

Tidal Wave II, Community Colleges, and Student Financial Aid

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Abstract

In the early 1990s, Clark Kerr and others predicted “Tidal Wave II”—a bulge of graduates from America’s high schools wanting access to higher education. The bulge was to start around 1998 and last until about 2010. This paper examines the impact of Tidal Wave II on public community colleges for the five-year period 2000-2001 to 2005-2006, through the use of National Center for Education Statistics data sets for enrollment and student financial aid. Data are then analyzed by the 2005 Basic Classifications of Associate’s Colleges from the Carnegie Foundation for the Advancement of Teaching. A detailed picture of the impact of Tidal Wave II enrollments on different institutional types of two year colleges (rural, suburban, urban, and other), and by type of financial aid awarded is presented.

Today’s American public community colleges are in the midst of the most dramatic enrollment surge since the middle of the 1960s Baby Boom. In just five years, from 2000-2001 to 2005-2006, total enrollment—that is, annual unduplicated headcount of for-credit students—at all publicly-controlled Associate’s Colleges jumped from 7,828,175 to 10,177,702, an increase of 30% (see Table 1).

This striking increase in enrollments was anticipated by many leading experts. In 1994, the late Clark Kerr predicted a coming “Tidal Wave II [that] will start in 1997 or 1998, when the grandchildren of the (WWII) GIs enter college.” He noted that this wave was “inevitable,” and would last until about 2010 (Kerr, 1994, p. 5-6). Kerr predicted that in California alone, nearly one-half million more students would soon need to be served, a number confirmed by

the California Higher Education Policy Center, the precursor organization to the influential National Center for Public Policy and Higher Education. In 1996, the Center's director, Patrick M. Callan, former director of the California Postsecondary Education Commission, wrote, "California and its colleges and universities are in the eye of a hurricane . . . California does not have a bad plan for the future of higher education; it has no plan at all" (p. 1). That the Golden State, which for decades has led the nation in terms of both the size of its public higher education system and student access, was in such a predicament did not bode well for the nation in its quest to serve the Baby Boom echo.

Clark Kerr's international prestige assured that his prediction of Tidal Wave II would receive wide coverage. As President of the University of California from 1954 to 1967, Kerr was intimately involved in creating the landmark California Master Plan for Higher Education. Later, he directed the Carnegie Council and Carnegie Commissions on Higher Education and developed the first version of its widely used classification scheme for higher education institutions (Kerr, 2001).

Other leading organizations and scholars have noted and echoed aspects of Kerr's Tidal Wave II theme. In the mid-1990s, the Western Interstate Commission on Higher Education (WICHE), whose 15 member states include California, began publishing its series, *Knocking at the College Door: Projections of High School Graduates by State, Income, and Race/Ethnicity, 1988-2018*. The sixth edition, published in 2004, predicted high school graduation class size growth through 2009, a slight decline until 2015, and an upward trend thereafter. In 1993-1994, 2.2 million students graduated from public high schools in the United States. By 2001-2002, that figure had increased to 2.6 million per year, and by 2008-2009 was predicted to increase to about 2.9 million graduates per year (WICHE, 2004).

In his insightful literature review and analysis of the impact of Tidal Wave II on U.S. community colleges, Palmer (2000) discusses the works of Snyder and Hoffman (2000) and Snyder, Hoffman, and Geddes (1996) that predicted public two-year college enrollment by age group from 1993 to 1997. In re-analyzing the data from these studies, Palmer predicted that enrollments at public two-year colleges for students under the age of 23 would increase,

particularly among those students 17 years of age and younger, including concurrently enrolled high school students (Palmer, 2000, p. 94). Citing the work of Kojaku and Nunez (1999), he also noted that 59 percent of all first-time enrollees at public two-year and four-year colleges under the age of 24 were at community colleges and 41% were at four-year colleges. Finally, he observed that, according to U.S. Department of Education projections, 15 states had projected increases in their high school graduating class sizes of 25% or above between 1996-97 and 2008-09 (Palmer, 2000).

Palmer (2000) justified community colleges' involvement in serving the new waves of traditionally-aged students, noting that throughout its history,

the community college . . . acts as the neighborhood school of American higher education, extending the reach of local school districts and connecting them to state university systems . . . Many other colleges and universities provide undergraduate education to individuals screened through an admissions process. But no other institution has the task of bringing the first two years of college to all citizens of local communities. (p 96)

Methodology

This article describes the nature and direction of enrollment changes and the varying patterns of student financial aid data for the five-year Tidal Wave II period from 2000-2001 to 2005-2006. The authors use the new 2005 Basic Classifications of Associate's Degree Colleges published in February 2005 by the Carnegie Foundation for the Advancement of Teaching to parse out important differences by type of community college, to provide a more accurate and detailed picture of the extent of the challenge (Carnegie Foundation for the Advancement of Teaching, 2006). The new 2005 Carnegie Basic Associate's College classifications, which both authors played a prominent role in developing, use geography as a primary determining factor in classifying two-year colleges, an approach that is justified on the basis that most, if not all, of the states define by statute or regulation the service delivery areas of their public two-year colleges (Hardy & Katsinas, 2006). This view is conceptually consistent with Palmer's notion of the community college as serving distinctly defined local communities and service areas. Through use of these new Carnegie classifications, a richer, more textured and detailed picture of the shape and direction of enrollments and of students' uses of financial aid can be

illuminated that better informs state and federal policymakers and can lead to the development of better policies and the implementation of improved practices that might expand the numbers and percentages of students who achieve academic success.

The balance of this article is organized as follows: First, the new 2005 Basic Classifications of Associate's Degree Colleges of the Carnegie Foundation for the Advancement of Teaching are described while presenting data on community college student enrollments. Then data on student financial aid are presented, including dollars and percentages from the IPEDS Institutional Characteristics, Finance, and Fall Enrollment Surveys for 2000-2001 and 2005-2006 and selected data from the IPEDS Student Financial Aid Cohort Studies from 2001 and 2005, as well as data on tuition increases over the same period. The paper concludes with a discussion of the findings and related policy implications.

Carnegie's 2005 Basic Classifications of Associate's Colleges and Tidal Wave II Enrollments

Table 1 (see following page) shows the nomenclature of the new Carnegie Basic Classifications as it presents institutions in 2005 and compares annual unduplicated student head count students for 2000-2001 and 2005-2006. There were 1,089 distinct publicly controlled two-year college units reporting data to the US Department of Education's National Center for Education Statistics' Integrated Postsecondary Education Data System (IPEDS) in the 2005-2006 academic year. These institutions together had an annual unduplicated head count enrollment of 10,177,702 students. The 972 Rural, Suburban, and Urban Associate's Colleges classified, using geographic service delivery areas, comprised 89% of all Associate's Colleges and by percentage were 53, 19, and 17%, respectively, of all Associate's Colleges. Together these Rural, Suburban, and Urban Associate's Colleges enrolled 9,540,925 students, or about 94% of total Associate's College enrollments.

