

**INNOVATIONS IN INCLUSIVE EDUCATION: TWO TEACHER  
PREPARATION PROGRAMS AT THE SAN FRANCISCO STATE  
UNIVERSITY**

**Pamela Wolfberg**

**Pamela LePage**

**Ellen Cook**

*San Francisco State University*

*This article introduces two innovative teacher preparation programs that emphasize inclusive education at San Francisco State University. The Combined Elementary and Special Education program has as its main goal to provide specialized cross training for special and general educators who work in highly diverse inclusive public school settings. The training allows teachers to earn credentials in (a) elementary education, (b) special education, and (c) bilingual education. By combining and redesigning three existing programs at SFSU, the students now earn credentials in each of these three areas faster, while benefiting from the strengths of these multiple disciplines. The Autism Spectrum graduate program is designed to prepare highly qualified educators and related professionals to meet the unique needs of learners with Autism Spectrum Disorders (ASD) in diverse settings. This interdisciplinary program is offered at an advanced level for students pursuing any area of special education or a related field. The program enables candidates to earn a (a) Master of Arts (b) Clear Education Specialist Credential Autism and (c) Autism Spectrum Certificate. Through participation in this program, students demonstrate working knowledge of state-of-the-art training models, strategies and philosophies to guide them in implementing appropriate educational programs for learners with ASD in inclusive settings.*

## Introduction

There is a national movement in the United States to educate children with disabilities in inclusive settings. The movement began in 1975 with the passage of Public Law 94-142 (reauthorized as the Individuals with Disabilities Education Act - IDEA, 1997), which states that students with disabilities have the right to be educated alongside students without disabilities to the maximum extent appropriate within the least restrictive environment. Although inclusive placements and practices are determined according to a student's individualized education plan (IEP) on a case-by-case basis, data suggest that over the past two decades increasing numbers of students identified with disabilities from diverse backgrounds are spending a significant portion of their school day in general education (ED-DATA, 2006). California schools are among those most impacted in light of increases in the proportion of included students with high incidence disabilities (e.g., specific learning disabilities) and autism spectrum disorders (California Department of Education, 2009; U.S. Department of Education, 2009). As these rates continue to rise, the number of fully qualified general and special educators to serve diverse students with disabilities in inclusive settings is not keeping up (Center for the Future of Teaching and Learning, 2004; McLesky, Tyler, & Flippin, 2004). In an effort to address this need, this article introduces two new innovative teacher preparation programs that emphasize educational reform and teacher training for inclusive education at San Francisco State University.

## Combined Elementary and Special Education Program

The purpose of the *Combined Elementary and Special Education program* is to provide specialized cross training for special education and general education teachers who work in highly diverse inclusive public school settings. The training allows teachers to earn credentials in (a) elementary education, (b) special education, and (c) bilingual education. By combining and redesigning three existing programs at SFSU, the students now earn credentials in each of these three areas faster, while benefiting from the strengths of these multiple disciplines.

### *Need for Program focused on Social Justice and Inclusion*

In 1998–99, the U.S. reported that 47 percent of students with disabilities spent 80 percent or more of the day in a general education classroom. In 1988–89, only 31 percent of such students did so. According to a recent report by the Pew Foundation, in 2004, 80 percent of students with disabilities spent the majority of their time in regular classrooms (Olson, 2004). The increase in the percentage of students with disabilities included in general classrooms is noteworthy because the number of such students has been growing faster than total school enrollments. The ratio of special education students to total K–12 enrollment in 1988–89 was 112 per 1,000 students; in 1998–99, it was 130 per 1,000 students. Since the turn of the century, the numbers have remain constant; around 13% of the US population of children are being served under IDEA although the populations are changing (National Center for Education Statistics, 2006-2007)

Not only did the percentage of students with disabilities placed in regular classrooms increase between 1988–89 and 1998–99, the size of increase varied by type of disability (National Center for Education Statistics, 2002). The largest increase occurred among students with high incidence disabilities, for example specific learning disabilities rose from 20 to 45 percent. By 2004, 48% of the students with disabilities had specific learning disabilities. The smallest

increases occurred among students with multiple disabilities (from 7 to 11 percent) and those who are both deaf and blind (from 12 to 14 percent). Overall, the percentage of students with disabilities educated in separate facilities declined for students of all disability types except for those with visual impairments (National Center for Education Statistics, 2002). In California specifically, a fairly consistent percentage (approximately 6 percent) of California's special education students (grades K-12) had been returning to general education each year between 1999 and 2002 (Walter, 2003). Since then the rates have stabilized.

Although California is working to integrate more students with disabilities into the least restrictive environments (general education settings) Wagner and Blackorby (1996) state that, "for many students, more time in general education was associated with a higher likelihood of course failure, which was a strong predictor of dropping out of school." Dropout rates are high: 32% of students with disabilities still drop out of high school (Olson, 2004). The dropout rate for students with disabilities is approximately twice that of general education students (Blackorby & Wagner, 1996; Olson, 2004). To support children with high incidence disabilities in inclusive settings, we need to understand reasons for failure. In her research on inclusive schools in Oregon, Irmsher (1995) found that when inclusion failed, it was usually due to inadequate teacher preparation, training, and support. Only fourteen states require general education teachers to take courses in special education before getting a teaching license (Olson, 2004).

