

Evaluation of Teacher Preparation with a Focus on Math and English Teachers in California High Schools

**Center for Teacher Quality
The California State University
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Summary

The outcomes of teacher preparation programs on 22 CSU campuses were examined in a fifth annual evaluation, and are summarized in this report. CSU programs were effective when the evaluations began in 2001, and are improving in effectiveness each year. CSU is effective in the subject-matter preparation of K-12 teachers by colleges of arts and sciences, and in their pedagogical preparation by colleges of education. Individual campuses use the evaluation results as constructive feedback in order to make substantive improvements in the preparation of future teachers.

Sources of Evaluation Information

Five annual cohorts of CSU teaching graduates participated in the evaluation. The Chancellor's staff surveyed K-12 classroom teachers who had completed their credential preparation in the CSU during the following academic years: 1999-00, 2000-01, 2001-02, 2002-03 and 2003-04. CSU also surveyed the school supervisors of the CSU teachers. In response, both groups provided valuable information.

Teachers who participated in the CSU evaluation had several important qualifications. All had been admitted into CSU programs of professional teacher preparation. All teacher participants had satisfactorily completed the coursework and fieldwork components of those programs. CSU campuses recommended them for California teaching credentials. All served as certificated teachers in K-12 schools for at least one year after completing CSU preparation. The participating teachers answered CSU's questions at the end of their first year of certificated teaching. CSU explicitly asked teachers to judge the value and effectiveness of their CSU preparation on the basis of their teaching experiences in K-12 classrooms. Their answers have validity because the teachers completed all phases of CSU preparation and then used their newly-acquired skills in their teaching jobs. Overall, the evaluation included 12,760 teachers, which was 50 percent to 55 percent of the randomly-selected teachers each year. The evaluation samples were large and the response rates were high so the findings are reliable in describing the preparation of five annual cohorts of CSU teachers.

School supervisors who participated in the evaluation also had important qualifications. From the beginning to the end of a school year, each administrator was officially responsible for the supervision and evaluation of one or more CSU teaching graduates. The administrators had previously supervised other beginning teachers in K-12 public schools. All knew the *Content Standards for California Public Schools* and were able to assess CSU teacher preparation in relation to the standards. Each administrator received the name of the CSU graduate whose preparation was to be assessed. (None of them assessed CSU preparation "in general.") Before answering CSU questions, each supervisor had visited the CSU teacher's classroom for extended observations of teaching OR had discussed teaching

issues with the CSU graduate in extended professional conferences at the school site. Participating supervisors were well-suited to answer CSU's questions about how well each teacher was prepared for the many responsibilities of K-12 classroom teachers.

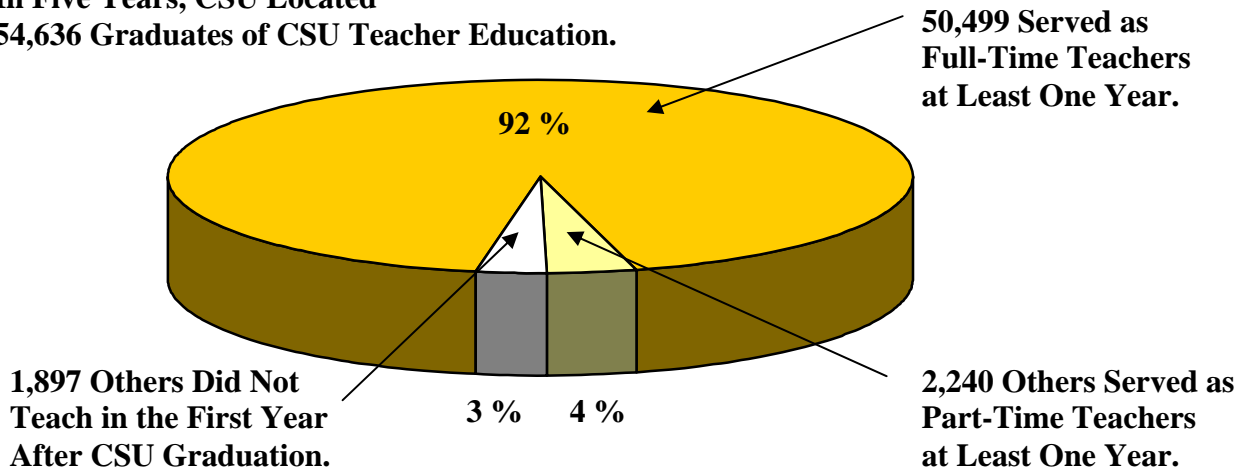
First Evaluation Finding: Many CSU Students Become K-12 Teachers

