

## **Examination of Alternative Programs of Teacher Preparation on a Single Campus**

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### **Introduction**

Strong research evidence suggests that among educational variables influencing student achievement, the quality of teaching is the most important (Nye, Konstantopoulos, & Hedges, 2004; Rowan, Correnti, & Miller, 2002). Evidence supports the premise that good teachers matter to the individual learning of students (Darling-Hammond, Berry, & Thoreson, 2006). Teachers are the key to what happens in classrooms; they assess what students have learned and what they may need (Darling-Hammond, 2000a). There is a belief held by some that teaching is something that most academically qualified people can do (Berry, Hoke, & Hirsh, 2004). Unfortunately, many people believe that differences in teachers lie primarily in teacher individual characteristics (e.g., good teachers are knowledgeable, verbally fluid, energetic, and so forth) that cannot be taught and that pedagogical skills are not as important as has been claimed (Good, McCaslin, Tsang, Zhang, Wiley, Bozack, & Hester 2006). The rise of alternative preparation programs is justified by supporters who believe that quality

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teachers can be prepared in less time at a considerably lower cost and investment than required by traditional teacher education programs (Feistritzer, 2004), and by those who argue that traditional teacher certification programs are obstacles to attracting bright people with strong subject matter backgrounds into teaching (Paige, Stroup, & Andrade, 2002). In contrast, Darling-Hammond, Chung, and Frelow (2002) wrote that measures to improve teacher education programs will do little to improve teacher quality if states allow schools to hire teachers without preparation. Strong preparation is essential to teacher quality.

Nationally respected researchers, educators in university-based teacher preparation programs, and members of all major accreditation agencies view teaching as specialized work that requires specialized preparation in which candidates learn to teach by developing knowledge about teaching and learn to teach with experienced classroom teachers (Darling-Hammond, 2006; National Council for the Accreditation of Teacher Education [NCATE], 2010). University-based teacher preparation programs typically consist of varying combinations of academic coursework and clinical field experiences in response to state or national standards. Investigations into best practices in teacher preparation suggest that promoting closer contact between higher education faculty and school district personnel, increasing field experiences, providing a sequence of courses, and connecting programs to state student content standards show promise (American Association of State Colleges & Universities [AASCU], 2004). In their study of seven exemplary teacher education programs, Darling-Hammond, Hammerness, Grossman, Rust, and Shulman (2005) found that high quality teacher preparation programs had strong connections between coursework and clinical field experiences and a consistent vision of good teaching practice.

Teacher preparation has been repeatedly challenged to prove its relevance or effectiveness by various critics (e.g., Duncan, 2010; Wineburg, 2006); Chester Finn (2003) has argued against teacher education requirements, maintaining that they are a “barrier” to enter teaching. School district employers report that teachers from different preparation programs possess dissimilar skills and perspectives on what constitutes best practice (Good et. al, 2006). Not every teacher has a measured, positive impact on learning, and the recent emphasis under NCLB on improving the learning of all children has raised a new set of questions about how best to prepare teachers to be effective in classrooms (Marszalek, Odom, LaNasa, & Adler, 2010). Because of the mounting pressure to demonstrate efficacy with solid evidence, university educators have begun to pose research questions about the effectiveness of different types or forms of programs that prepare teachers (e.g., Darling-Hammond, 2000b; Howey & Zimpher, 1989).

This article reports results of research on whether there are clinical and statistically significant differences in the effectiveness of three pathways to teacher preparation on a single campus, Yosemite State, a member of the California State University (CSU) System as rated by graduates and employment supervisors. The independent variable is the type of pathway into teaching; the dependent variable

consists of ratings of preparation quality at the end of the graduates' first year of professional teaching experience.

### ***Intern Programs***

Teacher shortages have been a reality faced by many states because of retiring baby boomers, increasing college tuition costs, low teacher salaries, low retention rates, school organization issues, and the working conditions of schools (Futernick, 2007). Bracey (2002) noted causes that included growing student populations, aging educators, and teachers retiring or leaving to avoid the pressures of high stakes testing. Additionally, No Child Left Behind [NCLB] has sought to move teachers who are not "highly qualified" out of the classroom, creating a new difficulty for administrators to retain and recruit teachers with certain subject matter preparation (Brownell, Bishop, & Sindelar, 2005). One response to this shortage has been to allow individuals who have completed undergraduate degrees to enter the teaching profession via non-traditional, alternative routes. These alternatives offer quicker routes to certification or allow a candidate to earn a salary while enrolled. Generally, such teachers are placed in charge of classrooms while still completing certification requirements (Shaw, 2008).

