Faced with the probability of a future shortage of teachers, the State of California has been exploring possibilities for increasing the number of qualified personnel for the schools. One of the options considered was providing alternative routes of entry into the teaching profession. The Commission on Teacher Credentialing (CTC) evaluated one alternative, the Teacher Trainee program, in order to determine, among other things, how the caliber of teacher trainees compared to that of other beginning teachers. It was suggested that, based on the findings of the study, the Legislature might wish to provide additional incentives for school districts to use this option as a means of increasing the supply of qualified teachers. The first chapter of this report provides background information on the Teacher Training program. Chapter 2 contains an analysis of the cost-effectiveness of the CTC study. In Chapter 3, an outline is presented of options for expanding the program. (JD)
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The California Teacher Trainee Program: A Review
Introduction

Several studies have indicated that, in the next five to ten years, the State of California will experience a significant shortage of qualified teachers. Last year, in the *Analysis of the 1986-87 Budget Bill*, we reported on projections of the teacher shortage, and outlined a number of alternatives available to the Legislature to increase the supply of teachers.

One of the options we discussed was to provide alternative routes of entry into the teaching profession. We also noted that the Commission on Teacher Credentialing (CTC) was evaluating one such alternative—the Teacher Trainee program established by SB 813—in order to determine, among other things, how the caliber of teacher trainees compares to that of other beginning teachers. We suggested that, based on the findings of the study, the Legislature might wish to provide additional incentives for school districts to use this option, as a means of increasing the supply of qualified teachers.

The CTC completed its study in January 1987. Chapter I of this report provides background information on the Teacher Trainee program. Chapter II contains our analysis of the cost-effectiveness of the program, based on the results of the CTC study. Finally, Chapter III outlines options for expanding the program that the Legislature might wish to consider.

This report was prepared by Paula Mishima, under the supervision of Ray Reinhard.
Executive Summary

The Teacher Trainee program, established by SB 813 (Ch 498/83), provides an alternative route of entry into the teaching profession. Under the program, teacher candidates participate in two years of "on-the-job" training as an alternative to completing a traditional, college-based teacher training program. In order to participate in the program, a school district must (1) certify that there is an insufficient supply of fully credentialed teachers, (2) participate in the state-funded Mentor Teacher program, and (3) develop professional development plans for each of the teacher trainees. If these requirements are met, the school district may apply to the Commission on Teacher Credentialing (CTC) for teacher trainee certificates on behalf of qualified candidates.

The teacher trainee certificate authorizes the holder to teach under the guidance of a mentor teacher, in "departmentalized" classes in grades 6 through 12. If the trainee (1) teaches successfully for two years under the guidance of a mentor teacher, (2) completes a professional development plan adopted by the district, and (3) receives a recommendation for certification from the district governing board, he or she may then receive a "clear" teaching credential.

To date, very few school districts have opted to participate in the Teacher Trainee program. Only 13 school districts are participating, enrolling a total of 455 trainees since the program began in 1984-85. One district--Los Angeles Unified School District (LAUSD)--accounts for 436 of the trainees, or 96 percent of this total. The other participating school districts are small districts in rural areas of the state.

Professional Development Plans. As described above, school districts that participate in the Teacher Trainee program are required to develop and implement a "professional development plan" for each trainee. LAUSD provides two professional development plan options for its trainees--a "district training option" program, or a "college option" program. The rest of the districts that participate in the program provide individualized professional development plans for the trainees, which generally include participation in the district's existing staff development activities.

Findings and Conclusions. Our analysis finds that, compared to traditional teacher training programs, the district training option of the Teacher Trainee program is:

- more cost-effective for the individual being trained;
- more cost-effective for the state's taxpayers; and
- less cost-effective for the school district.

We also find that, compared to traditional programs, the college option of the Teacher Trainee program is:

- more cost-effective for the individual being trained;
- equally cost-effective for the state's taxpayers; and
- equally cost-effective for the school district.
While the college option results in negligible costs to school districts, there are no positive incentives for districts to participate.

