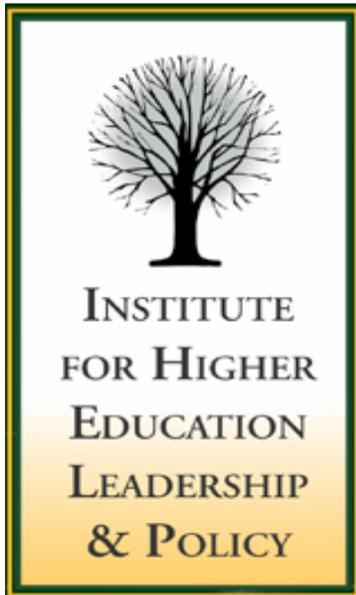


Policy Issue Report

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Improving Outcomes for California's Minority Students: Can an Increased Role for Community Colleges in Teacher Preparation be Part of the Answer?

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Executive Summary

Effective, well-trained teachers are a critical component of a high quality education, but too many students of color in California lack consistent access to qualified teachers, resulting in a persistent achievement gap. If minority students are to succeed in K-12 and go on to higher education, they need committed, capable teachers to help them achieve to high standards. This paper describes some of the current recruitment and retention problems that California schools face and suggests ways in which community colleges could help alleviate teacher shortages.

Involving community colleges more overtly in teacher preparation could provide an opportunity to reach out to new kinds of candidates, including more under-represented minority students who are largely concentrated in this sector of the state's higher education system. In this report, we envision a four-step pipeline for teacher development in which the community colleges can play a vital role:

1. Recruitment of students into the community colleges who are interested in teaching
2. Successful completion of requirements for transfer to a senior institution, including adequate preparation for an education program
3. Transfer and completion of a baccalaureate and a teaching credential
4. Placement and retention in the teaching workforce

We suggest that new efforts in community colleges could shore up the pipeline at each of these points by encouraging more students to consider teaching as a career, enabling more students to prepare for transfer with a teaching career in mind, and ultimately bringing more teachers of diverse backgrounds into classrooms in high need areas of the state.

We describe some of the challenges community colleges face in assuming a larger role in teacher preparation including lack of a well-defined lower division teacher education curriculum, a complicated system for teacher credentialing, persistently low transfer rates in many of California's community colleges, and high rates of poor academic preparation among community college students. We also review developments that offer promising evidence for the value community colleges can add to teacher preparation in California. Finally, we offer several recommendations for policymakers and educators to shore up the pipeline for teacher development by supporting an enhanced role for community colleges in a process so critical to the well being of our students, our families and our economy. The search for an enhanced community college role in teacher preparation is occurring across the country but is especially important in California where community colleges play a larger role in higher education yet face greater challenges to finding their niche in the teacher preparation pipeline.

I. Introduction: California's Need for Teachers

Effective, well-trained teachers are a critical component of a high quality education. For too many minority students in California, however, consistent access to a well-trained and experienced teacher is rare. With a persistent achievement gap between white students and underrepresented minority students, a shortage of qualified teachers for California schools hurts our students, our families, and our economy. If minority students are to gain access to higher education in California and succeed, they need committed, capable teachers in grades K-12 to help them achieve to high standards. This paper describes some of the current recruitment and retention problems that California schools face and suggests some ways in which community colleges may be able to help alleviate California's teacher shortages.

CALIFORNIA'S PARTICULAR NEEDS

In the mid-1990s, California faced a severe shortage of fully credentialed and qualified teachers. Today, as a result of the economic downturn and state efforts to recruit new teachers, that general statewide demand for elementary school teachers has largely been met. However, teacher recruitment and retention remain serious problems for many California schools.

California suffers from three primary needs in teacher preparation:

- To ease the shortage of qualified teachers in critical subject matter areas and in low-performing schools;
- To diversify the teaching workforce; and
- To improve teacher skills and effectiveness.

California's Teacher Shortages: Focused in Critical Areas

Growing school enrollments and a statewide class-size reduction initiative combined to create a sharp increase in demand for teachers in the 1990s. Student populations rose from around 4.5 million in the early 1990s to more than 6 million by 2000-01. In 1996, California allocated almost a billion dollars for the Class Size Reduction Program, which offered additional state funds to districts that reduced class size from kindergarten through third grade (and hired additional teachers to fill the increased number of classrooms). In the 1990s, the total teacher population rose from slightly under 220,000 to more than 300,000.¹

The California Postsecondary Education Commission (CPEC) estimates that, due to increased enrollments and projected retirements in the public system, California will need 25,000 to 30,000 new teachers annually for the first ten years of the twenty-first century.² The state of California issued about 22,000 teaching credentials annually from 1997 to 2000,

increasing to 24,000 in 2000-01 and more than 29,000 in 2001-02.³ At first glance, this appears adequate to meet future need.

Other factors, however, indicate that California is not preparing enough new teachers for future demands. About two-thirds of the nearly 30,000 credentials issued in 2001-02 were first-time credentials while one-third were awarded to people who were already working in the classroom.⁴ In addition, fewer than 9 out of 10 individuals who earn a new credential teach in California public schools in the next year.⁵ Research also suggests that teacher attrition plays a role in shortages, with a substantial number of teachers leaving the profession in the first five years of teaching. In addition, research suggests that high-poverty schools (schools with greater than 50% of students in poverty) suffer from much lower teacher retention rates than schools with lower rates of poverty.⁶ Given all of these factors, the number of students currently in the teacher development pipeline in California may fall short of projected needs. In particular, California is not prepared to meet the need for minority teaching candidates, well-trained teachers ready to teach math and science, and teachers prepared for new requirements.