Although California has recently lowered the number of underprepared teachers, there has been a continuing need for highly qualified teachers for decades. In an effort to meet this need for teachers, the Teacher Education Internship Act of 1967 established university internship programs, and in 1993 the state established funding programs to support them (Guha, Shields, Tiffany-Morales, Bland, & Campbell, 2008). Intern programs' primary purpose was to expand the pool of qualified teachers by attracting career changers and other persons into teaching who might not otherwise enter the classroom (CCTC, 2009). The second purpose was to enable K-12 schools to respond immediately to pressing staffing needs while ensuring that interns participated in professional preparation that was extensive and systematic.

In 2001, a few years after the state mandated reduced class size in grades K-3, there were approximately 42,000 underprepared teachers. The advent of alternative preparation programs and increased traditional program graduates reduced this number to 6980 interns enrolled in university programs and another 1407 in district-based programs by 2010 (CCTC, 2011). Although there may be concern that interns are not as effective as fully credentialed teachers while still in training, the more important question is whether interns, when fully credentialed, are as effective in the classroom as traditionally prepared teachers?

### ***Partner School Programs***

A partner school, sometimes called a professional development school [PDS], is a type of school-university collaboration that has developed internationally with examples in Canada (Fullan, 1995), Australia (Sachs, 1997), England, and the United States, where national standards were established by NCATE in 2001

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(Harris & van Tassel, 2005). As used here, the partnership is a complex, multi-purpose school–university agreement analogous to a teaching hospital that focuses on initial preparation as well as continuing education and research. As the partnerships evolved, they came to include schools dedicated to educating a challenging K-12 student population via a significant collaboration with a university teacher education program and involvement in inquiry about teaching practice. Levine (2002) described PDS as a relationship between schools and universities to better prepare teacher candidates who are of high quality and skilled in pedagogy. Research on PDS programs has generally found positive outcomes for achievement of K-12 students and preparation of teacher candidates (Wong & Glass, 2005).

In a report by the US Department of Education on partnerships in teacher preparation, school districts reported that such activity improved the quality of the preparation and increased the preparedness of the graduates (American Institutes for Research, 2006). Partner school districts indicated that partnership activities enhanced the ability of teacher candidates to use instructional strategies and to apply standards to classroom lessons. School districts also reported that partner universities produced new teachers who utilized a greater variety of assessment strategies, applied standards to classroom lessons, managed classrooms effectively, worked with diverse populations of learners, used a variety of instructional strategies, and knew how to be better learners as a result of the partnership activities.

#### **Cohorts**

Cohorts in higher education are defined as a group of students who begin a program of study together, enroll in the same courses with the same faculty and instructional experiences, and work toward the completion of a specific degree or credential (Merino, Muse, & Wright, 1994). A student cohort represents a specific type of a learning community, increasingly used in both undergraduate and graduate programs (Saltiel & Russo, 2001). In general, research conducted on cohorts has suggested that they have the potential to improve students' need for affiliation and connection in an educational context, and some cohort studies have described the bonds that form in cohorts family-like and emotional, not just educational (Radencich et al., 1998). The emergence of strong emotional ties has been linked to positive student outcomes and an increased sense of emotional support (Reynolds & Hebert, 1998). Students like cohorts because within this format their course of study and the timeline in which it will be completed is well defined. Faculty find cohorts attractive because it assures them of the students' course sequencing and allows for coordination across courses (Maher, 2005).

Yerkes, Basom, Norris, and Barnett (1995) described three types of cohorts: closed, where students take all coursework together in a prearranged sequence; open, where students take a core set of courses together but then enroll in additional work to meet their needs; and fluid, where students may enter a cohort at various points of time. The impact of the cohort model can be substantial in a range of areas such

as keeping up with day to day requirements, handling stress, or becoming acculturated in a new profession (McCarthy, Trenga, & Weiner, 2005). Dinsmore and Wenger (2006) found that the quality of teacher preparation was enhanced through opportunities presented in cohort models where the candidate had consistent access to supportive university faculty members. They also indicated that cohorts should be infused with a strong sense of community and suggested that such programs include well-designed field experiences, opportunities for learning with cohort peers, and easy access to supportive university faculty. The use of cohorts in teacher preparation has been supported by multiple authors who suggest the communities created in cohorts model desirable attributes such as collaboration and teamwork (Goodlad, 1994; Koeppen, Huey, & Connor, 2000).

#### **Elementary Preparation at Yosemite State**

California statutes prohibit colleges and universities from offering undergraduate degrees in education, thus all teacher candidates must possess a baccalaureate degree in a discipline other than education prior to being fully admitted to a credential program, and further, the state requires candidates be able to complete a credential program in one calendar year. The authority for approving institutions to award a teaching credential lies with the California Commission on Teacher Credentialing [CCTC]. Its purpose is to “ensure integrity and high quality in the preparation, conduct and professional growth of the educators who serve California’s public schools. Its work shall reflect both statutory mandates that govern the Commission and research on professional practices” (CCTC, 2011, p. 7).