Furthermore, we find that because the Teacher Trainee program is more financially attractive to the individual than traditional programs, it has the potential of attracting individuals into the teaching profession who might not otherwise enter, thereby helping to alleviate the teacher shortage. The number of individuals that can participate in the program, however, is limited by the number of school districts that opt to participate. And very few school districts are participating, possibly because it is not cost-effective for them to do so.

Options. As described above, we find that the Teacher Trainee program (1) can be a cost-effective approach to training teachers, from the perspectives of both the individual being trained and the state's taxpayers and (2) has the potential of attracting into the teaching profession individuals who might not otherwise enter—thereby helping to alleviate the teacher shortage. Accordingly, we find that careful expansion of the program is warranted, and we identify five options for expanding the program that the Legislature may wish to consider:

- Expand the program to all grades;
- Authorize "veteran" teachers—as well as mentor teachers—to guide and supervise the teacher trainees;
- Provide matching state funds to support the "district training option" of the Teacher Trainee program;
- Authorize school districts to pay trainees 7/8 of the beginning teacher salary; and
- Provide grants to public postsecondary institutions to develop "college option"-type programs.
Chapter I

Description of the Teacher Trainee Program

The Teacher Trainee program allows teacher candidates to participate in two years of "on-the-job" training as an alternative to completing a traditional, college-based teacher training program. In order to participate in the program, a school district must (1) certify that there is an insufficient supply of fully credentialed teachers available, (2) participate in the state-funded Mentor Teacher program, and (3) develop professional development plans for each of the teacher trainees. If these requirements are met, the school district may apply to the Commission on Teacher Credentialing (CTC) for teacher trainee certificates on behalf of qualified candidates.

In order to qualify for a teacher trainee certificate, an applicant must (1) hold a bachelor's degree, (2) pass the California Basic Educational Skills Test (CBEST), and (3) pass the appropriate National Teachers' Examination (NTE) for subject matter competency. The teacher trainee certificate, which is valid for two years, authorizes the holder to teach under the guidance of a mentor teacher in "departmentalized" classes in grades 6 through 12. If the trainee (1) teaches successfully for two years under the guidance of a mentor teacher, (2) completes the professional development plan adopted by the district, and (3) receives a recommendation for certification from the district governing board, he or she may then receive a "clear" teaching credential.

Program Participation

Table 1 summarizes participation in the Teacher Trainee program from 1984-85 through 1986-87. To date, only 13 school districts have taken advantage of the program, enrolling a total of 455 trainees. One district--Los Angeles Unified School District (LAUSD)--accounts for 436 trainees, or 96 percent of the total number of teacher trainee certificates issued since the program began in 1984-85. The remaining participants are small districts located in rural areas of the state.

The table also shows that the number of entering trainees declined by 33 percent after the first year of the program, but appears to have stabilized during the last two years.

<table>
<thead>
<tr>
<th></th>
<th>1984-85 Actual</th>
<th>1984-85 Estimated</th>
<th>1986-87 Actual</th>
<th>1986-87 Estimated</th>
<th>Three-Year Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Los Angeles Unified</td>
<td>187</td>
<td>125</td>
<td>124</td>
<td>436</td>
<td></td>
</tr>
<tr>
<td>All Otherb</td>
<td>10</td>
<td>4</td>
<td>6</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Total, Statewide</td>
<td>197</td>
<td>129</td>
<td>129</td>
<td>455</td>
<td></td>
</tr>
</tbody>
</table>

a Based on number of teacher trainee certificates issued
b Includes 12 small districts in rural areas of the state
Professional Development Plans

As described above, school districts that participate in the Teacher Trainee program are required to develop and implement a "professional development plan" for each trainee. LAUSD provides two professional development plan options for its trainees—a "district training option" program, or a "college option" program. The rest of the districts that participate in the Teacher Trainee program provide individualized professional development plans for the trainees, which generally include participation in the district’s existing staff development activities.

In the LAUSD program, the majority of teacher trainees (and, therefore, most trainees in the state) opt for the district training program. This program includes a total of three weeks of intensive summer training prior to the school year and a 3-hour weekly seminar during the school year.

Traditional training programs require approximately 30 semester units; the district training classes, which consume 283 hours of training, are equivalent to approximately 21 college semester units. While the trainee receives no college course credits for these classes, the classes count towards advancement on LAUSD’s salary schedule. The program is conducted by the district’s staff development office at no charge to the trainee.