The percentage distribution of enrollment by the major Carnegie subclassifications is: 33% Rural, 29% Suburban, 31% Urban, and 6% Other Public Associate's Colleges (which include public Special Use Institutions, such as military schools, 2-Year Under 4-Year, 4-Year Primarily Baccalaureate, and

TABLE 1 | Number of Institutions in the new Carnegie 2005 Basic Classification of Public Associate's Colleges, and Enrollment in 2000-2001 and 2005-2006.

| | Annual Unduplicated Head Count Enrollment | | | | | Change, 2000-1 to 2005-6 | | |
|--|---|-------------|------------------|-------------------|-------------|--------------------------|------------|-------------|
| | Institutions 2005 | | 2000-2001 | 2005-2006 | | Number | % growth | % of |
| | Total | % of Total | Number | Number | % by type | | by type | all growth |
| “GEOGRAPHIC” COLLEGES | | | | | | | | |
| Rural Small | 125 | 11% | 134,118 | 184,399 | 2% | 50,281 | 37% | 2% |
| Rural Medium | 310 | 28% | 895,101 | 1,427,064 | 14% | 531,963 | 59% | 23% |
| Rural Large | 142 | 13% | 1,361,224 | 1,780,393 | 17% | 419,169 | 31% | 18% |
| Total Rural | 577 | 53% | 2,390,443 | 3,391,856 | 33% | 1,001,413 | 42% | 43% |
| Suburban Single Campus | 112 | 10% | 1,052,814 | 1,347,141 | 13% | 294,327 | 28% | 13% |
| Suburban Multi-Campus | 97 | 9% | 1,312,931 | 1,652,790 | 16% | 339,859 | 26% | 14% |
| Total Suburban | 209 | 19% | 2,365,745 | 2,999,931 | 29% | 634,186 | 27% | 27% |
| Urban Single Campus | 32 | 3% | 203,254 | 421,977 | 4% | 218,723 | 108% | 9% |
| Urban Multi-campus | 154 | 14% | 2,404,740 | 2,727,161 | 27% | 322,421 | 13% | 14% |
| Total Urban | 186 | 17% | 2,607,994 | 3,149,138 | 31% | 541,144 | 21% | 23% |
| Total | 972 | 89% | 7,364,182 | 9,540,925 | 94% | 2,176,743 | 30% | 93% |
| OTHER PUBLIC ASSOCIATE’S COLLEGES | | | | | | | | |
| Special Use | 12 | 1% | 45,886 | 54,403 | 1% | 8,517 | 19% | 0% |
| 2-Year Under 4-Year | 55 | 5% | 107,667 | 183,827 | 2% | 76,160 | 71% | 3% |
| 4-Year Primarily Associate’s | 18 | 2% | 166,271 | 219,119 | 2% | 52,848 | 32% | 2% |
| Baccalaureate/ Associate’s | 32 | 3% | 144,169 | 179,428 | 2% | 35,259 | 24% | 2% |
| Total | 117 | 11% | 463,993 | 636,777 | 6% | 172,784 | 37% | 7% |
| Grand Total | 1,089 | 100% | 7,828,175 | 10,177,702 | 100% | 2,349,527 | 30% | 100% |

Baccalaureate/Associate's Colleges). In 2005-2006, the nation's 154 Urban and 97 Suburban Multi-Campus Associate's Colleges comprised 25% of all institutions, and enrolled 43% of all students. In contrast, the nation's 577 Rural Associate's Colleges comprised 53% of all institutions, yet enrolled 33% of all students. Readers may wish to keep these two important pieces of data in mind as they review the tables that follow.

Table 1 shows the dramatic enrollment growth that occurred at all 11 types of Associate's Colleges over the past five years. In 2000-2001, they enrolled 7,828,175 students; a number that in 2005-2006 jumped to 10,177,702, a 30% increase in just five years. Enrollments at Rural, Suburban, Urban, and Other Public Associate's Colleges increased by 42%, 27%, 21%, and 37%, respectively. None of the 11 Associate's College types experienced an enrollment decrease, and the range of increase was from 71% for 2-Year Under 4-Year Associate's Colleges to 13% for Urban Multi-Campus Associate's Colleges. Within the Public Associate's Colleges that were classified using geography, significant variation of enrollment growth was observed in the Rural and Urban classifications, ranging from 59% for Rural Medium to 31% for Rural Large Associate's Colleges and 108% for Urban Single-Campus to 13% for Urban Multi-Campus Associate's Colleges.

While the multi-campus growth rate was lower than for single campuses in both the Suburban and Urban community college categories, readers should not assume significant growth has not occurred. Given their much larger average size, a relatively small percentage growth of 13% for Urban Multi-Campus colleges can produce rather dramatic increases in numbers, in this case 541,144 new students, in just five years. This may explain why urban and suburban community college districts, such as the Tarrant County College District in Fort Worth, Texas and the North Harris-Montgomery College District that serves suburban communities around Houston, are adding new campuses to their existing physical plants.

Within the Rural, Suburban, and Urban Public Associate's Colleges subclassifications, the greatest growth was at Rural colleges. Among the 2,349,527 additional students, 1,001,413 or 42% enrolled at Rural, 634,186

enrolled at Suburban, 541,144 at Urban, and 172,784 at Other Public Associate's Colleges. Significant variation exists within the Rural and Urban subclassifications, and little variation in Suburban subclassifications. Rural Medium colleges saw the largest increase in students (59%) followed by Rural Small (37%) and Rural Large (31%). Urban Single Campus colleges experienced an incredible 108% increase in enrollment in just five years, compared to just 13% for Urban Multi-Campus colleges. Suburban Single Campus colleges saw a 28% increase, and Suburban Multi-Campus colleges 26%. The four subclassifications that comprise Other Public Associate's Colleges together enrolled 172,784 additional students over the five year period, an increase of 37%.

Table 1 also shows that while substantial enrollment growth was recorded across all types of Associate's Colleges from 2000-2001 to 2005-2006, the growth rates varied. Rural institutions contributed the largest percentage to the overall enrollment growth (43%), compared to Suburban (27%), Urban (23%), and the Other Public Associate's Colleges (7%). Policymakers likely will need to take these differences into account when considering operating budget, capital budget, and financial aid policies for their states, to best address the demands of the Tidal Wave II enrollment surge.

Student Financial Aid and Associate's Colleges

This section is divided into two parts. The first presents numbers and percentages regarding student financial aid awarded at Associate's Colleges in the United States using the new Carnegie 2005 Basic Classifications, while the second section summarizes data from the Student Financial Aid Cohort study. Before turning attention to a presentation of student financial aid data, however, it is useful to know the basic costs that students must bear to attend.

Table 2 (see page 31) shows the average in-district and average in-state tuition and fees by Associate's College type for 2000-2001 and 2005-2006 and the change in number and percent between the two periods. It is generally understood that tuition and fees are not the only costs borne by community college students. Books, for example, can cost well over \$1,000 per year, and cost increases for books have exceeded the inflation rate in recent years. Many

community college practitioners, policymakers, and scholars would likely agree with Robert P. Pedersen, a former community college dean who later served for many years as Senior Editor at *Community College Week*, when he argued that for students attending rural community colleges, access to transportation—in most cases, a reliable used car—is critical if students are to attend, since low-cost accessible mass transit does not exist in most rural areas of our nation (Katsinas, Alexander, & Opp, 2003). In addition, with much of the job growth in recent decades occurring in suburban regions of the country, the existence of mass transit in the urban core area does not necessarily equate to access to suburban jobs. Transportation and child care services have long been identified as two key barriers to access for low income students, and a focus only on tuition and fees understates the real costs (Katsinas, Alexander, & Opp, 2003).

