programs resulting from state-specific barriers. A 2001 report from the Maryland Higher Education Commission revealed that only a marginal portion of the state's need-based grant was reaching community college students, in part because the grant deadline was too early for most of them to take advantage of it. Community college students often begin the enrollment process just prior to the start of the academic term, and so miss the deadline. Once this barrier was identified, the state worked to improve funding approaches, while community colleges strengthened early awareness initiatives to encourage more students to apply for aid by the state deadline.

The California Community Colleges' *I Can Afford College* campaign was a response to the state's decision to increase student fees at community colleges by 64 percent. State leaders recognized that this increase could create a financial barrier for students, low-income students in particular, and responded by investing $38 million annually to increase financial aid staff at individual colleges and to fund *I Can Afford College*, a financial aid information campaign.

Efforts to address institution-specific barriers were detailed by panelists from Florida and Virginia. Valencia Community College in Florida has improved enrollment as a response to barriers created by out-of-date institutional policies. For example, the college did not have an established method of communicating consistent information to prospective students, nor did its marketing approach recognize the differences among the different types of prospective students attracted to Valencia. By analyzing the data on existing students, the college was able to create a series of up-to-date student profiles that enabled it to establish clear messages and an interactive website.

Likewise, Northern Virginia Community College (NoVA) determined that more high school students were declaring intent to attend NoVA than actually enrolled and were ill-prepared to succeed as well. Established as a response to this analysis, the *Pathway to the Baccalaureate Program* is a collaborative effort by NoVA, local high schools, George Mason University, and others to assist students through the transition from secondary to postsecondary education and ensure success in higher

Working collaboratively to identify and respond to institution- or state-specific barriers is an initial step toward enabling enrollment.

The California Community Colleges' *I Can Afford College* **campaign was a response to the state's decision to increase student fees at community colleges by 64 percent.**

education. The *Pathways* program serves students within the high schools that they attend, providing academic, informational, and financial services.

As the panelists' testimony demonstrates, state-specific barriers to enrollment are often related to financial barriers. In both cases, Maryland and California, part of the solution was to reduce informational barriers: Maryland has been unable to adjust state grant deadlines, but has increased awareness of them, and California acted to ensure that low-income students recognized that fee waivers were available for them, as well as other types of aid.

Institution-specific barriers are products of multiple issues. Complexity at the institutional level that prevents colleges from accurately assessing the needs of prospective students is one problem. In addition, institutions that seek to increase enrollment for underserved populations must also address the academic barriers of their populations.

Valencia Community College has improved enrollment as a response to barriers created by out-of-date institutional policies.

Communicate Information through Outreach Efforts

Outreach is a powerful tool to inform prospective students, help them overcome their concerns, and assist them with the enrollment process (Pathways to College Network 2004). Outreach is a broad concept that encompasses a variety of efforts and approaches. It can focus on just one problem issue or can take a comprehensive approach; it can target one specific group, such as low-income or minority students, or serve a wider audience. Some key approaches to using outreach include broad communication through mass marketing; direct, personal communication through local advising; and detailed communication through Internet sites and resources.

Outreach is a powerful tool to inform prospective students, help them overcome their concerns, and assist them with the enrollment process.

Mass marketing has been found to be important in terms of increasing college access through information (CommunicationWorks LLC 2002; Pathways to College Network n.d.; College Access Marketing n.d.). The purpose of the mass market campaign of the California Community Colleges, *I Can Afford College*, is to combat misinformation or a lack of information about college affordability in order to encourage enrollment. Components of the campaign include radio, television, and print advertisements used to target young low-income students, low-income adults, and others who influence these students. The ads direct prospective students to a website for more information on financial aid availability and assistance, including the contact information for community college financial aid offices. As a result, the California Community Colleges have seen a 20 percent increase in financial aid applications and awards.

In contrast to this broad approach, financial aid administrators in Maryland have used direct, personal outreach methods. These efforts include holding financial aid information workshops for families and school counselors at area middle and high schools, sending financial aid information to various groups within the community, participating in College Goal Sunday, hosting a Financial Aid Awareness Week, and participating in a televised event, *You Can Afford College*, that answers questions about financial aid. As a result there has been a 26 percent increase in the number of community college students who apply for aid by the state grant deadline. Similarly, NoVA's *Pathway to the Baccalaureate Program* includes community information workshops, tutoring within the high schools, and advising on how to prepare for college.

The Internet is also a channel for effective outreach, as research shows that 87 percent of teenagers use it and more households now have access to broadband (Lenhart et al. 2005; Horrigan 2006). Valencia Community College's website, www.EducationIsIn.com, seeks to reach prospective students through an interactive format. An electronic magazine is the main feature, providing essential information about Valencia, its degree and career offerings, the benefits of various careers, and how to enroll. The website receives about 4,000 visitors a week and enrollment has increased as a result. Northern Virginia Community College (NoVA) has also engaged in web-based outreach through their online FAFSA video tutorial. In the tutorial, two student narrators provide a detailed explanation of each step in the application process, while questions and instructions from the FAFSA are displayed on the screen. This tutorial addresses two issues in the college community: a shortage of financial aid counselors to provide personalized assistance, and a student population that has difficulty meeting with counselors during regular business hours. Since the tutorial went online in July 2007, the number of NoVA students submitting a FAFSA has significantly increased.

Outreach is a method of addressing informational barriers, but in so doing, can contribute to reducing social, complexity, and financial barriers as well. Mass market approaches have been helpful in a state as large as California, while Maryland, with a smaller geographic area, is better positioned to provide more personalized and directed outreach. Both large and small states, as well as individual colleges, can take advantage of the Internet as a point of contact between institution and prospective student through which multiple, coordinated messages can be accessed at-will on the timetable of the individual.

Create Systems to Better Link Secondary and Postsecondary Education

Community colleges can help bridge the transition from secondary to postsecondary education by creating systems that link the two educational levels. Successful efforts combine academic, social, and information supports. Research has shown that programs offering strong academic and social supports to low-income, at-risk high school students increase the likelihood of such students enrolling in college (Martinez and Klopott 2005). Dual enrollment is another way to develop a link between educational systems that has been shown to increase college access for low-income and disadvantaged students (Karp et al. 2007).

NoVA's *Pathway to the Baccalaureate Program* developed a partnership with area high schools to more effectively enable college enrollment for minority, low-income, and first-generation students. The program works within high schools, offers a variety of services, including placement testing and accelerated tutoring, to inform and prepare students for enrollment. NoVA's program takes a cohort approach, working with students in high school and staying with them to provide support through community college and transfer to a four-year institution.

An example of a comprehensive approach at the state level is the College and Career Readiness Pilot Program Act that the governor of Illinois recently signed into law. This act will create partnerships between community colleges and area high schools to determine students' college readiness early by examining gaps in the curricular alignment between secondary and postsecondary education and determining ways to close those gaps (Illinois Board of Higher Education 2007). This may improve the level of academic preparation that students have when beginning a postsecondary education. Preparation and community college enrollment will be promoted through measures such as tutoring, dual enrollment, and AP courses.

Many states, institutions, and organizations are actively promoting dual-enrollment. An examination of dual enrollment populations in Florida found that students were more likely to go on to enroll in college and more likely to enroll full-time. Similar results were found for students who participated in dual enrollment through the College Now program at the City University of New York (Karp et al. 2007). The Community College Research Center is beginning a dual enrollment initiative for low-income, underrepresented, and low-achieving students in California, funded by the James Irvine Foundation, called *Concurrent Courses: Pathways to College and Career Initiatives* (The Community College Research Center n.d.). *The College and Career Transitions Initiative*, operated by the

Programs offering strong academic and social supports to low-income, at-risk high school students increase the likelihood of such students enrolling in college.

Pathway to the Baccalaureate Program **developed a partnership with area high schools to enable college enrollment for minority, low-income, and first-generation students.**

League for Innovation in Community Colleges in conjunction with the U.S. Department of Education's Office of Vocational and Adult Education has similar goals. In particular, the initiative focuses on showing students career pathways (The League for Innovation in Community Colleges n.d.).

Alignment strategies, such as the ones discussed above, are primarily a means of addressing academic barriers. Students who engage in these curricula or curricular supports are more likely to be academically prepared for college. However, alignment strategies also work to alleviate social, informational, and complexity barriers by familiarizing high school students with college administrators, procedures, and campuses.

Improve Administrative Procedures Related to Enrollment

Unfortunately, admissions, financial aid, and registrar's offices can significantly increase barriers community college students experience related to enrollment. Recent research has noted that these services, which are intended to decrease barriers, can actually reinforce them by being structured in such a way that students who need them most cannot access and benefit from them (Karp et al. 2008). A new report from The Institute of College Access and Success, *Green Lights & Red Tape*, exemplifies this point. The report highlights procedures in financial aid offices at California Community Colleges that reduce or increase barriers related to enrollment. Some services found to reduce barriers include making financial aid information available in other languages, restructuring office staffing such that experienced staff are available to answer student questions, and making available computers with staff nearby to assist students with their online FAFSA application.

The one-stop student services model is another solution to these problems. One-stop might refer to multiple services provided by liaison administrators or ways in which services are centralized and linked. NoVA's *Pathway to the Baccalaureate Program* has cross-trained its community college staff in financial aid and other student services. A staff member works within a high school to assist students with a variety of their enrollment needs so that they do not have to locate different offices on the college campus. Skyline College in California has created a One-Stop Student Services Center that integrates in one location all outreach, admissions, assessment, registration, articulation, and advising, as well as services for returning students. By increasing accessibility and quality of services for students and connecting the technological framework services, the center was able to increase efficiency (Ybarra-Garcia 2002).

An examination of dual enrollment populations in Florida found that students were more likely to go on to enroll in college and more likely to enroll full-time.

The one-stop student services model reduces complexity barriers by centralizing and simplifying administrative services.

Improving administrative procedures is a matter of addressing complexity barriers. Whether a college adopts targeted solutions to particular problems, trains liaison administrators, or creates an integrated single services location will depend on the needs of the institution and the students that it serves. Programs that use alignment strategies may benefit from liaison administrators, while colleges seeking solely to increase enrollment might look toward a single services location model. Other schools may need to analyze enrollment outcomes and determine where specific roadblocks occur for prospective students.