In addition to possessing a bachelor’s degree, candidates for an elementary program must have a minimum GPA of 2.75 on a 4.0 scale, obtain medical and identification clearance, and pass state mandated basic skills and subject matter exams. Besides successful student teaching, candidates must pass a state approved teaching performance assessment [TPA] and the Reading Instruction Competence Assessment [RICA] to be credentialed.

The elementary teacher preparation program at Yosemite is both CCTC and NCATE accredited. The 34-semester unit program is sequenced so it may be completed in a calendar year (summer, fall, spring); but is typically completed in three semesters (e.g., fall, spring, fall). The classes were designed to meet state and national standards, researched practices and theories, state teacher expectations, dispositional attributes, and skills identified by local districts as critical to professional success. Each course’s syllabus may be enhanced but not changed by faculty. The required courses are:

- Understanding the Learner, Instructional Design, and Assessment
- Cultural and Language Contexts of the Classroom
- Teaching Reading and Social Studies in Grades 4-8
- Field Study A (10 hours per week, 15 weeks)
- Science Instruction and Applied Technology

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- Math Instruction and Applied Assessment
- Teaching Reading and the Arts in Grades K-3
- Field Study B (15 hours per week, 15 weeks)
- Differentiated Instruction and Classroom Management
- Field Study C: Final Student Teaching (full time, 15 weeks)

The three fieldwork courses are embedded, requiring candidates to turn theory into practice through implementation of new strategies/pedagogical skills each semester. Candidates are placed in the three settings crossing both primary and upper elementary grade placements, and all are placed in schools having a significant population of English Learners.

#### ***Significance of the Research***

It is difficult to discern the effectiveness of varying approaches to preparing effective teachers. Darling-Hammond (2000a) wrote that teacher education matters. The present research attempts to determine if the specific type of teacher education matters if all the pathways are in an approved, nationally accredited program. This can be determined through the examination of convincing data (Darling-Hammond, Chung, & Frelow, 2002). One possible way to gather convincing data is through a comparison of graduates from the same basic pool of students receiving instruction from the same pool of faculty, by isolating the certification pathway as the major variable being examined.

#### ***Research Questions***

1. Are there relationships between demographic variables of candidates and their choice of pathways to a teaching credential in the Yosemite State program?
2. Do the elementary principals supervising teachers during their first year of professional practice differentiate the teachers' preparation based on the pathway the teachers followed?
3. Do elementary teachers differentially evaluate their own credential programs preparation based on the pathway that they followed?

#### ***Method***

This ex post facto research, usually referred to as causal-comparative, focused on data from three pathways at a single university, CSU Yosemite, that serves 22,000 students and employs 1100 faculty. The three pathways, traditional campus-based, campus intern, and partner school program, not only met the same standards, they required exactly the same courses taught by instructors from the same instructor pool. The coursework in the paths differed only in the circumstances, location, and delivery of instructional supports and arrangements for field experiences. This survey research utilized data collected annually over a six-year period, from graduates who had completed one of three pathways in the elementary credential program at CSU

Yosemite between 2005 and 2010. The candidates were not randomly assigned to pathways, they chose the pathway they pursued. Randomization was not possible because the interns must have been hired by a district and the partner school candidates had to voluntarily join a cohort and agree to take all classes at the sometimes geographically distant partner school sites. This lack of randomization complicated the study, threatening the internal validity by making the results possibly affected by the threats of both history and selection, as described by Campbell and Stanley (1963). Demographics of candidates that chose each pathway are described in results and may be seen in Table 1.

**Pathways**

*Yosemite Campus-Based (YCB).* The YCB path, a traditional teacher preparation program, was delivered through late afternoon or evening classes offered on the university campus. Candidates were not in a cohort and may have taken classes

**Table 1**  
**Frequencies and Percentages of Students in Three Yosemite Groups—**  
**Campus Based (YCB), Intern (YI), and Partnership (YP)—**  
**by Demographic Variables**