This program not only prepares teachers to work with children with disabilities, it addresses ethnic and language diversity for both general and special education students. California's students are the most diverse in the nation. In addition to their differing backgrounds, fully a quarter of them are learning English. In fact, in 2002, English language learners (ELL) made up 25.4% of the public school population (Education Demographic Office, California State Department of Education, 2002). The challenge of working with children with such diverse needs has affected California's ability to keep up with other states in achievement testing. According to the National Assessment of Educational Progress (NAEP) test scores, in the California public schools just 15% of 4th-graders and 18% of 8th-graders are proficient in math, compared with 25% and 26% nationally. In science, 14% of 4th-graders and 15% of 8th-graders are proficient, compared to 28% and 30% nationally (Educational Demographics Office, Department of Education, 2003). In all three areas, reading, math, and science, students in California lag behind a vast majority of students from the other states (National Center for Education Statistics, 2002). According to the NCE report, one reason for this discrepancy is because California has the largest percentage of English learners of any state at both grade four (29 percent) and grade eight (20 percent). In addition, California's results include a higher proportion of English learners than any other state in the nation (California excludes only 10 percent of English learners in grades four and eight from the test compared with the exclusion of 22 percent of grade four and 33 percent of grade eight for the nation as a whole.). These statistics clearly demonstrate the need for California teachers in both general and special education to understand the needs of English language learners.

To effectively prepare teacher candidates to successfully teach learners with high incidence disabilities from diverse backgrounds, an integrated curriculum approach is needed including a focus on dispositions (LePage, Nielsen, & Fearn, 2008). This approach is different than having candidates enroll in lengthy general education, and then special education, and then programs

focusing on English language learners concurrently or simultaneously. For the proposed program, course content is not separated by discipline, but is effectively integrated and presented as a cohesive whole. Programs offering general-special education integrated courses are unique because they challenge not only the candidates, but university personnel as well, to work together in a collaborative fashion, therefore modeling, in their teaching, practices encouraged for adoption in schools. Integrated programs, moreover, reduce the possibility of duplication of course content and will encourage candidates' application of proposed strategies and techniques across a range of students. The faculty who are working to design and implement this program will work together to support teachers who are responsive to the unique needs of younger children, who can integrate general, and special education knowledge and classroom experience and who are well-equipped to work in settings that implement more inclusive practices.

Typically, general and special education teachers are most often prepared in two separate tracks isolated from one another. General education pre-service teachers receive little or no exposure to theory and practice on meeting the needs of students with disabilities, and are generally only required to complete one or two courses in special education. At San Francisco State, general education students are not required to take any courses in special education to complete requirements for a level 1 elementary credential. Preparation for special education teachers focuses on special education curriculum and instructional approaches employed in isolated or segregated settings such as resource rooms or self-contained classrooms. As a result, neither general nor special education graduates are prepared to work effectively in the inclusive programs that are evolving in our nation's schools. On the contrary, most general and special education teacher education programs actually model exclusion by separating students with disabilities. This is also true for dual-credential programs. Candidates of dual-credential programs concurrently enroll in general and special education courses. However, the curriculum tends to remain discipline specific, and instructors rarely work together in selecting curriculum emphasis and designing overall program outcomes. General and special education faculty continue with their standard practice, each teaching their courses, with little communication and/or collaboration, therefore leaving it the candidates' responsibility to integrate this sometimes disparate information. For example, the general education program may emphasize the use of a whole language approach for the teaching of reading; the special education program, the adoption of a more skills-based approach -- leaving candidates with the uncertainty of which program is most effective -- rather than the understanding that both approaches offer effective means for teaching a diverse group of learners, and that both have a place in the classroom. Therefore, this program represents a step forward in the preparation of teachers of elementary-aged children. First, because it moves beyond traditional dual-credential programs by integrating course content across general and special education and by presenting that content through co-teaching by general and special education faculty. Second, students are given the opportunity to work in multiple inclusive settings during their student teaching experiences.

There is a need to provide opportunities that allow for teacher candidates to earn credentials in California. At the turn of the century approximately 6 percent of the teaching force nationwide lacked full certification in 2000-2001 (Office of Postsecondary Education, 2002). Nine of those states reported having more than 10 percent of their teachers on waivers for that year, with Arizona, California, and North Carolina leading the way with 16 percent. The proposed program clearly addresses the following California's state goals:

- To increase the percentage of special education staff who are fully certified,
- To decrease the percentage of special education teachers operating under emergency permits or credential waivers,
- To increase the percentage of students in special education who return to general education.
- To attain high percentages of special and general education teachers accessing trainings, resources, and/or technical assistance reporting that these activities have helped them implement research-based strategies in the classroom, particularly those related to increasing reading/language arts skills, academic achievement, and post school results; improving transitions; ensuring positive behavioral supports, and increasing involvement/collaboration of parents in their child's education.
- To increase the amount of time that California's students with disabilities spend in the general education environment, and
- To improve the equity of placement across ethnicity and socioeconomic status by disability.

Although California is facing a teacher shortage, dual credential programs in special education are very rare. In the Bay area these programs are almost nonexistent. When people did combine programs for the purpose of integration, it was often in early childhood (Hanson, 1987; McCollum & Thorp, 1988). The University of California, Berkeley, Stanford University, and University of California, Santa Cruz do not even offer programs in special education. California has started to develop undergraduate programs that integrate content and education courses. These programs do not focus on special education or the education of English language learners, and none of them are located in the Bay area. The bottom line is that none of the universities in the Bay area offer programs that prepare teachers to work in integrated and inclusive elementary and special education programs that also address linguistic and cultural diversity. To improve teacher education programs educators suggest strongly that teacher educators need to streamline their programs while improving their quality (Office of Postsecondary Education, 2002). This program does just that; it allows students to earn two credentials and a certificate faster and prepares them for working with diverse students – all in a higher quality program.

## **Program Design**

### ***Designing the Program based on Research on Effective Teacher Educatio.***

A number of studies in the 1980's and early 1990's documented a set of longstanding problems in teacher education (Goodlad, 1990; Holmes Group, 1996; Howey & Zimpher, 1989; Zeichner, 1993). Because much of the research criticizing teacher education has been conducted in general education classrooms, special education programs often ignore problems with traditional designs. The problems that predominated between 1950 and 1990 are summarized as follows:

- **Inadequate time.** Elementary and special education is considered weak in subject matter; secondary preparation was weak in knowledge of learning and learners.