In the field of teacher preparation, news reports and policy discussions frequently indicate that "fifty percent of newly-prepared teachers do not become teachers at all." CSU's primary mission is to prepare effective teachers for California's public schools. Accordingly, it is critically important for CSU graduates to enter the teaching profession and serve with distinction for many years. Until CSU initiated annual evaluations, however, reliable statistics about this critical issue were not available.

In the five cohorts whose preparation was evaluated, a total of 59,842 CSU students completed preparation for California teaching credentials. One year after they completed CSU programs, the CO staff located 54,636 or 91 percent of these CSU graduates. As Figure One shows, a total of 50,499 or 92 percent of the located graduates taught full-time in K-12 schools during the first year following their CSU preparation. Another 2,240 or four percent taught part-time. In the available literature, no other institution has reported a *teaching participation rate* higher than 67 percent in a single year.

**Figure One:
Ninety-Six Percent of CSU Credential Graduates Become Teachers (Five Cohorts)**

**In Five Years, CSU Located
54,636 Graduates of CSU Teacher Education.**



In this population of CSU graduates, many of the part-time teachers (N=2,240) served as substitute teachers while applying for full-time teaching positions. When the five cohorts are combined with each other, only three percent of the graduates did not teach at all during their first year following CSU preparation. Approximately 85 percent of these graduates planned to teach sometime after their first year, however. *Based on evidence compiled in the five annual evaluations, the CSU is extremely productive and efficient in preparing large numbers of classroom teachers who serve in California public schools.*¹

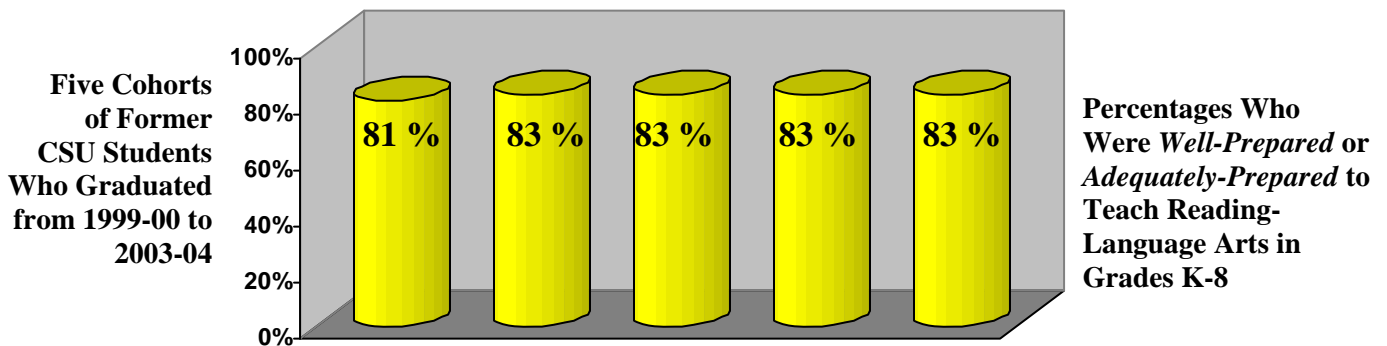
¹ Pertaining to the *retention* of CSU teachers in the teaching profession, a related report is currently being prepared for the Trustees.

Second Evaluation Finding: CSU Professional Teacher Preparation is Effective in Grades K-8

Reading-Language Arts Standards for California Public Schools are among the most important factors in the evaluation of CSU teacher preparation. Adopted by the California Board of Education in 1997, these standards describe the literacy curriculum that CSU graduates must be prepared to teach in each grade level. CSU faculties have worked hard to integrate these standards into the preparation of every new teacher in recent years. The five-year evaluation provides the most reliable available evidence of CSU's effectiveness in preparing teachers to achieve *California's Reading-Language Arts Standards*.