Ensure that Sufficient Financial Aid is Available

Although tuition at community colleges is lower than tuition at four-year public and private colleges, it can still be out of reach for many. Aside from tuition, the additional costs associated with attending community college, such as textbooks, computers, transportation, and childcare, as well as lost income, may make education prohibitive (Zumeta and Frankle 2007). Ensuring the availability of need-based financial aid is a key component to enabling student enrollment at the community college level (Kirshstein and Rhodes 2001; Zumeta and Frankle 2007). Strategies for doing so include providing additional funding or waivers for certain programs or sectors, and aligning state grant programs with the specific needs of community college students.

NoVA's *Pathway to the Baccalaureate Program* takes many measures to assist students with the college enrollment process, and it also recognizes that some students cannot enroll without financial assistance. To address this problem, NoVA makes available $200,000 to provide supplemental need-based grants to program students. In a similar fashion, California offers the California Community College Board of Governor's Fee Waiver to all community college students eligible for the federal Pell Grant and the state Cal Grant, a waiver that essentially covers all college costs (The Institute for College Access and Success 2007).

Many states have sought to align their grant programs with the needs of community college students. In particular, Maryland has worked to ensure equity in the distribution of grant funds among all postsecondary sectors, including schools with high percentages of Pell Grant enrollees. Other states that have opened grant programs to part-time students, an action that benefits community college students, include Ohio, where community college students enrolled only quarter-time are eligible to receive the Ohio College Opportunity Grant, and New Jersey, which allows part-time students to receive its Tuition Assistance Grant (Dougherty et al. 2006; Higher Education Student Assistance Authority n.d.). Other states, such

The additional costs associated with community college, such as textbooks, transportation, and childcare, may make education prohibitive.

Ensuring the availability of need-based financial aid is a key component to enabling student enrollment.

as Washington, have given priority to certain student segments in awarding state grants, such as foster care students.

Successfully addressing financial barriers often requires understanding how the informational, social, and complexity barriers impact students' ability to afford community college. For example, part-time students face different financial barriers than foster care students do as a result of the other types of barriers they encounter. In addition, targeting state grant aid to specific groups of students and supplementing it with aid from individual programs and colleges are ways of further eliminating financial barriers for students.

Making sure that students are able to enroll is the first step; the next is ensuring that they are able to persist.

These five practices offer a variety of methods by which to better enable enrollment, and provide a starting platform for states and institutions wishing to do so. Making sure that students are able to enroll is the first key step in the transition to college and the pathway to a bachelor's degree. Once students have successfully matriculated at community college, the next important area on which to focus is ensuring that students are able to persist throughout their chosen programs.

ENSURING PERSISTENCE

Background

While all students do not enroll in community college for the purpose of attaining a degree, research has shown that the persistence patterns of those who intend to gain a degree or transfer are troubling and inconsistent (Driscoll 2007). Data from 2006 show that after three years, 45 percent of first-time community college students were not enrolled in any type of institution and had not received a degree, far higher than four-year college student attrition rates (NCES 2007). Inasmuch as these schools serve as a pathway to a bachelor's degree, the evident pattern of non-completion is disturbing. Forty-six percent of our nation's postsecondary students attend community colleges; thus, increasing persistence at the community college level is vital to preparing the nation's future workforce (AACC 2008).

Understanding why students do not complete their programs is crucial. Among other factors, students drop out or stop out prior to completion because of the competing pressures of work and family, which limit the time available for academic pursuits (Tinto 1993; Schmid and Abell 2003; Sydow and Sandel 1998). Many students also cite related financial constraints as a reason for non-completion (Choitz and Widom 2003). While open access ensures that any high school graduate can attend, community college students, on average, enter less academically prepared than their peers at four-year colleges, which can also inhibit persistence (Bailey et al. 2005; Adelman 2006; Bailey and Alfonso 2005).

Directing resources to improve factors affecting student persistence is more difficult for community colleges than four-year colleges for multiple reasons. State education formulas are often inequitable, typically funding two-year colleges at lower levels than four-year colleges (Mullin and Honeyman 2007). This lack of adequate funding is a top concern among community college leaders (Education Commission of the States 2000). In addition to funding issues, community colleges face challenges in serving a population more complex than an average four-year college. This diversity means that appropriate support services for persistence will vary from college to college. For example, full-time community college students entering directly from high school have different motivations, goals, and problems than do older, part-time students with full-time jobs and families to support (Bailey and Alfonso 2005). These factors must be considered along with other persistence-related barriers in order to develop and implement successful retention efforts.

Understanding and addressing persistence at the community college level is a multi-faceted task that takes into account fluctuating state funds and a

Data from 2006 show that after three years, 46 percent of first-time community college students were not enrolled in any type of institution and had not received a degree.

Directing resources to improve student persistence is difficult for community colleges due to a lack of funding and the varying needs of the diverse student population.

17

diverse service population. To meet persistence goals, college leaders must constantly reevaluate institutional objectives and refocus efforts. Nationwide, organizations are taking steps to improve persistence at community colleges. The *Bridges to Opportunity* initiative, funded by the Ford Foundation, works to improve educational and economic outcomes of low-income adults, while *Achieving the Dream* focuses on using data to support the development of strategies for student success. The MetLife Foundation's *Community College Excellence Award* honors colleges achieving results with underserved student populations. All of these efforts take into account the five general barriers that affect student persistence: academic, social, informational, complexity, and financial.

Main Barriers

Academic. Community college students often enroll with academic needs that differ from their peers at four-year colleges. Some may be returning to college after working, and others may be traditional-aged students who have always struggled in school. In addition, a student's enrollment status is related to academic success and steady persistence. Of all students beginning at public two-year institutions in 2003, only six percent of students continuously enrolled part-time received any degree after three years, compared to 23 percent of students continuously enrolled full-time. Only 31 percent of students continuously enrolled part-time were still in school or had transferred by that time compared to 48 percent of students continuously enrolled full-time (NCES 2007).

Students who are not college-qualified, who are enrolled in developmental courses, or who lack sufficient study and academic skills are less likely to persist in college (Grimes 1997). Certain milestones such as completing developmental education requirements, passing the first course of college-level math, and generating a year of college-level credit are critical points in keeping on the path toward degree completion (Calcagno et al. 2006; Prince 2006; Adelman 2006). Students who have yet to reach these milestones are at a greater risk of not persisting.

Social. Research at four-year colleges suggests that students can encounter persistence problems when they are not adequately integrated with the school community (Braxton et al. 2004; Tinto 1975). Because of the commuter-oriented population of two-year colleges, building strong relationships with faculty and classmates can be even more challenging. This lack of connection can lead to feelings of isolation and inadequate access to resources that could promote persistence efforts.

While much research exists highlighting the types of engagement that enhance persistence for students at four-year institutions, less research has

To meet persistence goals, college leaders must reevaluate objectives and efforts to account for the barriers that affect student persistence.

Students who are not college-qualified, who lack sufficient study skills, and are not integrated with the school community are less likely to persist.

been done on this subject for students at two-year colleges. The research that is available, however, suggests that community college students benefit from becoming engaged in learning communities tailored to their needs (Bailey and Alfonso 2005).

Informational. Many students do not have adequate advising to obtain information on the behaviors and steps needed to enhance persistence. Even if the information is available, it may not be accessible or tailored to meet the students' needs. Students may not be aware of information gaps until it is too late, so a system of advising that requires students to initiate contact may not be as effective as one that automatically emails, calls, or otherwise notifies students of impending deadlines (Rosenbaum et al. 2006).

Orientation courses have been shown to be positively related to persistence. This implies that students who are not introduced to the issues discussed in orientation courses, such as financial aid and academic advising processes, face challenges in the areas of academic progress and persistence (Rendon 1995; Shulock and Moore 2007).

Complexity. The lack of clarity and seeming disconnect among institutional policies and offices can lead to student confusion, which can result in mistakes that hinder persistence. These mistakes might include enrolling in inappropriate courses and delays with financial aid and bill payment, among others. Students often comment that it is difficult to understand and navigate the various offices, processes, and policies of a campus (Community College Study of Student Engagement 2007).

These comments corroborate research outlining differences among community colleges relative to persistence efforts. Research finds that support services need not only be available, but must be coordinated and aligned throughout the college's administrative offices (Jenkins 2006). Additionally, in order for large-scale systemic change to occur, alignment of expectations and policies between K-12 and higher education must be in place (Kazis 2006; Jenkins 2006). Otherwise, disconnected systems and services could be relaying different messages and confusing students.

Financial. Low-income students, especially nontraditional students, indicate that financial issues are the primary hindrance to completing college plans; this includes not only tuition, but rent, childcare, and transportation (Grossman and Gooden 2002; Choitz and Widom 2003). The average unmet need among low-income students who attended community college full-time in the 2003-04 school year was $5,567 (Long and Riley 2007). Thus, the average remaining expenses after the award of

Many students do not have adequate advising to obtain information on the behaviors and steps needed to enhance persistence.

Students comment that it is difficult to understand and navigate the various offices, processes, and policies of a campus.

19

need-based aid, including the Pell Grant, require students to work or borrow to pay for education.

The financial burden of college can increase pressure to work, taking away time that could be devoted to study. In fact, 50 percent of community college students work full-time and attend school part-time, which often lowers eligibility for financial aid and increases time-to-degree and persistence (AACC 2008). Students who are head of household must also consider rent, childcare, and other cost-of living expenses. Furthermore, the price of textbooks at two-year public colleges has risen over 100 percent in the past 17 years, more rapidly than other commodities during the same time period (ACSFA 2007). Students unable to purchase textbooks may be at a disadvantage academically, especially at community colleges where the library may not be as extensive as that of a four-year college.

Session Panelists

This session focused on strategies that promote student persistence and completion at community colleges. Panelists included researchers and community college leaders who discussed a variety of persistence initiatives, including global strategies based on research and program-, institution-, and state-specific efforts. These included state legislation, research on student engagement, and financial incentives that serve to increase student persistence and success. Complete panelist testimony can be found in the full report.

Mr. Robert Shireman was the moderator for session two.

Panelists included:

Dr. Thomas R. Bailey
Director
Community College Research Center
Teachers College, Columbia University

Dr. Bailey discussed his research on the role that "student success" courses play in providing the information and academic guidance necessary to persistence. Student success courses teach study skills, coping mechanisms, and topics related to making the transition to higher education. He presented research findings from Florida's community college system.