- ***Acute Shortages in Specialized Areas: Math, Science and Special Education***

Whereas public perception holds that California suffers from a widespread shortage of teachers (and the state may have indeed suffered from such a shortage after the introduction of class-size reduction in California), researchers generally agree that current teacher shortages are more concentrated in a select group of subjects and schools. The need for qualified teachers is particularly acute in specialized subject areas such as math, science, and special education. A 1997 study found that 46% of high school math teachers in California did not have a major or minor in math.⁷

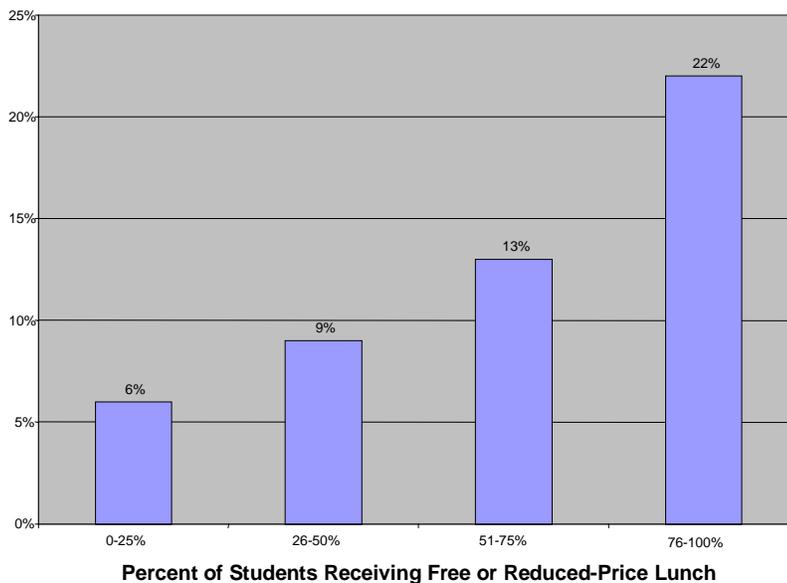
Current research suggests that a teacher's knowledge of the subject he or she is teaching strongly influences the teacher's ability to help students reach high standards. In fact, "the strongest and most consistent predictor of a state's average student achievement level is the proportion of well qualified teachers in the state," with well-qualified defined as teachers who are fully certified and hold the equivalent of a major in the subject taught.⁸ Research also suggests that teachers' subject knowledge is particularly important in math and science as compared to other subject areas.⁹

- ***Low-Income Students and Students of Color More Likely to Have Teachers without Full Credentials***

To meet the demand for teachers, California schools employ high numbers of teachers without full credentials. In 1995-96, more than 15,000 teachers, or 7% of the state’s teaching workforce, were in classrooms without a full credential.¹⁰ By 2002, that share had doubled to 14%, or 42,000 teachers.¹¹ Sometimes teachers working in the classroom with emergency credentials or waivers are enrolled in courses at night or over the summer to fulfill requirements; others leave the teaching profession after a few years without ever earning a full credential.

Just as the shortage of teachers is not consistent across subjects, the shortage of qualified teachers is not uniform across districts. In 2001-02, 40 California districts had 20% or more of their teachers without full credentials.¹² The schools that suffer from general teacher shortages and hire high numbers of teacher without full credentials tend to be low performing schools with high concentrations of poverty and underrepresented minority students.¹³ Of those California schools in which 76%-100% of students were receiving free or reduced price lunch, an average of 22% of teachers did not hold full credentials, compared to 6% of teachers in schools where fewer than 25% of students received free or reduced price lunch.¹⁴

Figure 1. Percentage of Teachers Without Full Credentials by School Poverty Level



Source: The Center for the Future of Teaching and Learning, *The Status of the Teaching Profession, 2000*

Students who are taught year after year by inexperienced teachers are being denied an equal chance to reach high standards. Research has shown that teaching quality (linked often to years of experience) has a substantial impact on student achievement and that low-achieving students could benefit the most from capable teachers.¹⁵

Need to Diversify the Teaching Workforce

The population of teachers in California public schools is not representative of the student population. While White students make up only 35% of California’s K-12 students, almost 75% of California’s teachers are White. The following table shows the racial composition of California’s teachers and students.

Table 1: Racial Composition of California Teachers and Students, 2001-2002

	Non-Hispanic White	Hispanic or Latino	Black	Asian or Pacific Islander	Filipino	American Indian
Students	34.8%	44.2%	8.3%	8.8%	2.4%	0.9%
Teachers	74.2%	13.5%	5.1%	4.6%	1.1%	0.9%

Source: California Department of Education Educational Demographics Unit, *Number of Teachers in California Public Schools by Ethnic Designation and Gender, 2001-02* (excludes multi-racial/no response categories)

The disparity between the numbers of Latino students and teachers is most striking. While the percentage of students who are Hispanic or Latino in California has grown to almost 45%, the population of Latino teachers has not kept pace. In addition, research suggests that the percentage of teachers nationwide who are members of ethnic minority groups may have decreased in the past decade, even as the number of African-American, Latino and Asian-American students in both K-12 and higher education has increased. In a report released in 2003, the National Education Association reported that the percentage of African-American teachers nationally declined from 8% in 1991 to 6% in 2001.¹⁶

Researchers and advocates stress the importance of minority teachers for three main reasons:

- ◆ Teachers who share students’ backgrounds may serve as models of academic success.
- ◆ Teachers’ expectations for students can be important predictors of success and teachers of color may have higher expectations for minority students than other teachers.
- ◆ Teachers of color may be more likely to stay in schools serving high numbers of poor or minority youth, reducing high teacher turnover rates and increasing stability within schools.¹⁷

Ultimately, most researchers agree that teaching quality, regardless of the teacher's race or ethnic background, is most critical to student achievement. But most researchers also argue that diversity among our teachers can play an important role in raising student achievement among minority youth.

Not Just More Teachers, New Skills Needed As Well

California also faces a growing need for teachers with new skills. In the 1990s California introduced rigorous new achievement standards for all students. In several years, all California students will have to pass a high school exit exam in order to earn a diploma. The federal "No Child Left Behind" legislation also places new requirements on California teachers and districts with regard to teacher training and effectiveness. In order for schools to qualify for federal funding, the legislation requires that all teachers of core academic subjects be "highly qualified" by the 2005-06 school year.¹⁸ Researchers suggest that high standards for all students demand a different set of skills than teachers were trained to have in the past—when a much smaller percentage of students were expected to graduate from high school.

