

# Understanding Success of Historically Underrepresented Students at California State University, Monterey Bay through a Look at Their Institutional Experiences

Mary Boyce, Veronica Chukwuemeka, Kathryn Cruz-Uribe

## Abstract

*Unlike many universities, the historically under-represented (URM) students at California State University, Monterey Bay, typically graduate at a higher rate than non-URM students. Intense efforts have been made by staff and faculty to increase retention and graduation rates of all students. This paper examines the graduation rates in the context of the students' experience of our institution, as measured by data in our Student Information Management System and student survey data.*

California State University, Monterey Bay (CSUMB), was founded in 1994 as the twenty-first campus of the California State University. With the fall 2012 enrollment of 5,609 students, it is one of the smaller campuses in the CSU system, which serves 426,534 students on twenty-three campuses throughout the state. Located on the central coast of California, CSUMB is the only four-year university in Monterey County. The county encompasses about 3,300 square miles, with 418,000 residents, of whom 56 percent are Latino (<http://quickfacts.census.gov/qfd/states/06/06053.html>). The economy is based upon agriculture as well as tourism and recreation. Higher education and research is the third-largest economic driver, and the region is home to more than twenty higher education and research institutions, including CSUMB.

CSUMB was started with a strong founding vision statement that guides the work of the campus. The statement encompasses a number of ideals, including partnership, innovation, sustainability, community, diversity, service, and excellence. For many at the university, the core of the statement about our students and how we will serve them, as follows: "The campus will be distinctive in serving the diverse people of California, especially the working class and historically undereducated and low-income populations. . . . The identity of the university will be framed by substantive commitment to multilingual, multicultural, gender-equitable learning." The ideals of the vision statement permeate the campus and inform our hiring decisions. Our retention, tenure, and promotion policy for faculty explicitly states that the policy is "intended to reflect the University's commitment to the principles, goals, and ideals described in the California State University, Monterey Bay (CSUMB) Vision Statement," and in their portfolios, faculty are expected to address how their work relates to the vision.

CSUMB's vision inspires the campus context for students. As a public university founded with ideals of social justice and multiculturalism, the university has attracted faculty and staff who are deeply committed to educating historically underrepresented and low-income students of California. In Monterey County and the nearby counties where only 25 percent of the high school students graduate prepared for postsecondary education, CSUMB is invested in strengthening the pipeline to college for underrepresented and first-generation college students, and increasing retention and graduation rates. CSUMB faculty and staff provide professional development for middle- and high-school math teachers, host middle-school students for Imagine College, and sponsor an annual, residential, summer Junior Otter program for migrant youth. Carefully crafted admissions materials have enabled students to choose CSUMB because it is an institution at which they imagine themselves being successful. Like many of our sister institutions in the California State University system, CSUMB serves a diverse population: 52 percent of our undergraduate students are first-generation, 41 percent are under-represented minority students, 45 percent are "Pell-eligible," and 72 percent receive financial aid. CSUMB's faculty are also diverse, although the diversity does not yet mirror the student population (more than one quarter of the full-time faculty come from traditionally underrepresented minority populations). A federally designated Hispanic Serving Institution (HSI), CSUMB attracts about one-third of its undergraduate students from the region and the rest from other parts of the state. Unlike many of its sister universities, CSUMB is not "impacted" and is using the same admission requirements for all underrepresented minorities (URM) and non-URM students. These requirements include high school graduation, a 2.0 GPA, completion of high school subject distribution requirements in areas "A-G" with grades of "C" or better, SAT I or ACT, and placement exams in writing and math. Even with these admission requirements, approximately 60 percent of the First-Time Freshmen (FTF) arriving at CSUMB will place into remedial writing or math, or both.

About 10 percent of the underrepresented students at CSUMB are participants in Educational Opportunity Programs (EOP) and Trio-funded Student Support Services (SSS). The university also has had a Title IV-funded College Assistance Migrant Program (CAMP) that served sixty-two students. A significant feature of these programs is developing a sense of belonging on the campus and the skills of an effective learner. For example, the summer program for first-year students includes participation in the university's math "boot camp,"—an intensive four-day math workshop. These students make connections with peers and staff during the program and they report feeling confident as they begin their university experience. In 2011–2012, 95 percent of EOP/CAMP students participating in math boot camp successfully completed their math remediation obligations in their first-year on campus. Support to gain skills and confidence as a math learner is an example of the programming that the university provides its students.

CSUMB offers all entering first-year students the opportunity to participate in math boot camp and math tutoring. Successful math remediation within one year at CSUMB

is now at 95 percent and success in the subsequent math course has reached 78 percent within two years. More than 25 percent of the math majors since the inception of the major in fall 2003 actually began their student career in remedial math. In fact, the math major at CSUMB has grown to over 100 students and attracts students with energy and excitement.