During the five-year evaluation, CSU received feedback from 6,321 elementary school principals who understood the *Reading-Language Arts Standards* and were responsible for implementing the *Standards* in K-12 schools. The supervisors also observed the CSU teaching graduates frequently during reading instruction. They assessed the *preparation* of 6,321 newly-certified K-8 teachers in relation to the following question: "How well was (Teacher's Name) prepared to teach reading-language arts according to the *California Reading-Language Arts Standards* for her/his grade level?" Principals could answer this question by reporting that the first-year CSU graduate was *well prepared* or *adequately prepared* or *somewhat prepared* or *not-at-all prepared* for this critical responsibility. Figure Two shows the percentages of new CSU teachers who were *well prepared* or *adequately prepared* according to their supervisors who were experienced instructional leaders in their schools.

Figure Two: In Elementary Schools, CSU Graduates are Prepared to Teach Reading-Language Arts According to California Standards



Evaluations of CSU Teacher Preparation by 6,321 School Principals (K-8)

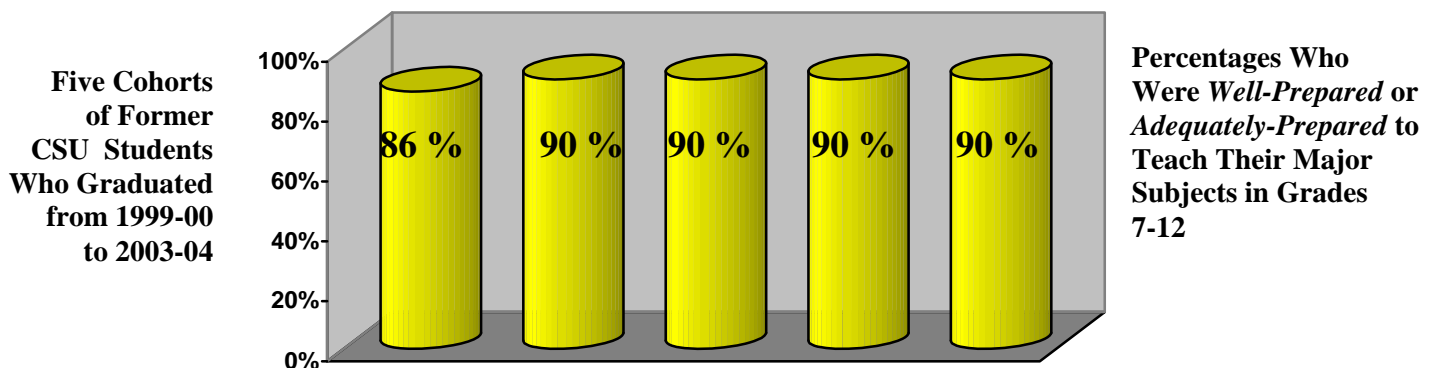
In these findings, "*adequately prepared*" describes a new teacher who had *sufficient preparation to function effectively* with the *support and assistance* that schools are expected to provide in the state's Beginning Teacher Support and Assessment (BTSA) Program. CSU exceeded this high level of preparation among K-8 graduates who were "*well prepared*." *The evaluation findings indicate strongly that CSU was effective in preparing teachers at the outset of the five-year evaluation period. CSU became more effective soon after the period started. Then CSU maintained its high level of effectiveness for the period's duration.* There have been no other valid, reliable evaluations of the California State University's effectiveness in preparing K-8 teachers for reading-language arts.

Third Evaluation Finding: CSU Professional Teacher Preparation is Effective in Grades 7-12

In grades 7-12, most CSU graduates teach one or two subjects of the curriculum. Most of these teachers completed CSU majors or minors in the subjects they teach. During their CSU studies, these prospective teachers also completed coursework and fieldwork in effective methods of subject-specific instruction. So, for example, prospective teachers of English, mathematics, history and science complete coursework and fieldwork in effective *methods for teaching* English, mathematics, history and science, respectively. Although their programs of professional preparation are fully accredited, the *effectiveness* of their preparation has not been evaluated previously.