There are 25 states with local funding in excess of 10 percent of total revenues, and 25 states without (Grapevine, 2005, Table 10). The striking differences across these two categories of states are often cited by community college leaders when comparing institutions (Phillippe & Boggs, 2003). Katsinas (2005) has noted that since 8 of the 9 largest states classified by Grapevine as having local funding (only Florida does not), many more states in more sparsely populated areas of the nation have community colleges with no local funding. Such differences should be considered when national data averaging tuition and fees across all states are presented—differences often not considered in federal student aid policy.

In 2000-2001, the average in-district tuition and fees charged at Rural, Suburban, and Urban Public Associate's Colleges was \$1,231; by 2005-2006, it had jumped to \$2,046, an increase of \$815 or 66%. Similarly, in 2000-2001, the average in-state tuition and fees charged at public rural, suburban, and urban community colleges was \$1,571; by 2005-2006, this figure had increased by \$917 or 58%. "Two-year under four-year" college tuition, which long has been pegged to the main university campuses, grew much higher, starting as it did at a much higher base. These tuition and fee increases far outstripped the Consumer Price Index over the same five-year period, during which the federal minimum wage remained flat, as did the maximum Pell Grant.

TABLE 2 | Average Tuition and Fees in 2000-2001 and 2005-2006 (In-District and In-State) and Change 2000-2001 to 2005-2006.

| | 2000-2001 | | 2005-2006 | | Increase in Average Tuition & Fees 2000-2001 to 2005-2006 | | | |
|--|--|---|--|---|--|--|---|--|
| | Average In-District Tuition/ Fees | Average In- State Tuition/ Fees | Average In- District Tuition/ Fees | Average In- State Tuition/ Fees | Average Increase In- District Tuition/ Fees | Percent Increase, 2000-01 to 2005-06 | Average Increase In-State Tuition/ Fees | Percent Increase, 2000-01 to 2005-06 |
| Carnegie Classification: | | | | | | | | |
| PUBLIC ASSOCIATE'S COLLEGES | | | | | | | | |
| Rural Small | 1,210 | 1,307 | 2,080 | 2,185 | 870 | 72% | 878 | 67% |
| Rural Medium | 1,331 | 1,521 | 2,232 | 2,471 | 901 | 68% | 950 | 62% |
| Rural Large | 1,226 | 1,718 | 1,982 | 2,502 | 756 | 62% | 784 | 46% |
| All Rural | 1,279 | 1,525 | 2,137 | 2,418 | 858 | 67% | 893 | 59% |
| Suburban | 1,388 | 2,198 | 2,247 | 3,098 | 859 | 62% | 900 | 41% |
| Single Campus | | | | | | | | |
| Suburban Multi-Campus | 957 | 1,300 | 1,628 | 2,060 | 671 | 70% | 760 | 58% |
| All Suburban | 1,192 | 1,789 | 1,961 | 2,619 | 769 | 65% | 830 | 46% |
| Urban | 1,562 | 1,826 | 2,535 | 2,904 | 973 | 62% | 1,078 | 59% |
| Single Campus | | | | | | | | |
| Urban Multi-Campus | 1,027 | 1,390 | 1,708 | 2,479 | 681 | 66% | 1,089 | 78% |
| All Urban | 1,124 | 1,469 | 1,857 | 2,556 | 733 | 65% | 1,087 | 74% |
| All Rural/ Suburban/Urban | 1,231 | 1,571 | 2,046 | 2,488 | 815 | 66% | 917 | 58% |
| OTHER PUBLIC ASSOCIATE'S COLLEGES | | | | | | | | |
| Special Use | 2,286 | 2,297 | 2,891 | 2,894 | 605 | 26% | 597 | 26% |
| 2-Year Under 4-Year | 1,681 | 1,700 | 2,678 | 2,715 | 997 | 59% | 1,015 | 60% |
| 4-Year Primarily Associate's | 2,494 | 2,494 | 4,205 | 4,206 | 1,711 | 69% | 1,712 | 69% |
| Baccalaureate/ Associate's | 3,245 | 3,256 | 5,075 | 5,075 | 1,830 | 56% | 1,819 | 56% |
| All Other Public Associate's Colleges | 2,304 | 2,316 | 3,611 | 3,629 | 1,307 | 57% | 1,313 | 57% |
| Grand Total | 1,345 | 1,650 | 2,214 | 2,610 | 869 | 65% | 960 | 58% |

Student Financial Aid Awarded at Associate's Colleges

Tables 3, 4, and 5 (see pages 33, 34, 35) show student financial aid awarded at Associate's Colleges. Table 3 shows the absolute dollars awarded in 2005-2006, while Table 4 shows how the aid is spread on a percentage basis across each type of Associate's College, and Table 5 shows how each type of aid is distributed across the different types of Associate's Colleges. A total of \$6,462,933,652 in grants of all types was awarded to students at Associate's Colleges in 2005-2006, according to Table 3. Of this \$6.5 billion, the lion's share—\$4.2 billion—came in the form of Pell Grants. Other types of aid included \$409 million in other federal grants including SEOG and Perkins grants, about \$1.1 billion in state grant aid, \$48 million in local government grant aid, about \$211 million in private grant aid, and \$510 million in institutional grant aid. The vast majority—between three-fourths and nine-tenths of each aid type—was awarded to students attending public Rural, Suburban, and Urban Associate's Colleges. Table 3 shows that of the \$4.2 billion in total Pell Grant funding, nearly \$3.9 billion or 92% went to students at public Rural, Suburban, and Urban Public Associate's Colleges.

Pell Grants are critically important to students attending all types of community colleges in the United States. As Table 4 shows, Pell Grants comprise between 63% and 70% of total grant aid awarded for each Rural, Suburban, and Urban subclassification, and between 44% and 72% for each of the four Other Public Associate's Colleges subclassifications. The pattern of grant aid distribution is fairly even across all types of Rural, Suburban, and Urban Associate's Colleges, with slightly more state grant aid to students at Suburban, and larger percentages of institutional grant aid to students at Rural Associate's Colleges. A wider variation of aid distribution exists within Other Public Associate's College types.