A few years ago, we noticed that students who successfully completed remedial work at CSUMB graduated at higher rates than other students. Although this struck us oddly, it suggests that when remediation goes well it is an example of successful early college learning experiences being a factor in retention. As CSUMB sought to disaggregate its retention and graduation data and increase its retention and graduation rates, the campus examined institutional data to understand what is occurring and develop strategies for increasing retention and graduation rates. This project coincided with a system-wide project in the CSU system to improve graduation rates.

## **The CSU Graduation Initiative**

In January of 2010, the California State University Board of Trustees announced the launch of a long-term, system-wide initiative to increase retention and graduation rates. The initiative is focused on increasing graduation rates as well as cutting in half the achievement gap in degree attainment for underrepresented students. At the time, CSU's overall six-year graduation rate for FTF was about 46 percent, and the announced goal of the graduation initiative was to increase this by eight percentage points by 2015 (to 54 percent—the top quartile of national averages of similar institutions).

CSU worked with The Education Trust (Ed Trust) on the analytical work to set the overall goal for the system, as well as individual goals for each campus, which will lead to achievement of the system's goal. The main populations of interest are the first-time freshmen and underrepresented minorities (defined as African-American, Hispanic and Native American). Ed Trust developed a national peer grouping for each CSU campus, analyzed the peer groups' retention and graduation rates, and determined the top quartile for each. As might be expected with such a large and diverse university system, campuses vary widely in their graduation rates. Some CSU campuses were already near the top of their peer group in terms of the graduation rate; these campuses also made a commitment to increase the graduation rate by an additional six percentage points by 2015.

The initiative to improve graduation rates resonated strongly with CSUMB, as we were already addressing retention issues. Based on the Ed Trust analysis, CSU Monterey Bay was given a goal to improve its six-year FTF graduation rate from 35.6 percent (for the cohort that started in 2000) to 49.3 percent by 2015 (cohort starting in 2009). This represents a 14 percentage point increase in graduation rate for this population (the second highest increase identified among the 22 CSU campuses included in the study).

Many campuses also showed a significant gap between the graduation rates of URM versus non-URM students. Based on the analysis of URM graduation rates for each CSU national peer group, each campus was required to increase the URM graduation rate up to the top quartile of their peer group. CSUMB was one of only three campuses that did not show an achievement gap between URM and non-URM students.

Since CSUMB opened its doors in 1995, the institution has, for the most part, graduated more URMs than non-URMs within six years. With the exception of three six-year graduation cycles, CSUMB has graduated URM students at a higher (or the same rate) as non-URM students. For the cohorts of FTF who enrolled at the institution from 1995 to 2005, the average six-year graduation rate for URM students is 39 percent compared to 36 percent for non-URM students (see Table 1).

A particular point of interest relates to the very idea of using six-year FTF rates as a measure of student attainment. CSUs typically serve many transfers in addition to first-time freshmen. Thus, as part of the Graduation Initiative, CSU also made a commitment to raise the graduation rates of transfer students, campus by campus, by the year 2015. Each campus was encouraged to set a target graduation rate increase for this population. CSUMB, however, as a residential campus drawing from all over the state, traditionally serves a higher percentage of FTF students compared to other CSUs. Thus, in this paper, we focus on the FTF data.

(Note that the graduation rate of 35.1 percent for the 2000 cohort is slightly different than the 35.6 percent figure previously cited above by the Ed Trust. The Ed Trust method differs slightly from the usual way that we calculate campus graduation rates in that it excludes some students, including part-time students and international students, who are included in the following CSUMB numbers.)

**Table 1. Six-Year Graduation Rate of First-Time Freshmen over time; includes both full-time and part-time students (although most of the students are full-time).**

Cohort Year	Total Number of Students in Cohort	All Students	URM	Non-URM
1995	171	40.9%	44.4%	38.9%
1996	219	37.4%	34.2%	39.2%
1997	181	33.1%	41.7%	27.5%
1998	273	36.3%	36.8%	36.0%
1999	299	32.1%	27.4%	34.3%
2000	445	35.1%	35.0%	35.1%
2001	570	37.5%	40.1%	36.4%
2002	576	38.2%	47.8%	33.8%

2003	515	41.4%	44.7%	39.9%
2004	648	40.9%	37.2%	42.5%
2005	547	37.5%	40.3%	36.0%
Average over the years:		37.3%	39.1%	36.3%