In grades 7-12, CSU evaluation questions are usually answered by the chairs of academic departments. These academic administrators are responsible for the active supervision and annual evaluation of CSU graduates who are new teachers in their departments. Department chairs are also experienced teachers who know California's *Content Standards* in their subject areas. During the five-year evaluation, CSU received teacher-specific reports from 3,148 of these academic administrators, who responded to the following evaluation question: "How well did the CSU prepare (teacher's name) to teach her/his major subject(s) according to California's *Academic Standards* in the same subject(s)?" If the CSU graduate was prepared to teach history or English, then the academic department chair answered the question in relation to the *History Academic Standards* or the *English Academic Standards*. Supervisors answered the question by reporting that CSU graduates were *well prepared* or *adequately prepared* or *somewhat prepared* or *not-at-all prepared* to teach their major subject(s) in grades 7-12. Figure Three shows the percentages of CSU teachers who were *well prepared* or *adequately prepared* according to their academic supervisors.

**Figure Three:
In Secondary Schools, CSU Graduates are
Prepared to Teach Their Major Subjects**



Evaluations of CSU Teacher Preparation by 3,148 Academic Department Chairs

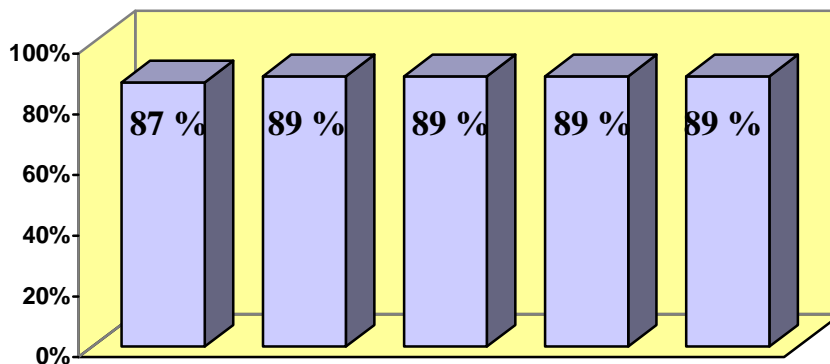
During five recent years, experienced supervisors of academic departments in California high schools and middle schools have consistently affirmed CSU's effectiveness in preparing new teachers to teach their major subjects satisfactorily and effectively in grades 7-12.

Fourth Evaluation Finding: CSU Subject-Matter Preparation is Effective in Grades K-12

Learning to use effective methods of instruction is not, by itself, sufficient teacher preparation. In addition to learning new pedagogical ideas and practices, CSU students who intend to teach must learn and understand the subjects to be taught. Every CSU campus offers undergraduate majors and minors in which prospective teachers acquire essential preparation in the content of the K-12 curriculum. This critical aspect of teacher preparation operates outside of CSU colleges of education, and is equally important for prospective elementary teachers and prospective secondary teachers. Accordingly, the five-year evaluation compiled evidence about the effectiveness of CSU subject-matter preparation among beginning CSU teachers in grades K-8 and in grades 7-12.

During the five-year evaluation cycle, CSU received valuable feedback about subject-matter preparation from elementary school principals and secondary school department chairs who supervised a total of 9,582 beginning teachers from the CSU. They answered the following question: "How effective was the CSU in preparing (teacher's name) to know and understand the subjects of the K-12 curriculum according to the *California Academic Standards* for those subjects?" In answering this question, supervisors had the same *response options* as before. Figure Four shows the percentages of teachers in each annual cohort who were *well prepared* or *adequately prepared* to know and understand the subjects they were teaching.

**Figure Four:
At All School Levels, CSU Graduates Are
Prepared to Know and Understand Subjects of the K-12 Curriculum**



**Percentages of Beginning CSU Teachers Who Were
Well-Prepared or *Adequately-Prepared* to
Know and Understand Subject-Matter in Grades K-12
According to 9,582 Experienced School Supervisors**

Evaluation data provide convincing evidence that *CSU graduates have strong knowledge and understanding of the subjects they are assigned to teach in their first-year assignments. Compared with other findings of the five-year evaluation, the subject-matter preparation of K-12 teachers is unusually effective in the California State University.*

Focused Findings About the Subject-Matter Preparation of English and Math Teachers

In recent years, the California State Board of Education gave primary attention to improving basic academic skills instruction in kindergarten and grades one through eight. The evaluation of teacher preparation shows that the California State University substantially supported the Board's initiatives in elementary education. Today, state education leaders are focused on high schools and the need to improve instruction in English and mathematics as well as other core subjects in grades 7-12. The State Board's focus on the English and math sections of the California High School Exit Examination is matched by the CSU Trustees' focus on the English and math sections of the CSU Early Assessment Program (EAP). But what about the *preparation of beginning English and math teachers* for 7-12? What can the evaluation of teacher preparation tell us about these areas of intense contemporary focus?