Table 5 shows both the total grant aid, and how each type of grant aid was distributed across the 11 Carnegie classifications in 2005-2006. Pell Grants were awarded in percentages higher than their related percentage of total enrollments at both Rural and Urban Associate's Colleges. Rural Small, Medium, and Large Colleges together comprised 33% of total enrollments (see Table 1), yet awarded 39% of all aid; while Urban Single and Urban Multi-Campus Associate's Colleges together enrolled 31% of all students and awarded 32% of all grant aid. By specific type of grant aid, Pell, Other Federal,

TABLE 3 | Total Student Financial Aid Expenditures—2005-2006.

| | Total— All Grants | Pell Grants | Other Federal Grants | State Grants | Local Government Grants | Private Grants | Institutional Grants |
|--|----------------------|----------------------|----------------------------|----------------------|-------------------------------|--------------------|-------------------------|
| Carnegie Classification: | | | | | | | |
| RURAL, SUBURBAN & URBAN PUBLIC ASSOCIATE'S COLLEGES | | | | | | | |
| Rural Small | 182,552,815 | 125,896,808 | 9,249,349 | 17,987,208 | 1,019,447 | 5,933,207 | 22,466,796 |
| Rural Medium | 1,228,601,798 | 799,557,407 | 72,662,217 | 170,318,115 | 6,029,616 | 34,685,795 | 145,348,648 |
| Rural Large | 1,133,495,896 | 717,068,857 | 79,705,071 | 169,199,056 | 3,034,969 | 42,918,815 | 121,569,128 |
| Total Rural | 2,544,650,509 | 1,642,523,072 | 161,616,637 | 357,504,379 | 10,084,032 | 83,537,817 | 289,384,572 |
| Suburban Single Campus | 671,374,093 | 422,703,556 | 48,565,982 | 138,850,563 | 6,494,369 | 16,450,461 | 38,309,162 |
| Suburban Multi-Campus | 646,904,100 | 408,852,932 | 54,161,201 | 121,004,178 | 4,101,062 | 13,437,444 | 45,347,283 |
| Total Suburban | 1,318,278,193 | 831,556,488 | 102,727,183 | 259,854,741 | 10,595,431 | 29,887,905 | 83,656,445 |
| Urban Single Campus | 339,909,496 | 237,854,274 | 15,266,081 | 60,943,641 | 975,421 | 6,610,648 | 18,259,431 |
| Urban Multi-Campus | 1,701,424,469 | 1,143,827,949 | 110,660,756 | 281,930,407 | 26,124,366 | 62,308,872 | 76,572,119 |
| Total Urban | 2,041,333,965 | 1,381,682,223 | 125,926,837 | 342,874,048 | 27,099,787 | 68,919,520 | 94,831,550 |
| Total Rural/ Suburban/Urban | 5,904,262,667 | 3,855,761,783 | 390,270,657 | 960,233,168 | 47,779,250 | 182,345,242 | 467,872,567 |
| OTHER PUBLIC ASSOCIATE'S COLLEGES | | | | | | | |
| Special Use | 32,109,634 | 14,079,867 | 2,205,584 | 13,583,548 | 0 | 1,084,631 | 1,156,004 |
| 2-Year Under 4-Year | 126,452,751 | 91,036,887 | 5,008,953 | 14,917,049 | 240,998 | 3,642,097 | 11,606,767 |
| 4-Year Primarily Associate's | 181,731,687 | 121,192,710 | 4,341,773 | 31,484,675 | 45,182 | 16,371,133 | 8,296,214 |
| Baccalaureate/ Associate's | 218,376,913 | 118,028,879 | 7,600,777 | 62,930,119 | 619,403 | 7,474,120 | 21,723,615 |
| Total Other Public Associate Colleges | 558,670,985 | 344,338,343 | 19,157,087 | 122,915,391 | 905,583 | 28,571,981 | 42,782,600 |
| Grand Total | 6,462,933,652 | 4,200,100,126 | 409,427,744 | 1,083,148,559 | 48,684,833 | 210,917,223 | 510,655,167 |

TABLE 4 | Percent of Total Student Financial Aid Expenditures in Each Aid Type—2005-2006.

| Carnegie Classification: | Total— All Grants | Pell Grants | Other Federal Grants | State Grants | Local Government Grants | Private Grants | Institutional Grants |
|--|-------------------------|----------------|----------------------------|-----------------|-------------------------------|-------------------|-------------------------|
| RURAL, SUBURBAN & URBAN PUBLIC ASSOCIATE'S COLLEGES | | | | | | | |
| Rural Small | 100% | 69% | 5% | 10% | 1% | 3% | 12% |
| Rural Medium | 100% | 65% | 6% | 14% | 0% | 3% | 12% |
| Rural Large | 100% | 63% | 7% | 15% | 0% | 4% | 11% |
| All Rural | 100% | 65% | 6% | 14% | 0% | 3% | 11% |
| Suburban Single Campus | 100% | 63% | 7% | 21% | 1% | 2% | 6% |
| Suburban Multi-Campus | 100% | 63% | 8% | 19% | 1% | 2% | 7% |
| All Suburban | 100% | 63% | 8% | 20% | 1% | 2% | 6% |
| Urban Single Campus | 100% | 70% | 4% | 18% | 0% | 2% | 5% |
| Urban Multi-Campus | 100% | 67% | 7% | 17% | 2% | 4% | 5% |
| All Urban | 100% | 68% | 6% | 17% | 1% | 3% | 5% |
| All Rural/ Assoc. Colleges | 100% | 65% | 7% | 16% | 1% | 3% | 8% |
| OTHER PUBLIC ASSOCIATE'S COLLEGES | | | | | | | |
| Special Use | 100% | 44% | 7% | 42% | 0% | 3% | 4% |
| 2-Year Under 4-Year | 100% | 72% | 4% | 12% | 0% | 3% | 9% |
| 4-Year Primarily Associate's | 100% | 67% | 2% | 17% | 0% | 9% | 5% |
| Baccalaureate/ Associate's | 100% | 54% | 3% | 29% | 0% | 3% | 10% |
| All Other Public Associate Colleges | 100% | 62% | 3% | 22% | 0% | 5% | 8% |
| Grand Total | 100% | 65% | 6% | 17% | 1% | 3% | 8% |

TABLE 5. | Percent of Total of Each Type of Student Financial Aid Expenditures in Each College Type—2005-2006.

| Carnegie Classification: | Total— All Grants | Pell Grants | Other Federal Grants | State Grants | Local Government Grants | Private Grants | Institutional Grants |
|--|-------------------------|----------------|----------------------------|-----------------|-------------------------------|-------------------|-------------------------|
| RURAL, SUBURBAN & URBAN PUBLIC ASSOCIATE'S COLLEGES | | | | | | | |
| Rural Small | 3% | 3% | 2% | 2% | 2% | 3% | 4% |
| Rural Medium | 19% | 19% | 18% | 16% | 12% | 16% | 28% |
| Rural Large | 18% | 17% | 19% | 16% | 6% | 20% | 24% |
| All Rural | 39% | 39% | 39% | 33% | 21% | 40% | 57% |
| Suburban Single Campus | 10% | 10% | 12% | 13% | 13% | 8% | 8% |
| Suburban Multi-Campus | 10% | 10% | 13% | 11% | 8% | 6% | 9% |
| All Suburban | 20% | 20% | 25% | 24% | 22% | 14% | 16% |
| Urban Single Campus | 5% | 6% | 4% | 6% | 2% | 3% | 4% |
| Urban Multi-Campus | 26% | 27% | 27% | 26% | 54% | 30% | 15% |
| All Urban | 32% | 33% | 31% | 32% | 56% | 33% | 19% |
| All Rural/ Suburban/Urban | 91% | 92% | 95% | 89% | 98% | 86% | 92% |
| OTHER PUBLIC ASSOCIATE'S COLLEGES | | | | | | | |
| Special Use | 0% | 0% | 1% | 1% | 0% | 1% | 0% |
| 2-Year Under 4-Year | 2% | 2% | 1% | 1% | 0% | 2% | 2% |
| 4-Year Primarily Associate's | 3% | 3% | 1% | 3% | 0% | 8% | 2% |
| Baccalaureate/ Associate's | 3% | 3% | 2% | 6% | 1% | 4% | 4% |
| All Other Public Associates College | 9% | 8% | 5% | 11% | 2% | 14% | 8% |
| Grand Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% |

State, and Private Grants were distributed in percentages larger than their total enrollment percentages at both Rural and Urban Associate's Colleges. Only two aid types broke from this pattern: Local Government Grants and Institutional Grants. Fifty-six percent of the \$48 million in Local Government Grants went to students at Urban, and 57% of the much larger pot of \$511 million in Institutional Grant Aid went to students at Rural Associate's Colleges. This suggests that differences in the availability of different types of aid to different types of students attending different types of institutions also exists, and likely indicates that from the standpoint of economic disadvantage, financially needy Urban and Rural students may have much in common.