Dr. Lashawn Richburg-Hayes
Senior Research Associate
Young Adults and Postsecondary Education
MDRC

Dr. Richburg-Hayes discussed the results of the *Louisiana Opening Doors* demonstration program, which found that additional student financial assistance increased credit accumulation and persistence at community colleges. The *Opening Doors* demonstration consists of several projects designed to affect persistence at community colleges in different areas of the nation.

The Louisiana demonstration, a scholarship program, provided incentives for students to reach certain persistence benchmarks.

Mr. David Prince
Assistant Director
Research and Analysis
Washington State Board for Community and Technical Colleges

Mr. Prince discussed the *Student Success Initiative*, a new incentive program that the Washington State Board for Community and Technical Colleges is piloting to increase student persistence levels. This initiative rewards institutions for meeting benchmarks in key areas related to student persistence.

Mr. Richard Kazis
Senior Vice President
Jobs for the Future

Mr. Kazis discussed Jobs for the Future's work through *Achieving the Dream* to create state policy that effectively promotes student persistence. He commented on the various approaches that the 15 states involved in the project have taken to reach that goal.

Dr. Angela Oriano-Darnall
Project Coordinator
Survey of Entering Student Engagement
Community College Survey of Student Engagement

Dr. Oriano-Darnall discussed how community colleges are using data from the Community College Survey of Student Engagement (CCSSE) to measure student engagement and to design policies and programs that increase student persistence. CCSSE is a national survey gauging the engagement of students at participating colleges, including faculty interaction and the use of school centers and services, among other things. The data collected is made public and colleges are able to use the data to determine areas for improvement.

Practices to Ensure Persistence

From the testimony of the panelists and a review of the literature, five major practices that ensure persistence have emerged: valuing persistence as a goal, aligning curriculum and standards, developing efforts to support student learning, creating student data systems, and ensuring adequate financial resources. These five practices are interconnected, as it is difficult to positively influence persistence if any one of these elements is missing. In addition, the network of support that these practices establish helps to address the complex needs of a diverse student population at community colleges. A comprehensive strategy to encourage student success that encapsulates all of these themes will effectively address the five major barriers mentioned above as well.

Value Persistence as an Important Goal

Without recognizing student persistence as an important mission of community colleges, it is unlikely that the focus of initiatives at the state or institutional level will change to reflect student success. For example, *Achieving the Dream* requires participating states to show that they are making a clear public policy commitment to student success, and the initiative is at the forefront of the national discussion on persistence at community colleges. This collaboration of states, philanthropic organizations, and higher education leaders has devised theories of action that will help more students succeed in community colleges. To this end, several states have included *Achieving the Dream* goals in their strategic plans (*Achieving the Dream* n.d.). The many colleges who are a part of this collaborative are exhibiting the type of public commitment to student success that is the integral first step to ensuring persistence.

Achieving the Dream **requires participating states to show that they are making a clear public policy commitment to student success.**

Once the priority of addressing persistence is recognized, an action plan must be drafted that includes input from all relevant stakeholders. Washington State realized a need for more highly skilled workers, and saw the value of utilizing the state's community colleges to meet the demand. The state's *Student Success Initiative* was created with the input of members of the Washington State Board for Community and Technical Colleges, community colleges, and researchers. The *Student Success Initiative* rewards community colleges for meeting certain benchmarks related to persistence, benchmarks created by reviewing relevant research and similar plans in other states (Seppanen 2007; Washington State Board of Community and Technical Colleges n.d.).

States and institutions must value persistence as an important mission of the community college.

Community college leaders must recognize the importance of student persistence to their institutions. By valuing persistence as the important goal that it is, colleges can work with other stakeholders, including states, to implement plans that can affect multiple persistence barriers: academic, informational, and financial barriers, in particular. Programs such as the *Student Success Initiative* seek to address remediation, information, and other student needs as a method of increasing persistence.

Align Curriculum and Standards between K-12 and Higher Education

Better P-16 alignment would enable students to be more prepared to succeed in college. Panelists noted this as an important underlying factor related to their work. Students are sometimes unaware that they do not have the academic skills to be successful in college until they arrive on

campus, due to expectations in high school inconsistent with college demands. Many organizations have noted the need for curricular and standards-based alignment between secondary and postsecondary education and are taking steps to help states work toward this goal (Achieve 2008; Hechinger Institute on Education and the Media, The Institute for Educational Leadership, and the National Center for Public Policy and Higher Education 2002).

The American Diploma Project, spearheaded by Achieve, is a coalition of states that are committed to alignment between K-12 requirements and the skills necessary to meet students' postsecondary plans. States involved have agreed to take formal steps to align expectations, curriculum, and assessments to ensure that students are prepared for postsecondary success. Indiana was one of the first states to be involved with the American Diploma Project's work, strengthening P-16 alignment through its *Core 40* proposal, which became the required high school curriculum in fall 2007. The *Core 40* is a set of curricular standards in every subject developed to equip students to meet the demands of either college or the workforce. Students who complete the *Core 40* requirements can also receive additional financial aid for college (Indiana Department of Education 2005). Although this initiative is geared towards preparing students for four-year colleges, the course of study suggested will aid any student who is on the pathway to earning a bachelor's degree.

New Hampshire has formed the Partnership for the Advancement of Postsecondary Education Research (NH PAPER n.d.) in response to the need for more P-16 alignment to meet the needs of students transitioning from secondary school to college. The group's mission is to "promote a research agenda to collect, study, analyze and disseminate information on trends and projects that impact postsecondary aspirations and participation" (NH PAPER n.d.). Alignment councils such as these can prove useful in determining what gaps in skills students have and finding solutions before problems that inhibit persistence become entrenched. Such solutions could include remediation, tutoring, and better preparation both prior to and at the beginning of students' postsecondary education.

Collaboration between secondary schools and the higher education community can help to improve curriculum and standards for students and decrease confusion about necessary college skills. Such alignment can ease academic, informational, and complexity barriers that students face and in so doing, may enable students to reach their educational goals in a shorter amount of time. In addition, the complexity of navigating an intimidating and unfamiliar setting would be mitigated.

Many organizations have noted the need for curricular and standards-based alignment between secondary and postsecondary education.

The American Diploma Project is a coalition of states that are committed to alignment between K-12 requirements and the skills necessary to meet students' postsecondary plans.

Develop Targeted Efforts to Support Student Learning

Given that more two-year than four-year college students enter underprepared, structuring support for them through remediation or additional services must be a key component of any persistence plan. Research has determined that students with the most social capital are more likely to utilize support services; therefore, colleges should both target resources to students who are most in need as well as be proactive in connecting students to the service rather than waiting for students to take the first step (Karp et al. 2008). Student success courses, learning communities, and other efforts that seek to integrate students into college life can also help students who are struggling academically (Zeidenberg et al. 2007; McClenney and Waiwaiole 2005).

Student success courses prepare students for the rigors of college life, teaching time management skills, good study habits, and effective note-taking strategies. Students in these courses are also informed of and reminded about information specific to the school, such as important deadlines. Research on the effectiveness of these courses by the Community College Research Center showed that after controlling for student characteristics, those enrolled in student success courses in Florida Community Colleges were eight percent more likely to earn a credential. Among students who took remedial coursework, participation in the student success course was associated with a five percent increase in completion.

Similarly, the formation of learning communities as a response to remediation has been shown to improve retention (Tinto 1998). Learning communities have different formats, but a typical model includes groups of students who take the same bundle of courses from the same faculty members. Time is structured into the curriculum to meet for discussion and extra preparation, sometimes in a format similar to student success courses. Faculty generally receive additional training and may be more accessible to these students than they would normally be to others. Though learning communities began in the four-year college setting, they are proving to be a promising and well-researched tool in community colleges (Bloom and Sommo 2005). Early results from a random demonstration study of learning communities at Kingsborough Community College, part of the CUNY system, found that these students are much more likely to pass developmental English and a writing test required for graduation (Bloom and Sommo 2005). Such students are also more likely to earn more total course credits (MDRC 2007).

Structuring developmental education in a way that is productive is important in ensuring success. Because extensive remediation can delay

Structuring support for students through remediation or additional services must be a key component of any persistence plan.

Student success courses prepare students for the rigors of college life, teaching time management skills, and good study habits.

completion or cause students to become discouraged and drop out altogether, institutions must determine ways to give students necessary skills in an efficient manner. At Bunker Hill Community College (BHCC) in Massachusetts, 87 percent of entering students need at least one developmental course, and over half require remediation in two or more subjects (Choitz 2006). To meet this demand, BHCC offers courses in different formats and on different schedules to accommodate student needs. Developmental courses are offered directly through the relevant academic department rather than through a central developmental education department. Counselors work with students to determine which course format works best for their personal learning needs. Though there are a variety of ways of structuring remedial education, the methods that Bunker Hill chose have produced results for its students. In 2001-02, 91 percent of students enrolled in either developmental English or reading remained enrolled throughout the course, and 70 percent earned a grade of 'C' or higher (Choitz 2006).

Developing quality developmental education must be a priority for any institution that wishes to move more students toward completion. A first step involves working with high schools to ensure that students have the skills necessary to begin college and to clarify which skills each student still needs to support their learning. Quality remediation can help students overcome the academic barriers they often face upon entering community college. Students also indicate that success courses benefit them by building relationships between peers and professors, which addresses social barriers; gaining direction with advising and planning, which addresses informational barriers; and obtaining necessary skills, which addresses academic barriers.

Structuring developmental education in a way that is productive is important in ensuring success.

Create and Utilize Student Data Systems

In order for institutions to be positioned to ensure persistence, they must be aware of skills students are missing and be able to track progress to determine which efforts are successful. There is growing awareness within the higher education community of the need to gather and utilize data to effect change (Goldberger 2007; Brock et al. 2007). Many states and institutions are working to create their own data systems or are working with external data systems to analyze the effectiveness of their efforts.

There is growing awareness within the higher education community of this need to gather and utilize data to effect change.

The Community College Survey of Student Engagement (CCSSE) acts as an external data system that enables community colleges to evaluate their success with the engagement level of their students. Results are categorized under five benchmarks, developed by researchers and

practitioners and related to educational practice, which institutions can use to improve student services and systems. The benchmarks are active and collaborative learning, student effort, academic challenge, student-faculty interaction, and support for learners. Demographic information about students is also collected, and the survey results are made public, which allows schools to compare their progress to the progress of similar institutions. As a result of this input, CCSSE institutions have responded to persistence issues in a variety of ways, such as developing learning communities, referring students to participate in learning support programs, developing course competency standards, requiring orientation, and implementing early warning referral systems.