THE RESEARCH QUESTION: CAN COMMUNITY COLLEGES PLAY A ROLE?

The traditional division of responsibility in California higher education placed teacher preparation under the auspices of the California State University (CSU) and, to a lesser extent, the University of California (UC). Despite playing a substantial role in California's higher education system as a whole, community colleges have played a more hidden role in the preparation of K-12 teachers.

California community colleges enroll half of all freshman college students in the state and an even greater percentage (nearly 75%) of African-American and Latino college freshmen.¹⁹ This report asks whether an increased role for California's community colleges in teacher preparation could help to improve the number of teacher candidates available for students in low-performing schools, including teachers from minority backgrounds. Our analysis also examines the potential role for community colleges to increase teacher retention in high-poverty schools and improve the quality of training that future teachers already receive—all with the ultimate goal of improving academic achievement for minority students across California.

Research methods for this analysis included a review of the literature on teacher preparation and an investigation of the current role of community colleges in California teacher training. We conducted interviews with program administrators at community colleges and

other segments of California higher education and completed an analysis of pilot programs and pending legislation.

Our methodology also included the development of a framework for evaluating the potential benefit of including community colleges more explicitly in the teacher preparation system. In this report, we suggest the potential impact that an increased role for community colleges could have on the teacher development pipeline in California, and we make corresponding recommendations for policies that we believe could help to shore up the pipeline for new teachers in California. In undertaking this analysis, the Institute for Higher Education Leadership & Policy seeks to contribute concrete policy recommendations that will increase the number and kinds of qualified teachers for California schools, and ultimately improve instruction and achievement for all students.

II. Why Turn To California's Community Colleges?

With teacher shortages across the country in the late 1990s, researchers have suggested community colleges as a potential resource for new teacher candidates.²⁰ In California, where shortages have been especially pressing and the community colleges play a larger role in higher education than in many other states, finding a new source of teacher candidates in the community colleges is a particularly compelling prospect. Involving community colleges more overtly in teacher preparation could also provide an opportunity to reach out to new kinds of candidates, including more under-represented minority students, and could improve the level of academic and professional training that future teachers currently receive.

COMMUNITY COLLEGES SERVE MOST STUDENTS, ESPECIALLY MINORITY STUDENTS

Community colleges enroll the majority of California's college students, including 69% of all students in public institutions and 67% of all first-time freshmen in the public segments.²¹ In California, where the notion of the junior college first developed, two-year community colleges were designed to be a more substantial part of the higher education system than in many other states. Nationally, community colleges enroll less than 40% of all college students.²²

Enrollments at California community colleges are expected to increase over the next decade, both in real numbers and as a percentage of all higher education enrollments. The community colleges will receive as many as 500,000 additional students over the first decade of the twenty-first century.²³ While all of California higher education is expected to experience substantial growth in enrollment, community colleges may see a disproportionately large increase, due both to their greater capacity to admit new students and to the cost savings achieved when students complete their first two years at a community college.

Community colleges play an even greater role in the education of California's minority students. Latino students in particular make up a greater percentage of student enrollment in the community colleges (29%) than they do in the University of California (14%), the California State University (23%), or the state's private institutions (18%). Table 2 shows enrollment in each segment by ethnicity.

The sheer size of the community college segment in California (more than 1.7 million students) means that the community colleges are home to a much greater number of minority students than the other, smaller segments. In fact, the community colleges enroll a majority of all Latino and African-American students in California's public institutions. More than 80% of

African American and Latino college students in California’s public institutions are found in the community colleges. Therefore, any effort to diversify the teaching workforce must consider students who begin in the community colleges.

Table 2: Enrollment by Segment by Ethnicity (Undergraduates), Fall 2002

	Non-Hispanic White	Hispanic or Latino	Black	Asian	Filipino	American Indian	Non-Resident Alien
UC	56,473 (39%)	19,986 (14%)	4,622 (3%)	48,130 (34%)	7,271 (5%)	935 (1%)	3,374 (2%)
CSU	116,621 (41%)	66,546 (23%)	18,193 (6%)	43,138 (15%)	15,363 (5%)	2,476 (1%)	12,334 (4%)
CCC	604,277 (43%)	403,552 (29%)	109,875 (8%)	168,416 (12%)	50,181 (4%)	13,733 (1%)	22,089 (2%)
Private	86,642 (53%)	30,201 (18%)	12,001 (7%)	26,111 (16%)	NA	1,770 (1%)	8,397 (5%)

Source: California Postsecondary Education Commission, *Total Enrollment by Segment by Student Level by Ethnicity (Undergraduates), Fall 2002* (excludes no response category)

COMMUNITY COLLEGES HOLD UNTAPPED POTENTIAL

California’s community colleges may be a source of untapped potential in terms of new candidates for teaching careers and new avenues for teacher preparation. In the first chapter, we outlined California’s needs for more and better-prepared teachers. Here, we envision a framework for evaluating potential solutions: an efficient pipeline for teacher development in California that recognizes and includes community colleges as an important piece in the pipeline. As we have imagined it, California’s pipeline for teacher development extends from community colleges through four-year institutions and credential programs, and into the teaching workforce in terms of the retention of beginning teachers in the profession and within urban schools and school districts.

We suggest that the pipeline to a teaching career through the community colleges can be understood as a series of four steps:

1. Recruitment of students into the community colleges who are interested in teaching
2. Successful completion of requirements for transfer to a senior institution, including adequate preparation for an education program

3. Transfer and completion of a baccalaureate and a teaching credential
4. Placement and retention in the teaching workforce

We believe that new efforts in community colleges could shore up the pipeline at each of these points by encouraging more students to consider teaching as a career, enabling more students to prepare for transfer with a teaching career in mind, and ultimately bringing more teachers of diverse backgrounds into classrooms in high need areas of the state.