Yosemite Groups	YCB		YI		YP		Total	
Demographic Variables	N	%	N	%	N	%	N	%
<b>Gender</b>								
Males	75	11.0%	8	1.2%	14	2.1%	97	14.2%
Females	435	63.8%	38	5.6%	112	16.4%	585	85.8%
Total	510	74.8%	46	6.7%	126	18.5%	682	100.0%
<b>Ethnicity</b>								
African American	3	0.4%	0	0.0%	2	0.3%	5	0.7%
American Indian	3	0.4%	1	0.1%	0	0.0%	4	0.6%
Asian	35	5.1%	2	0.3%	7	1.0%	44	6.5%
Hispanic/Latino	181	26.5%	16	2.3%	37	5.4%	234	34.3%
Other	13	1.9%	1	0.1%	3	0.4%	17	2.5%
White, Non-Hispanic	231	33.9%	20	2.9%	65	9.5%	316	46.3%
Biracial	7	1.0%	0	0.0%	1	0.1%	8	1.2%
Unknown	37	5.4%	6	0.9%	11	1.6%	54	7.9%
Total	510	74.8%	46	6.7%	126	18.5%	682	100.0%
<b>GPA</b>								
<= 1.99	1	0.1%	4	0.6%	2	0.3%	7	1.0%
2.00 – 2.49	0	0.0%	4	0.6%	0	0.0%	4	0.6%
2.50 – 2.99	4	0.6%	41	6.0%	11	1.6%	56	8.2%
3.00 – 3.49	11	1.6%	138	20.2%	21	3.1%	170	24.9%
3.50 – 4.00	30	4.4%	323	47.4%	92	13.5%	445	65.2%
Total	46	6.7%	510	74.8%	126	18.5%	682	100.0%

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part-time, spanning a number of semesters. Fieldwork was generally in more than one school and/or regional school district. Candidates typically had different instructors and supervisors each semester.

*Yosemite Internship (YI).* The YI path served interns through classes on the university campus during the late afternoon and evening. The YI students did not take classes as a group, but rather joined the students in the YCB path classes. They were a fluid cohort in that they had the support of one dedicated full-time faculty member/director and five part time faculty who met with them at monthly weekend seminars. The candidates were all employed either full or part time as teachers while enrolled in the program. Instead of a master teacher with whom they shared a classroom, candidates had a site-based mentor who generally also had classes to teach. The university supervisor came from the pool of elementary university supervisors on campus.

*Yosemite Partner School Program (YP).* Candidates participating in the YP pathway completed the credential program as a closed cohort assigned to a specific partner school district. University coursework was completed onsite in a dedicated classroom at a partner school and fieldwork experiences were completed in classrooms in the partner district. The university and participating districts served as partners striving to affect student learning, educator preparation, professional development, curriculum development, and research inquiry. University faculty teaching in YP were paired with district staff that assisted in aligning credential courses to procedures and methods used in the district and were encouraged to team on presenting coursework and to model effective practices in the K-12 classroom. The candidates attended the same professional development activities as the district teachers during the year and started the experience with a day of team building exercises on a “ropes course.” Every partnership had an assigned faculty liaison, who received one course release to work with the teachers and candidates at the partner schools, handle logistical difficulties, and assure excellent communications between the district and the University. The liaisons taught one course in the program and provided some, but not all, of the university supervision of the candidates. Five districts ranging in enrollment from 3,000 – 75,000 students participated involving 20 elementary schools ranging from 360 to 700 students each.

### ***Data Collection***

Since the 2000-2001 academic year, an annual evaluation of teacher preparation termed the *Systemwide Evaluation of Professional Teacher Preparation Programs [SEPTPP]* has been conducted across all credential programs in CSU system. The purpose of the evaluation is to monitor the effectiveness of the system’s 23 colleges and schools of education and to enable them to make needed improvements in the preparation of K-12 teachers. Annually, each campus forwards to the Chancellor’s Office Center for Teacher Quality (CTQ) a list of former teacher candidates at that

campus who, during a prior 12-month period, met the standards for state certification. The CTQ enlists the assistance of state agencies, universities, and local districts, resulting in locating approximately 85% of program completers (CTQ, 2009).

### **Instrument**

Program graduates, after teaching for one year, and their employment supervisors complete separate but parallel 110 item surveys designed to collect information about the extent to which K-12 teachers who were recent graduates of teacher preparation programs perceived the effectiveness of their program to prepare them for important teaching responsibilities, and the extent to which their program coursework and fieldwork were professionally valuable and helpful to them during their initial year of teaching (CTQ, 2009). Graduates also are queried about the extent to which major features of their preparation program, such as pedagogical coursework and fieldwork activities, proved to be valuable and helpful during subsequent teaching. Finally, all respondents were asked questions about the quality of their credential program in relation to prominent standards for state and national accreditation.

Responses are indicated on a four-point Likert scale with the following choices: *Well Prepared, Adequately Prepared, Somewhat Prepared, and Not At All Prepared*. In 2003, the CSU Deans of Education grouped together survey items that were substantively related to each other. For example, the survey includes several items related to preparing teachers for diversity in education. The Deans grouped these questions together in a composite called *Preparing for Equity and Diversity in Education*. The grouping of items in this and other composites represents an important aspect of teaching and facilitates the analysis and interpretation of large amounts of complex data. The 15 composites for supervisors and 17 for teachers are found in Table 2. The composites are divided into five areas: A) overall effectiveness, B) preparation to understand and teach core subjects, C) preparation in general pedagogy, D) preparation to teach diverse groups, and E) overall quality and value of the program.