Table 6 (see following page) shows total student financial aid grant expenditures per student in dollars, total annual unduplicated student head count, and grant dollars per student for 2000-2001 and 2005-2006. In 2000-2001, a total of \$3,438,651,476 in grant aid from all sources was distributed across some 7,364,182 annual unduplicated credit head count students at Rural, Suburban, and Urban Public Associate's Colleges, producing a "grant dollars per student" average of \$467. In 2005-2006, a total of \$5,904,262,667 in grant aid from all sources was distributed across 9,540,925 annual unduplicated head count students attending Rural, Suburban, and Urban Public Associate's Colleges, for a "grant dollars per student" average of \$648. Yet in-district and in-state tuition and fees increased by \$869 and \$960, respectively, over the same five-year period.

Table 7 (see page 38) also shows the changes by numbers and percentages over the five-year period in grant aid expenditures per student. Over five years, total grant aid at Rural, Suburban, and Urban Public Associate's Colleges increased by \$2,465,611,191 or 72%, while the total annual unduplicated credit enrollment increased by 2,176,743 students or 30%. Grant dollars per student increased by 33% over the same period. That the actual dollars per student *declined* for several of the fastest growing Associate's College types—Urban Single Campus (down by \$171 per student) and Rural Small (down by \$30 per student)—and increased only minimally for other Rural, Suburban, and Urban Associate's Colleges over this five year period is troubling. The cost increases for books, not to mention gasoline, assuredly have far exceeded the \$171 increase of average grant dollars per student over this five year period.

TABLE 6. | Total Student Financial Aid Expenditures per Student—2000-2001 to 2005-2006.

| | 2000-2001 | | | 2005-2006 | | |
|---|-----------------------|--|------------------------------------|----------------------|--|------------------------------------|
| | Total — All Grants | Total Annual Unduplicated Credit Head Count | Grant Dollars per Student | Total— All Grants | Total Annual Unduplicated Credit Head Count | Grant Dollars per Student |
| Carnegie 2005 Basic Classification: | | | | | | |
| PUBLIC ASSOCIATE'S COLLEGES | | | | | | |
| Rural Small | 136,770,793 | 134,118 | 1,020 | 182,552,815 | 184,399 | 990 |
| Rural Medium | 715,254,356 | 895,101 | 799 | 1,228,601,798 | 1,427,064 | 861 |
| Rural Large | 664,290,177 | 1,361,224 | 488 | 1,133,495,896 | 1,780,393 | 637 |
| Total Rural | 1,516,315,326 | 2,390,443 | 634 | 2,544,650,509 | 3,391,856 | 750 |
| Suburban | | | | | | |
| Single Campus | 378,642,545 | 1,052,814 | 360 | 671,374,093 | 1,347,141 | 498 |
| Multi-Campus | 352,159,895 | 1,312,931 | 268 | 646,904,100 | 1,652,790 | 391 |
| Total Suburban | 730,802,440 | 2,365,745 | 309 | 1,318,278,193 | 2,999,931 | 439 |
| Urban | | | | | | |
| Single Campus | 198,486,463 | 203,254 | 977 | 339,909,496 | 421,977 | 806 |
| Multi-Campus | 939,573,795 | 2,404,740 | 391 | 1,701,424,469 | 2,727,161 | 624 |
| Total Urban | 1,138,060,258 | 2,607,994 | 436 | 2,041,333,965 | 3,149,138 | 648 |
| Rural/Suburban/ Urban except KY | 3,385,178,024 | | | | | |
| Kentucky CTCS-Unclassified | 53,473,452 | | | | | |
| Total Rural/ Suburban/Urban | 3,438,651,476 | 7,364,182 | 467 | 5,904,262,667 | 9,540,925 | 619 |
| OTHER PUBLIC ASSOCIATE'S COLLEGES | | | | | | |
| Special Use | 16,127,167 | 45,886 | 351 | 32,109,634 | 54,403 | 590 |
| 2-Year Under 4-Year | 75,738,733 | 107,667 | 703 | 126,452,751 | 183,827 | 688 |
| 4-Year Primarily Associate's | 124,392,617 | 166,271 | 748 | 181,731,687 | 219,119 | 829 |
| Baccalaureate/ Associate's | 150,131,374 | 144,169 | 1,041 | 218,376,913 | 179,428 | 1,217 |
| Total Other Associate's Colleges | 366,389,891 | 463,993 | 790 | 558,670,985 | 636,777 | 877 |
| Grand Total | 3,805,041,367 | 7,828,175 | 486 | 6,462,933,652 | 10,177,702 | 635 |

Note: Kentucky's community and technical colleges submitted a single piece of data to IPEDS for all of their colleges, making it impossible for us to disaggregate by type of Associate's College here.

TABLE 7. | Change in Student Financial Aid Expenditures per Student—2000-2001 to 2005-2006, in Numbers and Percentages.

| | in Numbers/Dollars | | | in Percentages (+ or -) | | |
|---|-----------------------------|--|------------------------------------|-------------------------------|--|------------------------------------|
| Carnegie 2005 Basic Classification | Grant Total — All Grants | Total Annual Unduplicated Credit Head Count | Grant Dollars per Student | Grant Total— All Grants | Total Annual Unduplicated Credit Head Count | Grant Dollars per Student |
| RURAL, SUBURBAN & URBAN COLLEGES | | | | | | |
| Rural Small | 45,782,022 | 50,281 | -30 | 33% | 37% | -3% |
| Rural Medium | 513,347,442 | 531,963 | 62 | 72% | 59% | 8% |
| Rural Large | 469,205,719 | 419,169 | 149 | 71% | 31% | 30% |
| All Rural | 1,028,335,183 | 1,001,413 | 116 | 68% | 42% | 18% |
| Suburban | 292,731,548 | 294,327 | 139 | 77% | 28% | 39% |
| Single Campus | | | | | | |
| Suburban | 294,744,205 | 339,859 | 123 | 84% | 26% | 46% |
| Multi-Campus | | | | | | |
| All Suburban | 587,475,753 | 634,186 | 131 | 80% | 27% | 42% |
| Urban | 141,423,033 | 218,723 | -171 | 71% | 108% | -18% |
| Single Campus | | | | | | |
| Urban | 761,850,674 | 322,421 | 233 | 81% | 13% | 60% |
| Multi-Campus | | | | | | |
| All Urban | 903,273,707 | 541,144 | 212 | 79% | 21% | 49% |
| All Rural/ Suburban/Urban | 2,465,611,191 | 2,176,743 | 152 | 72% | 30% | 33% |
| OTHER PUBLIC ASSOCIATE'S COLLEGES | | | | | | |
| Special Use | 15,982,467 | 8,517 | 239 | 99% | 19% | 68% |
| 2-Year | 50,714,018 | 76,160 | -16 | 67% | 71% | -2% |
| Under 4-Year | | | | | | |
| 4-Year | 57,339,070 | 52,848 | 81 | 46% | 32% | 11% |
| Primarily Associate's | | | | | | |
| Baccalaureate/ Associate's | 68,245,539 | 35,259 | 176 | 45% | 24% | 17% |
| All Other Public Assoc. Colleges | 192,281,094 | 172,784 | 88 | 52% | 37% | 11% |
| Grand Total | 2,657,892,285 | 2,349,527 | 149 | 70% | 30% | 31% |