Targeted data on student engagement and involvement can identify possible solutions to social and informational barriers.

Both *Achieving the Dream* and the *Student Success Initiative* work to help institutions develop internal data systems. A key component of the *Achieving the Dream* initiative is using data to build a "culture of evidence" to improve systems for student success (Brock et al. 2007). *Achieving the Dream* works with colleges to help them collect, analyze, and use data at the institutional level. One of the state policy goals of the initiative is to routinely rely on student outcome data to inform decision making. Data on student success and institutional progress is also the foundation of Washington State's *Student Achievement Initiative*. In order for Washington to carry out its incentive program, which rewards colleges for meeting certain student success benchmarks, colleges must have a valid data system in place to track student progress. Colleges within the state have spent this first year reinforcing those systems in preparation for full implementation, which will occur in the 2008-09 school year.

Research suggests that need-based financial aid can increase persistence.

If colleges implement good data systems, they will be better equipped to provide students with needed information regarding necessary coursework for successful program completion, which could reduce complexity. Enhanced data systems may also give institutions the capacity to quantify the academic barriers that students face, allowing for targeted academic advising or remediation. Furthermore, targeted data on student engagement and involvement can identify possible solutions to social and informational barriers, as evidenced by CCSSE. In fact, comprehensive data could also highlight financial solutions helpful to students; CCSSE has added financial aid questions to its spring 2008 assessment.

Ensure that Students have Adequate Financial Resources to Attend

Recent research suggests that need-based financial aid can increase persistence (Bettinger 2004; Seftor and Turner 2002). Preliminary results of some studies suggest that supplemental help with living costs can increase persistence, and indicate that Pell Grants may reduce drop-out

rates (Brock and Richburg-Hayes 2006; Bettinger 2004). Both sets of findings indicate that finances play an important role in persistence at community colleges. Approaches to ensuring financial aid can take several forms: implementing aid initiatives linked to persistence, maximizing the efficiency of institutional systems, and distributing information on changes to federal programs.

An example of a student persistence initiative is the *Louisiana Opening Doors Program*, which was facilitated and evaluated by MDRC in collaboration with *Achieving the Dream*. The scholarship used TANF surplus monies to fund scholarships and support services for low-income parents. Participants were given $1,000, in increments, in addition to any regular financial aid that the student would normally receive, for two terms. Monies were disbursed directly to students without stipulations on spending, which proved useful as follow-up research implied that many low-income students had trouble meeting regular living costs, such as child care or rent. This random assignment demonstration provided evidence that students respond well to scholarships provided on the basis of persistence benchmarks. Significantly more scholarship recipients persisted to a second semester than did regular students. Furthermore, even though the program ended after two semesters due to Hurricane Katrina, students who had previously received the scholarship were 11 percent more likely to attend a third semester. Overall, scholarship recipients earned about four more credits than students who did not.

Schools can do more to ensure that students can access financial resources available to them. Gateway Community College in Arizona is updating systems so that students have 24/7 access to their information online. To accomplish this, Gateway has made available electronic award letters, book vouchers, scholarship applications and authorization forms, loan entrance and exit counseling, loan master promissory notes, and a debt management system. The facility of these systems can decrease complexity for students. With these innovations, Gateway was able to process a far greater number of financial aid applications without increasing the size of the financial aid staff, resulting in 100 percent increase in the number of Pell Grant recipients (Gateway Community College 2004). Data from *Achieving the Dream* have shown better educational outcomes for students who receive Pell Grants than for those who do not, suggesting that Pell can affect persistence at community colleges (Brock et al. 2007).

Community college students will find additional financial relief through provisions of the College Cost Reduction and Access Act of 2007. The new law increases the income protection allowance, which protects the earnings of students who work to cover unmet financial need. In addition, the law has a provision that eliminates tuition sensitivity. Previously, the

Data from *Achieving the Dream* have shown better educational outcomes for students who receive Pell Grants than for those who do not.

Community college students will find additional financial relief through provisions of the College Cost Reduction and Access Act of 2007.

amount of Pell Grant funds for which students were eligible was tied to the level of tuition at their college of choice. This provision hurt many colleges with extremely low tuition costs, particularly affecting students at community colleges. These statutory changes in federal law could result in large increases in aid; however, many students and aid administrators may be unaware of these new policies. For this reason, colleges should take measures to inform students who are newly eligible for aid.

Finances are a barrier for students at the community college level. Even if colleges put all other best practices into place, such as aligning the curriculum, restructuring developmental education and student services, and implementing a comprehensive data system, the bottom line is that if students do not have the financial capability to continue in school, they will likely drop out. Ensuring that financial resources are available and accessible to students is critical to promoting student persistence and success.

Institutions and states need to take comprehensive approaches to ensure persistence.

Community college students are a diverse population and face a number of unique barriers to persistence. Due to this fact and the ever-fluctuating nature of state funding, institutions and states need to take comprehensive approaches to ensure persistence by re-evaluating institutional and state objectives and refocusing efforts in order to develop a workforce suitable for the 21st century.

FACILITATING TRANSFER

Background

Many students initially enroll in a community college with the specific intention of transferring to a four-year institution to attain a bachelor's degree; however, very few students make this transition. Less than 20 percent of college-qualified, low-income high school graduates in 1992 who enrolled in a two-year college with the intention of earning a bachelor's degree achieved that goal within eight years of high school graduation (ACSFA 2006). But low- and moderate-income students should not be penalized for choosing an affordable path to a baccalaureate degree.

Low transfer rates can be attributed to the numerous challenges students face when attempting to transfer. Such challenges include inadequate transfer policies, insufficient academic preparation, and the need for financial aid. Moreover, research has shown that student characteristics known to adversely affect persistence and attainment, such as part-time enrollment, delayed enrollment, financial independent status, having financial dependents, single-parent status, working full-time, high school dropout status, or being a GED recipient, often prevent students from completing an education if specific policies impacting transfer are not in place (Price 2004; Long 2005). This phenomenon makes it imperative for community colleges and statewide systems to improve transfer efficiency and increase the number of community college students who attain bachelor's degrees.

In order to remain competitive in a global economy, America faces major demographic challenges that require improving access to and completion of a bachelor's degree for its citizens. While all sectors of the higher education community must play a role in helping the nation meet its educational and workforce needs, the community college with its open-access mission, proximity, and lower costs will be a leader in this effort. Transfer is particularly important as 31 percent of college-qualified low-income students enrolled in community colleges in 2004 (ACSFA 2008), and students need to be encouraged to complete bachelor's degrees.

States and institutions have implemented myriad policies to address these issues, ranging from increased aid specifically for transfer students to the development of common course numbering systems to increase alignment, yet there are still significant barriers in the transfer process. Recognizing and responding to these barriers is a necessary component in facilitating student transfer from two-year to four-year colleges.

Less than 20 percent of college-qualified, low-income high school graduates in 1992 who enrolled in a two-year college with the intention of earning a bachelor's degree achieved that goal within eight years of high school graduation.

Low transfer rates can be attributed to the numerous challenges or barriers students face when attempting to transfer.

Main Barriers

Academic.   A lack of academic advising is a hindrance for students wishing to transfer from a community college to a four-year college. Placement and matriculation policies may compound the problem as, without them, students may not declare a clear academic focus early or may not have enough guidance to help them reach goals (Shulock & Moore 2007). Academic advising guides students as they choose courses that count toward a degree program (Jenkins et al. 2006). However, according to the Community College Survey of Student Engagement, students are not meeting with academic advisors at appropriate times over the course of their studies at the community college (CCSSE 2007).

Academic preparation is another key issue for community college students unprepared to transfer to a four-year college. Only 32 percent of students leave high school at least minimally prepared for college, an indicator of how lack of preparation can hinder success at the postsecondary level (Greene and Foster 2003). Preparation upon college entrance is often below what is required to succeed in college and varies with the background of the student. Adelman (1999) has found that students differ in terms of the courses taken and performance depending on their background. Significant gaps in test scores by income exist, indicating the need for better preparation at the community college level to help students succeed in transferring and completing a bachelor's degree.

Social.   Social commitments and cultural differences present significant barriers for students attending a community college. Almost half of community college students are over the age of 24 and are more likely to have family and work-related responsibilities (Martinez 2004). These nontraditional, or adult students, may delay enrollment, enroll part-time, work full-time, be financially independent, or have dependents—all of which are factors that make educational attainment and transfer more difficult (Spellman 2007). Twenty-one percent of community college students spend at least six hours per week commuting (CCSSE 2006). Managing multiple roles is particularly stressful for female students, who tend to keep their caregiver responsibilities while enrolled (Carney-Crompton and Tan 2002). Almost 85 percent of students at public two-year colleges work in addition to taking classes, and about 67 percent of them attend part-time (Wilson 2004; Hamm 2004).

Cultural differences can also deter student success in the community college for minority students, first-generation students, and international students, inhibiting them from applying and transferring to a four-year institution. These students may encounter cultural stereotypes, immigration problems, and language limitations when they attempt to further their education (Spellman 2007). Despite special services that may

A lack of academic advising is a hindrance for students wishing to transfer from a community college to a four-year college.

Social commitments and cultural differences present significant barriers for students planning to transfer from a community college.

be available at the college, students who face cultural barriers may refuse to use them, avoiding the associated stigma (Gary et al. 2004). ESL students may remain silent in courses when they do not feel comfortable with the language, impacting their prospects of improving skills and moving on to the next academic level.

Informational. According to CCSSE, more than one-third of students claimed they had not completed any course placement tests after a month in college, approximately half did not discuss educational goals with an advisor within the first month, and about one-third did not attend orientation (2007). These statistics indicate that students may lack the necessary information and guidance to adequately prepare for transfer. In addition, advising about the transfer process is sorely needed, and the lack of a transfer center at some community colleges perpetuates this problem. Additionally, some students may not understand the importance of transferring, as such a message may not have been emphasized when they first enrolled. Students need to know the offerings of a four-year college and the benefits of continuing an education.

> **Students may lack the necessary information and guidance to adequately prepare for transfer.**

Information on the transfer process, along with information about financial aid, should be emphasized to encourage transfer from the day students begin at the community college. Lack of knowledge about aid policies that encourage transfer may inhibit students' ability to take the giant step of seeking to transfer or prevent persistence at the four-year institution (Long 2005). Students may also fail to explore options at schools that provide specific transfer scholarships and grants.