*Development and validation of the instrument.* The Deans of Education in the CSU reviewed instruments used by other universities and research centers to develop an extensive set of items. Alignment of items with state content standards, state expectations for newly credentialed teachers, and state and national accreditation standards by the individuals who had participated in drafting those standards strengthened validity (CTQ, 2006). “The validity of the CSU composites derives substantially from the Deans’ extensive efforts to ensure that each composite consists of questions that are conceptually related to each other and that address important issues in the preparation of K-12 teachers” (p. 8). In 2003, the CSU subjected the questions to a factor analysis using SPSS to assess empirical validity of the Deans’ conceptual groupings. The results of a varimax rotation suggested minimal changes, moving a few items. After review and discussion, the Dean’s accepted the changes bringing the *SEPTPP* to its present form.

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*Additional validity.* Beare, Marshall, Torgerson, Tracz, and Chiero (2012) analyzed responses from 19,050 employment supervisors statewide and found no significant correlations between principals' evaluation of graduate's preparation on the *SEPTPP* and certain characteristics of schools in which the graduates taught during their first year. Specifically, the percent of students eligible for free or reduced lunch, the percent of students who were English learners, school achievement level on state tests, or the percent of teachers in the school with emergency teaching credentials had no effect on the evaluation of the teachers by principals. The authors concluded that these findings, devoid of extrinsic variables affecting the ratings, speak to the applicability of *SEPTPP* in establishing a culture of evidence for teacher preparation program improvement.

*Weighting.* Following the factor analysis described above, the CSU Education Deans decided that all questions were not equally important (CTQ, 2006). They assigned different weights to the questions to reflect their levels of importance in evaluating the preparation of teachers on a one to four scale. The Deans assigned more weight to questions pertaining to the teaching of core curriculum subjects, the teaching of historically-underserved students, and concepts and practices that apply broadly to all students and many subjects. The majority of items were assigned a weight of one, two and three were assigned sparingly and weights of four were limited to a small set of critical evaluations questions. Scores were then transformed to range from 0 to 100 to appear like percentages.

*Reliability.* Since the inception of the survey, each year's data set yields the percent of respondents who gave specified answers to the questionnaire and included reliability estimates for each finding in the form of confidence intervals. These are based on both the number of respondents and the concurrence or homogeneity of responses. The composite scores are substantially more reliable than are the evaluation of participants' responses to individual survey items, and many are sufficiently valid and reliable to serve as the basis for academic and professional decisions about teacher preparation by faculty and administrators at system campuses (CTQ, 2006). The confidence intervals of the composite scores for the three pathways range from zero to two percentage points at the 90 percent confidence level.

## **Results**

### **Subjects**

*Teacher Graduate Demographics.* The frequencies and percentages for the teacher demographic variables of gender, ethnicity, and grade point average by pathway appear in Table 1. The first research question addresses the issue of whether pathway choice is independent of demographic variables and was asked in an effort to address non-random assignment of teachers to pathways. A series of chi-square tests of independence was run for each of the three demographic

variables. Results showed there was no relationship between pathway and gender ( $\chi^2(2)=1.476, p=.478$ ), pathway and ethnicity ( $\chi^2(14)=9.930, p=.767$ ), and pathway and GPA ( $\chi^2(8)=8.539, p=.383$ ). This finding means that teachers did not choose or avoid any pathway in a pattern determined by gender, ethnicity or prior GPA, and that the distribution of teachers across pathways and demographics were relatively proportional as might be expected with random assignment.

*University Instructors.* To examine for differences among the instructors for the three pathways it was determined that a total of 440 sections were taught in the MS credential program during the time period, 244 on campus, 196 in partner schools. The Intern candidates enrolled in the on-campus classes so all faculty could be categorized as teaching on campus, in partnerships, or both. Faculty who taught in both covered 302 or 69% of all sections including 149 of those on campus and 153 of those at partner schools. A total of 69 different faculty members taught in the program with a range from teaching one section to 30 sections. Fifty faculty were either White or unidentified ethnicity, of these, 18 taught in both, 10 partnership only, 12 campus only; 19 were from under-represented groups; 10 taught in both partner schools and on campus, 7 campus only, and 2 partner school only. Which faculty taught at what location was determined mainly by geographic locations and ease of travel. For example, one instructor does not drive, thus only taught on campus; one could only teach at night and partner school sections are during the day; and a number lived closed to partner schools and volunteered to teach classes there.