A smaller number of trainees opt for one of two college option programs developed by the California State University (CSU). These postgraduate programs, which lead to a CSU master's degree, include lecture courses, seminars, and supervision of the teacher trainee in the classroom. To attend the college program, the trainee enrolls in the university and pays the applicable fees.
Chapter II

Analysis of Cost-Effectiveness

The Teacher Trainee program was established to provide an alternative route into the teaching profession that would attract persons who might not otherwise consider teaching as a career. The program, however, has not succeeded in attracting a significant number of people into the profession—which may be due to the fact that very few school districts are participating in the Teacher Trainee program. If the Teacher Trainee program trains teachers as effectively as, and at a lower cost than, traditional teacher training programs, the Legislature might wish to expand the program by encouraging school districts to participate. In this chapter, we compare the cost-effectiveness of the Teacher Trainee program to that of traditional teacher training programs.

Costs

Table 2 compares the cost of training teachers under the two options of the Teacher Trainee program to that of a traditional teacher training program. For purposes of this analysis, we compare the two options under the LAUSD teacher trainee program—which trains most of the state's trainees, to a traditional teacher training program of the California State University system—which trains the majority of the state's teachers. As the table shows, the costs to the state, school district, and individual vary significantly among the three routes to certification.

For traditional training programs, the state and the individual bear the cost of training, and the school district bears no

<table>
<thead>
<tr>
<th></th>
<th>LAUSD Training Program</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Traditional Program</td>
<td>District Program</td>
</tr>
<tr>
<td>State</td>
<td>$2,227</td>
<td></td>
</tr>
<tr>
<td>School District</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>Individual</td>
<td>--</td>
<td>$2,000^b</td>
</tr>
<tr>
<td>Fees</td>
<td>$573^c</td>
<td></td>
</tr>
<tr>
<td>Foregone Income</td>
<td>20,265^d</td>
<td>1,267^e</td>
</tr>
<tr>
<td>Total Costs</td>
<td>$23,065</td>
<td>$3,267</td>
</tr>
<tr>
<td>Net Costs to State Taxpayers^f</td>
<td>$2,227</td>
<td></td>
</tr>
</tbody>
</table>

^a Marginal cost of instruction at California State University (CSU), less student fees
^b Based on Los Angeles Unified School District (LAUSD) data. Does not include the cost of mentor teachers who are required to supervise the trainees.
^c 1986-87 CSU fees (two semesters).
^d Annual beginning teachers' salary, under the Minimum Teachers' Salaries program, established by SB 813 (Ch 498/83).
^e Assumes 3 weeks of a beginning teachers' salary
^f Other than teacher trainee.
costs. As the table shows, training a teacher through a traditional program costs the state approximately $2,200, and the individual roughly $20,800 ($573 in fees, and $20,300 in foregone income).

For the district training option of the Teacher Trainee program, the school district and, to a lesser extent, the individual, bear the cost of training, while the state bears no cost. As the table shows, training a teacher through the Teacher Trainee program costs the school district roughly $2,000, and the individual approximately $1,300 (no fees, and roughly $1,300 in foregone income). Because the school district receives no special state aid for its costs associated with the Teacher Trainee program (instead it pays for any costs out of its general-purpose revenues), the district training option results in no net increases in costs to the state's taxpayers.

For the college option of the Teacher Trainee program, the training cost shifts from the school district to the state. While the cost to the individual increases by $573 due to fees, he or she earns college units which count towards advancement on the salary schedule of any school district. Under this option, the state's taxpayers incur net additional costs of roughly $2,200 (the average annual state subsidy for students in the CSU).

In sum, the table shows that, in terms of total costs, either of the two options under the LAUSD program is much less costly than is a traditional program. The primary factor accounting for this difference is the large cost to the individual of foregoing income while receiving training through a traditional route. Excluding costs to the individual being trained, the costs of the two LAUSD options are roughly comparable to those of a traditional program. Finally, in terms of costs to state taxpayers, the district training option of the LAUSD program is the least costly--resulting in no net additional costs to state taxpayers.