Complexity. Students who seek to transfer often find that lack of curricular alignment between institutions requires course repetition, creating layers of complexity for institutions and students alike. The frustration experienced and extra time required can be a hindrance to transfer and successful completion of a bachelor's degree (Long 2005). Furthermore, a lack of course coordination can discourage students from transferring at all (Wellman 2002). Many community college systems have responded to this problem by developing articulation agreements with four-year public and private colleges to ensure that various community college courses will be accepted at a higher rate. Some states are also currently working to align courses among institutional levels in higher education to ensure ease of transfer (Dougherty and Reid 2006). However, most states lack a common course numbering system that would better enable students to receive proper credit and, thereby, ease transfer.

> **A lack of curricular alignment between institutions requires course repetition, creating layers of complexity for institutions and students alike.**

The multiple missions of community college can also contribute to the complexity that students face. Better coordination is needed among faculty and the curriculum in remedial, workforce, and academic transfer programs. These three programs tend to operate separately in most

community colleges, without providing guidance to students on how one component of their education affects other components (Jenkins 2003). The divisions among programs create additional barriers for students who wish to move from remedial or career-related programs into academic programs, further reducing their chance of transferring and obtaining a bachelor's degree. Such divisions can exacerbate problems students experience when attempting to complete an associate's degree within two years, further increasing costs.

Financial. The increased costs of a four-year college can be a significant impediment to transfer. Tuition and fees at public flagship universities, on average, are more than 2.5 times the tuition and fees at community colleges (College Board 2007). Students who transfer also face additional costs, such as room and board, transportation, and other expenses, which can total $10,000 on average (College Board 2007). If students already have unmet need at the community college level, they may become overwhelmed by these higher costs. Moreover, students who seek to transfer from a two-year to four-year institution often find that less institutional aid is available to them because such funds are often targeted at recruiting first-time, full-time students. Only a few states have created aid programs that encourage transfer (Long 2005; Wellman 2002).

In addition, many community college students work while they are in school and attempt to balance academics with work. For some students, the need to work increases the time and cost to degree. Working can also affect determination of need when they apply for financial aid at the four-year institution because income from the previous year affects expected family contribution for the following year. Despite the enactment of the College Cost Reduction and Access Act of 2007, which increases the income protection allowance for students who work, many community colleges may have difficulty informing students of this change. Students who have not been eligible in the past may be unaware of their impending eligibility for federal aid.

Session Panelists

Session three panelists discussed efforts to improve the transfer process in the context of growing state and institutional awareness of the need for increased transfer from two-year to four-year institutions. Panelists also focused on the inequities facing many transfer students and the institutions that serve them, including transfer of credit, alignment, funding, stigma, and data collection measures by state and federal governments. These inequities create multiple barriers—academic, social, informational, complexity, and financial—and serve to prevent community college students from obtaining baccalaureate degrees through transfer. Complete panelist testimony can be found in the full report.

The increased costs of a four-year college can be a significant impediment to transfer.

Many students work while they are in school, which can increase the time and cost to degree.

This session was moderated by Dr. Claude O. Pressnell, Jr. Prior to the panelist testimony, Diane Auer Jones, Assistant Secretary for Postsecondary Education, U.S. Department of Education, provided remarks on behalf of U.S. Secretary of Education Margaret Spellings, on the importance of community colleges and the Secretary's priorities regarding them.

Panelists included:

Dr. Margarita Benitez
Senior Associate
National Articulation and Transfer Network

Dr. Benitez described the goal and programs of the National Articulation and Transfer Network. These include the organization's efforts to help institutions better align their course requirements, provide students and advisors with more information about transfer guidelines, and improve the transition from two- to four-year institutions.

Ms. Shonda Gray
Director
Transfer Center *Connect Program*
Morgan State University

Ms. Gray discussed the *Connect Program*, an alternative for students who are initially ineligible for admission to Morgan State University (MSU) and who enroll in a neighboring community college to prepare for MSU. Although students who participate in the program begin their education at a community college, MSU provides them with access to MSU services and events, helps them prepare to transfer to MSU, and then provides support following successful transfer.

Dr. James Applegate
Vice President of Academic Affairs
Kentucky Council on Postsecondary Education

Dr. Applegate shared several strategies that Kentucky has developed to boost transfer rates between two- and four-year institutions as part of the state's goal to double the number of bachelor's degree recipients. These include a commitment on the part of the state toward transfer as well as financial incentives to institutions.

Ms. Jane Oates
Executive Director
New Jersey Commission on Higher Education

Ms. Oates discussed New Jersey's new statewide transfer legislation (A3968/S2535), which requires public four-year colleges and universities within the state to accept all coursework from a student seeking to transfer with an associate's degree from a New Jersey county, or community, college. She also described the state's plan to track student transfer rates.

Mr. David K. Moldoff
Founder and CEO
AcademyOne

Mr. Moldoff explained how AcademyOne is using technology to help institutions and state systems address the challenges associated with the transfer process between two- and four-year institutions.

Practices that Facilitate Transfer

Facilitating transfer from two-year to four-year institutions requires that both types of institutions work together on the issue as well as within their ranks in order to best serve the needs of low-income populations that begin a postsecondary education at two-year colleges. Strategies currently used to facilitate transfer include: building partnerships, creating articulation agreements, developing support services, establishing public goals to increase transfer, and increasing financial aid for transfer students. Each of these practices addresses several key barriers that transfer students face. Programs highlighted in the symposium are a sampling of the numerous initiatives nationwide by states, institutions, and other entities that have been developed to facilitate transfer.

Build Partnerships between Two-Year and Four-Year Institutions

Numerous institutions have taken it upon themselves to build partnerships that enable students to seamlessly transfer from a two-year to a four-year college. Because the process of preparing for transfer and the transition involved is complex, students' chances of transferring and completing a baccalaureate degree are greatly enhanced when two-year and four-year institutions work together to facilitate the process and reduce barriers (NATN 2007). Such a partnership could involve alignment between two institutions, an agreement that the four-year college admit a certain number of transfer students from its partner institution, and even academic and financial support for students to make the transition.

Both Morgan State University (MSU) and Northern Virginia Community College (NoVA) have developed partnership programs to aid transfer. MSU has partnered with nine community colleges in the State of Maryland to strengthen its transfer initiative, the *Connect Program*, a joint enrollment program that provides a clear pathway for students who wish to transfer and complete a bachelor's degree at MSU. Students attend the community college at its affordable cost, but obtain access to sports and other events, services, and activities at Morgan State University. The purpose of the *Connect Program* is to allow student acclimation to and engagement in the culture and systems of the four-year college in order to support and ease transfer. Additional support services at the four-year institution ensure transfer student success. NoVA's *Pathway to the Baccalaureate Program* is a partnership with George Mason University that enables transfer from the two-year to the four-year institution. NoVA provides students in the *Pathway to the Baccalaureate Program* with academic support, grants to minimize financial

barriers, and sufficient guidance to eliminate confusion about the transfer process. These approaches seem to have been very effective with a low-income population.

Other transfer center programs have also committed to increasing the number of students transferring to four-year institutions. The Transfer Experience and Advising Mentor (TEAM) Project at the University of Illinois helps community college students transfer to the university and succeed academically. It targets ten community college districts and provides information sessions, one-on-one advising, and peer mentoring to increase the amount of information being provided to community college students about transfer (Forrest 2007). The program also offers courses that have been shown to help students determine how to move toward specific majors.

Partnerships such as those mentioned above act globally and comprehensively to address barriers related to transfer, including all five addressed in this report. Many partnership programs have discovered that it is not enough to address any one barrier in isolation. Developing a student support program to facilitate transfer involves looking at the multiple reasons for student failure to transfer and succeed, which requires examining student motivation and success in terms of the inequities that such students face.

The *Connect Program* is a joint enrollment program that provides a clear pathway for students who wish to transfer and complete a bachelor's degree at MSU.

Create Articulation Agreements and Services to Clarify the Transfer Process

Articulation agreements provide clear guidelines for prospective transfer students about which classes will and will not be accepted at the four-year institution. Policymakers and researchers have identified improving articulation and transfer agreements at both the state and institutional level as a key method by which to improve bachelor's degree attainment rates (Wellman 2002). Creating such agreements is no easy task as it requires faculty and institutions to agree on which courses properly prepare students and requires them to review and potentially revise their courses (Handel 2007). For large state systems, development of an articulation agreement may require a substantial investment in technology or may involve legislative review.

Improving articulation and transfer agreements at both the state and institutional level is a key way to improve bachelor's degree attainment rates.

The National Articulation and Transfer Network (NATN), serves as a resource for postsecondary institutions working toward agreements. The network enables collaboration and the sharing of best practices among institutions at the national level. The NATN Student Portal (www.natn.org/studentportal) provides information on articulation

agreements and transfer guidelines for community college students. NATN also monitors state progress on articulation and transfer agreements and highlights national models for other institutions to emulate. The resources that NATN provides have been helpful for a number of states and institutions in navigating this complex process.

The National Articulation and Transfer Network (NATN), serves as a resource for postsecondary institutions working toward agreements.

California has a comprehensive articulation model based on a statewide general education curriculum, the Intersegmental General Education Curriculum (IGETC), that encompasses the general education requirements for any California public postsecondary institution. California has also invested in a statewide database (ASSIST), accessible to all students, that displays all course articulation agreements among the University of California (UC), California State University (CSU), and the California Community College systems. In addition to such databases, students considering transfer to the University of California are advised to take prerequisites for their intended major, important to establishing a transfer focus from the beginning of the community college experience. (Handel 2007).

In addition to California, numerous states, institutions, and organizations are making efforts to incorporate technology in ways that improve course credit transfer. AcademyOne, a technology company, has developed systems that can make course credit transfer and articulation models more efficient for institutions. Implementing an electronic transcript system, using a centralized degree audit operation, and developing an electronic format to move student information, such as credentials, are only some of the technological strategies developed. Appropriate use of technology may mitigate complexity for both students and institutions.

Numerous states, institutions, and organizations are making efforts to incorporate technology in ways that improve course credit transfer.