Student Financial Aid Cohort Data

To obtain a clearer picture of how financial aid helps new entering community college students with financial need, we also examined Associate's College data from the 1,029 discrete reporting units participated in the Fall 2005 IPEDS Student Financial Aid (SFA) Cohort Study. These 1,029 institutions served a total of 6,337,696 students, an increase of 709,879 students or 13% over the 5,627,817 total enrollment reported in the SFA Cohort Study in Fall 2000. By college type, 2,110,426 or 33% were enrolled at Rural Associate's Colleges; 1,870,973 or 30% at Suburban; 30% at Urban; and 425,696 or 7% at Other Associate's Colleges. The Multi-Campus Urban and Suburban institutions accounted for 42% of the enrollment total. Further analysis, which we are not able to present in detail here due to space limitations, revealed that 632,351 students were reported as First-Time/Full-Time Degree-/Certificate-seeking in Fall 2005, an increase of 91,554 students or 17% above the 540,797 figure reported in Fall 2000. These 632,351 First-Time/Full-Time Degree-/Certificate Seeking Students comprised 10% of all students enrolled in Fall 2005, but were distributed in very different patterns across all types of Associate's Colleges, with Rural Associate's Colleges enrolling 258,713 or 54% of the total. When combined with their higher loan indebtedness, this may reflect the higher nontuition and fee costs such as transportation and child care that students attending Rural Associate's Colleges face in order to participate in postsecondary education.

Discussion

From the data presented, the following can be concluded: First, the dramatic 30% enrollment increase associated with the Tidal Wave II enrollment boom from 2000-2001 to 2005-2006 is affecting *all* types of public Associate's Colleges. Enrollment jumped by 2.3 million students in just five years, increasing across each of the 11 Carnegie public Associate's College types. Without doubt, Tidal Wave II is the most significant bulge in enrollment affecting community colleges since the Baby Boom. Second, enrollments have grown dramatically even as tuition and fees charged to students have skyrocketed. Third, the growth in total student grant aid expenditures did not cover the combined impact of 2.3 million additional students and the 60% increase in tuition and fees over this five year period. Fourth, the Pell Grant emerges as the driving financial aid program in delivering on the promise of access for disadvantaged students at all types of

Associate's Colleges. Fifth, while space limitations do not allow us to present tabular data, it is clear that Associate's Colleges are playing an important role in providing access for first-time/full-time students generally, and that financial aid is critical in assisting first-time/full-time students to enroll. Sixth and finally, very different patterns of financial aid distribution exist among the 11 Associate's College classifications—patterns that may not be well known by federal and state policymakers.

Just as Clark Kerr and many other experts had predicted, enrollments have increased by 2.35 million students, from about 7.8 million to about 10.2 million, across all public Associate's College from 2000-2001 to 2005-2006. Put differently, *in the middle of the predicted Tidal Wave II, public Associate's College enrollments grew by 30% in just five years*. Enrollments grew for each of the four major subcategories of Rural (42%), Suburban (27%), Urban (21%), and Other Public Associate's Colleges (37%), with Rural Associate's Colleges experiencing the greatest numerical growth, over 1 million of the 2.35 million additional students. By subclassification, the range was from a low of 13.1% for Urban Multi-Campus Associate's Colleges to 107.6% for Urban Single Campus, 71% for 2-Year Under 4-Year, 59% for Rural Medium, and 37% for Rural Small Associate's Colleges. Yet, since Urban Multi-Campus enrollments were numerically larger to start, their smaller percentage growth rate of 13% produced a substantial growth in numbers—322,421 additional students. It may not be an overstatement to conclude that enrollments are “busting at the seams” at public two-year colleges in the United States. The across-the-board enrollment increases draw a picture showing the strength and sweep of Tidal Wave II enrollment growth that Kerr (1994), Callan (1996), Rendon & Hope (1996), Palmer (2000), and others predicted.

Additionally, this dramatic enrollment growth has occurred at a time of substantial increases in the tuition and fees charged to students. In 2000-2001, in-district and in-state tuition and fees across all types of Associate's Colleges averaged \$1,345 and \$1,650, respectively (Table 2). Five years later, those figures were \$2,214 and \$2,610, respectively, an increase of 65% and 57%, respectively. Tuition and fees at Suburban Associate's Colleges increased slightly more than at other types. These conclusions must be tempered, however, by the well-known differences across state lines—California charges under \$1,000 per

year while in Minnesota, the cost is over \$4,500 per year (Roessler, 2006). In FY 2003, 34 state directors of community college systems reported taking midyear state budget cuts, and all 46 reporting states indicated the raising of tuition (Katsinas, Palmer, & Tollefson, 2004). There is no reason not to assume that the burden passed onto students and their families would be much greater in those 25 states where revenue from local sources constitutes less than 10% of total revenues or that, with California excluded from the aggregate, the national average of tuition and fees charged grew much faster than 60% over this five-year period.

The Pell Grant is the key driver in delivering on the promise of access for economically disadvantaged students to all types of Associate's Colleges.

Likewise, total student grant aid expenditures grew, but not enough to cover the combined impact of 2.3 million additional students. However well meaning federal policymakers might have been in expanding federal grant aid to help financially needy students access community colleges, they are challenged to meet a rapidly moving target, as annual in-district tuition and fees charged at public Associate's Colleges increased by 65% over this five-year period. In 2000-2001, as Table 5 shows, \$3.8 billion in grant aid from all sources was spread across 7.8 million students, for an average of grant dollars per student of \$486. Put differently, a total of \$2.66 billion in additional grant dollars were added into the system in 2005-2006 over 2000-2001, to be spread over 2.3 million new students, for an increase in the grant dollars per student average of \$149. Grant dollars increased by 70% in five years, enrollment by 30%, yet grant dollars per average student only 31%.

Since the average tuition and fees charged started at a much higher number in 2000-2001 than did the average grant dollars per student awarded, it would take dramatically larger percentage increases in grant aid to make up the difference. Again, the target is moving, both on the enrollment side of the

ledger as well as on the side of tuition and fees charged. In this context, the 65% increase in in-district tuition and fees charged to students and families has made the task of delivering access more challenging for federal and state policymakers. At a time when states and the federal government should be adding significantly to overall system capacity, the state-level cuts in appropriations for public community college operating budgets have compounded the challenge of preserving the purchasing power of the financial aid packages to needy students.