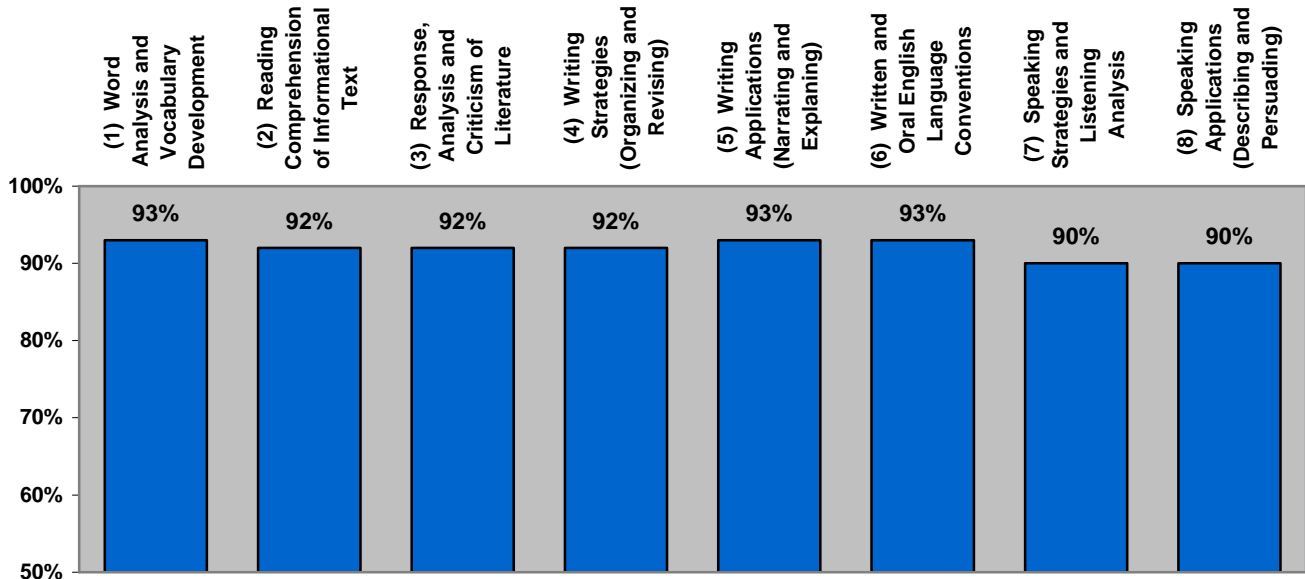
Evaluation findings on page 5 showed that 89 percent of beginning CSU teachers in all grades (K-12) are well-prepared or adequately-prepared to know and understand their subjects. When we focus exclusively on CSU English and math teachers in grades 7-12, the evaluation indicates that 94 percent of these CSU graduates are well-prepared or adequately-prepared to know and understand English and mathematics, according to their supervisors who are the Chairs of English and Math Departments in California high schools and middle schools. In the important subjects of English and mathematics, then, *CSU campuses are especially effective in preparing teachers of these subjects to know and understand their content areas.*

Given the critical attention that the State Board of Education and the CSU Trustees have given to English and mathematics, the multi-year evaluation has investigated *specific areas of English and math* where CSU campuses are *most and least effective*. Here the evaluation's purpose is to enable CSU campuses to strengthen their performance in all areas of English and mathematics teacher preparation. Figures Five and Six show the results of the evaluation in critical areas of *subject-matter preparation*.