Some states, including New Jersey and Kentucky, have used legislation or other formal agreements to develop articulation strategies. New Jersey recently adopted an articulation law that requires four-year public colleges and universities within the state to accept all coursework from students with associate's degrees from New Jersey community colleges who seek to transfer to four-year institutions. The law has guaranteed a complete and seamless transfer. The state moved toward legislation to simplify the existing and numerous articulation agreements in place throughout the state, all of which created a maze of complexity for potential transfer students. Kentucky has taken a similar, but more narrow approach to articulation, implementing a "2+2" curricular alignment program. Business and education school deans have agreed that associate's degrees completed in their respective programs would be accepted by any four-year business or education program in the state.

By accepting some coursework from those with earned associate's degrees, articulation agreements, whether mandated by the state or

designed by institutions themselves, may eliminate the need for students to re-take courses and, thus, reduce academic and complexity barriers. In addition, strong agreements reduce financial barriers by mitigating the costs associated with repeating courses due to non-alignment. This makes it much easier for students to enroll directly into a degree program at a four-year college without worrying about whether all of their requirements have been fulfilled.

Develop Support Services for Transfer Students

To ensure success among students in community college and to better prepare them for transfer, research points to the effectiveness of student support services, such as in-depth orientations, proactive advising, early warning systems, organized academic support for the transfer process, and financial aid policies (Jenkins et al. 2006). Traditional outreach tactics to provide information to students, such as college fairs and mass mailings, are insufficient to enable students to retain information necessary for success. Some recommended strategies are the development of transfer centers and programs that sustain a transfer-going culture.

Data from California indicate that students are much more likely to transfer if the community college has a transfer-going culture.

The University of California, for example, has focused its outreach efforts on community college counselors and transfer-center directors (Handel 2007). All of California's community colleges have developed transfer centers (Handel 2007). This has allowed the university to work very closely with students and invest in professional development resources that help counselors meet the needs of students more effectively. Data from California indicate that students are much more likely to transfer if the community college has a transfer-going culture (Handel 2007). Developing a campus culture that promotes transfer might mean having a separate transfer center, counselors trained in transfer issues, honors programs, a four-year campus visitation program, and full-time articulation officers.

Increase administrative capacity to establish a strong transfer focus and ensure that students receive one-on-one support.

Morgan State University (MSU) has developed a transfer-going culture through the *Connect Program*, which serves as a "middleman" between the student wishing to transfer and the admissions office at MSU. The *Connect Program* works closely with students to avoid confusion they may experience over the application process. For example, transfer students in the *Connect Program* send their applications to the transfer center at MSU where program staff review applications to ensure completion before sending them to the admissions office.

Though an initial investment in administrative cost is necessary for these strategies to work, the results far outweigh such costs. Increasing

administrative capacity to establish a strong transfer focus such as that at MSU, or increasing overall administrative capacity such as that in California ensures that students are receiving the one-on-one support essential to a process as complex as transfer. It also ensures that students are provided with information appropriate to their needs, whether financial, academic, or both.

Establish Public Goals to Increase Transfer

Creating a public commitment to transfer is the responsibility of community colleges and four-year colleges and universities, and it requires that institutions hold themselves accountable to that commitment (Handel 2007). Publicizing such a commitment can serve as a significant motivator when establishing initiatives that address the needs of transfer students seeking bachelor's degrees. Both states and institutions can establish such public goals.

At the state level, Kentucky has established a goal to double the number of the state's bachelor's degree recipients by 2020 as a means of helping the state rise above the national average in degree attainment. In service of that goal, Kentucky plans to increase the number of students that transfer from two- to four-year institutions. Extra money is provided to institutions as an incentive to graduate more students, and monetary rewards are given to community colleges for producing associate's degrees and transfer students. Such incentives have created a push to establish scholarships for transfer students, as well as loan forgiveness programs for students in high-demand fields. Kentucky has also designed numerous student support programs to improve developmental education and to address other academic and information barriers. To keep the state and its institutions accountable, Kentucky has developed a Transfer Feedback Report, which provides the state with data on each institution's transfer efforts. The resulting data can be used both for accountability and for evaluating best practices.

At the institutional level, the University of California (UC) system has established similar goals for the number of transfer students it admits (Handel 2007). The new agreement among all California institutions, mentioned above, requires that the UC system give first priority to students from a California Community College over students from other four-year institutions. Usually, a four-year institution only considers transfer students if the school falls short of its freshman enrollment goals (Handel 2007). Lumping transfer students and freshmen together belies the notion that they are two separate populations from dissimilar backgrounds and require different student services.

Developing specific transfer targets such as those at UC can help to address transfer student needs, whether those are transfer grants, different student services, or different types of academic support. As states and institutions more closely examine the issue of transfer, they find that these students have unique needs. Creating a public commitment to transfer allows institutions and states to better address the specific obstacles that only transfer students face and, thereby, reduce multiple barriers.

Increase Information and Financial Aid for Transfer Students

At community colleges, where the population tends to be low-income, students are less likely to apply for financial aid than students attending other types of institutions (Prince 2006). This is due to a variety of reasons, from lack of awareness of available aid, the complex types of aid and their processes, poor outreach at the institutional level, and insufficient financial aid. For that reason, it is essential that community colleges offer appropriate financial aid and guidance so that students are able to persist and transfer with few financial barriers. Students need such additional aid and support because the cost of attending a four-year college is significantly higher than that of a two-year college.

Some states are able to offer financial aid targeted directly toward transfer students. For example, Morgan State University offers a Bridge Grant to students who earn at least 24 credits before transfer. The grant provides $1,000 each semester along with extra tuition scholarships if an associate's degree is earned. In addition, Kentucky has directed efforts toward alleviating financial barriers for transfer students. The state now provides financial incentives to four-year institutions to produce graduates, and offers similar rewards to two-year colleges to produce more associate's degrees and encourage transfer. Such incentives provide institutions with additional resources that, in turn, provide additional financial aid for transfer. In addition, scholarships for transfer students and loan-forgiveness programs for students in high-demand fields have been developed to address the financial barriers that these students face.

Providing students with financial aid information also increases student motivation to complete a bachelor's degree and can, therefore, speed up time to degree. An example is North Carolina, which has appropriated $3.6 million to fund an additional financial aid officer at each state community college (Prince 2006). Other institutions use technology to improve financial aid participation. In 1995, the Connecticut Community College System centralized their financial aid system, creating a web-based, self-service financial aid system with 24/7 access to financial aid status, awards, and disbursement activity. The system also automates and

combines enrollment and financial aid application processes to ensure that students learn about and receive appropriate grant aid for tuition, fees, books, and supplies. As a result, from 2001 to 2004, the number of financial aid recipients in Connecticut increased by 40 percent (Prince 2006).

Increasing financial aid for transfer students is not simply a matter of making additional aid dollars available. Transfer students still face considerable informational and complexity barriers in the process of determining how to finance the final years of a bachelor's degree at a four-year institution. As with other aspects of the transfer process, these students face significant barriers due to their unique needs and unique status among postsecondary students; thus, comprehensive approaches are often advisable.

States and colleges need to understand the populations they are serving and expand efforts to ensure that community colleges are a low-cost entry point to a bachelor's degree.

The practices highlighted above to improve the transfer pathway have had varying degrees of success throughout the country. All are initiatives that other states and institutions are replicating and are first steps in enabling a seamless process for students to enroll in and succeed at a four-year institution. As those with a vested interest in ensuring transfer examine the flaws in established processes, re-evaluation is often necessary as they confront the unique status and needs of the transfer student. States and colleges need to understand the populations they are serving and must continue to expand efforts to ensure that community colleges are a low-cost entry point to a bachelor's degree.

PUBLIC COMMENT

Session Panelists

Interested members of the public were invited to provide comment on topics addressed in the three hearing sessions. Panelists discussed the social, financial, and complexity barriers that affect particular groups of students, such as adult learners and foster care youth. In addition, barriers such as informational, complexity, and financial that affect community college students generally—completion of the FAFSA, dependency issues, and the administration of financial aid offices—were brought to the attention of Committee members.

This session was moderated by Mr. Darryl A. Marshall.

Panelists included:

Mr. Guy Gibbs
Interim Director of Financial Aid and Support Services
Northern Virginia Community College

Mr. Gibbs described the FAFSA Online tutorial produced by Northern Virginia Community College. He discussed how this tool is used to simplify the process of applying for financial aid.

Ms. Deborah Cochrane
Research Analyst
The Institute for College Access and Success

Ms. Cochrane described the Institute's research on financial aid at California Community Colleges. She also discussed the financial challenges students face at community colleges, specifically those in California.

Ms. Amy-Ellen Duke
Senior Policy Analyst
Center for Law and Social Policy

Ms. Duke discussed state and institutional policies that impact persistence for low-income working adults who attend community colleges. Her comments also emphasized the need for increased federal investment in building adult workforce skills.

Mr. John Emerson
Postsecondary Education Advisor
Casey Family Programs

Mr. Emerson highlighted recent legislative changes that improve college access for foster care students. He then discussed the social and academic support needs of students from foster care who enter community colleges.

Dr. Clifford Adelman
Senior Associate
Institute for Higher Education Policy

Dr. Adelman discussed the financial, academic, and social barriers that affect students and how they may differ based on the dependency status of the student. He also advocated for enhanced data tracking to count students who attend part-time and who transfer to community colleges.

CONCLUSION

The panelists in this symposium exhibit an obvious commitment to our nation's community college students. The discussion in each session provides clear evidence that the higher education community is taking important steps to improve college access and success at the community college level. The barriers analyzed during the symposium show degrees of similarity, important to understanding that students encounter a series of common and interrelated barriers in the areas of enrollment, persistence, and transfer. Recognizing these common barriers—academic, social, informational, complexity, and financial—provides ground for collaboration among educational leaders and policymakers as they design programs to reduce or eliminate them.

Collaborative effort is critical for a community that serves a unique and diverse segment of the higher education population. Unlike four-year colleges, community colleges maintain open door policies that allow a variety of students with differing ages, educational objectives, and college preparation levels to pursue their goals and attain degrees. As America's participation in the global economy warrants the development of more workers with bachelor's degrees, many states and institutions have recognized the need to focus on community colleges as a resource to encourage students to enroll, persist, and transfer to a bachelor's degree-granting institution. It is the Committee's hope that the information gathered and analyzed here can be used by a wide audience in service of these educational and workforce goals.