Clearer Path to Teaching Careers Could Draw in Interested Students

A variety of factors have combined in California to deny community colleges an explicit role in teacher preparation—and make it difficult for community colleges to play a substantial role in the recruitment of new teacher candidates. The state’s 1960 Master Plan for Higher Education assigned primary responsibility for teacher credentialing programs to the California State Colleges (later renamed the California State University). No role for community colleges in teacher preparation was authorized beyond the general education of any student interested in transfer.

In order to receive a California teaching credential, candidates must demonstrate subject matter competence, complete a credentialing program, and pass a set of exams—much like the licensing requirements in other states. Unlike most states, however, California separates the four-year baccalaureate degree (meant to build subject matter competence) from the credentialing program, a fifth year of teacher preparation coursework designed to provide pedagogical instruction and student teaching experience, and prevents colleges from granting undergraduate degrees in education. By placing teacher preparation almost totally within post-graduate education, the state denied community colleges any formal role in teacher preparation.

Without a formal role in teacher preparation, community colleges have not had the infrastructure necessary to recruit students to teaching careers. Until recently, community colleges were only able to offer three transferable units in education, and many colleges still offer a single Introduction to Teaching class. Without an education major or department at the community colleges, there also has been no academic “home” on campuses for community college students interested in teaching. Many students (both at community colleges and four-year institutions) who are interested in elementary school teaching major in Liberal Studies. However, there are few courses in the major that focus on pedagogy and no student teaching experience. Students who are unsure about teaching as a career choice may lose interest and

turn to another career goal. Students interested in teaching in middle or high school typically major in academic fields that offer even less of a tie to teaching.

Given a more formal role, community colleges could produce many more students interested in a teaching career. With targeted recruiting, many of these students could be members of ethnic minority groups, math and science majors, or particularly interested in teaching in low-performing urban schools.

Adequate Counseling and Support Could Help Students Negotiate the Pathways

The requirements for the teaching credential in California are extremely complex, and community colleges have lacked adequate resources to assist students in negotiating the pathways. Until recently, few, if any community colleges had dedicated counselors to guide students through the teacher preparation process and to help students choose appropriate courses to meet all requirements. A more formal structure for teacher preparation in community colleges, along with adequate support services, could keep students on the path to transfer and a credential.

Early Introduction to Teaching Could Improve Outcomes

Community colleges have long played a silent role in teacher preparation: providing the first two years of academic preparation to thousands who ultimately do become teachers. While national studies show that 20% of teachers start their education in community college,²⁴ that figure is surely higher in California with its extensive use of the community colleges to educate undergraduates. Community college students in California, however, receive little or no introduction to the classroom or instruction in pedagogy.

If community colleges had a more defined role in teacher preparation, they could use the two years they have with future teachers to formally start their preparation by exposing them to the classroom in their first years of college. Research suggests that earlier exposure to the classroom can have a positive effect on teacher efficacy, particularly in the first few years of teaching.²⁵ An early introduction to teaching could solidify students' commitment to the teaching profession, ease the transition into teacher preparation programs, and improve learning and completion rates in baccalaureate and credentialing programs.

Targeting Community College Students Could Help High Need School Districts

An efficient and effective teacher preparation pipeline must account for more than just increased numbers of new candidates. It must also consider the placement and retention of new teachers, their effectiveness in the classroom, and their development into future leaders in

education and education reform.²⁶ By recruiting new teacher candidates from among the large number of under-represented minority students attending community colleges, providing them with adequate counseling and advising needed for transfer to and success in four-year universities, and giving them an early introduction to the classroom, community colleges could greatly increase the chances of placement and retention in high-need positions and communities.

III. Challenges Facing Community College Efforts to Improve Production of Teacher Candidates

Drawing new teachers from the community colleges is a compelling prospect across the country, but especially in California, where students in the K-12 schools are so diverse and have needs that may best be served by a more diverse teaching workforce, and where community colleges play a substantial role in higher education, particularly for minority college students. However, California's community colleges face substantial challenges if they are going to help the state alleviate serious shortages and provide adequate training for today's teachers. Some of the greatest obstacles include an unclear role for lower division instruction in teacher preparation, a complicated system for teacher credentialing, persistently low transfer rates in many of California's community colleges, and high rates of poor academic preparation among community college students.

UNCLEAR ROLE FOR LOWER DIVISION IN TEACHER PREPARATION

Unlike most other states, California separates the four-year baccalaureate degree (meant to build subject matter competence) from the credentialing program, a fifth year of teacher preparation coursework designed to provide pedagogical instruction and student teaching experience. With the passage of the Ryan Act in 1970, the state prevented all California colleges from granting undergraduate degrees in education. By placing teacher preparation almost totally within post-graduate education, the Ryan Act denied community colleges (who provide transfer students with the lower division coursework needed for an undergraduate degree) any formal role in teacher preparation.

COMPLEXITY OF CALIFORNIA HIGHER EDUCATION AND TEACHER CREDENTIALING

In most other states, community colleges are able to offer coursework leading to degrees in education and in many states, students interested in teaching need only follow a common transfer curriculum. However, in California, there is no undergraduate education degree and no common transfer curriculum. To ensure that community college students interested in transferring take courses that will be accepted for General Education and major requirements, community colleges and four-year institutions develop articulation agreements on a course-by-course and campus-by-campus basis. In these agreements, a particular CSU or UC campus designates the courses it will accept from a specific community college for major and General Education requirements. Although the Liberal Studies major, the most common program followed by students interested in elementary teaching, is offered at every CSU campus, the

requirements for the major differ across campuses, making planning for transfer more difficult for students and increasing the challenge for community colleges to prepare their students for transfer and teaching careers. In addition, there is no common major for students interested in secondary teaching, increasing the likelihood that students in critical fields such as math and science will get diverted from a teaching goal into the many other career choices available to them.