- **Fragmentation.** Key elements of teacher learning are disconnected from each other. Coursework is separated from practice teaching; professional skills are segmented into separate courses.
- **Uninspired teaching methods.** Many believe that for prospective teachers to learn active, hands-on and minds-on teaching, they must have experienced it for themselves.
- **Superficial curriculum.** “Once over lightly” describes the curriculum. Traditional programs focus on subject matter methods and a smattering of educational psychology.
- **Traditional views of schooling.** Most prospective teachers work in isolation, rather than in teams, (National Commission on Teaching and America’s Future, 1996, p 32).
- **Fieldwork.** While it is often a core portion of student-teachers’ experiences Guyton & McIntyre, 1990), fieldwork has often been divorced from coursework, inadequately designed, and placements have often failed to reflect standards for good teaching.

Spurred by these critiques, teacher education reforms have led many programs to raise admission standards, focus more on subject matter preparation, lengthen clinical experiences, place greater emphasis on learning theory and its implications for teaching, develop curriculum that better addresses issues of diversity, culture, and context, and create partnerships with schools (Imig & Switzer, 1996; Darling-Hammond, 2006). Some of these new teacher education program designs represent more integrated, coherent programs that emphasize a consistent vision of good teaching. These programs also create stronger links between clinical experiences and more formal coursework and use pedagogies in coursework that are connected to real classroom practices (Cabello, Eckmier, & Baghieri, 1995; Graber, 1996; Grossman, 1994; Grossman & McDaniel, 1990; K. Hammerness & Darling-Hammond, 2002; J. Oakes, 1996; Ross, 1989; Darling-Hammond; 2006; Cochran-Smith, Feiman-Nemser, & McIntyer, 2008).

It is widely believed that exemplary teachers need to be able to think pedagogically, reason through dilemmas, investigate problems, analyze student learning to develop appropriate curriculum, all the while being able to do so with a diverse group of learners. A number of successful traditional and alternative teacher education programs have shown that it is possible to design, develop and maintain high quality teacher preparation programs despite the barriers associated with program, university, and regulatory contexts (e.g., Cabello, B., Eckmier, J., & Baghieri, H., 1995; Darling-Hammond, 2000; Novak, 1994; Oakes, 1996; Sockett, Demulder, LePage & Wood, 2001; Valli, 1992; Darling-Hammond; 2006). For example, a recent study of seven such programs found common features among a group of large and small programs located in both public and private colleges and universities. These features include:

- A common, clear vision of good teacher in all course work and clinical experiences;
- Well-defined standards of practice and performance that are used to guide and evaluate coursework and clinical work;
- A curriculum grounded in substantial knowledge of child and adolescent development, learning theory, cognition, motivation, and subject matter pedagogy, taught in practice;
- Extended clinical experiences (at least 30 weeks) which are carefully chosen to support the ideas and practices presented in simultaneous, closely interwoven coursework;
- Strong relationships, common knowledge, and shared beliefs among school-and university-based faculty; and

- Extensive use of case study methods, teacher research, performance assessments, and portfolio evaluation to ensure that learning is applied to real problems of practice (Darling-Hammond, 2000).

For the proposed program, we have examined the research on effective practice in teacher education and have used that knowledge to design a high quality program (e.g., Marilyn Cochran-Smith & Zeichner, 2005; Cochran-Smith, Feiman-Nemser, & McIntyer, 2008). The program follows the guidelines for teacher preparation programs spelled out in the “Teacher Preparation in California Standards of Quality and Effectiveness document” (California Commission on Teacher credentialing, 1998, 2008), as well as the “California Standards of Quality and effectiveness for education specialist credential programs document” (California Commission on Teacher credentialing, 1996, 2008 ). It is cohort-based and is designed with a common, clear vision of inclusive practice. The curriculum was designed based on the recommendations of the Committee on Teacher Education, which provides research-based suggestions for curriculum content (Darling-Hammond, Bransford, LePage, Hammerness, & Duffy, 2005). The program requires participation in clinical internships in three diverse settings that span over three semesters. The curriculum coursework is grounded in knowledge of child development, learning theory, and subject matter pedagogy, and will be developed and co-taught by general and special education faculty from both the university and the public schools. These educators will make extensive use of case methods, teacher research, and portfolio assignments in order to connect theory with practice. Finely, well-defined standards of practice and performance will be used to guide and evaluate coursework and clinical work.

Years 1-3. In the first three years of this program, general and special education faculty who integrate information across disciplines taught courses. The program provided extensive field-based experiences in each of the three areas targeted, general and special education, and the education of English language learners. Students completed 180 hours of clinical work in each of these three areas. The program addressed issues of ethnic and language diversity for both general and special education students. Ultimately, the main goal of the project was to prepare teachers who were capable of working with general and special education students in inclusive programs and/or better prepare special education and/or English language learners for entry into inclusive programs. To that end, the program emphasized reading and literacy development for children in the early grades, and the students were given extensive pedagogical training in other content areas including social studies, science, and math. Content specific methods courses will be aligned with content standards for California public schools.

The students attended the university full time for two years (four semesters) and earn 62 units to earn a multiple subjects credential with a ELL certificate and an educational specialist credential (45 units of coursework and 15 units of student teaching). In summary, the program was unique because it, 1) included courses collaboratively designed and taught by general and special education faculty who will integrate information across disciplines, 2) provided extensive field-based experiences in each of the three areas targeted, 3) emphasized reading and literacy development for children in the early grades, 4) emphasized content knowledge and pedagogy aligned with California state standards (<http://www.cde.ca.gov/standards>), 5) addressed issues of cultural and language diversity, and 6) prepared teachers who are capable of working with general and special education students in inclusive programs. Table 1 lists the courses required

in the existing programs.