State-specific shifts in costs are not captured in the data presented. According to a recent report by the College Board (2007), average community college tuition and fees are the lowest in Western states (\$1,289) and the highest in the Middle States region (\$3,714). This dramatic shift in community college finance has occurred in just five years. Given the fact that 1 in 4 students at U.S. community colleges are in California, and given the Golden State's historic commitment to low tuition, if the California numbers are removed from the national averages, it is easy to predict that the gap between growth in grant dollars and growth in tuition and fees charged has widened in many states over this five-year period of Tidal Wave II.

Finally, we have documented through use of the new Carnegie Classifications of Associate's Colleges that Pell Grants are important in providing the promise of access at all types of Associate's Colleges. Of the \$6.5 billion in total grant aid awarded to students across all types of Associate's Colleges in 2005-2006, Pell Grants comprised \$4.2 billion or 65% of the total (Tables 3, 4, and 5). State grants lagged far behind as the second largest category at 17%, followed by institutional grants (8%), other federal grants (6%), private grants (3%), and local grants (1%). By major category, 68% of the aid dollars awarded at Urban, 65% at Rural, and 63% of the aid dollars at Suburban Associate's Colleges came in the form of Pell Grants. More local government grant aid dollars went to students at Urban, and more institutional grant aid dollars went to students at Rural Associate's Colleges. However, the major conclusion that can be drawn from the data presented here is striking: the Pell Grant is the key driver in delivering on the promise of access for economically disadvantaged students to all types of Associate's Colleges. As Kojaku and Nunez (1999, cited in Palmer 2000) note, of all first-time students at public two-year and four-year colleges

under 24 years old, 59% were enrolled at community colleges. Additional analyses of the IPEDS Student Financial Aid (SFA) Cohort Study not presented in this paper due to space limitations underscores both the primacy of the Pell Grant, and the role these colleges play in serving newly entering students. While all forms of grant aid are important to the students who receive them, the primacy of the Pell Grant in assisting Associate's Colleges to serve economically disadvantaged students helps to explain why the American Association of Community Colleges (AACC) and the Association of Community College Trustees (ACCT) have chosen to make increasing Pell Grants their top legislative priority during the 2007 reauthorization of the Higher Education Act. (AACC & ACCT, 2007).

Analysis: Our Findings in the Larger Research and Policy Context

Our work shows that community colleges of all types have seen dramatic increases in enrollments over the five-year period from 2000-2001 to 2005-2006. These changes have important implications for enrollment managers, as well as for academic, student affairs, and finance administrators. Rendon and Hope (1996) address a number of issues concerning how institutions of higher education change their internal practices to better serve the new students entering American higher education. Additionally, Manns (2004) has argued that if waves of new students were to be accommodated, increased investment in public higher education facilities to expand overall system capacity was essential. In his studies of state tax appropriations for public higher education facilities, he found that only 15 of the 41 states that responded had master plans for their public higher education facilities in 1996-97 (Manns & Opp, 2001; Manns, 2004). In a follow-up study conducted seven years later (2003-04), only 13 of 39 states reported that they had such plans (Manns & Katsinas, 2006). It is clear that the current enrollment boom is challenging leaders across institutions of higher education, and not just enrollment managers.

Our findings are both consistent with and different from what prior authors on the subject of enrollments and student financial aid have found. That community colleges are serving increased numbers of low income students in recent decades is beyond doubt (see McPherson & Shapiro, 1998). Zumeta (2004), in presenting what might be deemed a "conventional" policy argument, notes that "where states face large-scale growth in enrollment demand that for

one reason or another they choose to respond to by expanding capacity in public institutions, many may want to look at two-year colleges to meet more of this need than they have in the past” (p. 100), and avers that scarce state resources may be motivating this approach. As Katsinas (2005) has noted, intense budgetary competition at the state level, particularly with regard to health care, has produced declining state dollars and has made it difficult for community colleges to keep their tuitions low. The Texas Higher Education Coordinating Board’s *Closing the Gaps: The Texas Plan for Higher Education* has called for dramatic increases in community college enrollments at the same time the state has cut its funding of the instructional formula from 65% in 2000 to 52% in 2005. As we are completing this manuscript, the \$154 million of health benefits for community college faculty and staff vetoed by the Texas governor (Redden, 2007) has been restored, but it is estimated that this funding issue will be revisited (Haurwitz, 2007). The deep cuts in state appropriations and much higher tuition charges in most states that followed the 2003 budget cuts (Katsinas, Palmer, & Tollefson, 2004) flies in the face of Voorhees’ (2001) assertion that “Increases in community college tuition would be highly likely to reduce participation in higher education among those groups who are already the most underrepresented groups in higher education” (p. 493). It is also important to note Heller’s (2001) documentation of a 750% increase in tuition charged at two-year colleges between 1971 and 1998, a period when the Consumer Price Index rose by 297%. While this analysis might cause some to conclude that, from an economic perspective, the demand for higher education programs and services offered by community colleges may be somewhat inelastic, it is clear to us that further studies are needed regarding how many students may be shut out of even lower cost community college education following five years of sustained increases in tuition in most states.

As we write in 2007, we are nearing the end of the second consecutive two-term presidential administration that promised a \$5,000 maximum Pell Grant during their campaigns, yet failed to deliver on this promise once in power. Fortunately, positive movement toward this goal is being made, and we may not be all that far from achieving this goal. In light of the cuts in FY 2003 state appropriations, states and institutions are increasingly shifting the financing of college onto the backs of students and families. The dramatic increases in tuition and fees from 2000-2001 to 2005-2006 shown here certainly are indicative of this unfortunate shift, particularly within that sector of the higher education environment that

traditionally has served an inordinate number and percentage of those students who are economically disadvantaged and for whom, as Cohen and Brawer point out, the community college so often has been the only viable choice for pursuing a postsecondary education (2003).

It is important to note that not every state has made the policy choice of substantially raising tuition. California Governor Arnold Schwarzenegger signed legislation that lowered tuition, which was already the lowest in the nation at California community colleges, by 28% as of the spring 2007 semester (Schwarzenegger, 2006). In contrast, tuition and fees at Minnesota's community colleges averaged \$4,500 per year in 2005-2006 (Roessler, 2006). Even without taking additional nontuition and fee related costs of attendance into account, differences in tuition and fee charges across state lines tell a compelling story.

Applying the new 2005 Basic Classifications of Institutions of Higher Education from the Carnegie Foundation for the Advancement of Teaching for the first time allows analysis using specifically defined geographic types of two-year colleges. The importance of geographic service delivery areas cannot be understated, for community colleges to be the *community's* colleges requires them to be engaged in the regions they serve. The finding of commonalities between urban and rural college students we found is an area that deserves further study by researchers and federal and state policymakers alike. Our work, therefore, is consistent with Palmer's (2000) notion of community colleges as "the neighborhood schools of American higher education." By illuminating both differences and similarities among and across the 11 types of Associate's Colleges, we hope our work will provide direction to practitioners, researchers, and public policymakers who are interested in helping these institutions deliver on the promise of access to affordable, quality higher education in America. ■