Eight subjects of the 7-12 English curriculum, listed along the top of Figure Five, coincide with the eight domains of California's *Academic Standards for English in Grades 7-12*. Data in Figure Five plot the percentages of CSU-prepared English teachers whose supervisors judged them to be well-prepared or adequately-prepared in their knowledge and understanding of each English content domain. These judgments were reported by English Department Chairs who were responsible for supervising and evaluating the performances of CSU graduates during their first year of certificated teaching. *CSU Departments of English are highly effective in preparing new English teachers who have strong knowledge and understanding of the major domains of the California English curriculum.*

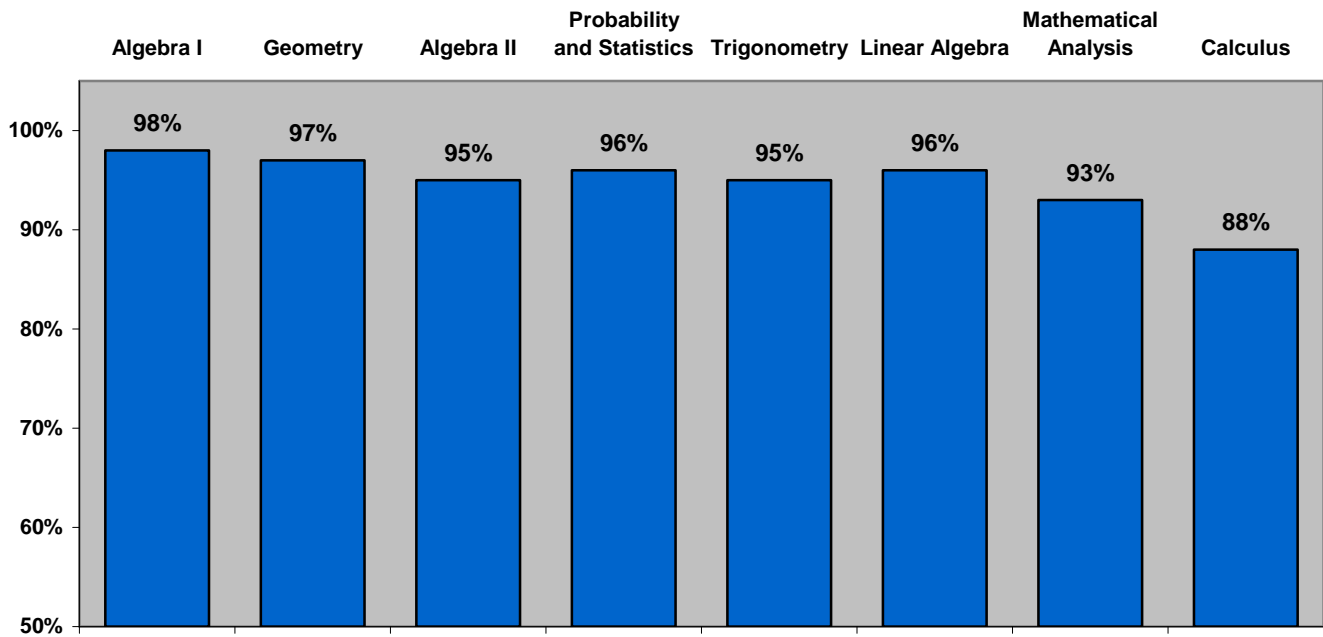
Similarly, eight subjects of the 7-12 Mathematics curriculum, along the top of Figure Six, match the domains of California's *Academic Standards for Mathematics in Grades 7-12*. Figure Six displays the percentages of CSU-prepared teachers of mathematics whose supervisors reported them to be well-prepared or adequately-prepared in their knowledge and understand of each domain. Mathematics Department Chairs who supervised and evaluated the performances of CSU graduates during their first year of certificated teaching rendered these judgments. *CSU Departments of Mathematics are highly effective in preparing new mathematics teachers who have strong knowledge and understanding of the major domains of the California mathematics curriculum.* High schools need *larger numbers* of these teachers than the CSU has previously produced, but new efforts to prepare *more math teachers* build on the CSU's recent record of *effectiveness* in preparing highly-talented, knowledgeable teachers.