### **CSUMB Survey Data**

As we reviewed our retention and graduation data, we were puzzled. First, we perceived a disconnection between the relatively low graduation rate for the campus, and the fact that we engage in many high impact practices. For example, our campus is highly residential, with about 61 percent of our undergraduate students living on campus, and 88 percent of freshmen doing so. In addition, all freshmen are required to enroll in a Freshmen Year Seminar, which is normally taken in their first semester. Service learning is an important part of our academic curriculum, and our program has received national and international recognition. We are one of only four public universities in the nation and the only one in California, with a service learning requirement for all undergraduate students. (All students who begin as freshmen are required to take a service learning course at the lower division as well as in their major at the upper division, while transfers take only the upper division course.) We also espouse active and engaged learning, and our results on the National Survey of Student Engagement (NSSE) indicate that our students strongly experience this commitment. For example, on the dimension of “Active and Collaborative Learning,” results from CSUMB seniors in both 2008 and 2011 put our institution in the top 10 percent of peer institutions administering the NSSE.

Our analysis of our retention and graduation data focused on two groups of students—those who were not retained and those who were. We learned several important things from the data set about students who were not retained. The attrition of CSUMB students crossed all demographic groups, all majors, and all levels. Something was not working for many of our students. We were losing as many as 50 percent by the end of their second year and another 10 percent in the third year and in the fourth year. While many institutions lose students after the freshmen year and even the sophomore year, it is uncommon to lose students as juniors and seniors and yet, we were. As we looked closely at student survey feedback, our attention was drawn to student concerns about a complex curriculum and inadequate academic advising. In addition, when we looked at our transfer students (most of whom were coming in ready for upper division courses), we saw we that were losing these students as well, despite the fact that they transferred to campus with a specific major in mind. Student comments expressed dissatisfaction with the academic requirements for transfer students and a perception that it would be difficult to meet the degree requirements.

The curriculum at CSUMB was both unique and complex. Its approach to General Education (GE) had requirements in thirteen areas, and these areas did not easily correspond to the GE Areas A-E common to community colleges and other state universities in California. Additionally, the university had graduation requirements in

technology, foreign language proficiency, service learning, and “culture and equity.” This distinctive curriculum worked for many students who began their academic work at CSUMB, although it became apparent that some students were concerned about the requirements. It also took labor-intensive advising for an incoming transfer student to understand how many of the courses they had already taken could meet CSUMB requirements and how many courses in addition to the major would be necessary. Some transfer students left after one semester or one year when they realized how many additional courses it would take to complete their undergraduate degrees. Institutional data (Retention Study, 2001–2011) show that about 18 percent of the students leaving CSUMB were students with 121 or more semester units completed. Data from the National Clearinghouse indicate that many of these students transferred to other universities to complete their degrees.

Improvements in advising and reform of GE became central projects in a multiple-year effort to address student concerns in tangible ways. Faculty met with community college colleagues and began to examine how the curriculum could be organized to better serve the students of California. The content and learning experiences could be powerful in ways that the faculty had initially envisioned and yet, organized in ways that made sense to more prospective students and counselors in high schools and community colleges. While we worked on advising and launched the GE reform effort in the faculty, a group led by the Provost began to examine the data of students that were being retained. What could we learn from students who were being successful?

We turned again to student survey data to try to understand why our URM students graduate at the same rate (or better) as non-URM students and what was “working” for the students who stayed. CSUMB administers the NSSE to our students every three years, as well as a home-grown survey we call the “CSUMB Experience Survey” (CSUMB-ES). The NSSE collects information about the nature and quality of students’ college experiences, particularly the extent to which they are engaged in learning and personal development. The CSUMB-ES is designed to inform the campus about students’ perception of and satisfaction with the education and services they receive from CSUMB. The CSUMB-ES includes all undergraduate levels, while the NSSE surveys freshmen and seniors only. For the purpose of this paper, we divided the student responses into two groups: “URM” students (traditionally UMs such as African-Americans, Hispanics, and Native Americans) and “non-URM” students (all others).

The CSUMB-ES has sixty-one questions that deal with student satisfaction across a variety of campus experiences, including their academic programs, athletic opportunities, diversity, dining and residential life (Table 2 provides some examples). For most of these questions (59 out of 61), URM students reported higher satisfaction with their CSUMB experience than non-URM students. This higher satisfaction was statistically significant at the 0.05 level or below for 56 of those questions.

Note that the scale is a five-point Likert scale, ranging from 5 (very satisfied) to 1 (very dissatisfied).