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References

- American Association of Community Colleges & Association of Community College Trustees (2007). Advancing community colleges in the nation's capitol, legislative priorities for the 110th Congress. Washington, DC. February 2007, Retrieved August 31, 2007, from <http://www.aacc.nche.edu/Content/NavigationMenu/GovernmentRelations/LegislativeAgenda/110thLA.pdf>
- Carnegie Foundation for the Advancement of Teaching (2006). *2005 Basic Classification of Institutions of Higher Education*. Released February 2006. Retrieved August 31, 2007, from <http://www.carnegiefoundation.org/classifications/index.asp?key=791>
- Callan, P. M. (1996, May). The eye of the hurricane. Crosstalk. San Jose, CA: The California Higher Education Policy Center. Editorial. Retrieved August 20, 2007, from http://www.capolicycenter.org/ct_0596/cted_0596.html
- Cohen, A. M., & Brawer, F. B. (2003). *The American Community College*. 4th Edition. San Francisco, CA: Jossey-Bass.
- College Board (2007). *Trends in college pricing*. Retrieved October 22, 2007, from <http://www.collegeboard.com/press/releases/189547.html>
- Gerald, D. E., & Hussar, W. J. (1999). *Projections of education statistics to 2009*. Washington, DC: National Center for Education Statistics. Retrieved August 17, 2007, from <http://nces.ed.gov/pubs99/1999038.pdf>
- Grapevine (2007). An annual compilation of data on state tax appropriations for the general operation of higher education. Table 10. Retrieved August 31, 2007, at http://www.grapevine.ilstu.edu/tables/pdf/table10_07.pdf
- Hardy, D. E., & Katsinas, S. G. (2006). Using community college classifications in research: From conceptual model to useful tool. *Community College Journal of Research & Practice*, 30(4), 339-358.
- Haurwitz, R.K.M. (2007, October 24). Vetoed community college funds to be restored. *Austin American Statesman*. Retrieved October 24, 2007, from <http://www.statesman.com/news/content/news/stories/local/10/24/1024community.html>
- Heller, D. E. (2001). Trends in the affordability of public colleges and universities: the contradiction of increasing prices and increasing enrollment. In Heller, D. E. (Ed.). *The states and public higher education policy, affordability, access, and accountability*. Baltimore, MD: Johns Hopkins Press.
- Katsinas, S. G. (2003). Two-year college classifications based on institutional control, geography, governance and size. In A. C. McCormick & R. D. Cox (Eds.), *New directions for*

- community colleges: Classification systems for two-year colleges* (Vol. 122, pp. 17-28). San Francisco, CA: Jossey-Bass.
- Katsinas, S. G. (2005). Increased competition for scarce state dollars. In Katsinas, S. G., and Palmer, J. C. (Eds.). *New directions for community colleges: Sustaining financial support for community colleges* (Vol. 132, pp. 19-32). San Francisco, CA: Jossey-Bass.
- Katsinas, S. G., Alexander, K. F., & Opp, R. D. (2003). *Preserving access with excellence: Financing for rural community colleges*. Rural Community College Initiative Policy Paper. Chapel Hill, NC: MDC Inc.
- Katsinas, S.G., Palmer, J.C., & Tollefson, T.A. (2004). State funding for community colleges: perceptions from the field: A survey of the members of the National Council of State Directors of Community Colleges. A report of the Bill J. Priest Center for Community College Education, University of North Texas. Retrieved August 31, 2007, from <http://www.unt.edu/highered/Priest/sd04.pdf>
- Kerr, C. (1994). *Preserving the Master Plan: What is to be done in a new epoch of more limited growth and resources?* San Jose, CA: California Higher Education Policy Center Occasional Paper (October). (ED 399 848)
- Kerr, C. (2001). *The gold and the blue: a personal memoir of the University of California, 1949-1967*. Berkeley, CA: University of California Press.
- Kojaku, L. K., & Nunez, A. M. (1999). *Descriptive summary of 1995-1988 beginning postsecondary students with profiles of students entering 2- and 4-year institutions*. Washington, D.C.: U.S. Department of Education, Office of Educational Research and Improvement. (ED 425 684)
- Manns, D. A. & Katsinas, S. G. (2006). Capital budgeting practices in public higher education. *Facilities Manager*, 22(1).
- Manns, D. A., (2004). An assessment of capital budgeting practices for public higher education. *Planning for Higher Education* 32(2), 5-11.
- Manns, D. A., & Opp, R. D. (2001). A fifty-state assessment of capital needs for public higher education: Policy objectives. *Facilities Manager*, 17(4), 39-49.
- McPherson, M. S., & Schapiro, M. O. (1998). *The student aid game: Meeting need and rewarding talent in American higher education*. Princeton, N.J.: Princeton University Press.
- Rendon, L. I., & Hope, R. O. (1996). *Educating a new majority: transforming America's educational system for diversity*. San Francisco, CA: Jossey-Bass.
- Palmer, J. C. (2000). Demographics, state education reform policies, and the enduring community college role as an extension of the schools. In Palmer, J. C. (Ed.), *New directions for community colleges* (Vol. 11, pp. 93-103). San Francisco, CA: Jossey-Bass.

- Phillippe, K. A., & Boggs, G. R. (2003). The perspective of the American Association of Community Colleges. In A. C. McCormick & R. D. Cox (Eds.), *New directions for community colleges: Classification systems for two-year colleges* (Vol. 122, pp. 17-28). San Francisco, CA: Jossey-Bass.
- Redden, E. (2007, July 30). When the balance in funding suddenly shifts. *InsideHigherEd.com*. Retrieved August 31, 2007, from <http://insidehighered.com/news/2007/07/30/texas>
- Roessler, B. C. (2006). A quantitative of revenues and expenditures in U. S. community colleges, 1980-2001. (Doctoral dissertation. University of North Texas, 2005). *Dissertation Abstracts International*, 67(04), 1200. (UMI No. AAT3214494).
- Schwarzenegger, A. (2006). Governor Schwarzenegger reinigorates programs to prepare California students for a 21st century economy. Press release, Office of the Governor, August 7, 2006. Retrieved August 31, 2007, from <http://gov.ca.gov/index.php?/press-release/3238/>
- Snyder, T. D., & Hoffman, C. (2000). *Digest of education statistics 1999*. Washington, D.C.: National Center for Education Statistics.
- Snyder, T. D., Hoffman, C. M., & Geddes, C.. M. *Digest of education statistics 1996*. Washington, D.C.: National Center for Education Statistics.
- St. John, E. P. and Parsons, M. D., (Eds.) (2004). *Public funding of higher education: Changing contexts and new rationales*. Baltimore, MD: Johns Hopkins Press.
- Texas Higher Education Coordinating Board (2000). *Closing the gaps: The Texas higher education plan, 2015*. Austin, TX: Texas Higher Education Coordinating Board. Retrieved August 31, 2007, from at <http://www.theccb.state.tx.us/reports/PDF/0379.pdf>
- Voorhees, R.A. (2001). Financing community colleges for a new century. In Paulsen, M. B., and Smart, J. C., (Eds.), *The finance of higher education: theory, research, and practice*. New York: Agathon Press.
- Western Interstate Commission on Higher Education. (2004). *Knocking at the college door: Projections of high school graduates by state, income, and race/ethnicity, 1988-2018*. Boulder, CO: Western Interstate Commission on Higher Education.
- Zumeta, W. (2004). State higher education financing; demand imperatives meet structural, cyclical, and political constraints. In St. John, E. P., & Parsons, M. D., (Eds.), *Public funding of higher education: Changing contexts and new rationales*. Baltimore, MD: Johns Hopkins Press.