## Course Sequence-Combined Credential Program: Elementary and Special Education (CCP)

#	Fall 07		#	Spring 08	
SPED 704	Ethics and Professionalism in integrated settings: Opportunities for Inclusion	3	EED 682	Teaching reading and language arts	4
EED 783	Analyzing Child Behaviors in a Culturally and Linguistically Diverse School Settings Learning and development)	3	SPED 774	Positive behavior supports (will add content from elementary ED management)	3
EED 749	Second Language Acquisition in the Elementary School	3	SPED 772	Assessment, curriculum and instruction (mild to moderate disabilities—focus on assessment)	3
EED 701	Social, Cultural, Historical Foundations of Education	3	EED 657	Teaching Practicum Seminar-Phase II	4
EED 763	Integrating Language, Literacy, and Technology in Elementary School Curriculum	3	EED 647	Teaching Practicum- Phase II	2
EED 701	Technology and teaching	1		Take RICA (reading exam)	
	<b>Fall 08</b>	16		<b>Spring 09</b>	16
EED 658	Teaching Practicum Seminar – Phase III	4	EED 737	Teaching social studies, social justice, and literacy	3
EED 648	Teaching Practicum-Phase III	2	SPED 726	Student teaching seminar (Reflective practice, analysis of teaching and action research: systematic inquiry into effective teaching)	3
EED 642	Curriculum and Instruction in Mathematics (CLAD emphasis)	3	SPED 730	Student teaching in special education settings	6
EED 679	Curriculum and Instruction in Science	3	SPED 775	Advanced methods in mild to moderate disabilities (will add	3

				content for English Language learners)	
SPED 775	Advanced methods in mild to moderate disabilities (will add content for English Language learners)	3			
		<b>15</b>			<b>15</b>
	<b>For a Master's degree -- in Special Education ....</b>			<b>Add 9 units summer courses/extended courses</b>	
ISED 797	Educational Research	<b>3</b>	SPED 788	Connecting research and literature with the world of practice in special education	3
SPED 803	Research and Practice in Language and Literacy Education (or 801) Families	<b>3</b>	SPED 894	(Students need to complete a thesis, creative work project, or field study)	3

Year 4. The classes were considered difficult to schedule, so in the 4<sup>th</sup> year, the department chairs of the elementary and special education departments decided to try a new course sequence for the fourth cohort. For the fourth cohort, which started in 2008 and will end in 2010, the students will first take elementary courses during the first three semesters and then start their special education courses. The courses and internships are the same, only the sequence has changed. The students have just started this program in the Fall of 2008, so researchers need to determine how this sequence will work out in practice.

### **Autism Spectrum Graduate Program**

The *Autism Spectrum graduate program* is designed to prepare highly qualified educators and related professionals to meet the unique needs of learners with Autism Spectrum Disorders (ASD) in diverse settings. This interdisciplinary program is offered at an advanced level to students in any area of special education or a related field. The program enables candidates to earn a (a) Master of Arts (b) Clear Education Specialist Credential Autism and (c) Autism Spectrum Certificate. Through participation in this program, students demonstrate working knowledge of state-of-the-art training models, strategies and philosophies to guide them in implementing appropriate educational programs for learners with ASD at the early childhood, elementary and secondary/transition level. A heavy emphasis of this program is on inclusive practices that support learners with ASD in diverse educational settings.

### ***Need to Prepare Educators with Specialized Knowledge and Skill in ASD***

Autism is the fastest growing special education eligibility category for public education across the nation (U.S. Department of Education, 2009). Within the past decade, autism increased at a disproportionate rate of more than fifty times higher than other identified disability groups served under IDEA. Moreover, the number of these students who spend a major portion of the school day in general education has tripled. Currently, over 280,000 children with autism ages 3

to 22 receive special education services at an annual estimated cost of 8.4 billion dollars (fightingautism.org).

In California, since 1996, the rate of autism skyrocketed from 4,000 to over 46,000 children, with over half attending public schools within Northern California. The highest concentration of this population is in the San Francisco Bay Area, one of the largest U.S. urban areas, spanning three major cities (California Department of Developmental Services, 2009; California Department of Education, 2009). Because not all students with ASD receive special education services under the classification of "Autism," it is likely that these child count data underestimate the actual prevalence of students with autism served under IDEA.

As autism continues to rise at an epidemic rate and schools face chronic teacher shortages, there is an unprecedented need to prepare educators who are qualified to work with this population. According to the National Research Council (NRC) (2001), "Personnel preparation remains one of the weakest elements of effective programming for children with autism spectrum disorders and their families (p. 225)." The complex nature and wide spectrum of variability in autism poses a distinct set of challenges for preparing educators to work effectively with this population (American Psychiatric Association, 2000). Without adequate instruction, students with ASD may not only fail to learn, but also risk regressing (Scheuermann, Webber, Boutot & Goodwin, 2005).

A major challenge in personnel preparation pertains to credentialing patterns in states where special educators receive preparation in non-categorical programs without additional disability-specific training or certification. This is the case in California where teachers earn non-categorical credentials in a two-tiered entry (preliminary level I) and advanced (clear level II) post-bachelors program. While such programs offer basic preparation to teachers, it is highly unlikely that they can adequately prepare educators with the specialized knowledge and skill needed to effectively work with students with ASD (Scheuermann et al, 2005).

Another challenge with personnel preparation is the lack of universally accepted professional standards in ASD (Yell, Drasgow & Lowrey, 2005). While there is a growing body of research that has prompted efforts to reach consensus on guidelines for effective evidence-based practices at the national and state level, the impact on personnel preparation is yet unknown. As such, existing teacher preparation programs with an ASD emphasis may vary widely in training content (Scheuermann, Webber, Boutot, & Goodwin, 2005).