While this symposium and the proceedings analysis have articulated the range of activities in which community colleges are engaged in order to advance the educational attainment of their students, questions still arise that require further attention and study. Responding to the following issues will help to alleviate the impact of inevitable political and economic changes to which community colleges and their students are subjected:

- Many community college students spend time in remedial courses, learning skills they should have mastered in the K-12 system. Their lack of preparedness for higher education costs them both time and money, both of which they hold in short supply. How can improvements be made to the elementary and secondary school systems to address that?

- Students at four-year colleges are taking up to five and six years to complete a bachelor's degree. As this becomes common practice, college administrators should determine what is causing this phenomenon and work to address that. If students at four-year colleges require more than four years to complete a degree, what

There is clear evidence that the higher education community is taking important steps to improve college access and success at the community college level.

Collaborative effort is critical to advance the educational attainment of community college students.

43

impact does that have on an institution's ability to accommodate additional transfer students?

- Remediation is a common practice at many levels of education: secondary, community colleges, and four-year colleges and universities. In order to make remediation as effective as possible, continued attention needs to be directed toward determining whether and how remediation reduces or increases costs, both to the student and the institution.

- While community colleges are making every effort to maintain open door policies so that they may serve the maximum number of students, no such capacity is infinite. What are the limitations in capacity of community colleges? When and how will they be reached? How can states and institutions respond to any impending limitations?

- As states and institutions nationwide move toward increasing the number of students who transfer from two-year to four-year colleges, articulation and transfer agreements are being developed unique to state needs. A national review of existing articulation and transfer agreements and an analysis of their effectiveness could articulate broad precepts that might assist other states attempting to facilitate transfer.

The core matters of the concerns and questions described above are relative to collaboration among states, community colleges, and the K-12 system in the areas of informational and academic barriers. In addition, attention to the effectiveness of existing remediation would potentially help to reduce financial barriers for thousands of students, as well as save federal and state funds. A study of capacity issues, including a trend in longer time-to-degree among four-year college students, will help states address multiple barriers, and may yield some additional insights on the social barriers that students face. Finally, a national review of articulation and transfer agreements would eliminate substantial complexity for students, institutions, and states.

The Advisory Committee looks forward to a continuing discussion of the important role that community colleges play in the pathway to achieving a bachelor's degree for millions of America's students. Acting on the information provided in this report, and looking ahead to address the questions raised above, are a start to making college dreams a reality for a large segment of our population.

REFERENCES

Achieve. 2008. *Closing the Expectations Gap: An Annual 50-State Progress Report on the Alignment of High School Policies with the Demands of College and Work.* Washington DC.

Achieving the Dream. n.d. State Work Plans: Summary of Priorities 2006-2007. http://www.achievingthedream.org/_images/_index03/StatePlansSumm.pdf (accessed February 5, 2008).

Adelman, C. 1999. *Answers in the Toolbox: Academic Intensity, Attendance Patterns, and Bachelor's Degree Attainment.* U.S. Department of Education. Washington DC: Office of Educational Research and Improvement.

Adelman, C. 2006. *The Toolbox Revisited: Paths to Degree Completion From High School Through College.* Washington DC: U.S. Department of Education.

Advisory Committee on Student Financial Assistance. 2005. *The Student Aid Gauntlet: Making Access to College Simple and Certain.* Washington DC.

— . 2006. *Mortgaging Our Future: How Financial Barriers to College Undercut America's Global Competitiveness.* Washington DC.

— . 2007. *Turn the Page: Making College Textbooks More Affordable.* Washington DC.

— . 2008. Shifts in College Enrollment Likely to Increase Bachelor's Degree Losses. Policy Bulletin. Washington DC.

American Association of Community Colleges (AACC). 2007. *About Community Colleges: Fast Facts.* http://www2.aacc.nche.educ/research/index.htm (accessed February 5, 2008).

— . 2008. *About Community Colleges: Fast Facts.* http://www2.aacc.nche.edu/research/index.htm (accessed February 5, 2008).

Bailey, T., and M. Alfonso. 2005. *Paths to Persistence: An Analysis of Research on Program Effectiveness at Community Colleges.* Indianapolis IN: Lumina Foundation for Education.

Bailey, T., D. Jenkins, and T. Leinbach. 2005. *What We Know About Community College Low-Income and Minority Student Outcomes: Descriptive Statistics from National Surveys.* Community College Research Center. New York NY: Teachers College, Columbia University.

Bailey, T., and V. Morest. 2006. *Defending the Community College Equity Agenda.* Baltimore MD: John Hopkins University Press.

Bedsworth, W., S. Colby, and J. Doctor. 2006. *Reclaiming the American Dream.* Boston MA: The Bridgespan Group.

Bettinger, E. 2004. How financial aid affects persistence. In *College Choices: The Economics of Where to Go, When to Go, and How to Pay for It*, ed. Caroline Hoxby, 207-237. Chicago IL: University of Chicago Press.

Bloom, D., and C. Sommo.2005. *Building Learning Communities: Early Results from the Opening Doors Demonstration at Kingsboro Community College.* New York NY: MDRC.

Braxton, J.M., A.S. Hirschy. and S.A. McClendon. 2004. *Understanding and reducing college student departure*. San Francisco: Jossey-Bass.

Brock, T., D. Jenkins, T. Ellwin, J.Miller, S. Gooden, K. Martin, C. MacGregor, and M. Pih. 2007. *Building a Culture of Evidence for Community College Student Success: Early Progress in the Achieving the Dream Initiative*. New York NY: MDRC and Community College Research Center.

Brock, T. and L. Richburg-Hayes. 2006. *Paying for Persistence: Early Results of a Louisiana Scholarship Program for Low-Income Parents Attending Community College.* New York NY: MDRC.

Bureau of Labor Statistics. 2005. Occupational Employment Projections to 2014. Monthly Labor Review. *Occupational Employment* (November).

Calcagno, J.C., P. Crosta, T. Bailey, and D. Jenkins. October 2006. *Stepping Stones to a Degree: The Impact of Enrollment Pathways and Milestones on Older Community College Student Outcomes*. CCRC Brief No. 32. Community College Research Center. New York NY: Teacher's College, Columbia University.

Carney-Crompton, S., and J. Tan. 2002. Support systems, psychological functioning, and academic performance of nontraditional female students. *Adult Education Quarterly* 52(2): 140-154.

Choitz, V. 2006. *Strategies for Success: Promising Practices from the 2004 Winners of the MetLife Foundation Community College Excellence Award.* Jobs for the Future. Washington DC.

Choitz, V., and R. Widom. 2003. *Opening doors to earning credentials: Money matters--How financial aid affects non-traditional students in community college*. New York NY: MDRC.

Choy, S. 2002. *Access and Persistence: Findings from 10 Years of Longitudinal Research on Students.* Washington DC: American Council on Education.

College Access Marketing. n.d. Organizational website. http://www.collegeaccessmarketing.org
  (accessed February 5, 2008).

College Board. 2007. *Trends in College Pricing*. Trends in Higher Education Series.
  Washington DC.

CommunicationWorks, LLC. 2002. *Capturing the College Potential of Students from Under-
  Served Populations: An Analysis of Efforts to Overcome Social and Financial Barriers to
  College.* Boston MA: Pathways to College Network.

The Community College Research Center. n.d. Organizational website.
  http://ccrc.tc.columbia.edu/Publication.asp?UID=567 (accessed January 7, 2008).

Community College Survey of Student Engagement (CCSSE). 2006. *Act on Fact: Using Data to
  Improve Student Success*. Austin TX: Community College Survey of Student
  Engagement.

— . 2007. *Committing to Student Engagement: Reflections on CCSSE's First Five Years*.
  http://www.ccsse.org (accessed February 5, 2008).

Doughtery, K., J. Marshall, and A. Soonachan. 2006. *Achieving the Dream in Ohio: State
  Policies Affecting Access to, and Success in, Community Colleges for Students of Color
  and Low-Income Students*. Community College Research Center. New York NY:
  Teacher's College, Columbia University.

Dougherty, K., and M. Reid. 2006. *Achieving the Dream in Connecticut: State Policies
  Affecting Access to, and Success in, Community Colleges for Students of Color and Low-
  Income Students.* Community College Research Center. New York NY: Teacher's
  College, Columbia University (November).

Driscoll, A. 2007. *Beyond Access: How the First Semester Matters for Community College
  Students' Access and Persistence*. Davis CA: Policy Analysis for California Education
  (PACE). http://pace.berkeley.edu/reports/PB.07-2.pdf (accessed February 5, 2008).

ECMC Group Foundation. 2003. *Cultural Barriers to Incurring Debt: An Exploration of
  Borrowing and Impact on Access to Postsecondary Education*. Santa Fe NM: ECMC
  Group Foundation.

Education Commission of the States. 2000. *State Funding for Community Colleges: A 50-State
  Survey*. Denver CO: Center for Community College Policy, Education Commission of
  the States.

Forrest S. 2007. Grant to ease transfer of community college students to U of I. *University of
  Illinois Foundation: News*. http://www.news.uiuc.edu/news/07/1023TEAM.html
  (accessed February 5, 2008).

Gary, J. M., B. Kling, and B.N. Dodd. 2004. A program for counseling and campus support services for African American and Latino adult learners. *Journal of College Counseling*. 7: 18-23.

Gateway Community College. 2004. *Innovation of the Year Description. Electronic Processes: Providing 24/7 Access.* http://zircon.mcli.dist.maricopa.edu/mlx/warehouse/01401-01500/01451/GWCC.pdf (accessed February 5, 2008).

Giegerich, S. 2006. Barrier Busters: Two-year Institutions Help Students Achieve their Dreams. *Focus.* Winter: 4-20.

Goldberger, S. 2007. *Power Tools: Designing State Community College Data and Performance Measurement Systems to Increase Student Success*. Boston MA: Achieving the Dream and Jobs for the Future.

Greene, J., and G. Foster. 2003. *Public High School Graduation and College Readiness Rates in the United States*. Manhattan Institute. Center for Civic Information. Education Working Paper. No. 3. (September).

Grimes, S. K. 1997. Underprepared community college students: Characteristics, persistence, and academic success. *Community College Journal of Research and Practice* 21 (1).

Grossman, L.M., and S. Gooden. 2002. *Opening Doors: Students Perspectives on Juggling Work, Family and College*. New York: MDRC.

Handel, S. J. 2007. Second Chance: Not Second Class. *Change*. The College Board (October).

Hamm, R.E. 2004. Going to college: Not what it used to be. In *Keeping America's Promise: A Report on the Future of the Community College,* ed. K. Boswell and C. Wilson, 29-33. Denver: Education Commission of the States and League for Innovation in the Community College.