### **Research Design**

Three pathways to teaching were compared through the use of a one-way ANOVA with three levels for Campus Based (YCB), Interns (YI) and Partnership Schools (YP) to answer research questions two and three for this study. Teachers and employment supervisors completed the survey. The number of respondents, the percents rated “well prepared” or “adequately prepared,” and the results of the post hoc Scheffe analysis are reported in Table 2. While programs may have had minor changes over time, the candidates from across six years of data collection were grouped together.

*Employment supervisor results.* The overall N and percentage of employment supervisor respondents rating the teachers as “well or adequately prepared” by their respective credential programs for the three Yosemite campus specific pathways is shown in Table 2. The Ns varied markedly, with 283 YCB, 38 YI, and 104 YP supervisors responding. These numbers were reflective of the relative numbers of candidates who completed each pathway on the Yosemite campus. The professional role of all the Yosemite employment supervisor respondents was elementary principal. An examination of the 15 composite percentages showed that the YI group was rated highest or tied for highest on 11 composites, YP was highest or tied for highest on four, and YCB was highest or tied on two. The ANOVA results examining

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**Table 2**  
**Number of Respondents, Group Means, and Post Hoc Results**  
**for Three Yosemite Groups—**  
**Campus Based (YCB), Intern (YI), and Partnership (YP)**

	Supervisors			Teachers		
	YCB	YI	YP	YCB	YI	YP
N	283	38	104	390	46	163
Composites						
A. Overall effectiveness of Basic Teaching Credential Programs in the CSU System						
A1 Overall effectiveness of Multiple-Subject Credential Programs						
	78	81	79	66	69	79*
B. Preparation to understand and teach core subjects of school curriculum at distinct levels						
B1 Preparation to understand and teach reading-language arts						
	81	77	84	78	79	90*
B2 Preparation to understand and teach mathematics						
	82	86	85	77	78	89*
B7 Preparation to understand and teach other subjects						
	74	79	75	56	60+	68*
C. Preparation in general pedagogical principles and practices across subjects and school levels						
C1 Preparation to plan instruction for all students & subjects						
	82	84	84	74	75	86*+
C2 Preparation to motivate students to be active learners						
	82	84	82	73	67	87*+
C3 Preparation to manage instruction for learning						
	80	79	80	68	67	80*+
C4 Preparation to use education technology effectively						
	80	83	81	57	64+	73*
C5 Preparation to use good pedagogy across the curriculum						
	80	82	82	67	69	82*+
C6 Preparation to assess and reflect on K-12 teaching						
	78	76	80	67	72+	84*
D. Preparation to teach California's students in diverse groups and stages of development						
D1 Preparation for Equity and diversity in K-12 education						
	76	83	77	68	74+	82*
D2 Preparation to teach young children in grades K-3						
	83	95	86	72	83	85*
D3 Preparation to teach middle-grade students in grades 4-8						
	80	79	76	67	63	83*+
D5 Preparation to teach English learners in grades K-12						
	78	82	78	68	76+	84*
D7 Preparation to teach special learners in inclusive schools						
	76	79	77	65	71+	80*
E. Overall quality and value of CSU teacher preparation in Basic Credential Programs						
E1 Overall value of CSU professional coursework in education						
				77	75	87*+
E2 Overall value of quality of fieldwork experiences in education						
				82	86+	92*

\* Scheffe post hoc analysis indicates YP mean greater than YCB mean at  $p = .001$  or lower.  
+ Scheffe post hoc analysis indicates YP mean greater than YI mean at  $p = .05$  or lower.

for differences between the pathways for composite *A1 Overall Effectiveness* of the credential program was not significant ( $F=.26$ ,  $df=2$ ,  $422$ ,  $p=.77$ ). Likewise, there were no statistically significant differences found among the three pathways for teacher's preparation for any of the 14 other composite areas rated by employment supervisors with the  $F$  values ranging from .007 to 1.14.

*Teacher results.* The sample sizes of the three teacher groups were 390 for YCB, 46 for YI, and 163 for YP. The Yosemite Partnership had the highest means on all 17 composites. The ANOVA results examining the difference among the pathways for composite *A1 Overall Effectiveness* of the credential program found statistical significance ( $F=12.20$ ,  $df=2$ ,  $594$ ,  $p<.001$ ). Significant differences were also found for all other composites with  $F$  values ranging from 7.03 to 16.49. On all these composite variables, post hoc tests revealed that the YP means were significantly higher than the YCB means ( $p=.001$ ). Post hoc tests showed that six YP means were also significantly higher than YI means ( $p=.05$ ). The YI pathway mean was higher than the YCB on 13 of the 17 composites while YCB means were higher than YI pathway means on four composites, though none of these pairwise comparisons was significant. In short, the Partnership (YP) pathway had a marked magnitude of advantage over the other two groups.