**Table 2. Examples of CSUMB Experience Survey (CSUMB-ES) questions and responses from the 2011 survey regarding student satisfaction.**

How satisfied have you been with the following since enrolling at CSUMB?	URM	Non-URM
Q14 Academic programs/majors***	4.1	3.8
Q17 Class size***	4.4	4.2
Q18 CSUMB's overall commitment to students***	4	3.6
Q19 Dining services***	3.1	2.9
Q20 Diversity of the student body***	3.8	3.7
Q24 Sense of community or belonging on campus***	3.8	3.6
<b>Please indicate the level of satisfaction at CSUMB in the following areas:</b>		
Q29 Availability of courses in your major***	3.4	3.3
Q30 Availability of internet access***	3.97	3.8
Q31 Availability of public transport***	3.8	3.6
Q46 Library hours***	3.98	3.8
Q54 Course registration process***	3.6	3.4
Q61 Support from faculty***	4	3.8
Q62 Support from fellow students***	4	3.7
Q72 Overall CSUMB academic experience***	4	3.7
Q74 Overall CSUMB experience***	4	3.8

\* = significant at  $p < .05$

\*\* = significant at  $p < 0.01$

\*\*\* = significant at  $p < 0.001$

The CSUMB-ES also includes 28 questions that ask students to what extent CSUMB has contributed to their various abilities, skills and interests (e.g., ability to communicate in two or more languages, critical thinking skills, interest in service learning or community service; see Table 3 for examples). On every one of these questions, URM student responses were higher than non-URM students, and the difference is highly significant in all cases. From this, we can conclude that URM students perceive that they have gained more from their CSUMB experience than non-URM students.

Note that the scale is a 4-point Likert scale, ranging from 4 to 1 (very little, some, quite a bit, very much).

**Table 3. Examples of CSUMB Experience Survey (CSUMB-ES) questions and 2011, responses regarding CSUMB contributions.**

To what extent has your CSUMB experience contributed to your:	URM	Non-URM
Q77 Ability to communicate in two or more languages***	2.5	2.1
Q78 Ability to cope with real-life situations***	2.8	2.4
Q81 Ability to uphold ethical standards***	3	2.6
Q82 Ability to use your creativity to transform culture***	2.8	2.4
Q83 Ability to work effectively in a group***	3	2.7
Q86 Desire for lifelong learning***	3.1	2.7
Q90 Leadership skills***	2.9	2.5
Q99 Understanding of different cultures and ways of life***	2.95	2.6
Q103 Verbal communication skills***	3	2.6

\* = significant at  $p < 0.05$

\*\* = significant at  $p < 0.01$

\*\*\* = significant at  $p < 0.001$

Some of our recent NSSE results (2011) also support the idea that URM students report a more positive campus experience than non-URM students. NSSE asks students to reflect on the time they devote to various learning activities, including coursework (e.g., coursework emphasized analyzing the basic elements of an idea, experience, or theory, such as examining a particular case or situation in depth and considering its components), and there was no significant difference between URM and non-URM students on any of these questions. The NSSE questions had a 4-point Likert scale of (very little, some, quite a bit, very much).

NSSE also asks students to reflect on a number of questions that relate to institutional emphasis, and this is where we see some differences. For CSUMB, four out of seven questions pertaining to institutional emphasis showed differences between URM and non-URM students, and on three of the four, URM students reported a higher rate of engagement (amounts of time studying, helping you cope with non-academic responsibilities, and providing the support needed to thrive socially) (see Table 4 below). Interestingly, on the fourth question (using computers in academic work), non-URM students reported a higher level of engagement, perhaps a reflection of the “digital divide.”

**Table 4. CSUMB results on 2011 NSSE questions related to Institutional Emphasis.**

NSSE Institutional Emphasis Questions:	URM Mean	Non-URM Mean
Spending significant amounts of time studying and on academic work **	3.30	3.09
Helping you cope with your non-academic responsibilities (work, family, etc.) *	2.42	2.19
Providing the support you need to thrive socially **	2.65	2.41
Using computers in academic work *	3.47	3.59

\* = significant at  $p < 0.05$

\*\* = significant at  $p < 0.01$

\*\*\* = significant at  $p < 0.001$

The NSSE includes 20 questions related to “institutional contribution.” Only eight of these questions showed significant differences between the responses of URM and non-URM students; and in each case, the URM students rated their experience higher than the non-URM students, as seen below.