Effectiveness

In order to evaluate the effectiveness of the pedagogical training of the Teacher Trainee program, the CTC compared the classroom effectiveness of teacher trainees with that of (1) beginning teachers trained by traditional programs and (2) emergency credential holders (who are not required to receive any formal training).

The CTC study compared the teaching effectiveness of a sample of 85 teacher trainees to a sample of 75 beginning teachers who were teaching in the same schools and, when possible, in the same subject areas. Of the sample of 75 non-trainees, 38 had just completed a CTC-approved teacher training program, and 37 were teaching under emergency credentials. All of the teachers in the sample were in their second year of teaching in a California public school. The study did not control for any prior teaching experience that these teachers might have had in other states, private schools, or community colleges--positions which do not require a K-12 California teaching credential.

Trained research assistants observed each of the teachers in the sample at least three times. After each observation, the researcher rated the teacher on each of the following criteria for effective teaching: (1) quality of the classroom environment, (2) degree of student engagement, (3) presentation skills, (4) appropriateness of lesson content and teaching methodology, (5) management of class time, and (6) use
of class content to stimulate student thinking. In most cases, the researcher did not know whether the teacher that was being observed was a trainee, a teacher trained through a traditional program, or emergency credential holder.

Table 3 summarizes the results of this assessment. Overall, all types of beginning teachers achieved quite similar scores on the six criteria of classroom effectiveness. As the table shows, the "college option" teacher trainees, on the average, scored slightly higher than all of the other groups. Teacher trainees as a whole, and the emergency credential teachers, scored slightly higher than the beginning teachers trained through a traditional program. None of these differences, however, was statistically significant (at a 95 percent confidence level), and the CTC study concludes that the training of the three groups resulted in levels of classroom effectiveness that were about the same.

There are at least three factors, other than the type of pedagogical training, that may explain why the teacher trainees and emergency credential holders did as well as the regularly credentialed teachers.

First, as mentioned above, the study did not control for any other non-K-12 public school teaching experience that the teachers may have had. In fact, the researchers learned through participant interviews that a portion of the trainees and emergency credential holders indeed had previous experience teaching in other states, private schools, and community colleges.

Second, both teacher trainees and emergency credential teachers received more "formal" assistance from the school district than did the other beginning teachers. For example, 95 percent of the trainees and 73 percent of the emergency credential holders had a support person formally assigned to them, compared to only 32 percent of the regularly credentialed beginning teachers.

Third, the average scores of the sample of regularly credentialed teachers may have been skewed by the inclusion of six teachers of history and social science who, as a group, scored lower than teachers in other subject areas. These teachers were included in the sample because an insufficient number of regularly credentialed teachers were available to be used in the study, in the areas for which teacher trainees were hired.

Finally, it should be noted that the extent to which the study may be used to predict the future teaching effectiveness of the three groups of teachers is unknown. We do not know, for example, whether the emphasis on theory that characterizes many traditional training programs might result in more effective teaching in later years, after the teacher become more skilled in the "basics" of classroom teaching.

Table 3
Commission on Teacher Credentialing
Teacher Trainee Evaluation Study
Average Scores for Classroom Effectiveness

<table>
<thead>
<tr>
<th>Criteria of Classroom Effectiveness</th>
<th>Teacher Trainee</th>
<th>Traditionally Trained</th>
<th>Emergency Credential Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom Environment</td>
<td>All Trainees</td>
<td>College Option</td>
<td>Traditionally Trained</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>6.7</td>
<td>(7.4)</td>
<td>6.3</td>
</tr>
<tr>
<td>Presentation Skills</td>
<td>6.4</td>
<td>(6.9)</td>
<td>6.1</td>
</tr>
<tr>
<td>Content and Method</td>
<td>6.6</td>
<td>(6.7)</td>
<td>5.8</td>
</tr>
<tr>
<td>Classroom Management</td>
<td>6.6</td>
<td>(7.1)</td>
<td>6.0</td>
</tr>
<tr>
<td>Cognitive Activity</td>
<td>6.5</td>
<td>(7.4)</td>
<td>5.9</td>
</tr>
<tr>
<td>Overall Average</td>
<td>6.33</td>
<td>(6.90)</td>
<td>5.85</td>
</tr>
</tbody>
</table>

* Ratings are based on a scale of 1 to 10
Conclusions

Cost Effectiveness

As discussed above, the CTC study found that the Teacher Trainee program appears to be as effective as traditional training programs. Therefore, in a cost-effectiveness analysis, the cost of the program is what differentiates the programs.