## **Discussion of Results**

This study examined seven years of data from Yosemite State. A total of 425 employment supervisors and 599 teachers provided ratings of three campus-specific pathways: Campus Based, Interns and Partnership Schools. No significant differences were found among the ratings of the employment supervisors, however teachers identified substantial differences despite all groups enrolling in the same courses taught by the same pool of instructors using a common master syllabus. The partnership graduates rated their preparation superior to the other pathways on every composite, with all differences being statistically significant. The intern graduates rated their preparation significantly higher than the campus based on 13 of the 17 composites. The magnitude of differences was indicative of clinical significance as well.

Research Question 1 asked if there were differences among the candidates who chose to pursue the three different pathways. The results indicated there were not. An additional comparison was made of instructors for pathways. It showed 69% of all sections were taught by faculty who taught in all tracks. They literally were drawn from the same pool. This would not account for differences in perceptions of preparation.

Research Question 2 asked if the principals supervising the graduates identified different levels of preparation among the three pathways. Employment supervisors of the Yosemite State graduates did not rate the preparation of the first year teachers in the three pathways differently on any composite. The three programs were developed

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and operated by a single university based on a common set of standards, staffed by the same instructors, and using a common syllabus. Combined with whatever first year induction activities provided by the district, the similarities outweighed the differences to a degree that the *SEPTPP* was not sufficiently sensitive to discern. The first year of teaching requires a fast learning curve for new teachers. By the end of the year, apparently the teachers had developed to the point that any program preparation differences that might exist were not evident to supervisors.

The two areas where the supervisors' ratings were consistently lower than the 80% level originally set by the CSU Education Deans as the target figure were B7, teaching subjects other than reading and math, and D7, teaching special learners in inclusive schools. On a number of other composites at least one of the pathways received a score below 80% including A1 overall effectiveness, B1 preparation to understand and teach reading-language arts, C3 preparation to manage instruction for learning, C6 preparation to reflect on teaching, D1 preparation for equity and diversity in K-12 education, D3 preparation to teach middle-grade, and D5 preparation to teach English Learners. Composites D5 and D7 have been targeted for improvement by the CSU because they are consistently low across the system.

Research Question 3 asked if teacher graduates differentially rated their preparation based on the pathway pursued. The teachers in this study varied significantly in their ratings of the three preparation programs on the *SEPTPP* with the Yosemite Partnership group rating their preparation highest on every composite. The Intern group rated their preparation significantly higher than the Campus Based group on 13 of 17 composites. One clear difference was that the Yosemite partnership was a closed cohort from team building at the start of the first phase through the final coursework and field experience. McCarthy et al. (2005) and Merino et al. (1994) supported this as an advantage in educator preparation.

That the Yosemite Internship path was generally higher than Yosemite Campus Based possibly confuses this issue. The Intern candidates were not in a closed cohort for courses but they did meet monthly as a group with a faculty member who provided seminars and regular support. Yerkes et al. (1995) would label the Yosemite Partnership a closed cohort and Yosemite Internship as open or fluid. The Partnership saw their liaison multiple times per week while the Internship saw theirs monthly. Yosemite Campus Based did not have a liaison. The type of cohort and the level of support appear to be crucial variables. The Partnership candidates were in a cohort by partner school district with the same teacher candidate peers for all three phases of the program. Each partnership had a liaison faculty member who was present to support the candidates across all phases. Continuity of supervision was not a feature of the Campus Based pathways. The cohort and the consistent liaison built in both peer and faculty support for the candidates while they were in this most important professional development experience.

There are other possible explanations for the comparative advantage of the Internship and Partnership. California's teacher preparation is abbreviated compared

to other states, not permitting a major in education and thus more gradual induction into the profession. Credential programs must be designed to so a candidate may complete it in one year. This is brief compared to other states. The Partnership and Internship candidates were part of a single school district and usually at a single school for the credential program. They attended workshops prior to the start of the school year and all teacher meetings while at the building. In addition, Partnership and Internship candidates sat in on professional learning committee meetings and teacher conferences. The Campus Based students may or may not have had these opportunities, but they generally were in multiple schools, if not school districts, during their program. This may have increased the difficulty of grasping the professional role and led to a reduced opportunity to feel a part of the institution or profession of teaching.