In assessing the needs of schools in California, special education administrators report that districts carry much of the burden of compensating for the gap in the knowledge and skill of teachers serving students with ASD. To counteract this problem, each district has pieced together their own in-service training programs, as well as hired outside contractors to provide services at premium costs. The training content is often piecemeal and fragmented, focusing on a single approach without presenting the larger picture of how such approaches may fit (or not fit) to guide educators in meeting the unique needs of students with ASD and their families (Iovannone, Dunlop, Huber, & Kincaid, 2003; NRC, 2001; Scheuermann, et al, 2005). With such a pervasive demand for the most up-to-date training, there has been a tremendous amount of overlap and duplication of professional development activities across districts within the same geographic region.

Accumulated evidence underscores the significant need to prepare educators in specialized knowledge, skills and competencies for working effectively with students with ASD in inclusive settings. Of critical importance for personnel preparation is providing a comprehensive competency-based curriculum that is grounded in up-to-date empirical research and evidence practices shown to be effective in improving outcomes for students with ASD. Further, it is essential to integrate specialized courses with highly relevant field experiences to optimize opportunities to translate research into effective and meaningful practice. By preparing highly qualified educators in partnership with schools, families and other specialists, students with ASD have the potential to make great progress. In contrast, with inappropriate responses from teachers, these students can experience devastating setbacks and difficulties.

### ***Program Design***

The Autism Spectrum graduate program at SFSU is designed to offer advanced preparation to educators and related professionals in partnership with local schools, university/medical centers and community based programs serving and advocating for children, families and adults with ASD. Through specialized coursework (4 core methods) and supervised field experiences (in diverse settings) candidates receive preparation in research-based knowledge, skills and competencies for working effectively with students with autism. The program of study is streamlined allowing for the integration of courses across the master's, credential and specialized areas without additional requirements or cost.

***Research-based curriculum and pedagogy*** The program's curriculum and pedagogy are grounded in the most up-to-date empirical research and evidence practices documented in the professional literature with a strong emphasis on inclusive education (for reviews, see Dunn Buron & Wolfberg, 2008; Iovannone et al., 2003; NRC, 2001; Scheurmann et al., 2003). The curriculum is also aligned with national and state accreditations standards (CEC, 2006; CCTC, 1996; NCATE).

The program also draws on research on effective teacher education pedagogy and practice (Darling-Hammond et al., 2005; Sockett et al., 2001; Zeichner, 2006) by incorporating features of high quality programs: (1) addresses diversity and culture in partnership with schools; (2) common, clear vision of good teacher practice; (3) well-defined standards of practice and performance; (4) curriculum grounded in development, learning theory, and subject matter pedagogy; (5) field experiences connect to real classroom practices, interwoven with coursework; (6) extensive use of case study methods, teacher research, performance assessments, and portfolio evaluation.

### ***Integration of Competencies, Coursework, Field Experiences and Portfolio***

Figure 1 depicts a seamless curriculum that integrates (1) *professional competencies* in autism related knowledge and skill, (2) *coursework* dove-tailing autism courses with master's and credential courses, (3) *field experiences* in multiple settings and contexts, and (4) *portfolio documentation* as evidence of knowledge and skill. Each area is discussed in detail as follows.

(1) ***Professional competencies in autism related knowledge and skill*** draw on findings and recommendations of a number of state and national autism projects including: *Professional Autism Standards Project* (Autism Society of America); *National Autism Standards Project*

(National Autism Center); *Committee on Educational Interventions for Children with Autism* (National Research Council); *ASD Guidelines for Best Practices in Assessment and Intervention* (California Department of Developmental Services and California Department of Education). The fourteen identified core competency areas explicitly address the role of families, culture and language, diagnosis and assessment, goals for and characteristics of effective education and intervention, team collaboration and integrated services, public policies that ensure individuals and families access to appropriate education and services, and research to further efforts to validate and expand knowledge and practice.

## Integration of Professional Competencies, Coursework, Field Experiences and Evidence of Knowledge and Skill\*

	Core Professional Competencies in Autism Related Knowledge and Skill	Autism Spectrum Courses	Field Experiences	Field Hours	Evidence of Knowledge and Skill (Portfolio Documentation)
F A L L	1. Nature of ASD in theory and practice	SPED 791 Nature of Autism Spectrum Disorders	In identified clinical site: • Observe and participate in diagnostic or early assessment of young child	25	• Written response to course readings • Case portrait of student with ASD • Project/presentation • Mentor documents
	2. Individualized educational supports and services 3. Assessment frameworks and procedures 4. Curriculum and instruction 5. Structuring learning environments 6. Addressing challenging behavior 7. Supporting communicative competence	SPED 825 Communication, Behavior and Instruction: Autism	In identified school/clinical/community site: • Observe and participate in diverse elementary and secondary class settings (special day class, inclusive) • Conduct environmental/ecological inventory and adapt environment • Design and implement instructional plan (one-to-one, small group)	25	• Reflection log • Ecological/Environmental inventory • Instructional plans (DVD) • Mentor documents
S P R I N G	8. Supporting social competence	SPED 794 Socialization and Imagination: Autism	In identified school/clinical/community site: • Conduct assessments focused on socialization, communication, play, imagination • Design and implement intervention with typical peers drawing on assessments	25	• Reflection log • Documentation of assessments • Documentation of intervention (DVD) • Mentor documents
	9. Supporting play/leisure and imagination 10. Inclusion with typical peers 11. Transition, vocational, independent living 12. Family support and partnerships 13. School and community partnerships 14. Professional literacy and leadership	SPED 796 Partnerships and Life Issues: Autism	In identified school/clinical/community site: • Conduct transition plan for secondary student • Observe and support student with family across home, school, community	25	• Written response to course readings • Transition plan • Project/presentation • Mentor documents
F A L L	1-14	Master's thesis/field study/creative work project	Variable	Total Hours 100	• Culminating Experience (MA Students) • Final Evaluation Report

\* Issues of diversity and the socio-cultural contexts within which learners with differing abilities, ethnic, cultural, linguistic, social and economic backgrounds participate are threaded throughout the coursework, competencies and field experiences.