LOW TRANSFER RATES

Persistently low transfer rates in many of California's community colleges may serve as a barrier to increasing the number of teacher candidates they send on to four-year institutions. While some of the 108 community colleges transfer large numbers of students every year, some community colleges have such low transfer rates that the National Center for Public Policy and Higher Education (NCPPE) has concluded that, "Students' opportunities to transfer are uneven, depending on the community college they attend."²⁷ The NCPPE report revealed that only 39 of the 107 community colleges in 1999-2000 supplied almost 65% of the transfers to the CSU. Possible problems that lead to low transfer rates as identified in the report include "deficiencies in curricula and instruction offered by some community colleges; poor counseling, articulation or financial aid policies; some community colleges' lack of proximity to four-year campuses; and deficiencies of public schooling." Transfer agreements between community colleges and four-year institutions are also made individually, often requiring students to know not only which major they intend to complete, but to which schools they intend to apply.

Transfer rates are particularly low among some groups of students that community colleges would be interested in tapping as future teachers. Our own research suggests that community colleges with large shares of African-American and Latino students have significantly lower transfer rates than colleges with larger proportions of White and Asian students.²⁸ The disparity is, in part, related to differences in average socioeconomic level and academic preparation in high school, but these factors do not entirely account for the racial/ethnic disparities. African-American and Latino students may face greater work, family and financial pressures that prevent them from transferring to four-year institutions, and may have unique obstacles to transfer related to being first-generation college students or encountering campus cultures that are not supportive of their educational goals.

POOR ACADEMIC PREPARATION FOR POST-SECONDARY EDUCATION AMONG STUDENTS

Community colleges striving to produce more teacher candidates could face a particularly thorny obstacle in the poor academic preparation of many incoming students. Nearly 50% of entering students in the CSU system require remedial classes in order to prepare for college level work. Because community colleges have open enrollment and no admission requirements, the need for remedial education is likely to be even greater (the lack of a standard assessment policy across community colleges limits our understanding of remedial needs in this sector). Poor academic preparation could slow the transfer process for many students as they complete remedial classes, decreasing the likelihood of retention and completion. Poor academic skills could also prevent students from becoming eligible for credentialing programs or passing licensure exams. Most importantly, however, poor academic preparation, especially if not corrected in the community colleges or four-year institutions, could prevent new teachers from being effective in the classroom and improving achievement among students.

Community colleges may face a particular obstacle in the preparation of more teacher candidates from under-represented minority groups. Data from the CSU indicate that African-American and Latino students are much more likely than White students to require remedial classes; similar patterns likely exist at the community college level. Table 3 below shows the percentage of first-year students at the CSU requiring remedial classes.

Table 3: Percent of First-Year Freshmen Needing Remediation at CSU, by Selected Ethnicities

Ethnicity	Percent Needing Remediation in Math	Percent Needing Remediation in English
Asian	29%	65%
Non-Hispanic White	27%	31%
Filipino	36%	61%
Pacific Islander	43%	55%
American Indian	40%	47%
Mexican-American	54%	67%
African-American	65%	69%
Total	37%	49%

Source: California State University Analytic Studies Unit, *Fall 2002 Regularly Admitted First-Time Freshman Remediation Systemwide*

Because African-American, Latino and other underrepresented students are taught disproportionately by under-qualified teachers in elementary and secondary schools with lesser resources, it is no surprise that they are less likely to enter college fully prepared. However, the result of that under-preparation presents a significant challenge to community colleges attempting to produce more minority teacher candidates.

IV. Analysis of Recent Developments: Promising Changes and Ongoing Challenges

Recent developments in community colleges and teacher credentialing have started to better define the role that community colleges can and should play in California teacher preparation. In 1998, the California Legislature passed a bill (AB 2042) remaking much of teacher preparation in California. Included in the legislation was direction for California State University campuses to begin developing “blended” programs that would combine academic subject matter preparation for teachers with the credentialing program. Almost every CSU campus now offers at least one blended program (alongside separate credential programs that will continue to operate as before) and soon all will accept community college transfer students as well. Several programs developed at the community college level in recent years could increase the number of qualified teacher candidates coming from that segment. In addition, several community colleges have developed individual partnerships at the department level to help speed transfer of students into four-year institutions and teacher credentialing programs.

A ROLE FOR LOWER DIVISION IN TEACHER PREPARATION

In 1998, the California State Legislature called for a major shift in the structure of teacher credentialing programs. With the passage of Assembly Bill 2042, the Legislature directed the California Commission on Teacher Credentialing (CTC) to:

- “Eliminate the requirement of...an approved fifth-year program,” and
- Encourage institutions of higher education to develop minors in education and special education.

In effect, AB 2042 eliminated the requirement of an additional “fifth year” credentialing program and allowed students to begin their professional training as teachers while undergraduates. By encouraging the development of education minors, it also called on institutions to help students focusing on subject matter competency to learn about the profession and practice of teaching at the same time. AB 2042 also encouraged colleges to link teacher preparation with new state student achievement standards, which led the CTC to develop new requirements for many credentialing programs.

In their implementation of AB 2042, CSU campuses developed blended programs that link undergraduate subject matter preparation with the education instruction found in teacher credentialing programs. Also known as integrated teacher education programs, blended programs allow students who are interested in teaching to begin professional training as

undergraduates. Blended programs allow students to engage in pre-service fieldwork as undergraduates, some as early as freshman or sophomore year. Some blended programs enroll students as freshmen while others enroll students as juniors. As of February 2003, almost all CSU campuses offered at least one blended program.²⁹ Most programs are designed to provide either a multiple subject (elementary school) or single subject (middle and high school) credential and some focus on themes. For example, the CSU Los Angeles blended program in Urban Learning trains teachers for the challenges of urban schools. Most CSU campuses continue to offer traditional one-year credentialing programs for students with baccalaureate degrees. In order to meet current requirements of the CTC, all CSU campuses must develop at least one blended program by 2004. Senate Bill 81, currently awaiting the Governor's signature, would require all CSU campuses to enter into articulation agreements with community colleges in their region to integrate transfer students into the blended programs by 2005.