From the individual's perspective, the Teacher Trainee program is the most cost-effective route of entry into the teaching profession. As described earlier, the teacher trainee route costs the individual approximately $1,300 for the district program, or roughly $1,900 (an additional $573 in fees) for the college option program. A traditional training program, on the other hand, costs the individual approximately $20,800.

Persons entering the teaching profession through LAUSD's district training option of the Teacher Trainee program can also expect salaries similar to those of individuals entering through programs in which college units are earned. This is because LAUSD treats the "units" earned in its district training program similar to college units and staff development credits, both of which count towards advancement on the salary schedule. These "units," however, are not "transferable" and do not necessarily count toward advancement on the salary schedule of other districts. Therefore, compared to individuals trained in traditional training programs, or the college option of the Teacher Trainee program, the future earning power of the teacher trainee may be less if the trainee transfers to another school district.

From the state taxpayers' perspective, the district training option of the Teacher Trainee program is the most cost-effective. As described earlier, since the school district receives no special state aid for its costs associated with the Teacher Trainee program (instead, paying for any costs out of its general-purpose revenues), the district training option results in no net increases in costs to the state's taxpayers. On the other hand, training a teacher through a postsecondary institution--either through the college option of the Teacher Trainee program, or a traditional training program--costs the state's taxpayers roughly $2,200 (the average annual state subsidy for students in the CSU).

From the school district's perspective, however, the district training option of the Teacher Trainee program is not as cost-effective as other alternatives. This is because school districts, at no additional cost, can (1) hire teachers that have received their training through a traditional training program, or (2) hire teachers on emergency credential, if fully credentialed teachers are not available. On the other hand, it costs the school district approximately $2,000 per trainee to train a teacher through a district training program. While the costs to the district for the college option Teacher Trainee program are negligible, there are no incentives for the school district to seek out a postsecondary institution to establish such a program.

Impact on Overall Supply

Because the Teacher Trainee program is a cost-effective way for the individual to enter the teaching profession, it has the potential of attracting individuals who might not otherwise enter it--thereby increasing the overall supply of qualified teachers. In fact, the CTC study found that trainees do tend to enter the Teacher Trainee program for financial reasons--many opt for the
program because it allows them to earn a teaching credential without returning to school and losing a year's income. For LAUSD, the program has been moderately successful at attracting such individuals; in 1984-85 through 1986-87, teacher trainees have annually accounted for approximately 5 to 10 percent of the district’s newly-hired teachers.

On a statewide basis however, the program has not been successful in significantly increasing the supply of qualified teachers. This may be due primarily to the fact that very few school districts are participating in the program—possibly because it is not cost-effective for them to do so.
Chapter III
Options for Encouraging the Expansion of the Teacher Trainee Program

Our analysis indicates that the Teacher Trainee program can be a cost-effective approach to training teachers, from the perspectives of both the individual being trained and the state's taxpayers. The program also has the potential of attracting into the teaching profession persons who might not otherwise enter the profession, thereby helping to alleviate the teacher shortage. Accordingly, we conclude that careful expansion of the program is warranted. In this chapter, we outline five options for expanding the program that the Legislature may wish to consider.

Option 1: Expand Program to All Grades
Authorizing teacher trainees to teach in all grades would increase the number of teacher trainees by (1) allowing elementary school districts to participate in the program, and (2) potentially increasing the number of trainees in participating districts. The Legislature has already favorably considered this option. In 1986, the Legislature passed AB 3673, which would have expanded the Teacher Trainee program to all grades. The Governor, however, vetoed this bill.

Our analysis indicates that, while providing this option "won't hurt," it is unlikely that it would help to increase participation significantly. This is because it fails to provide an economic incentive for districts to participate that will make the program cost-effective for them.