Figure Five: Percentages of CSU-Prepared Teachers of English (7-12) Who are Well-Prepared or Adequately-Prepared to Know and Understand the Eight Major Subjects of the English Curriculum in California



Sources: Chairs of High School English Departments Who Supervised and Evaluated CSU-Prepared English Teachers from 2003 Through 2005

Figure Six: Percentages of CSU-Prepared Teachers of Mathematics (7-12) Who are Well-Prepared or Adequately-Prepared to Know and Understand the Eight Major Subjects of the Math Curriculum in California



Sources: Chairs of High School Mathematics Departments Who Supervised and Evaluated CSU-Prepared Math Teachers from 2003 Through 2005

Focused Findings About the Professional Preparation of English and Math Teachers

By itself, learning the curriculum is not sufficient in the preparation of teachers. CSU must also prepare English and math teachers to use effective pedagogical practices. From 2003 through 2005, the supervisors of these teachers answered the following question regarding classroom practices that research has shown to be essential for student achievement in high schools.

Question: How well prepared was (teacher's name) to . . .

- (1) prepare lesson plans and make prior arrangements for students' class activities?*
- (2) establish academic expectations that are intellectually challenging for all students?*
- (3) develop fair criteria for course grades and to explain these to students and parents?*
- (4) use textbooks and other instructional materials that are aligned with State Standards?*
- (5) monitor student progress by using formal and informal methods to assess learning?*
- (6) assist individual students in areas of instructional need in English or mathematics?*
- (7) help students realize the connections between English/math and life beyond school?*
- (8) help students realize the impact of academic choices on their lives and career options?*

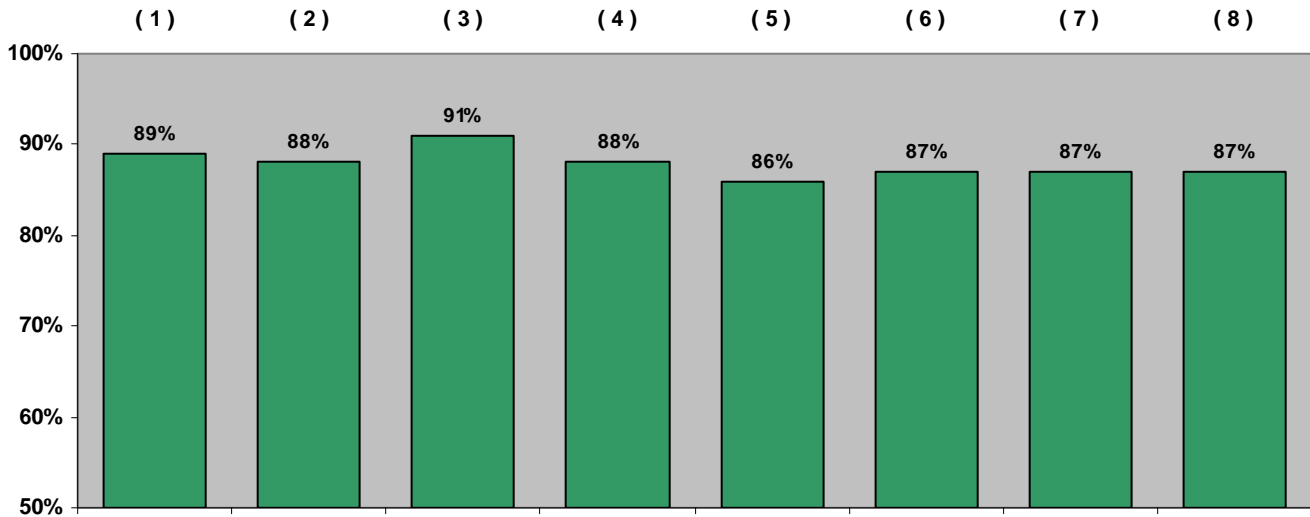
Figures Seven and Eight summarize recent evaluation evidence about CSU effectiveness in preparing high school English and math teachers to use these important teaching practices. Figure Seven sums the judgments of English Department Chairs regarding CSU's preparation of new English teachers from 2001-02 through 2003-04. Figure Eight plots the reports of Math Department Chairs about CSU preparation of new math teachers during the same years. In both cases, the academic supervisors rendered their judgments in 2003, 2004 and 2005, one year after each annual cohort of new teachers completed their professional preparation on CSU campuses. For readers' convenience, the eight teaching practices are repeated in the space between Figures Seven and Eight.

Working in close partnership with CSU Departments of English and Mathematics, CSU Schools and Colleges of Education are very effective in preparing new teachers of English and mathematics to use classroom teaching practices that foster learning on the part of high school students.