In the first evaluation of blended programs, SRI International concluded that blended programs could affect the teaching workforce in California in three significant ways:

- **Increase the quantity of credentialed teachers:** By offering students a “streamlined pre-professional track,” colleges may be able to attract students who would have been put off by the complexities of a separate credentialing program.
- **Decrease the number of students entering teaching with emergency credentials:** Because the blended programs eliminate the gap between the undergraduate degree and a teacher credentialing program, these programs may prevent a substantial number of students from choosing to enter the classroom with emergency credentials as soon as they receive a bachelor's degree.
- **Improve teacher training and skills:** Students gain experience in the classroom and combine academic subjects with coursework in pedagogy, which may make them more effective teachers.

The evaluation suggests that the blended programs could have a powerful impact on schools and students across California.

Blended programs are one component of a broad national attempt to improve teacher training. San Francisco's Stuart Foundation has provided grants to CSU campuses developing blended programs and has supported a large-scale evaluation of that effort. As part of its initiative to improve teacher preparation, the Stuart Foundation has also supported programs focused on developing effective training at the district level. The Carnegie Corporation is another supporter of new models of teacher preparation. In 2002, the Carnegie Corporation issued a “Carnegie Challenge” paper arguing that colleges of education should redesign teaching and teacher preparation as a clinical profession. In other words, teacher preparation should

include much more supervised teaching in a classroom setting, with extensive mentoring, instruction and support for beginning teachers. In this vein, the Carnegie Corporation has launched Teachers for a New Era, a major initiative to redesign teacher education and create “residencies” in education. The Carnegie Corporation believes that placing teacher candidates in the classroom earlier and providing them with mentoring and support will improve student achievement.

SRI estimates that blended programs had graduated slightly more than 60 students by 2002 and had 1,600 students who were likely to complete a degree in the coming one to four years. In other words, blended programs are set to begin producing at least 400 teacher candidates annually. There is little evidence to date that blended programs are successfully diversifying the teaching workforce. Based on limited data, SRI International found that blended programs tended to have higher percentages of white students than the general student population at each program’s campus. SRI concludes that strict schedules for beginning a blended program (on some campuses, students must enter the program in the freshman year) may present obstacles for minority students who are more likely to need remedial classes, to attend school part-time, and to begin their studies in community colleges.

Assembly Bill 2042 and the blended programs offer community colleges a tremendous opportunity and daunting challenges. By placing responsibility for teacher preparation in the undergraduate sphere, A.B. 2042 has opened the door for increased participation by community colleges. However, the changes wrought by A.B. 2042 and the development of the blended programs mean that community colleges have had to scramble to provide students with the most up-to-date information about transfer requirements, and with the opportunity to gain the early classroom experience that is a critical component of blended programs. Community college students may be at a disadvantage in regard to the blended programs, as the programs require a heavy courseload and transfer students may not be able to complete all required courses in four or even five years. Blended programs may also continue to require that students take their first classes focused on teaching in the four-year institutions, which might prevent students in community colleges from gaining classroom experience as early as students who begin in four-year institutions.

PARAPROFESSIONAL TEACHER TRAINING PROGRAM

Since 1995, California has funded a program designed to help paraprofessionals, who are already working in schools, to become fully credentialed teachers. The statewide Paraprofessional Teacher Training Program (PTTP) provides paraprofessionals (mostly

classroom aides) with academic and financial support, including tuition, money for books and other supplies, and counseling and tutoring services. The program also pays all fees associated with licensing exams.

The program has targeted paraprofessionals because they already have experience working in classrooms, tend to come from the same communities as their schools' students and are often members of underrepresented minority groups. Since many paraprofessionals have less than an Associate's Degree, the program works with community colleges as well as CSU campuses. The program directors in each school district recognize the challenges that many of the participants (who tend to be older and have families) face and offer targeted services to help students make it through. In addition to considerable financial support, the program has arranged for childcare and other services to ensure that participants can continue. Some of the affiliated community colleges have even offered courses at school sites so paraprofessionals can take courses with peers at an accessible location. When the program was launched in 1995, it was designed as a pilot project with a maximum of 600 participants from 12 school districts. More districts have since joined, with a total of 2,266 participants to date, across more than 25 districts.³⁰ The annual funding level varies with the number of participants; the authorizing legislation limits expenditures per participant to \$3,000 per year.

The PTPP has been a remarkable success. By targeting paraprofessionals who are already working in classrooms, the program has provided districts with reliable candidates who are extremely likely to remain in the district. Since its inception, the program has produced a total of 507 fully credentialed teachers, with 494 of those individuals still serving in California schools. An additional 324 participants serve as classroom teachers as they continue to work towards a full credential. The programs operate fairly independently and tend to focus on training teachers for specific needs at the local school districts. Districts cite especially the need for bilingual elementary school teachers and teachers of special education classes. Of the 2,266 participants in the program statewide, more than 1,100 are pursuing credentials in bilingual education (700) or special education (472). In three of the districts' paraprofessional training programs, all of the participants are pursuing credentials in special education. The program has also successfully recruited minority candidates. Of 485 program graduates who responded to a survey, 79% were members of ethnic minority groups.

TEACHER AND READING DEVELOPMENT PARTNERSHIPS (TRDP)

In 1998, California passed legislation authorizing the Teacher and Reading Development Partnerships (TRDP) program, an innovative grant program to recruit teachers at the community college level. More than 50 colleges or consortia applied for funds from the \$10 million program and 34 California community colleges received grants. The TRDP program provides community colleges with AmeriCorps funding to place students as tutors in low performing schools. Tutoring serves to expose students to the classroom and encourage them to pursue teaching careers. Some students receive stipends, and the tutoring is also a valuable service-learning opportunity.