Figure 1. Integration of Professional Competencies, Coursework, Field Experiences and Evidence of Knowledge and Skill\*

(2) **Coursework** is designed to actively engage students in learning course material through varied instructional modes that recognize individual differences in learning style. Diverse instructional formats include: lecture, modeling, and demonstration, guided participation in whole group, small group, paired discussion and activities. Written assignments and group projects emphasize critical thinking through analysis, synthesis and appraisal of course materials. To connect theory and practice, students engage in independent and collaborative research projects and curriculum development activities using multi-media technology. Brief descriptions of the autism spectrum courses follow.

**SPED 791 - Nature of Autism Spectrum Disorders (3 units)** This introductory seminar provides a thorough foundation in the education of diverse learners with Autism Spectrum Disorders (ASD). The focus is on understanding and addressing the unique and complex challenges people on the autism spectrum face in their learning, development and sociocultural experiences. The course offers a cross-disciplinary perspective highlighting: historical and theoretical underpinnings; etiology; definitions; characteristics; developmental and learning profiles; assessment frameworks and procedures; current and emerging practices; individualized educational supports and service delivery models.

**SPED 825 – Communication, Behavior and Instruction: Autism (3 units)** This course offers preparation in the design and delivery of communication, behavior and instructional supports for diverse learners with ASD. A major focus is on identifying and applying a wide range of assessment and intervention strategies while highlighting key approaches that are grounded in empirically validated research and evidence-based practices including: data-based assessment and intervention; functional communication, AAC; environmental supports; structured teaching; differentiated instruction; ABA, cognitive, developmental and sensory-based approaches.

**SPED 794 –Socialization and Imagination: Autism (3 units)** This seminar provides preparation in methods to enhance socialization, communication, play and imagination in diverse learners with ASD. The course merges our theoretical understanding of the “triad of impairments” as defining features of autism with practical modes of assessment and intervention. To illustrate major concepts, the application of key research-based models and evidence-based practices will be highlighted including: social pragmatic and social-cognitive approaches; adult-directed, child-centered and peer-mediated practices; inclusion with typical peers/siblings in school, home and community settings.

**SPED 796 – Partnerships and Life Issues: Autism (3 units)** This seminar is designed to offer rigorous exploration and critical analysis of contemporary issues influencing the lifelong learning, development and sociocultural experiences of people on the autism spectrum. Emphasis is placed on guiding students through a reflective process while becoming well versed in translating theory and research into effective and meaningful practice. The course highlights: transitions and lifespan issues; family, school and community supports and partnerships; professional literacy and leadership as autism specialists.

(3) **Field experiences** are directly tied to each of the four autism spectrum courses (see Figure 1 for a list of specific activities). They are designed to give candidates a perspective of the

lifelong learning and development of students with autism from early diagnosis through adulthood while centering on the school age years. They explicitly support opportunities to apply theoretical constructs, conduct and interpret assessments, and design and implement curriculum and instructional practices within a variety of field contexts and inclusive settings.

Candidates conduct 100 hours of fieldwork (which is over and above the requisite 180 hours of clinical practice completed in entry-level training). Candidates who are not teaching are supported in classes and schools with a master teacher within one of our partner districts. Candidates who are teaching engage in field experiences in their own classrooms and schools. Faculty and the field supervisor/coordinator work with schools to coordinate field activities.

**(4) Portfolio documentation** provides evidence of each candidate's knowledge and skill. Aligned with the competencies, portfolio components are linked to course assignments and field activities (see Figure 1). These include: reflection logs, written responses to readings, a detailed case study of a student with ASD, group projects and presentations in classes, environmental inventory, assessment protocols, intervention and instructional plans, supervisor and field mentor observations (written and videotaped), and a final grade report. Portfolios are used extensively for candidates to reflect on and refine their practice. Faculty, supervisors and peers review and give feedback on portfolios in meetings and classes. Portfolios are also used extensively in evaluation activities not only of teacher practices, but also for assessing student outcomes.

## **Current Status of Programs**

### ***Combined Elementary and Special Education Program***

Over the last five years, SFSU was selected to receive a grant from the U.S. Department of Education to develop a dual credential program at San Francisco State University to increase the number of teachers trained to work with children with disabilities in inclusive school settings. This grant provided funding to prepare 80 educators to serve students from diverse ethnic, cultural and linguistic backgrounds in diverse settings. The following objectives were established as important outcomes, (1) Develop an integrated program that allows students to earn a Level I credential in both special education and elementary education, a certificate demonstrating competence with English language learners, and a master's degree in special education, (2) Prepare 80 new teachers over a 4-year time period who can successfully teach in inclusive settings (general, special, and linguistically diverse settings), (3) Provide assistance in placing students in inclusive sites after they graduate, (4) Provide professional development through collaborative course development and collaborative teaching for SFSU faculty in general and special education so they can learn more about integrating interdisciplinary methods throughout the general education and special education curriculum, (5) Evaluate and Disseminate program model.

For the last few years, the staff of the Combined Credential Program has focused on collecting qualitative data on students' experiences in the program. The staff has modified the curriculum and changed course sequence a number of times based on this formative data.

When the first cohort graduated, that group will be asked to complete an exit survey that is given to all students in the California State University system. Scores on that survey will be compared



to scores on surveys from other universities, as well as from other programs at SFSU, to determine whether students feel prepared to teach special needs students.