Option 2: Allow Use of "Veteran" Teachers
Authorizing teacher trainees to teach under the guidance of "veteran" teachers (1) would allow those school districts that are not participating in the Mentor Teacher program to participate in the Teacher Trainee program, and (2) may encourage the participation of districts that have preferred not to commit their mentor teachers to working with teacher trainees. This option may also enhance the effectiveness of the support system that school districts provide for the teacher trainees. Again, the Legislature has already favorably considered this option, as such a provision was contained in AB 3673 (mentioned above).

Option 3: Provide Matching State Funds to Support District Training
To encourage more school districts to participate in the Teacher Trainee program, the Legislature could make the program more cost-effective for them by providing funds on a matching basis to districts that provide their own training. As long as the amount of state aid did not exceed the amount of state subsidy...
provided to CSU students, this would also be cost-effective for the state's taxpayers, since the Teacher Trainee program (district training option) currently results in no net increased costs to them.

In addition, providing direct state support for the Teacher Trainee program, rather than increasing state support for CSU, may be a more efficient means of adding to the supply of teachers. This is because the program (1) is targeted to train teachers in school districts that are experiencing shortages, (2) further enlarges the overall teacher supply by attracting individuals who otherwise might not enter the teaching profession through a traditional program, and (3) is more able to "adjust" with the times—that is, to appear during times of shortage and disappear during times of surplus.

**Option 4:**
**Authorize Districts to Pay Trainees 7/8 of Beginning Teacher Salary**

Current law authorizes school districts and postsecondary institutions to establish "internship programs." Under such programs, the intern is a salaried full-time teacher while attending a teacher training program at a postsecondary institution. During the internship, both faculty from the postsecondary institution and a veteran teacher from the school district are required to supervise and guide the intern. These programs, which were popular during the period of teacher demand in the 1950s and 1960s, nearly disappeared during the period of teacher surplus beginning in 1970.

The lack of release time for experienced teachers to guide and assist the interns was a major reason why few school districts continued to participate in the program once there was no longer a teacher shortage. In order to help school districts pay for the cost of releasing veteran teachers to supervise the interns, the Legislature enacted the "Teacher Education Internship Act of 1967" which, among other things, authorized school districts to pay interns seven-eighths of the beginning teacher's salary, and to use the remaining amount to fund the cost of releasing a veteran teacher to supervise the intern.

The Legislature could enact a similar provision for the Teacher Trainee program. This option would provide support for the program by shifting part of the cost of training from the school district to the individual (by reducing his or her salary while a trainee). The advantage of this option is that it provides school districts with a source of funding for the program, at no net increased cost to the state's taxpayers and without significantly increasing the cost (in terms of foregone income) to the individual.

**Option 5:**
**Provide Grants to Public Post-secondary Institutions to Develop "College Option"-Type Programs**

While the Teacher Trainee "college option" costs the state's taxpayers more than the district training option, the CTC study found that, as a group, the college option trainees attained slightly higher levels of classroom effectiveness than did the other teacher trainees or other beginning teachers. These differences were not statistically significant, and may be due to factors other than the mode of training; nevertheless, they suggest that this approach to teacher training may be particularly effective. If this is the case, increasing the number of "college option"-type programs operated through public postsecondary institutions may also have the "side benefit" of enhancing the effectiveness of traditional training programs.

While the college option of the Teacher Trainee program may be a particularly effective approach to teacher training, few school districts are participating in such programs. This may be because, while the
cost to the school district is negligible, there are no positive incentives to seek out a postsecondary institution to establish such programs.

To encourage the development of such programs, the Legislature could provide grants to public postsecondary institutions to develop the programs in collaboration with school districts in the area. The programs could be developed under the provisions of either the Internship program or the Teacher Trainee program. The grant would fund the start-up costs of the program, and the student-based subsidy and student fees would fund the ongoing costs. Such programs may result in an approach to teacher training that is both effective and successful at increasing the supply of qualified teachers.

Conclusion

In conclusion, we believe that any of the five options outlined above would result in expansion of the Teacher Trainee program. All of the options require enactment of legislation.

Options 1, 2, and 4 would result in no additional costs to the state, but probably would not result in significant expansion of the program.

Options 3 and 5 would require new state funding. Because both of these options provide incentives that would make participation in the Teacher Trainee program cost-effective for school districts, we believe they are more likely to result in significant expansion of the program.