More than simply providing tutoring opportunities, many TRDP programs have also served to create a home for teacher preparation on campus. Many have drop-in centers where students can come for counseling and advising on teaching careers, transfer, and related topics. Most of the programs have strengthened the counseling and advising available for students interested in teaching careers, with a particular focus on helping students learn about financial aid for future teachers (mostly in the form of future loan assumption after teachers have worked in low-performing schools).

Many TRDP programs have also focused on improving articulation with four-year institutions, developing additional courses in education, and partnering with local school districts. Several directors of TRDP programs have become heavily involved in regional efforts around improved articulation for Liberal Studies. These partnerships have brought together neighboring CSU campuses and community colleges to develop a uniform transfer curriculum for liberal studies that each four-year institution will pledge to accept from all nearby community colleges. Still in the beginning stages, these groups are negotiating agreements among institutions that could form the basis for one uniform curriculum statewide, which could allow any community college student to take a set of courses that would transfer to any CSU campus.

Many TRDP program directors are extremely committed to increasing diversity in the teaching workforce. As one director described, the programs are built on the premise that community college students who come from poor communities and become teachers in those communities will be able to serve as academic role models for students in the districts.³¹ A few TRDP programs are also confronting the issue of low transfer rates and poor academic preparation; at Santa Ana College, students go through intensive remedial education in cohorts,

and soon may have the option of entering a cohort comprised entirely of peers who are also interested in teaching.

TRDP programs are young, but preliminary results indicate that they may be able to increase significantly the number of elementary school teachers available, particularly to low performing schools. There are no indications yet that TRDP programs are helping to alleviate shortages in math, science, or special education. Whereas the paraprofessional program has been very focused on producing more candidates with desired characteristics, the TRDP programs have instead focused on broader changes, working to improve recruitment and articulation for all students. As a result, it is hard to track the programs' results in terms of the numbers of students served and teachers produced.

DEPARTMENTAL PROGRAMS

Partnerships have also developed in the past few years between departments at community colleges and four-year universities. These partnerships, designed to track students into single-subject credential programs, help students transfer quickly and complete the subject matter requirements for entry into a credential program. For instance, Sacramento City College has developed a program linking its Chemistry department with the Chemistry department at UC Davis, in hopes of increasing the number of qualified Chemistry teachers earning credentials. Whether there are several or dozens of similar programs remains unclear.

Department-based programs have the potential to provide desperately needed teacher candidates for single-subject credential programs, particularly if the partnerships are based in math and science departments. However, little institutional support exists for these department-oriented programs. The Sacramento City College-UC Davis program grew out of a personal connection; other programs may have developed similarly.

SUMMARY

The pilot efforts described in this chapter offer promising evidence for the value community colleges can add to teacher preparation in California at all points along the pipeline. Well-designed and targeted programs can produce more candidates for low-performing schools and increase teacher diversity. In the context of California's complex higher education system, more structured programs for community college students interested in teaching are needed. State efforts have begun to address the recruitment and support of students interested in teaching, but many of the efforts to date have been ad hoc and unsupported by data collection or analysis.

V. POLICY RECOMMENDATIONS

California higher education has made important strides in the last few years in its efforts to draw on a valuable resource for qualified teachers: the community colleges. In this final chapter, we offer several recommendations for policymakers and education administrators to shore up the pipeline for teacher development. Our recommendations follow the four points on the pipeline as described earlier in Chapter II.

1. Community colleges should focus on recruitment and early identification of prospective teachers—and the Legislature should provide them with the support to do so effectively.

Community colleges are perfectly poised to serve as a major recruitment arm for the teaching profession. With a better-defined role now in teacher preparation, community colleges will be able to take on a greater role in recruitment, particularly among under-represented minority students. Special efforts to identify and recruit potential teaching candidates are particularly important in California, where there is no education major and no “home” for students on community colleges campuses interested in teaching. Community colleges and universities in the state should support the concept of a minor in education to complement the subject matter preparation and engage students in the teaching profession. Colleges should try to match the requirements for a minor with many or all of the requirements needed to enter a credential program, allowing community college students to meet requirements in a clear and streamlined way.

The paraprofessional programs have had significant success in preparing teachers that meet the particular needs of local school districts for bilingual and special education teachers, and for teachers committed to serving the students of a particular community. Funding for this program should be continued and efforts made to expand the program to other districts, particularly those that have difficulty recruiting and retaining teachers.

Colleges should adopt the strategy followed by City College of San Francisco and include a question on the standard registration form asking students if they are interested in a teaching career. This simple addition to a universal form allows the Teacher Prep Center at this campus to identify interested students and begin providing them with exposure to the classroom and the profession. This strategy, of course, would require that colleges identify an individual or office

on campus to be responsible for gathering and distributing information on the special requirements for teacher preparation.

Finally, the Legislature should encourage the development of more programs designed to recruit students specifically for the high-need teaching areas of math, science, and special education. Speaking to *Education Week* in 1999, Linda Darling-Hammond said, “States need to pinpoint where teachers are needed and in what fields, and be strategic about what incentives to put in place to encourage people to enter the profession.”³² While many of the TRDP programs and paraprofessional programs have focused on training teachers for low performing schools, there have been no explicit efforts by community colleges to train teachers for shortages in math and science. Appropriate strategies include increased outreach to students in math and science courses at community colleges (and in the other segments) and tutoring opportunities for college students in math, science and special education classrooms. The state of California may also need more targeted efforts to recruit teachers who can diversify the teaching workforce.

2. Community colleges should enhance their support for students interested in teaching in order to keep them engaged, provide them with adequate preparation and put them on a pathway to the profession.