**Table 5. CSUMB results on 2011 NSSE questions related to Institutional Contribution**

NSSE Institutional Contribution Questions:	URM Mean	Non-URM Mean
Writing clearly and effectively *	3.23	3.06
Working effectively with others *	3.39	3.22
Learning effectively on your own *	3.06	2.86
Institutional contribution: Understanding yourself *	2.95	2.76
Developing a personal code of values and ethics *	2.91	2.62
Developing a deepened sense of spirituality *	2.13	1.82

To what extent has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas: Acquiring skills to work for social change \*

2.96 2.68

To what extent has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas: Understanding the consequences of your choices \*\*\*

3.18 2.76

\* = significant at  $p < 0.05$

\*\* = significant at  $p < 0.01$

\*\*\* = significant at  $p < 0.001$

These results lead us to wonder if there is a kind of student that is a good match for CSUMB. When we examine the feedback from students who stay at the university, they describe having found an academic home in a small university that is committed to social justice and characterized by active and engaged learning. The classes are small enough that as a student develops in the major, she/he is known by faculty. Qualitative comments on the CSUMB-ES consistently mention the fact that students feel that the faculty know them and are concerned about them. Students are making a place for themselves in this community. It may be that our URM students find this to be a more positive experience than they could have anticipated university-life being. On a majority of the NSSE items, our URM students indicate a more positive experience.

## **Conclusion**

Examining institutional data has allowed CSUMB to identify and develop numerous student success initiatives. These data highlighted student concerns about the curriculum and academic advising. The need for GE reform became visible. The percentage of incoming first time freshmen needing to develop a strong foundation in math and writing catalyzed a powerful and effective remedial program. For each initiative implemented, we gathered data that complemented institutional research to evaluate, assess, and improve the success of each initiative. The data we have examined are both formal and anecdotal. Not only is retention continuing to rise at CSUMB, graduation rates are also rising. The Otter Model, CSUMB's new GE program, was implemented in fall 2012 and has not yet been formally evaluated. It is so popular among students that advisors have been swamped with students wanting to change catalogs so that they will officially meet the requirements as stated in the 2012 catalog. About half of CSUMB's undergraduate students are benefitting from a phased implementation of improvements to academic advising. This project is still underway and the student reception of it is very positive. The NSSE results in 2008 and 2011 indicate a 20 percentage point increase in student satisfaction with academic advising over that time period.

Part of the CSU Graduation Initiative has been developing a campus leadership group that examines retention and graduation data for each cohort of FTF and transfer students. The leadership of the Provost and the engagement of the Vice President of Student Affairs and the Chair of the Academic Senate has enhanced the attention that each area of the university has to student success. Considering research questions and examining data is aided by institutional research and its director. We are using data to understand student experience and to determine tactics and strategies to improve retention and graduation rates. Our next steps include examining "leading indicators" of student success, continuing to invest in academic advising, evaluating the First Year Seminar program, and enhancing internship opportunities.

The early results of CSUMB's efforts to improve retention and student success are impressive. We have observed that the combination of the campus culture, vision, and support programs/commitment to student success, are resulting in higher retention and ultimately, graduation rates for traditionally underrepresented minority students. This

is the case for all but three 6-year cycles of graduation since the founding of CSUMB in 1995. Our goal is to see these rates go even higher. Graduation data confirm the success in the stream—these students report higher satisfaction, and they are also being graduated at higher rates than non-URM students.

### **Author Information**

Mary Boyce, Ph.D., Assoc. Vice President, Academic & Planning Institutional Effectiveness. Boyce is a former faculty in Business and Management, and is now an administrator working to broadly enhance student success.

Veronica O. Chukwuemeka, Ed.D. Director, Institutional Assessment and Research. Chukwuemeka has founded/co-founded three offices of institutional research and has in depth experience studying and reporting on the impact of institutional and external factors on retention and graduation.

Kathryn Cruz-Uribe, Ph.D., Provost and Vice President for Academic Affairs. An anthropologist by training, Cruz-Uribe leads the academic programs of the university, as well as the campus Graduation Initiative.

Mary E. Boyce, PhD  
Assoc. Vice President, Academic Planning & Institutional Effectiveness  
California State University, Monterey Bay  
100 Campus Center, Administration Bldg  
Seaside, CA 93955-8001  
E-mail: [mboyce@csumb.edu](mailto:mboyce@csumb.edu)  
Telephone: 831- 582-3952  
Fax: 831- 582-3558

Dr. Veronica O. Chukwuemeka  
Director, Institutional Assessment and Research  
California State University, Monterey Bay  
100 Campus Center, Library room 3154  
Seaside, CA 93955-8001  
E-mail: [vchukwuemeka@csumb.edu](mailto:vchukwuemeka@csumb.edu)  
Telephone: 831- 582-4664

Dr. Kathryn Cruz-Uribe  
Chancellor, Indiana University East  
2325 Chester Blvd.  
Richmond, IN 47374  
E-mail: [kathcruz@iue.edu](mailto:kathcruz@iue.edu)