Hechinger Institute on Education and the Media, The Institute for Educational Leadership, and the National Center for Public Policy and Higher Education. 2002. *Gathering Momentum: Building the Learning Connection Between Schools and Colleges.* http://www.highereducation.org/reports/g_momentum/MIS11800.pdf (accessed February 5, 2008).

Higher Education Student Assistance Authority. n.d. Organizational website. http://www.hesaa.org/index.php?page=part-time-tuition-aid-grant-tag (accessed January 7, 2008).

Horrigan, J. 2006. *Home Broadband Adoption 2006.* Washington DC: Pew Internet & American Life Project.

Illinois Board of Higher Education. 2007. Higher ed leaders applaud new community college readiness program. Press Release. Springfield IL: Illinois Board of Higher Education. http://www.ibhe.org/Media%20Center/2007/HTM/1115_SB858.htm (accessed February 5, 2008).

Indiana Department of Education. 2005. Organizational website. http://www.doe.in.gov/core40/overview.html (accessed January 24, 2008).

Institute for College Access and Success. 2007. *Green Lights and Red Tape: Improving Access to Financial Aid at California's Community Colleges*. Berkeley CA.

Jenkins, D.   2003.   The potential of community colleges as bridges to opportunity for the disadvantaged: Can it be achieved on a large scale? Paper presented at the Seminar on Access and Equity. Community College Research Center. New York NY: Teachers College, Columbia University.

Jenkins, D. 2006. *What Community College Management Practices Are Effective in Promoting Student Success? A Study of High- and Low-Impact Institutions.* Community College Research Center. New York NY: Teachers College, Columbia University.

Jenkins, D., et. al. 2006. *What Community College Policies and Practices Are Effective in Promoting Student Success? A Study of High- and Low-Impact Institutions.* Community College Research Center. New York NY: Teacher's College, Columbia University (March).

Karp, M., J. Calcagno, K. Hughes, D. Jeong, and T. Bailey. 2007. *The Postsecondary Achievement of Participants in Dual Enrollment: An Analysis of Student Outcomes in Two States.* St. Paul MN: National Research Center for Career and Technical Education.

Karp, M. M., L. O'Gara, and K.L. Hughes. 2008. *Do Support Services at Community Colleges Encourage Success or Reproduce Disadvantage? An Exploratory Study of Students in Two Community Colleges*. CCRC Working Paper No.10. Community College Research Center. New York NY: Teachers College, Columbia University.

Kazis, R. 2006. Articulation, alignment, and the challenge of college-readiness. Testimony to the Commission on the Future of Higher Education. Indianapolis IN. http://www.jff.org/Documents/Commission_Testimony040406.pdf (accessed February 5, 2008).

King, J. 1996. *The Decision to Go to College: Attitudes and Experiences Associated with College Attendance Among Low-Income Students.* Washington DC: The College Board.

— . 2006. Missed opportunities revisited: New information on students who do not apply for financial aid*. ACE Issue Brief. Washington DC: American Council on Education.

49

Kirshstein, R., and D. Rhodes. 2001. *Access and Affordability: Refocusing Financial Aid in Maryland*. Annapolis MD: Maryland Higher Education Commission.

League for Innovation in Community Colleges. n.d. Organizational website. http://www.league.org/league/projects/ccti/purpose.html (accessed January 4, 2008).

Lenhart, A., M. Madden, and P. Hitlin. 2005. *Teens and Technology: Youth are Leading the Transition to a Fully Wired and Mobile Nation*. Washington DC: Pew Internet and American Life Project.

Long, B.T. 2005. *State Financial Aid: Policies to Enhance Articulation and Transfer.* Boulder CO: Western Interstate Commission for Higher Education.

Long, B. T., and E. Riley. 2007. Financial aid: A broken bridge to college access? *Harvard Educational Review*. 77(1).

Manpower Demonstration Research Corporation (MDRC). n.d. Organizational Website. http://www.mdrc.org/project_31_76.html (accessed December 20, 2007).

Martinez, M. 2004. High and rising: How much higher will college enrollments go? In *Keeping America's Promise: A Report on the Future of the Community College,* ed. K. Boswell and C. Wilson, 21-24. Denver CO: Education Commission of the States and League for Innovation in the Community College.

Martinez, M., and S. Klopott. 2005. *The Link between High School Reform and College Access and Success for Low-Income and Minority Youth.* Washington DC: American Youth Policy Forum and Pathways to College Network.

McClenney, K. 2004. Keeping America's Promise: Challenges for Community Colleges. In *Keeping America's Promise: A Report on the Future of the Community College,* ed. K. Boswell and C. Wilson. Denver: Education Commission of the States, pp. 7-18.

McClenney, K., and E. Waiwaiole. 2005. Focus on retention: Promising practices in community colleges. *Community College Journal* (June/July) 37-41.

Mullin, C. M. and D.S. Honeyman. 2007. *The Funding of Community Colleges: A Typology of State Funding Formulas.* Community College Review 35 (7).

National Articulation and Transfer Network (NATN). n.d. Organizational website. http://www.natn.org/ (accessed February 5, 2008).

National Center for Education Statistics (NCES). 2002. *Digest of Education Statistics 2001.* Washington DC: U.S. Department of Education.

— . 2003. *High School Guidance Counseling E.D. Tabs*. Washington DC: U.S. Department of Education.

— . 2007. *Persistence and Attainment of 2003-04 Beginning Postsecondary Students: After Three Years*. Washington DC: U.S. Department of Education.

The National Center for Public Policy in Higher Education. 2004. *Responding to the Crisis in College Opportunity.* San Jose CA: The National Center for Public Policy in Higher Education.

New Hampshire Partnership for the Advancement of Postsecondary Education Research (NHPAPER). n.d. Organizational Website. http://www.nhpaper.org/ (accessed February 5, 2008).

Pathways to College Network. n.d. Audience research: What works in communicating to teens. Issue Brief. Boston MA.

— . 2004. *A Shared Agenda: A Leadership Challenge to Improve College Access and Success.* Boston MA.

— . 2007a. *Academic Rigor: At the Heart of College Access and Success.* Boston MA.

— . 2007b. *Social Support: An Essential Ingredient to Success.* Boston MA.

Price, D. 2004. Defining the gaps: Access and success at america's community college. In *Keeping America's Promise: A Report on the Future of the Community College,* ed. K. Boswell and C. Wilson, 35-37. Denver: Education Commission of the States.

Prince, H. 2006. *Money on the Table: State Initiatives to Improve Financial Aid Participation*. Boston MA: Jobs for the Future (October).

Rendon, L. 1995. Facilitating retention and transfer for first generation students in community colleges. Paper presented at the New Mexico Institute, Rural Community College, Espanolo N.M.

Rosenbaum, J.E., R. Deil-Amen, and A.E. Person. 2006. *After Admission: From College Access to College Success*. New York NY: Russell Sage Foundation.

Ruppert, S. 2003. *Closing the College Participation Gap: A National Summary.* Denver CO: Education Commission of the States.

Schmid, C., and P. Abell. 2003. Demographic risk factors, study patterns, and campus involvement as related to student success among guilford technical community college students. *Community College Review* 31 (1): 1-16.

Seftor, N. S., and S.E. Turner. 2002. Back to school: Federal student aid policy and adult college enrollment. *The Journal of Human Resources*. 37 (2).

Seppanen, L. 2007. *Summary of Empirically-Tested Theoretical Perspectives in the Literature on Community and Technical College Student Persistence/Success*. Olympia WA: Washington State Board of Community and Technical Colleges.

Shulock, N. and C. Moore. 2007. *Rules of the Game: How State Policy Creates Barriers to Degree Completion and Impedes Student Success in the California Community Colleges.* Institute for Higher Education Leadership and Policy. Sacramento CA: California State University.

Spellman, N. 2007. Enrollment and retention barriers adult students encounter. *The Community College Enterprise*. (Spring).

Sydow, D. L., and R.H. Sandel. 1998. Making student retention an institutional priority. *Community College Journal of Research and Practice.* 22 (7).

Tinto, V. 1975. Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research* 45: 89-125.

— . 1993. *Leaving College: Rethinking the Causes and Cures of Student Attrition*. Chicago IL: University of Chicago Press.

— . 1998. Learning communities and the reconstruction of remedial education in higher education. A paper presented at the Conference on Replacing Remediation in Higher Education sponsored by the National Center for Postsecondary Improvement and the Ford Foundation, Stanford University, January 26-27. http://www.doso.wayne.edu/SASS/Tinto%20Articles/Learning%20Communities%20&%20Remedial%20Education.pdf (accessed February 5, 2008).

U.S. Department of Education. 2003. *Remedial Education at Degree-Granting Postsecondary Institutions in Fall 2000: Statistical Analysis Report.* Washington DC.

Uhalde, R., J. Strohl, and Z. Simkins. 2006. *America in the Global Economy*. Washington DC: National Center on Education and the Economy.

Vargas, J. 2004. *College Knowledge: Addressing Information Barriers to College.* Boston MA: The Education Resources Institute.

Washington State Board of Community and Technical Colleges. n.d. Organizational website: http://www.sbctc.ctc.edu/college/d_studentachievement.aspx (accessed December 2007).

Wellman, J. V. 2002. *State Policy and Community College-Baccalaureate Transfer*. The National Center for Public Policy and Higher Education and The Institute for Higher Education Policy.

Wilson, C. D. 2004. Coming through the open door: A student profile. In *Keeping America's Promise: A Report on the Future of the Community College,* ed. K. Boswell and C. D. Wilson, 25-27. Denver CO: Education Commission of the States and League for Innovation in the Community College.

Ybarra-Garcia, R.   2002.   Skyline college one-stop student services center.   *iJournal* (September). http://www.ijournal.us/issue_02/ij_issue02_RosemaryYbarraGarcia_01.htm (accessed January 14, 2008).

Zeidenberg, M., D. Jenkins, and J.C. Calcagno. 2007. *Do Student Success Courses Actually Help Students Succeed?* Community College Research Center. New York NY: Teachers College, Columbia University.

Zumeta, W., and D. Frankle. 2007. *California Community Colleges: Making Them Stronger and More Affordable*. San Jose CA: National Center for Public Policy and Higher Education.

APPENDIX:
PAGE NUMBER OF PANELIST TESTIMONY IN FULL REPORT

Session Four: Public Comment