All community colleges can learn some important lessons from the TRDP programs. Many of the programs have become campus hubs of information about teacher preparation. The early classroom experience these programs provide is invaluable for nurturing the initial interest of students and solidifying their commitment to pursuing a teaching career. The enhanced advising services that have developed in a number of colleges with TRDP programs, along with selected improvements in articulation with teacher preparation programs, are helping to shore up the portion of the pipeline by which students position themselves for acceptance into a teacher preparation program. Based on these achievements, the Legislature should not only continue to fund the program but should work to expand it beyond its focus on elementary education and the teaching of reading.

Other promising developments at community colleges that are worthy of replication include student teacher clubs, efforts to develop close connections with education departments at four-year institutions, and learning communities that allow students to complete subject matter preparation with other students interested in teaching. In addition, every community college should designate at least one adviser on campus who can help students with course planning for transfer in light of the complexity of the teacher credentialing process. Every college also must consider the basic skills needs of potential teacher candidates, and should

evaluate the benefits of having students go through intensive remedial education in cohorts, as Santa Ana College is doing.

3. Community colleges, universities and the Legislature should work to enhance the prospects for students' successful transfer and eventual success at completing a baccalaureate and credentialing requirements.

The higher education segments should begin to standardize (or at least regionalize) transfer requirements for teacher preparation. As a long term goal, the segments should work towards a uniform teacher preparation curriculum for community colleges. Until then, regional efforts among community colleges and CSU campuses (like those envisioned in SB 81) should continue to promote articulation specific to teacher education. Without investing additional funds now, the Legislature can make it clear that articulation agreements are important. When funds are available, the Legislature should provide additional grants for regional groups to continue working on a teacher preparation curriculum that could be implemented statewide.

The Legislature and the segments should also work together to develop teacher preparation programs on site at community college campuses, through cooperative agreements between community colleges and four-year institutions. The opportunity to complete a baccalaureate and a teaching credential on a community college campus removes the geographic barrier to transfer that particularly affects minority students who may have greater financial and family considerations. There are several examples of such programs across the state, with perhaps the best example at College of the Canyons. At its University Center, College of the Canyons offers a number of undergraduate and graduate degrees on its campus through eight public and private universities. Students interested in teaching can complete their first two years of undergraduate coursework at the college, and then obtain a baccalaureate in Liberal Studies and a multiple subject credential through CSU Bakersfield on the same campus. Students can also complete a single subject credential offered by CSU Northridge, or one of several master's degrees in educational administration, counseling or curriculum and instruction offered by several public and private universities. The college also operates TEACH, a grant-funded partnership designed to recruit students interested in teaching, provide them with classroom experience, workshops and seminars on the teaching profession, and other assistance to get them through the pipeline.

4. The state should increase its efforts to place and retain qualified teachers, particularly in high need areas and fields, and should fully incorporate the community colleges in this effort.

Current teacher shortages in California are concentrated in certain subjects and schools, i.e., math, science, special education and schools serving low-income populations. Although the community colleges are not formally involved in the later stages of the pipeline (placement and retention of teachers), they can have a significant impact on teacher placement and retention. Many of the promising activities we identified have the potential to draw into the professions the kinds of persons who will be more likely to serve in high need areas and fields and to prepare these prospective teachers to succeed.

Community colleges and universities should actively promote department-to-department partnerships in science and math to identify students in these fields with an interest in teaching and support them through the process of transfer and completion of a single subject credential. Research demonstrates the importance of qualified teachers in these specialized fields, making it imprudent to rely on the informal development of such collaborations.

TRDP programs should develop formal partnerships with local school districts that include commitments to hire students once they complete their training. All community college teacher preparation programs should build links to local districts. Partnering with the school district ensures that students will have an avenue for field experience in the first two years of college, and helps counselors and students to understand the regional market for teachers.

Targeted recruitment of minority students, such as those implemented so successfully in the Paraprofessional Teacher Training Program, should be expanded. California needs more teachers of diverse ethnic backgrounds to ensure high expectations of the state's many under-represented minority students, to serve as models of academic success, and to increase teacher retention in urban school districts. Achieving a more diverse teaching workforce should follow from successful recruitment of minority students in community colleges, adequate support to meet their educational needs, and early exposure to the classroom to encourage their commitment to the profession.

As a final recommendation, we suggest that California must improve its data collection to allow researchers to track students over time through the community colleges and the universities. It is only through such efforts that we can understand better where the teacher development pipeline leaks and prospective teacher candidates are lost and how strengthening the role of the community colleges can best help.

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Bob Cichowski, Associate Director, Teacher Preparation and Public School Programs, California State University Office of the Chancellor, March 19, 2003.

Camille Esch, Research Associate, SRI International, March 26, 2003.

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Mary Gill, California Community Colleges Chancellor's Office, April 4, 2003.

Barbara Goldman, University of California, Davis, February 7, 2003.

Helen Goldsmith, Liberal Studies Integrated Teacher Education Program, San Francisco State University, April 2, 2003.

Kevin Gould, Legislative Aide to Robert Pacheco, April 21, 2003.

Estella Hassan, Guidance Aide, City College of San Francisco, March 19, 2003.

Jaime Jacinto, Coordinator, Teacher Preparation Center, San Francisco State University, April 2, 2003.

Tony Kline, Northern California Recruitment Center, March 14, 2003.

Jennifer Kuhn, Legislative Analyst's Office, March 26, 2003.

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Enrique Morales, Counselor, Teacher Prep Center, City College of San Francisco, March 25, 2003.

Tuan Nguyen, Center for Teacher Education, Santa Ana College, March 14, 2003.

Claire Palmerino, Center for Careers in Teaching, California State University Fullerton, April 2, 2003.

Toni Triguero, California Teachers Association, April 21, 2003.

Susie Turner, San Francisco Unified School District Paraprofessional Program, March 17, 2003.

Sher Weahunt, California Community Colleges Chancellor's Office, December 17, 2002.

Tina Vasconcellos, CALWorks Counselor, Vista College, April 3, 2003.

Kathleen White, Director, Teacher Prep Center, City College of San Francisco, March 5, 2003.

Marci Whitebook, Director, Center for the Child Care Workforce, March 12, 2003.

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