The schools asked to be part of the Partnership group were all “Title 1” schools that had a high level of students eligible for free and reduced lunch and at least 20% English Learners. During the seven years, 17 of the 20 schools involved raised their level of achievement or were already above the 90<sup>th</sup> percentile statewide in reading and math. With the exception of three schools, they showed rapid increases in achievement level compared to other schools in the state. This improvement may well have affected the graduates’ perception of training. These were schools with staff and administration proud of the work being accomplished. It is likely that their confidence was communicated to the candidates as they progressed through the credential program, possibly affecting the eventual results.

### **Summary and Future Actions**

Though not a specific research question, these results strongly counteract a continuing theme voiced by the Secretary of Education Arne Duncan. He has repeatedly indicated that the majority of teachers say their university preservice education left them unprepared for the classroom and that 67% to 82% of principals say they are dissatisfied with the preparation their teachers have received through university programs (U.S. Department of Education, 2011). These results refute such positions as there obviously was a much higher level of satisfaction among these subjects.

A major question raised by the results is “were the supervisors correct?” This would mean that there were no differences among the quality of preparation in the three pathways. Yosemite State, like most public university based preparation programs, devotes a great deal of effort to assuring that its preparation programs meet both NCATE and state standards for teacher preparation. Previous research has shown that the *SEPTTP* principal ratings are not affected by the demographics of the schools where the graduates are teaching (Beare et al., 2012) or the socioeconomic background of the graduates themselves based on their parents’ income and educational level (Wright et al., 2012). It may be that a preparation program that meets

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standards and attempts to prepare candidates in line with the factors measured by *SETPP* does simply that. The large majority of graduates are reasonably competent first year teachers who appear to be meeting the demands of the school, based on the evaluation of the principals. It really didn't matter which pathway they chose.

An interesting finding was that candidates placed in a cohort in a partner school with a consistent faculty liaison or supervisor, rated their preparation higher than did their peers in more traditional programs, supporting the findings of Dinsmore and Wenger (2006). The Yosemite Partnership graduates took the same classes as the other candidates however they judged their preparation and experience in the credential program significantly higher than did the other two groups. Yosemite Partnership was a three-semester program of traditional courses taught by college professors. Candidates experienced close collaboration with their liaison and they rarely needed to venture to the university campus. Accordingly, the pathway may be more of an immersion in a K-12 school and less of a university experience. This was completed by the sense of camaraderie engendered by being in a cohort, having peers for support when needed, and having an extra mentor. Darling-Hammond et al. (2005) found that exemplary programs gave candidates a consistent vision of good teaching. The Yosemite Partnership path did that with the students who self-selected this program. It also accomplished the 2004 recommendation of AASCU by promoting closer contact between University and school personnel, providing a sequence of courses and tying to state content standards. Being enmeshed in the academic life of a partnership school, as opposed to changing schools each semester and returning to the university campus daily likely increases this and may have added to their enculturation as teachers, supporting the findings of Wong and Glass (2005). In California, with the abbreviated time to credentialing, this may be a distinct advantage.

Along with answering the three research questions, this study responded to the questions asked by Darling-Hammond (2000b) and the challenges offered by Duncan (2010) and Finn (2003). Elementary principals did not discern differences in the preparation of graduates who pursued the different pathways to obtaining a credential, but graduates did perceive a marked level of difference among the pathways. There were no significant demographic differences among the candidates who followed the different pathways and no differences among the instructors for the pathways making it more likely differences in teachers' perception were based on the pathway, despite the lack of random selection. That aspect of the research supports having cohorts of candidates, embedded in partner schools, enrolled in coursework tied to the field experience activities feeling better prepared than students in traditional programs. University based teacher preparation programs should strongly consider the cohort arrangement with the cohorts housed at the schools where candidates will have field experience, integrating school district personnel and perspectives, and providing consistent support and mentoring. With these factors all parties, professors, teachers, candidates and K-12 learners, receive benefit.

From these data, there is no way to determine if the perception is real, particularly with principals discerning no differences.

Investigation of the differential perceptions of supervisors and teachers is worthy of attention and will be the subject of future investigation. Aside from its research utility, the survey is very useful in examining the effect of small program changes from year to year. Yosemite State has seen improvements across pathways from this and the CSU system-wide has shared strategies that lead to improved results on certain items and composites. Teacher education can only silence its critics through continued investigation of better ways to prepare educators and establishing a strong data base to demonstrate the effectiveness of programs.

The clear need in this research is pursuit of a value-added methodology that will determine if the students taught by teachers prepared through different pathways achieve differentially. Yosemite State is part of a large value added study being conducted by the CTQ in collaboration with the Carnegie Foundation. Along with examining for differences in achievement of students taught by Yosemite State graduates versus graduates of other credential programs, the first set of expected data will examine differences in achievement obtained by teachers who followed the three described pathways. Those results may give a more definitive answer concerning the accuracy of the principals' and graduates' perceptions of training.

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