The program staff has also developed a professional content knowledge test that is given to mild to moderate special education students when they enter the program and also when they leave the program. Gain scores will be calculated to determine whether the students experience significant increases in professional content knowledge. These gains will be compared with increases from other special education programs in the mild to moderate program at SFSU to determine whether the dual credential program ultimately prepares students as well, if not better, than other programs at SFSU.

Finally, students from the Combined Credential Program will also be followed out into the schools for two years and observed in their teaching jobs. Qualitative and quantitative observations will be collected to determine whether teachers are putting research-based strategies into practice in their classrooms in order to positively affect children's learning.

#### ***Preliminary Results of the first three cohorts***

In the first two cohorts, 39 of 42 students admitted to the program graduated and 38 of the 39 student have gotten jobs in teaching. Of the 38 students who are now teaching, 35 students have gotten jobs in special education, which was more than expected. The 3<sup>rd</sup> cohort will be graduating in May of 2009. In the 3<sup>rd</sup> cohort, 11 students were admitted and all 11 are still in the program. In the 4<sup>th</sup> cohort we admitted 29 students. Overall, we have 79 students who will be graduating by 2010.

So far we have had positive results in that all of the students who have earned a dual credential have stated that earning both credentials made them feel prepared to meet the challenges of children with special needs in inclusive settings. Many stated that they could not imagine working in a special education setting without general education content or working in a general education setting without special education content. Both were important.

#### ***Autism Spectrum Graduate Program***

In Fall 2006, SFSU was selected to receive a four-year grant from the U.S. Department of Education to train teachers who will work with the increasing number of students in Northern California being identified with Autism Spectrum Disorders (ASD). This program, known as Project Mosaic, will financially support, prepare and graduate 80 educators to serve students with ASD from diverse ethnic, cultural and linguistic backgrounds in diverse settings. The following objectives will assist in meeting these goals while guiding project activities: (1) Establish and maintain school, family and community partnerships with the university to support project activities; (2) Recruit and retain 80 candidates with disabilities and/or from diverse ethnic, cultural and language backgrounds; (3) Develop specialized research-based curricula and pedagogy that allows 20 candidates each project year to provide high quality services and instruction to students with autism; (4) Prepare candidates with knowledge and skill through integrated coursework and supervised field experiences over 3 semesters to address the specialized needs of students with autism; (5) Evaluate project activities, candidate knowledge and skill, and associated outcomes for the students with autism, and disseminate the program model at the local, state and national level.

To date, we have successfully recruited and retained top quality advanced credential and Master's level candidates who are in various phases of completing program requirements. We are currently evaluating candidate performance and mastery across professional competency areas. Thus far, candidates have produced high quality portfolio documentation, which provides evidence of their knowledge and skill within and across these areas of competence. The majority of graduating candidates are now fulfilling their service agreement working with students on the autism spectrum in diverse educational and therapeutic settings.

In our grant, we stated that we would implement a comprehensive evaluation plan of project objectives, candidate knowledge and skill, and associated student outcomes. We are in the process of collecting and compiling qualitative and quantitative data as we complete our third project year. We have secured the services of an external evaluator to assist us in implementing a multi-faceted evaluation of project activities and the program's progress. We have developed formative and summative evaluation tools to gain insight into the impact of the program on candidates, faculty, and project partners (school, family, community members) and ultimately, on student outcomes once our graduates complete the program. We are gathering data on candidate knowledge and skill, faculty and project partner responses to working in a collaborative model, as well as information that has been a part of the institutional change that has occurred during our first year. Data collection has included interviews with program graduates, exit surveys, candidate coursework, and student progress reports.

Both programs have extensive evaluation procedures built into their program designs to determine whether the program models will help recruit diverse teachers and assist in job placement in inclusive settings, make teachers feel confident to teach special needs learners and learn professional content knowledge, and teach them to put research-based strategies into practice that will ultimately affect children's learning.

## References

- American Psychiatric Association (2000). *Diagnostic and Statistical Manual of Mental Disorders-IV* (TR). Washington D.C.: Author.
- Blackorby, J., & Wagner, M. (1996). Longitudinal postschool outcomes of youth with disabilities: Findings from the National Longitudinal Transition Study. *Exceptional Children*, 62(5), 399-413.
- Cabello, B., Eckmier, J., & Baghieri, H. (1995). The comprehensive teacher institute: Successes and pitfalls of an innovative teacher preparation program. *The Teacher Educator*, 31(1), 43-55.
- California Commission on Teacher credentialing, (1996). *California standards of quality and effectiveness for education specialist credential programs*. Committee on Accreditation.
- California Commission on Teacher credentialing, (1998), *Teacher preparation in California standards of quality and effectiveness common standards*. Committee on Accreditation.
- California Department of Developmental Services (2009) *Autistic Spectrum Disorders: Changes in the California Caseload* (<http://www.dds.cahwnet.gov/>) Accessed April 4, 2009
- California Department of Education (2009) *Special education enrollment by age, grade, ethnicity and disability*. *Special Education Division, Dataquest* (<http://data1.cde.ca.gov/dataquest> ) Accessed April 4, 2009
- Center for the Future of Teaching (2004). *Special Education – Not So Special for Some; Qualified teachers in short supply for special education students, Santa Cruz, CA*
- Darling-Hammond, L. (2000). Foreword. In L. Darling-Hammond (Ed.), *Studies of excellence in teacher education: Preparation in the undergraduate years*. Washington, DC: National Commission on Teaching & America's Future.
- Darling-Hammond, L. Bransford, J., LePage, P., Hammerness, K. & Duffy. (2005). *Educating teachers for a changing world*. Jossey Bass Publishers. San Francisco, CA.
- Dunn Buron, K, & Wolfberg, P. (Eds). (2008) *Educating learners on the autism spectrum: Translating theory into meaningful practice*. Shawnee Mission, KS:Autism Asperger Publishing Company.
- Ed-DATA (2009) *Education Data Partnership*, California Department of Education ([ed-data.cde.ca.gov](http://ed-data.cde.ca.gov)).
- Educational Demographics office, California State Department of Education (2002). *English learner (EL) students and enrollment in California public schools, 1993 through 2002. Language consensus report*. Sacramento CA: California State Department of Education.
- Goodlad, J. I. (1990). *Teachers for our nation's schools*. San Francisco: Jossey-Bass Publishers.
- Graber, K. (1996). Influencing student beliefs: The design of a 'high-impact' teacher education program. *Teaching and Teacher Education*, 12(5), 451-466.
- Grossman, P. (1994). In pursuit of a dual agenda: Creating a middle-level professional development school. In L. Darling-Hammond (Ed.), *Professional development schools: Schools for developing a profession*. New York: Teachers College Press.
- Grossman, P., & McDaniel, J. E. (1990). *Breaking boundaries: Restructuring teacher education as a collaborative school/university venture*. Paper presented at the Annual Meeting of AERA.
- Guyton, E., & McIntyre, D. J. (1990). Student teaching and school experiences. In W. R. Houston (Ed.), *Handbook of research on teacher education*. New York: MacMillan.