Conclusion: How CSU Uses the Systemwide Evaluation Findings

This report summarizes the most important findings of the CSU Systemwide Evaluation of Teacher Preparation from 2001 through 2005. On each CSU campus, academic leaders and faculties are using the evaluation findings to make needed improvements in teacher education programs. Systematic uses of the data are becoming commonplace in the CSU System. Soon the campuses will be able to use the forthcoming results of the evaluation to indicate whether recent changes are improving CSU outcomes. Evaluation is an integral element of the teacher education enterprise at an institution like the California State University, where preparing teachers is a primary mission of the institution. While campuses continue to grow and improve on the basis of systematic feedback, the Chancellor's staff will continue to bring new evaluation findings to the Board of Trustees.

**Figure Seven: Percentages of CSU-Prepared Teachers of English (7-12)
Who are Well-Prepared or Adequately-Prepared to
Use Eight Effective Teaching Practices in the Teaching of English**

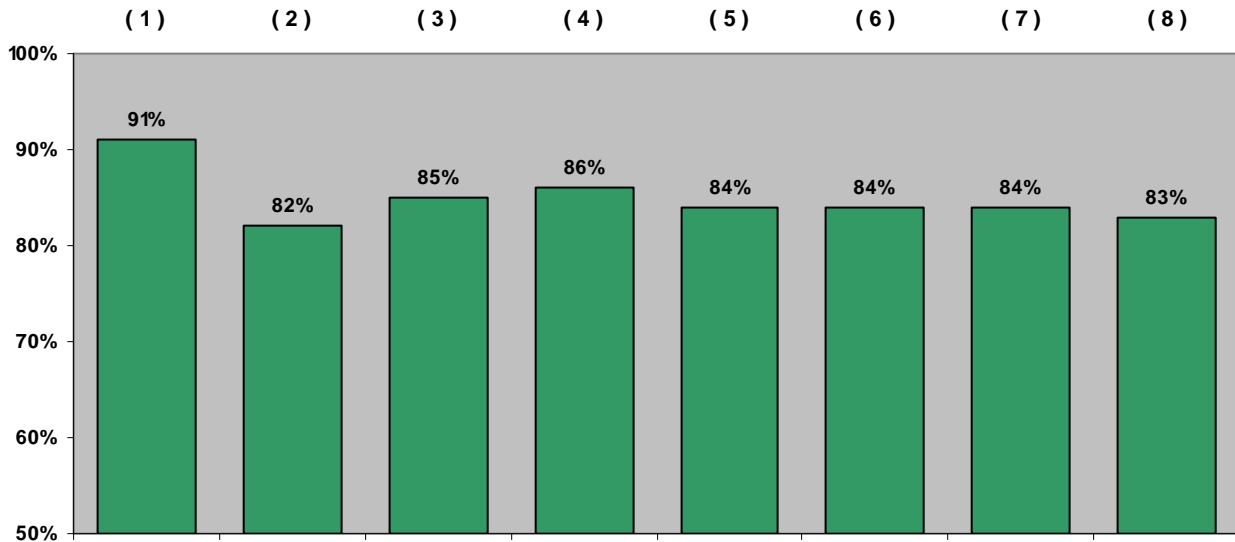


Sources of Data in Figure Seven: See Figure Five above.

Question Underlying Figure Seven and Figure Eight: How well prepared was (teacher's name) to . . .

- (1) *prepare lesson plans and make prior arrangements for students' class activities?*
- (2) *establish academic expectations that are intellectually challenging for all students?*
- (3) *develop fair criteria for course grades and to explain these to students and parents?*
- (4) *use textbooks and other instructional materials that are aligned with State Standards?*
- (5) *monitor student progress by using formal and informal methods to assess learning?*
- (6) *assist individual students in areas of instructional need in English or mathematics?*
- (7) *help students realize the connections between English/math and life beyond school?*
- (8) *help students realize the impact of academic choices on their lives and career options?*

**Figure Eight: Percentages of CSU-Prepared Teachers of Mathematics (7-12)
Who are Well-Prepared or Adequately-Prepared to
Use Eight Effective Teaching Practices in the Teaching of Mathematics**



Sources of Data in Figure Eight: See Figure Six above.