- Hammerness, K., & Darling-Hammond, L. (2002). Meeting old challenges and new demands: The redesign of the Stanford teacher education program. *Issues in Teacher Education, 11*(1), 17-30.
- Hanson, M. J. (1987). Addressing state and local needs: A model for interdisciplinary preservice training in early childhood special education. *Topics in Early Childhood Special Education, 7*(3), 36-47.
- Holmes Group. (1990). *Tomorrow's schools: Principles for the design of professional development schools*. East Lansing, MI: Holmes Group.
- Howey, K., & Zimpher, N. (1989). *Profiles of preservice teacher education*. Albany: Albany State University of New York.
- Imig, D., & Switzer, T. (1996). Changing teacher education programs: Restructuring collegiate-based teacher education. In J. Sikula, T. Buttery & S. Guyton (Eds.), *Handbook of research on teacher education: A project of the association of teacher educators* (2nd ed.). New York: MacMillan.
- Iovannone, R., Dunlap, G., Huber, H., & Kincaid, D. (2003). Effective educational practices for students with ASD. *Focus on Autism and Other Developmental Disabilities, 18* (3), 150-165.
- Irmsher, K. (1995). Inclusive education in practice: The lessons of pioneering school districts. *Journal of the Oregon School Study Council, 38*(6). Eugene OR: University of Oregon.
- McLesky, J., Tyler, N. C., & Flippin, S. S. (2004). The supply and demand for special education teachers. *The Journal of Special Education, 38*(1), 5-12.
- M.I.N.D. Institute. (2002) *Report to the legislature on the principle findings from the epidemiology of autism in California*, Sacramento, CA: University of California, Davis.
- National Center for Education Statistics, (2002). The condition of education 2002 (NCES 2002-025), Indicator 28. Washington, DC: U.S. Department of Education
- National Commission on Teaching & America's Future. (1996). What matters most: Teaching for America's future. New York: National Commission on Teaching & America's Future.
- National Council for the Accreditation of Teacher Education (NCATE). (2002) Professional standards for the accreditation of schools, colleges and departments of teacher education. Washington D.C.
- National Research Council (2001) *Educating Children with Autism*. Committee on Educational Interventions for Children with Autism: Division of Behavioral and Social Sciences and Education, National Academy Press: Washington, D.C.
- Novak, J. M. (Ed.) (1994). *Democratic teacher education. Programs, processes, problems, and prospects*. New York: State University of New York Press.
- Oakes, J. (1996). Making the rhetoric real: UCLA's struggle for teacher education that is multicultural and social reconstructionist. *National Association of Multicultural Education Journal, 4*(2), 4-10.
- Office of Postsecondary Education (2002). *Meeting the highly qualified teachers challenge*. The Secretary's Annual Report on Teacher Quality. Washington, DC: USED.
- President's Commission on Excellence in Special Education (2002). U.S. Department of Education Office of Special Education and Rehabilitative Services, *A new era: Revitalizing special education for children and their families*, Washington, D.C.
- Ross, D. D. (1989). First steps in developing a reflective approach. *Journal of Teacher Education, 40*(2), 22-30.

- Scheurmann, J., Webber, E., Boutot, A., Goodwin, M. (2003) Problems with personnel preparation in autism spectrum disorders. *Focus on Autism and other Developmental Disabilities*, 18 (3), 197-206.
- Sockett, H. T. , Demulder, E. K., LePage, P. C., Wood, D, R., (Eds.) (2001) *Transforming teacher education: Lessons in professional development*. Westport CT: Bergin and Garvey.
- U.S. Department of Education (2009) *Individual with Disabilities Education Act (IDEA) Data. Number of children served under IDEA by disability and age group*. Office of Special Education Programs, Washington, D.C. ([www.ideadata.org](http://www.ideadata.org)) Accessed April 4, 2009
- Valli, L. (1992). *Reflective teacher education: Cases and critiques*. Albany New York: State University of New York Press.
- Wagner, M. & Blackorby, J. (1996). Students with disabilities transition from high school to work or college: How special education students fare. *The Future of Children Journal Special Education*, 6(1)103-118.
- Yell, M., Drasgow, E., & Lowrey, K. (2005). No child left behind and students with autism spectrum disorders. *Focus on Autism and Other Developmental Disabilities*, 20 (3), 130-139.
- Zeichner, K. (1993). Traditions of practice in U.S. preservice teacher education programs. *Teaching and Teacher Education*, 9, 1-13.
- Zeichner, K. (2006). A research agenda for teacher education. In M. Cochran-Smith & K. Zeichner,(Eds.) *Studying teacher education: The report of the AERA panel on research and teacher education*. Mahwah, New Jersey: Lawrence Earlbaum Associates, Publishers.